

Recommendations Concerning
Promotion Measures of the Industrial Waste
Management Industry
(Summary)

Committee on Discuss Promotion Measures of the Industrial
Waste Management Industry

May 2017

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1. Background and objective of recommendations concerning promotion measures

1. Background and objective of recommendations concerning promotion measures

Background of recommendations

- Industrial waste treatment facilities are necessary for preserving the living environment and improving public health through proper waste treatment, and are indispensable infrastructure for building a sound material-cycle society. In addition, businesses related to the collection, transport and disposal of waste form an infrastructure in a broad sense, and its significance in society becomes greater year by year. However, waste treatment facilities are still perceived as a nuisance by citizens, and plans to build one tend to be opposed of industrial by local residents.
- Meanwhile, the number of industrial waste management businesses contributing to the creation of jobs, the development of the local economy, and the creation of a regional circular sphere in cooperation with the local communities has been gradually increasing. Facilitating such movement is important for raising the social status of the industrial waste management industry, promoting the building of necessary facilities, and constructing a sound material-cycle society.

Objective of recommendations

- “Promotion Measures of the Industrial Waste Management Industry” (hereinafter referred to as “Promotion Measures”) are formulated with the aim of setting the direction for sustainable development of the industrial waste management industry in coexistence with local communities as an indispensable infrastructure for Japan’s social and economic systems, and also presenting specific details of the support measures to facilitate the achievement of the industry’s sustainable development in cooperation with the national government, local governments, industrial waste generators and other related parties.

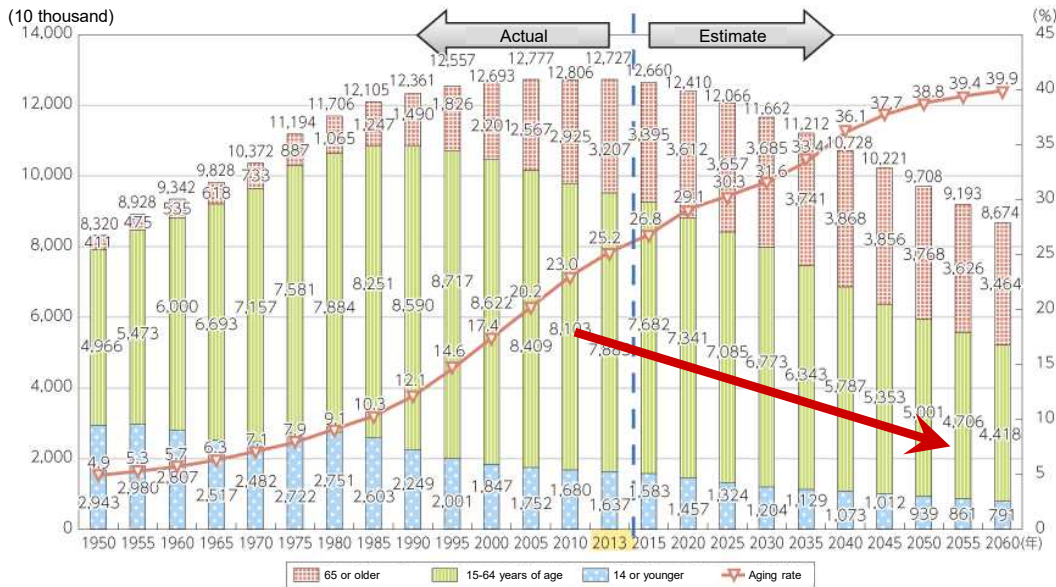


2. Social and economic trends relevant to the industrial waste management industry

2-1-1. Major trends affecting the future of the industrial waste management industry

- Population decline: The working-age population (15–64 years of age) started to decline after hitting a peak in 1995, and is estimated to decline from 77 million in 2015 to 73 million in 2020 and to 68 million (about 12% decrease) in 2030.
- Conversion to a stock-type society: Effective utilization of fixed assets developed during the period of rapid economic growth after WWII is progressing, and sales volumes of new durable consumer goods, etc., have been falling due to a decline in the sense of ownership and a decrease in demand. Construction waste is increasing due to the aging of social capital. New car sales and new housing starts, for example, have halved compared to 1990.

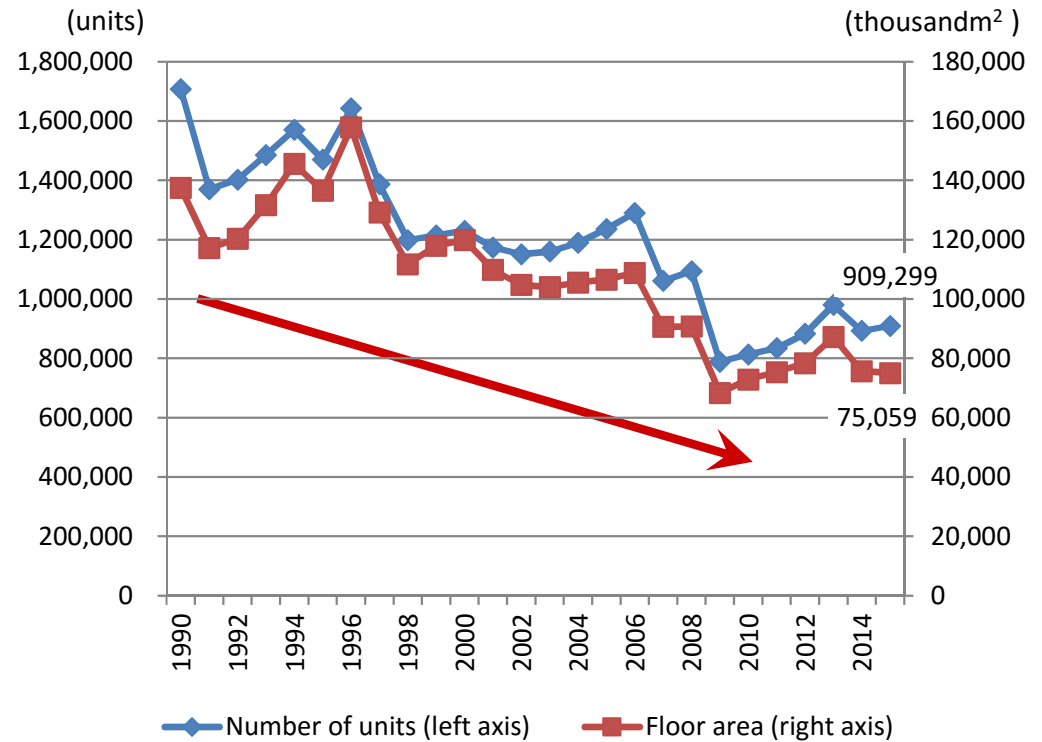
Population decline



Source: Census until 2010, definitive value as of December 1 of the population estimate for 2013, and estimate result of "Population Projection for Japan (estimate as of January 2012)" with medium-fertility and medium-mortality assumption released by the National Institute of Population and Social Security Research in and after 2015

Figure: Trends in Japan's aging and projection

Stock-type society



Source: Created based on "Statistics of Housing Starts" (updated on January 6, 2017) released by the Ministry of Land, Infrastructure, Transport and Tourism

Figure: Trends in new housing starts

2-1-2. Major trends affecting the future of the industrial waste management industry

- Environmental constraints: Final energy consumption in Japan is required to be reduced from 361 million kl in FY2013 to 326 million kl in FY2030, and the ratio of renewable energy to the total power generation is required to be increased from 10.7% in FY2013 to about 22–24% in FY2030.
- Resource constraints: Resource demand and waste generation are expected to increase as the world's population and economy grow. The amount of waste generation is estimated to increase from about 10.47 billion tonnes in 2010 to about 14.87 billion tonnes in 2025, boosting the demand for cyclical use. Furthermore, the importance of international resource circulation is increasing. In Japan, the import volume of specified hazardous waste under Basel Convention is increasing, mainly from electronic parts scrap, electric furnace dust, and metal-containing sludge.

Environmental constraints

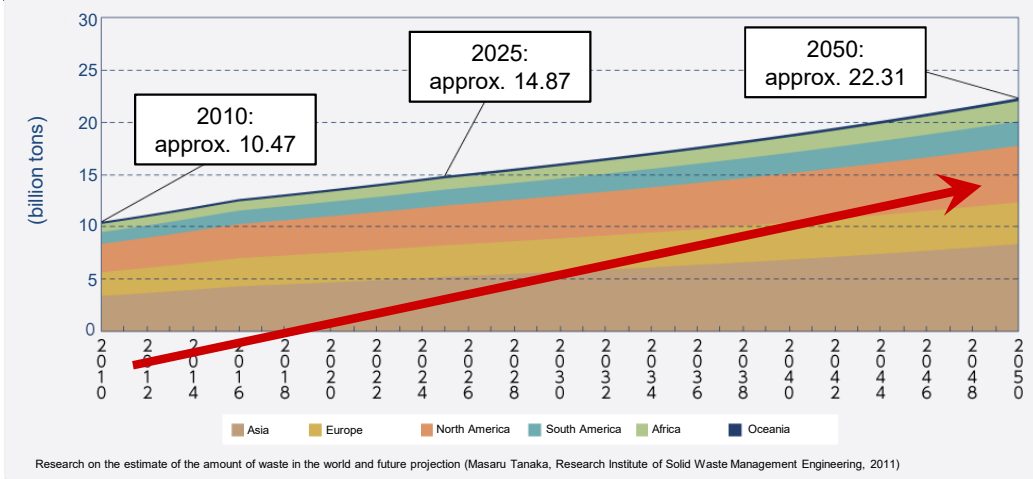
Table: Energy mix used to achieve greenhouse gas reduction targets

	FY2013	FY2030
● Final energy consumption	361 million kl	326 million kl
● Total power generation	966.6 billion kWh	About 1,065.0 billion kWh
Renewable energy	10.7%	22%~24% (approx.)
Nuclear power	1.0%	22%~20% (approx.)
Coal	30.3%	26% (approx.)
LNG	43.2%	27% (approx.)
Oil	14.9%	3% (approx.)

Source: "Long-term Energy Supply-Demand Outlook" (July 2015) by the Ministry of Economy, Trade and Industry

Resource constraints

Fig. 4-2-2: Trends in the amount of waste in the world (projection)



Source: "Annual Report on the Environment, the Sound Material-Cycle Society and Biodiversity in Japan FY2011" by the Ministry of the Environment

Figure: Trends in the amount of waste in the world (projection)

2-1-3. Major trends affecting the future of the industrial waste management industry

- Corporate Social Responsibility: The Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly in September 2015 set out goals to “ensure sustainable production and consumption patterns” and goals for **solving social issues** including health, education, and widening disparities. Furthermore, regarding corporate activities, ISO 20400 (Sustainable procurement) will be issued in 2017. Regarding corporate social responsibility for sustainable development, **supply chain management from a procurement perspective** is expected to become more important.

SDGs

Examples of “Goal 12. Ensure sustainable consumption and production patterns”

- 12.1 Implement the 10-year framework of programs on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources
- 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
- 12.4 By 2020, **achieve the environmentally sound management of chemicals and all wastes throughout their lifecycle**, in accordance with agreed international frameworks, **and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment**
- 12.5 By 2030, **substantially reduce waste generation through prevention, reduction, recycling and reuse**
- 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities
- 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

Table: Example of standards for sustainable procurement

General affairs	Compliance with laws and regulations / Ban on retaliatory actions
Environment	Energy savings / Use of low carbon/carbon-free energy / Reduction of greenhouse gas emissions by other means / Promotion of the 3Rs (“Reduce, Reuse, and Recycle”) / Reduced use of containers, packaging, etc. / Prevention of contamination, management of chemicals, and waste disposal / Collection of raw materials with consideration for resource conservation / Conservation of biodiversity
Human rights	Compliance with and respect for international human rights standards / Ban on discrimination and harassment / Ban on violation of the rights of local residents, etc. / Respect for women’s rights / Respect for the rights of persons with disabilities / Respect for children’s rights / Respect for the rights of social minorities
Labor	Compliance with and respect for international labor standards / Freedom of association and the right of collective bargaining / Ban on forced labor / Ban on child labor / Ban on discrimination in employment and careers / Wages / Ban on long working hours / Safety and hygiene of workplace / Foreign and migrant workers
Economy	Prevention of corruption / Fair business practices / Use of raw materials with no involvement with conflicts or crimes / Protection of intellectual property rights / Responsible marketing / Proper management of information / Invigoration of regional economies

Source: “Tokyo 2020 Olympic and Paralympic Games Sustainable Sourcing Code (1st edition)” released by the Tokyo Organising Committee of the Olympic and Paralympic Games

2-2-1. Implications for the promotion of the industrial waste management industry

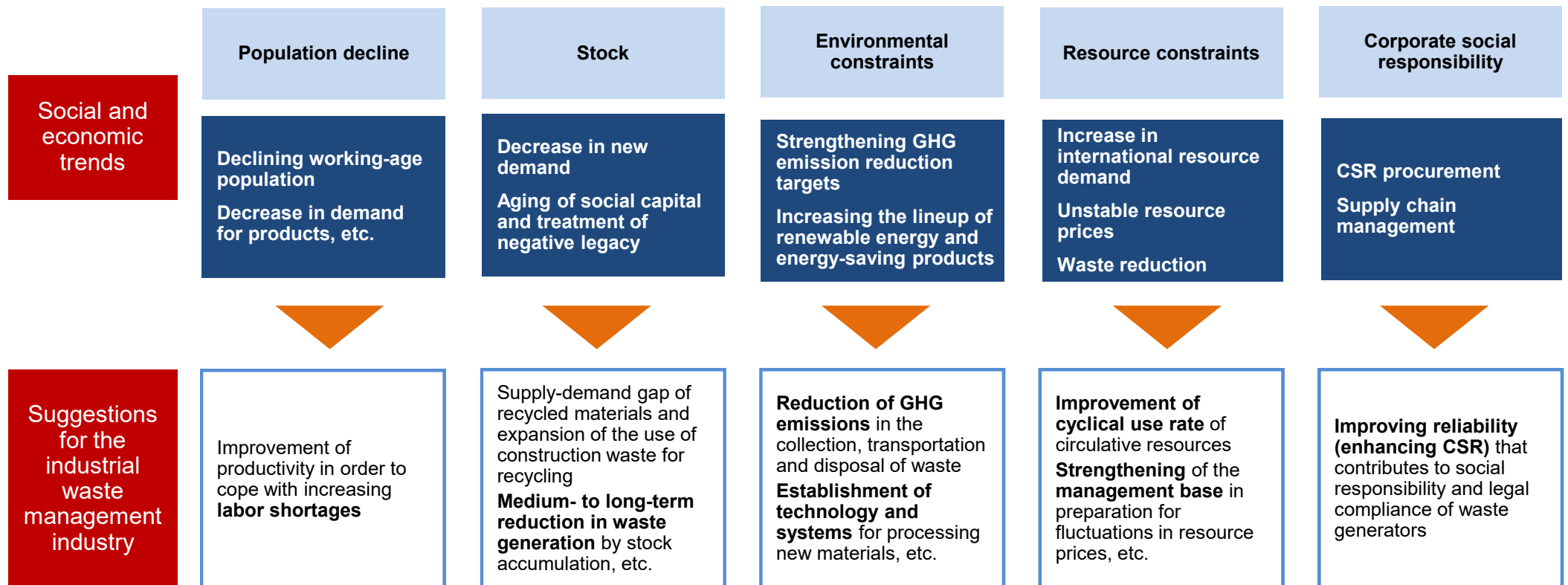
- The amount of industrial waste is decreased by factors including population decline and conversion to a stock-type society, and it is greatly affected by the financial situation of the national and local governments and changes in the international trade structure due to mega FTAs.

Table: Examples of social and economic trends and factors that affect the amount of industrial waste by resource type

Resource type	Industry of major waste generators affected	Social and economic trends that affect	Factors affecting social and economic trends
Stone and clay resources	Government agencies Electricity, gas, heat supply, waterworks Construction, ceramic, stone and clay products manufacturing	Reduction of lifecycle cost to repair aging infrastructure, etc. Decrease in construction demand / regional concentration	Financial status of the national and local governments Long-life technology/needs Scale and frequency of disasters Regulatory status of local governments Transportation costs
Metal and fossil resources	Industrial machinery manufacturing Durable consumer goods manufacturing Process service industry including information communication, transportation, and finance	Progress of service economy Decline in the sense of ownership	Changes in international trade structure due to mega FTAs, etc. Conversion to the generation with lower sense of ownership
Biomass resources (kitchen waste)	Agriculture, forestry and fisheries Food processing Distribution / food service Other service industries	Reducing food loss Increasing awareness toward safety	Changes in international trade structure due to mega FTAs, etc. Changes in eating habits

2-2-2. Implications for the promotion of the industrial waste management industry

- **The amount of industrial waste is decreased** by factors including population decline and conversion to a stock-type society. Meanwhile, in order to play a social role under environmental constraints and resource constraints, the industrial waste management industry is required to **reduce greenhouse gas (GHG) emissions** in the collection, transport and disposal process, establish technology and systems for processing **new materials**, and **improve the cyclical use rate of circulative resources**.
- The industry is also required to **improve the reliability (enhance CSR)** by **contributing to CSR procurement and supply chain management** in order to meet the social responsibilities and legal compliance of waste generators.
- Furthermore, in order to fulfill these roles, it is necessary to **improve productivity** to cope with increasing labor shortage and **strengthen the management base** in preparation for fluctuations in resource prices.



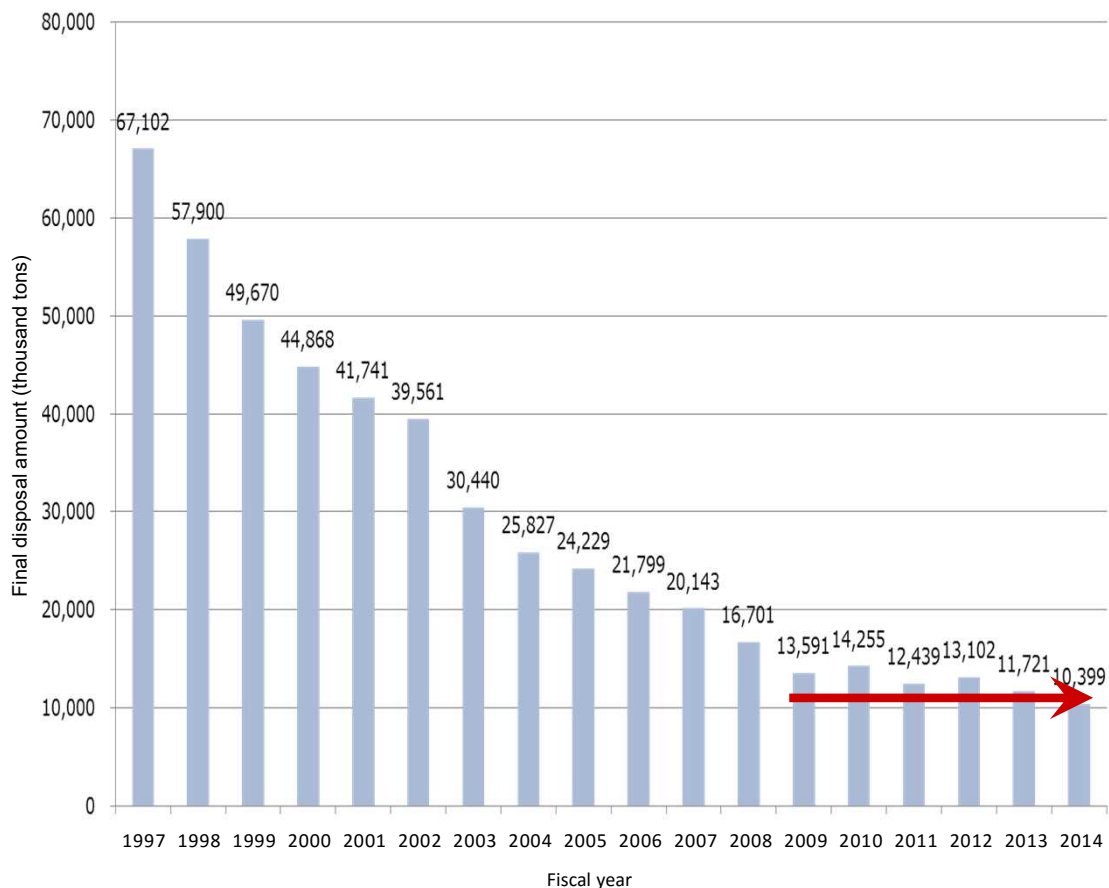


3. Trends, status and activities of the industrial waste management industry

3-1-1. Current status of industrial waste management (final disposal amount and recycling rate)

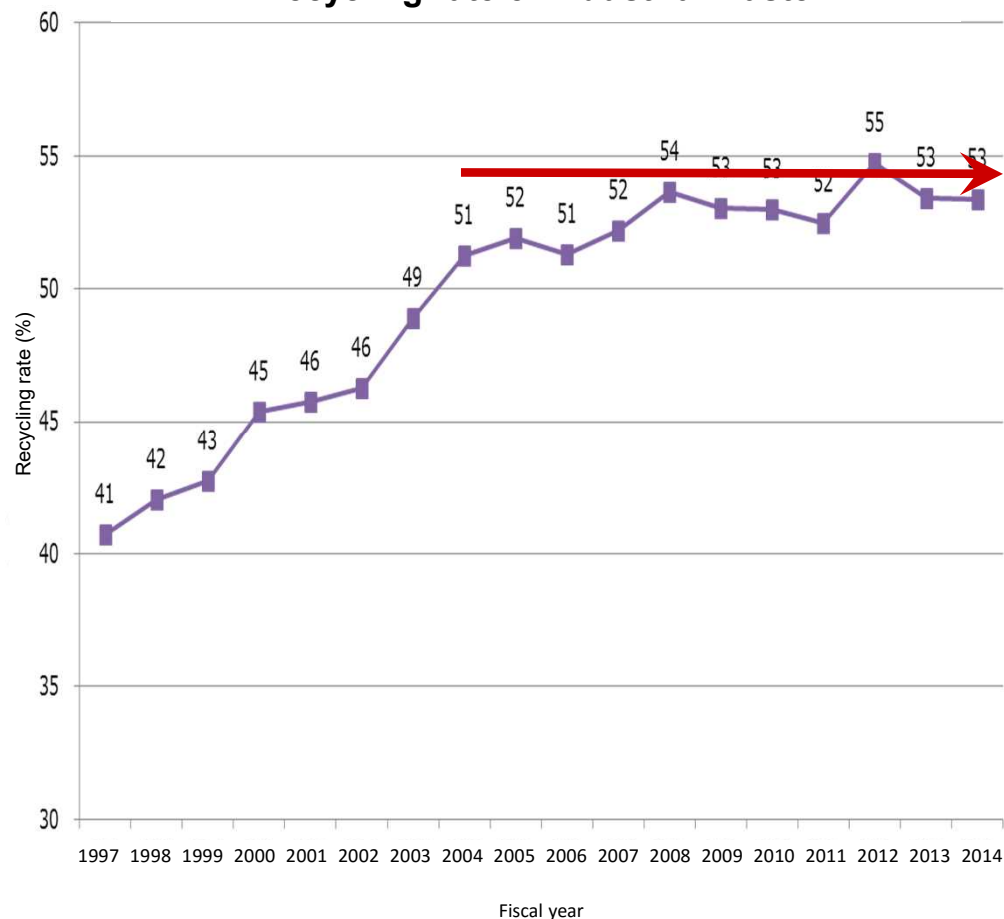
- The final disposal amount decreased by about 85% from about 67 million tons in FY1997 to about 10 million tons in FY2014, but **recently the rate has been flat**.
- Meanwhile, the recycling rate has been rising steadily from FY1997 to FY2005, and has **remained at a level over 50%**.

Final disposal amount of industrial waste



Source: Ministry of the Environment

Recycling rate of industrial waste

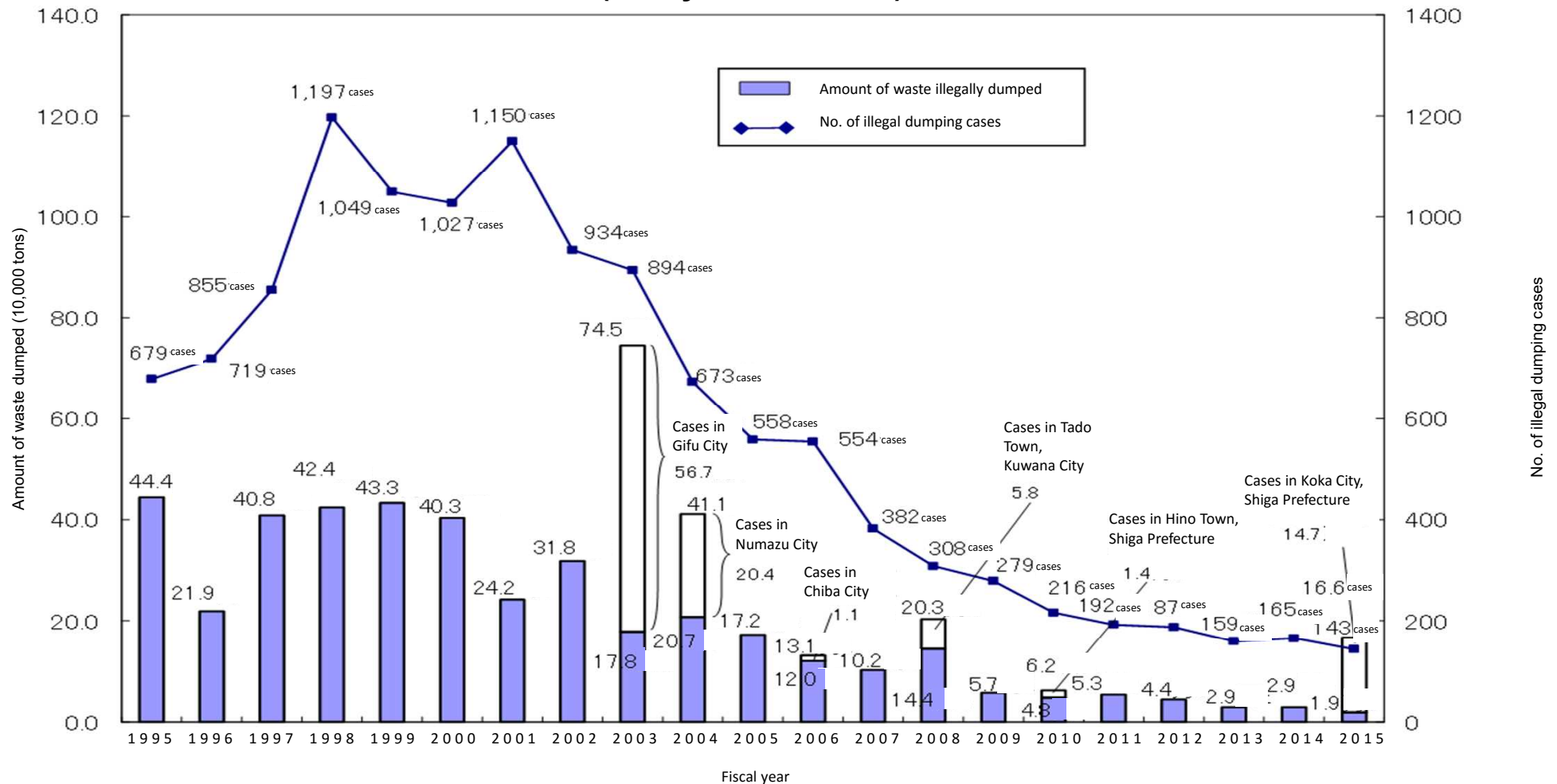


Source: Ministry of the Environment

3-1-2. Current status of industrial waste management (illegal dumping)

- Both the cases and the amount of illegal dumping have **decreased significantly after hitting a peak in FY1998–2001**, and measures to prevent illegal dumping have been successful. However, illegal dumping has not yet been eliminated totally.

Trends of the number of illegal dumping cases and the amount of waste dumped (newly found cases)

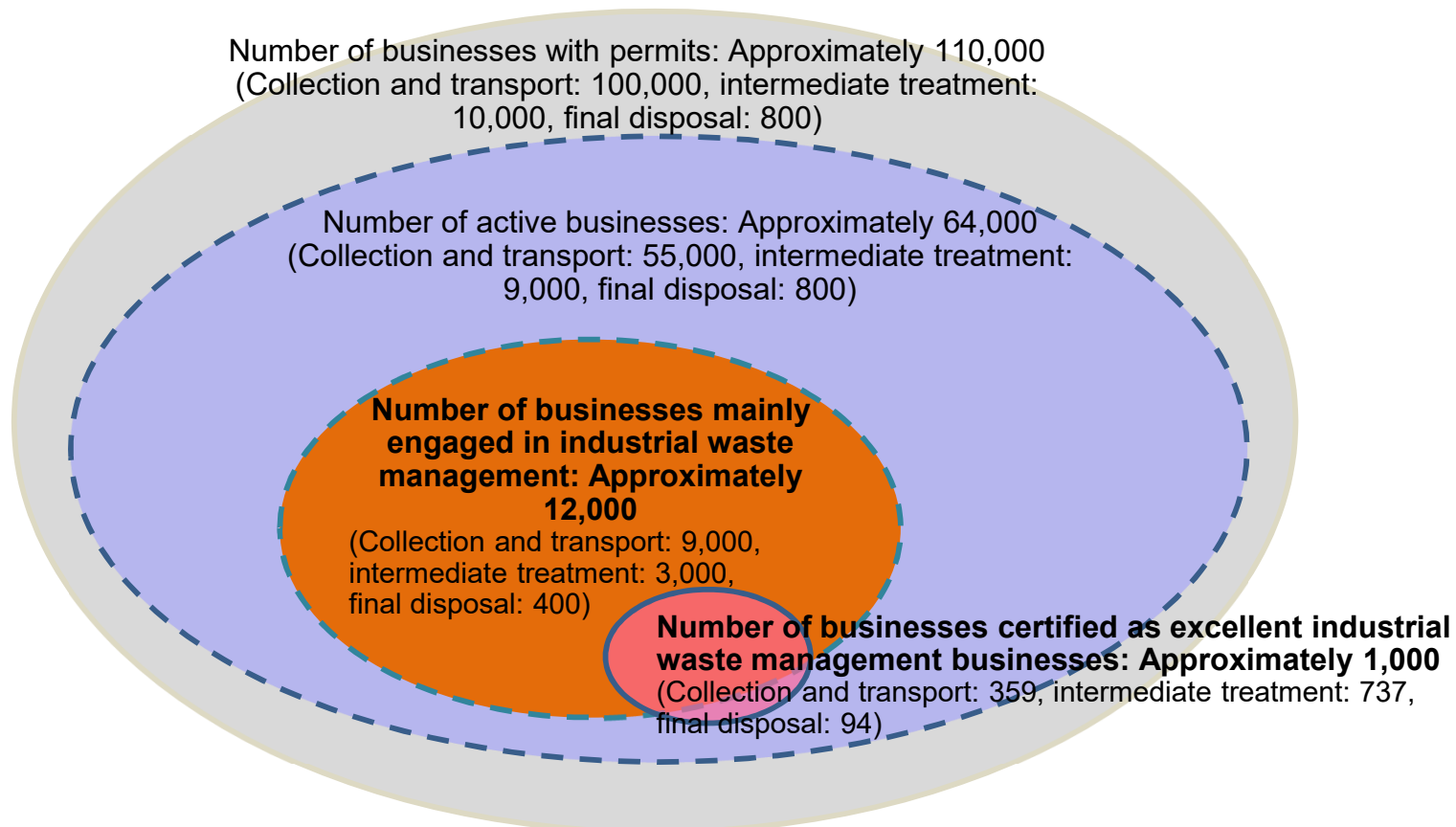


Source: Ministry of the Environment

3-2-1. Facts and figures of the industrial waste management industry (number of businesses)

- There are about 110,000 businesses with an industrial waste treatment permit, but the **number of active businesses is about 60,000, about 60% of the total.**
- **The number of businesses mainly engaged in industrial waste management (meaning their sales ratio from industrial waste management is 50% or more of the total sales) is about 12,000, which is about 10% of the total.** In addition, the number of businesses certified as excellent industrial waste management businesses is about 1,000, which is much smaller than the number of businesses mainly engaged in industrial waste management.

Number of businesses engaged in industrial waste management



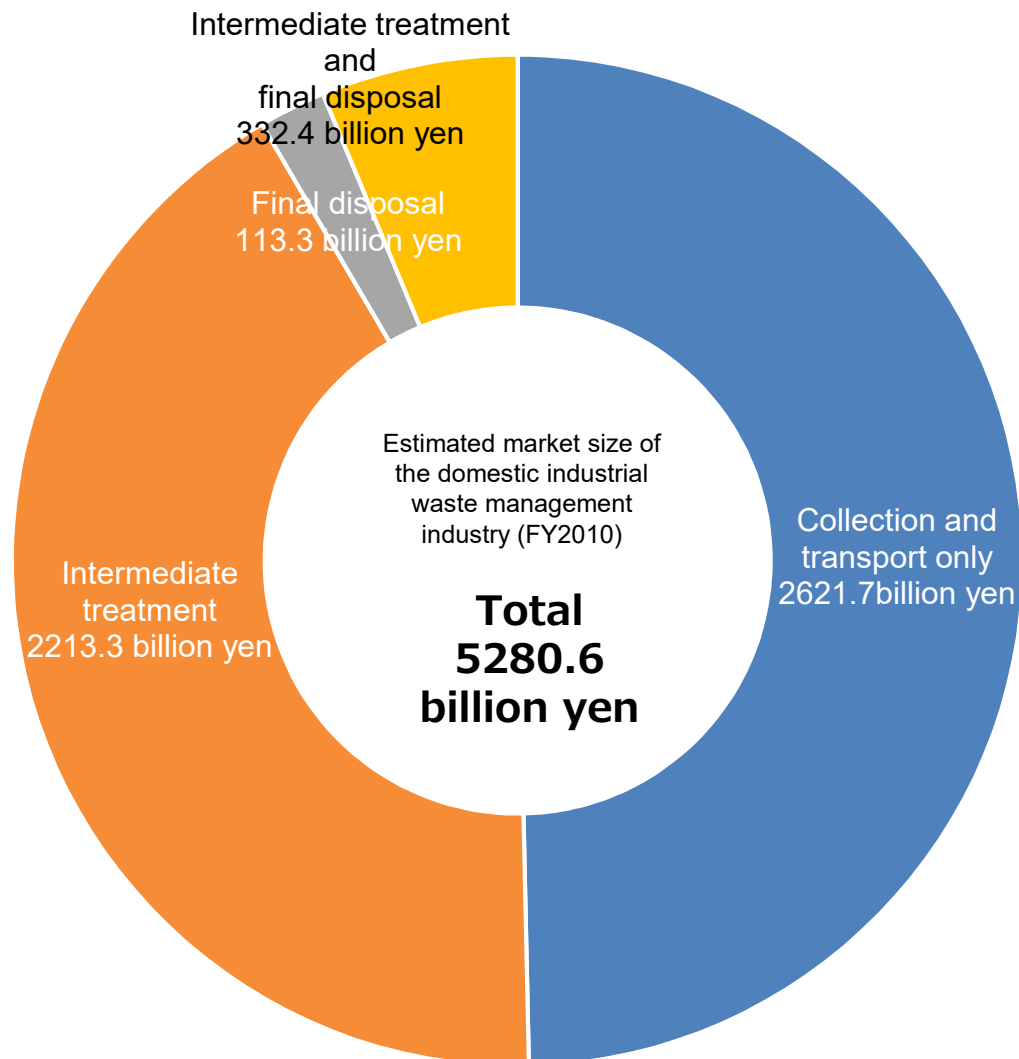
Source: (Number of businesses with permits) Information Retrieval System of Industrial Waste Management Businesses of the Ministry of the Environment (January 19, 2017)

(Number of active businesses and businesses mainly engaged in industrial waste management) Estimate by Mizuho Information & Research Institute

(Number of businesses certified as excellent industrial waste management businesses) Provided by the Japan Industrial Waste Management Foundation

3-2-2. Facts and figures of the industrial waste management industry (size of the domestic market)

- The size of the domestic industrial waste management market is estimated to be **approximately 5.3 trillion yen**.

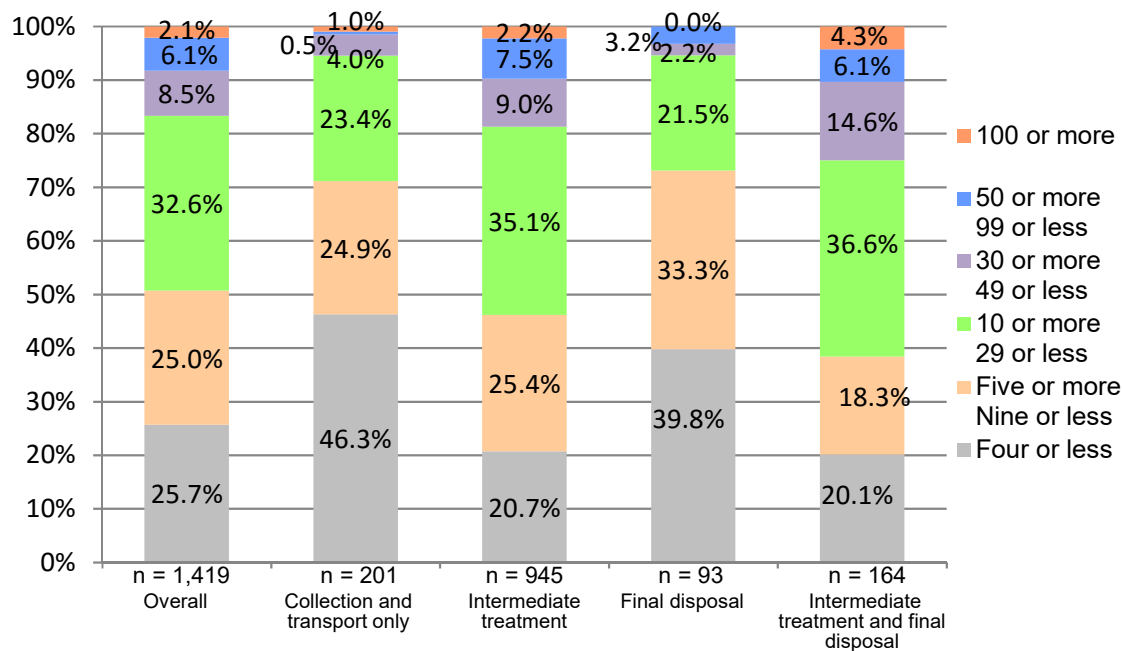


3-2-3. Facts and figures of the industrial waste management industry (number of employees)

Number of employees of businesses mainly engaged in industrial waste management:

- For businesses engaged in collection and transport only, **about half of the businesses have four or less employees, and only 1% of the businesses have 100 or more employees.**
- For businesses engaged in intermediate treatment, the proportion of businesses with a large number of employees is high. However, **the proportion of businesses with 100 or more employees is 2.1% of the total, meaning that the overwhelming majority have less than 100 employees.**

Number of employees of businesses mainly engaged in industrial waste management



Average number of employees of businesses mainly engaged in industrial waste management

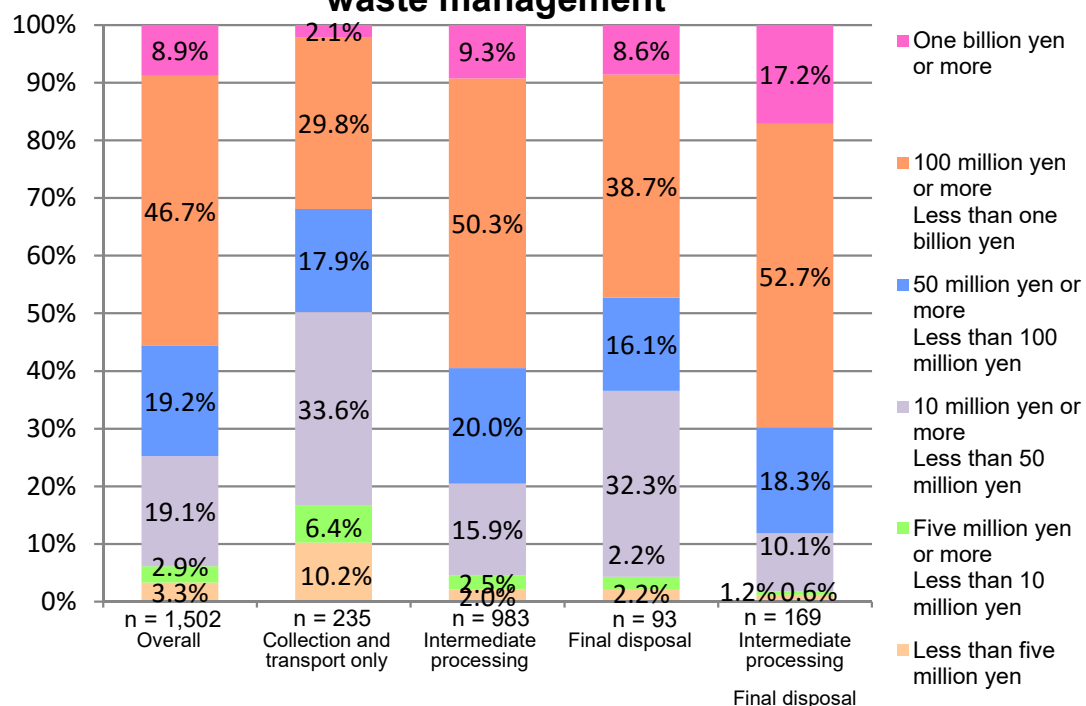
Industry	Average number of employees
Collection and transport only	9
Intermediate treatment	20
Final disposal	9
Intermediate treatment and final disposal	29

Data source: "FY2011 Survey Report on Industrial Waste Treatment Industry" by the Ministry of the Environment

3-2-4. Facts and figures of the industrial waste management industry (sales)

- For businesses doing only collection and transport among businesses mainly engaged in industrial waste management, **the proportion of businesses with sales of one billion yen or more is only 2.1%**. For businesses doing intermediate treatment and final disposal, the proportion of businesses with high volumes of sales is higher than that of businesses doing collection and transport only. **Overall, the proportion of businesses with one billion yen or more sales is less than 10%, but there are some businesses with sales of more than 10 billion yen.**

Sales of businesses mainly engaged in industrial waste management



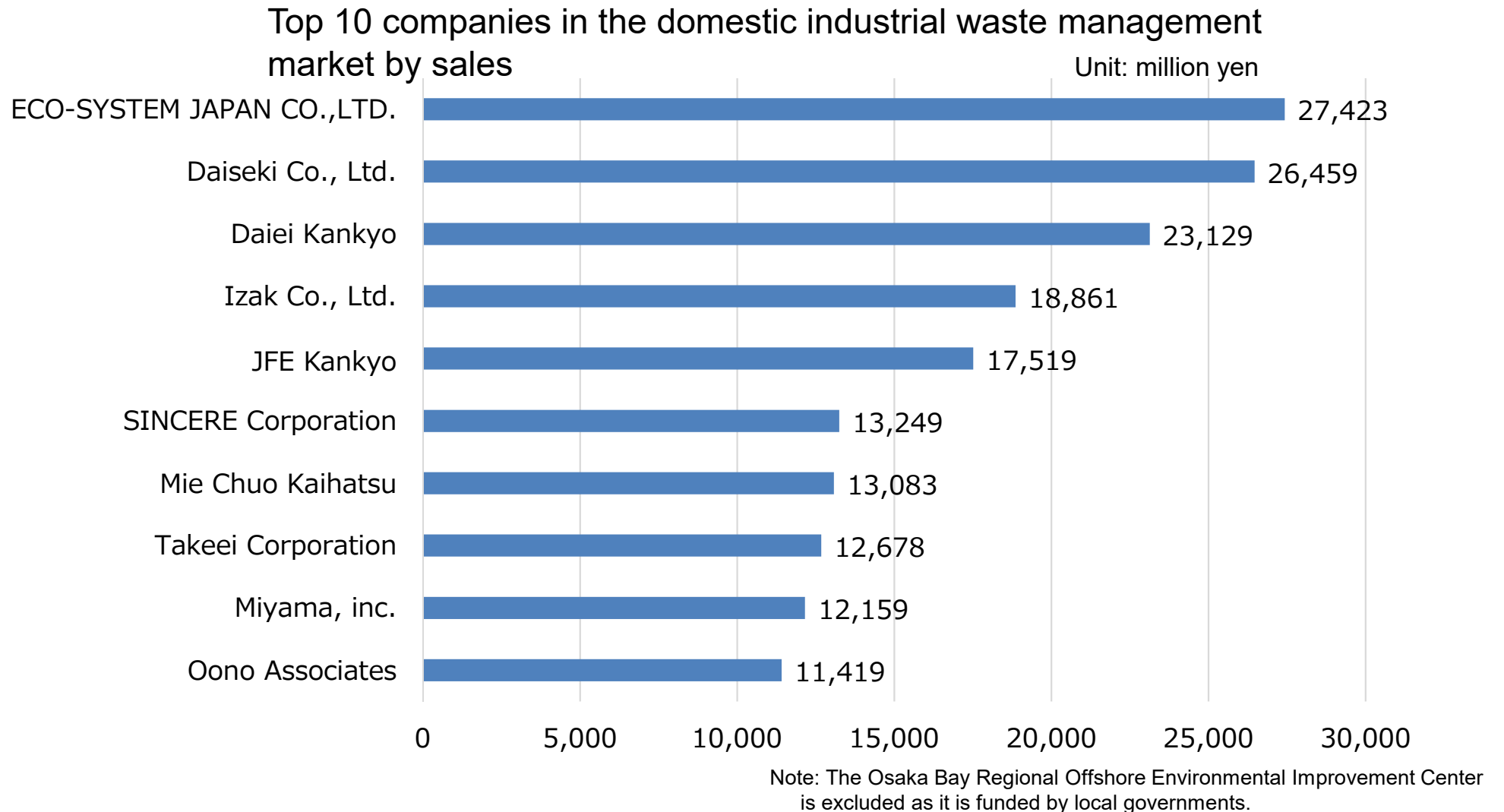
Average sales of businesses mainly engaged in industrial waste management

Industry	Average sales
Collection and transport only	162.67 million yen
Intermediate treatment	417.36 million yen
Final disposal	328.45 million yen
Intermediate treatment and final disposal	669.77 million yen

Data source: "FY2011 Survey Report on Industrial Waste Treatment Industry" by the Ministry of the Environment

3-2-5. Facts and figures of the industrial waste management industry (high-ranking businesses in the domestic market)

- Looking at the top 10 companies, their sales volume is between 11 to 27 billion yen. (Sales volume on a non-consolidated basis)

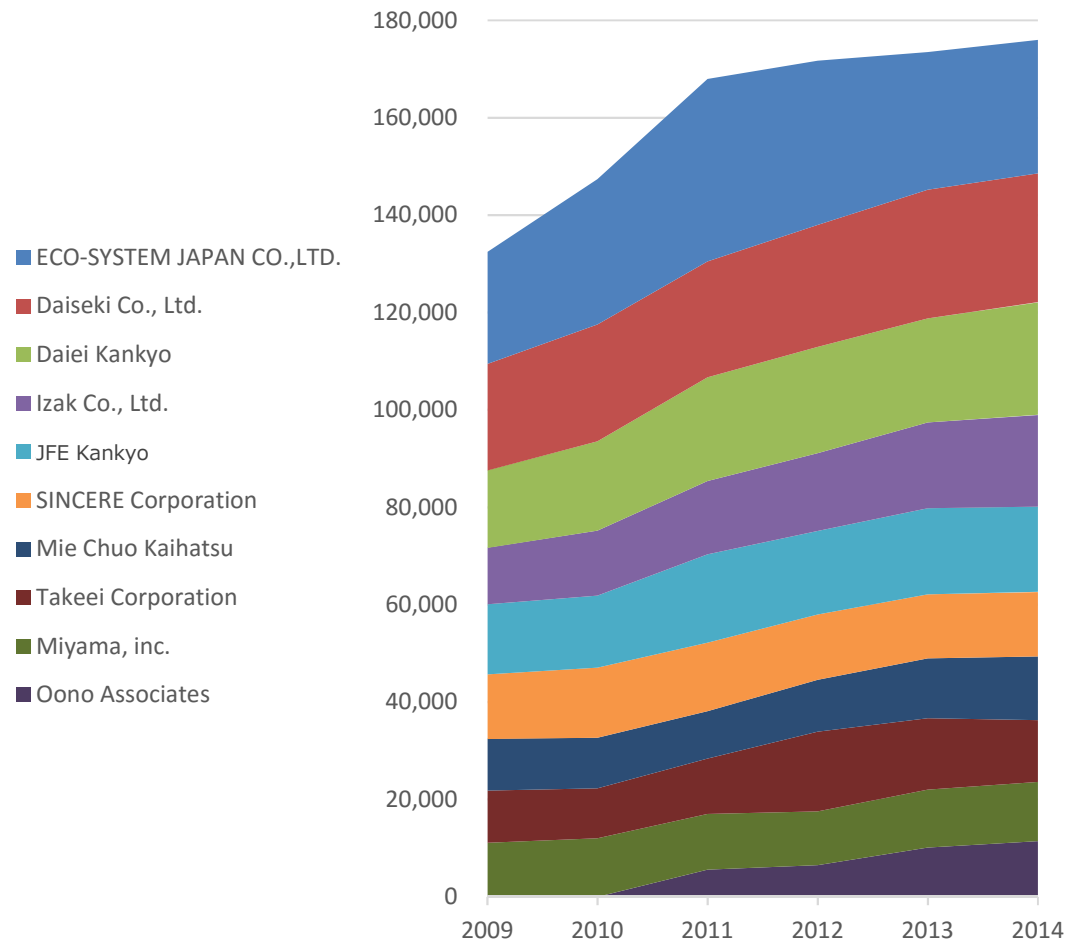


Data source: Teikoku Databank (industrial waste treatment industry, FY2014 results)

3-2-6. Facts and figures of the industrial waste management industry (major businesses)

- Combined sales of the top 10 domestic companies are on the rise, reaching **approximately 175.9 billion yen** in 2014.

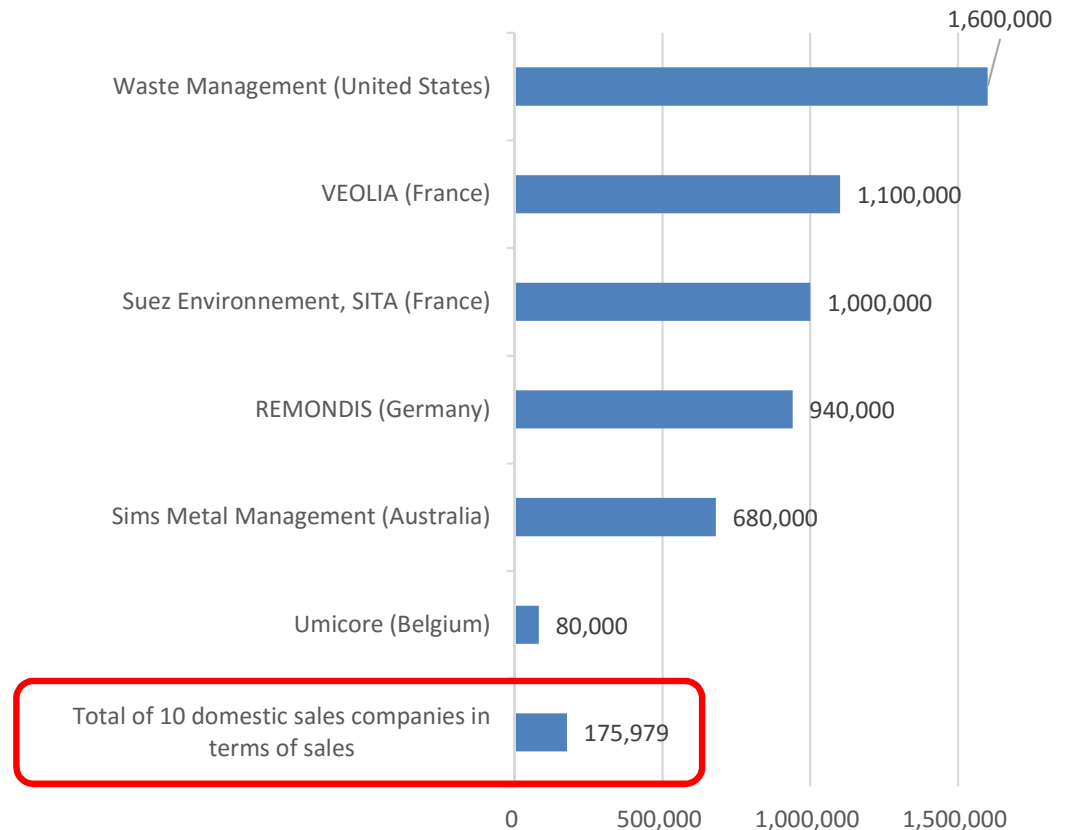
Sales trends of 10 major industrial waste disposal companies in Japan
Unit: millions of yen



Note: The Osaka Bay Regional Offshore Environmental Improvement Center is excluded as it is funded by local governments.

Data source: Teikoku Databank (industrial waste treatment industry, FY2014 results)

Sales of major U.S. and European companies (millions of yen)



Data source: "FY2015 Report on International Economic Research on Integrated Economic Growth In and Outside Japan (Regulatory Cooperation with EU: Survey on Trends of Resource Efficiency of Japan and EU)" released by the Ministry of Economy, Trade and Industry

Note: In Europe and the United States, companies that have posted sales of over one trillion yen on a non-consolidated basis through aggressive M&A are creating an oligopoly market.

3-3. Trends in activities of individual companies

- Major activities taken by individual businesses featured in industry journals and magazines in the past 10 years can be **categorized into** the following **six themes** based on their aims and social implications.

Strengthening / expansion of business foundation

- ◆ Efforts to strengthen competitiveness through strengthening and expanding the business foundation by taking such actions as the provision of safety and security to discharge companies by introducing a traceability system, advancement of small household appliance recycling systems in collaboration with home delivery service providers, establishing methane fermentation power generation facilities that achieve both food recycling and renewable energy supply, and listing stocks on the stock market

Business collaboration / business alliance / M&A

- ◆ Efforts to secure position in the industry through such measures as the integration of sales divisions to provide total solutions, cost saving through collaboration with scrap processors, and M&A aimed at simultaneous acquisition of facilities and permits in new sales areas

Market expansion

- ◆ Efforts to expand the market in anticipation of shrinking of the existing domestic market due to a decrease in industrial waste generation in the future, including entry into the business of generating fuels from waste plastic in cement manufacturing outside Japan, and entry into PFI projects for the construction of waste treatment facilities / DBO projects for operation management

Coexistence with local communities

- ◆ Efforts to eliminate negative perception of waste treatment facilities as a nuisance while raising evaluations from local communities, including entering the agricultural businesses in ways such as greenhouse cultivation utilizing energy generated in the incineration process, donating offset credits obtained from biomass power generation to local governments, and establishing a cooperation system to support disaster waste management in an emergency

Developing/ securing human resources

- ◆ Efforts to secure and develop the human resources necessary for stable and sustainable development of companies through such measures as the promotion of evaluations, training and networking of excellent businesses by private companies, introduction of educational programs on waste treatment and recycling by private companies and industry groups, and participating in business training for management

CSR activities

- ◆ Efforts to promote the three pillars of economy and management, environmental conservation activities, and social contribution activities in a well-balanced manner and to improve the image of the industry through efforts close to people such as the creation of CSR procurement guidelines, training on corporate activities that respect human rights, and the expansion of diversity in employment for women, handicapped people, and senior employees

3-4. Initiatives developed by waste generators and the industrial waste management industry

- In its “Voluntary Action Plan for Establishing a Sound Material-Cycle Society,” Keidanren set targets to **reduce the final disposal amount of industrial waste by about 70% in FY2020 compared to FY2000.** (The target was achieved ahead of schedule, with about a **73.4% reduction in FY2015.**) In addition, to improve the quality of resource circulation, **each industry has set unique targets** under the initiative of Keidanren and is advancing efforts.
- On the other hand, its implementation body, the Japan Federation of Industrial Waste Management and Recycling Associations, also presented its policy of moving **“from waste treatment and disposal as a recipient to an industry that produces resources and energy as a creator”** and **formulated the industry policy “Action Plan for Low-Carbon Society,”** aligning its stance with the expectations of waste generators.

“Quantitative targets set forth in the ‘Action Plan for Low-Carbon Society’” by the Japan Federation of Industrial Waste Management and Recycling Associations, March 2017

Category		Target fiscal year	Quantitative target (Base year: FY2010)	Remarks
Greenhouse gas emissions by the member companies of the Japan Federation of Industrial Waste Management and Recycling Associations		2020	±0%	• Evaluated based on the average emissions for the five years from FY2018 to FY2022
		2030	-10%	• Evaluated based on the average emissions for the five years from FY2028 to FY2032
Fuel economy of the collection and transportation businesses		2030	10% improvement	—
For incineration in the intermediate treatment businesses	Power generation amount	2030	Two times	
	Heat consumption amount	2030	Two times	

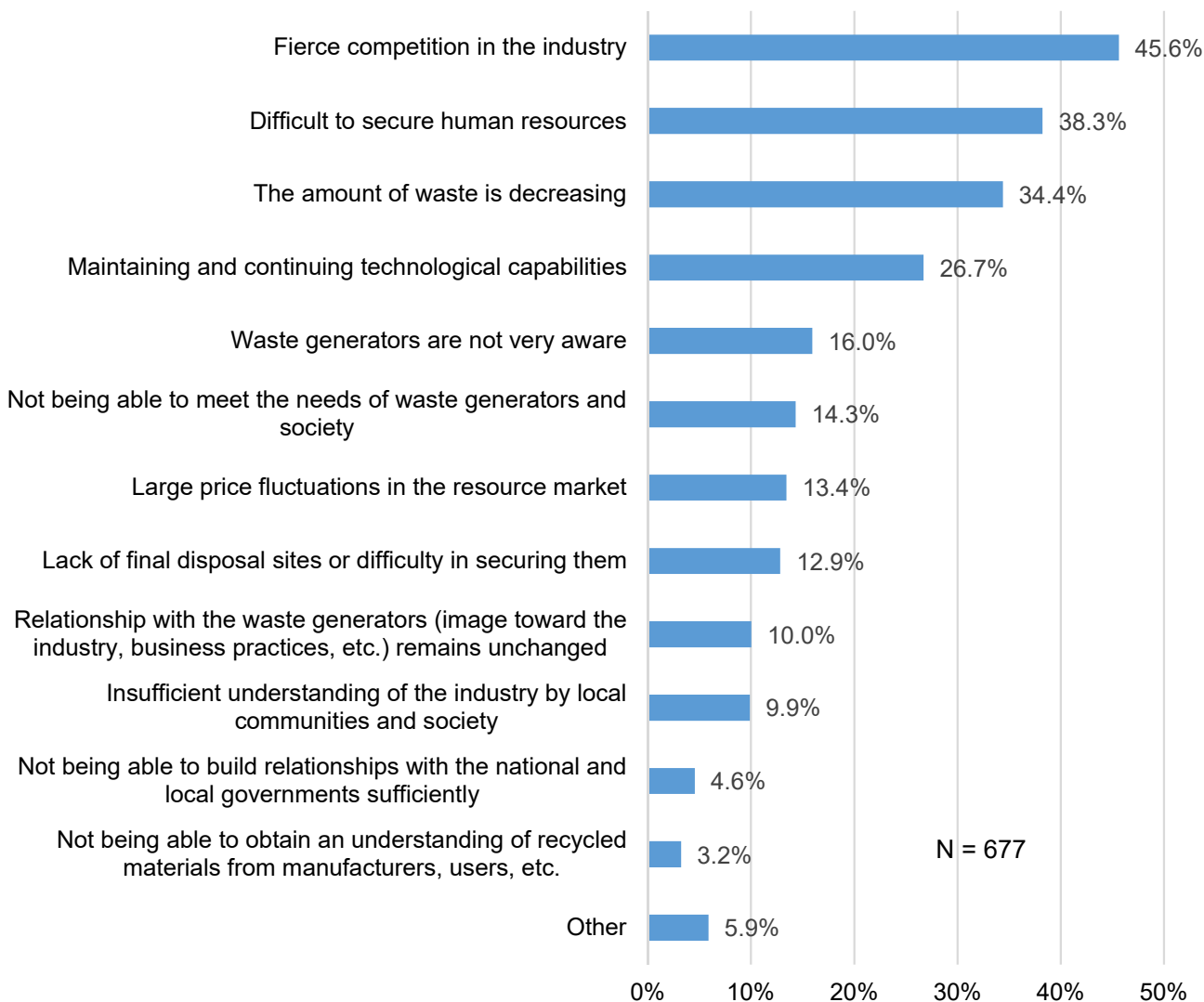


4. Business strategy for solving problems in the industrial waste management industry

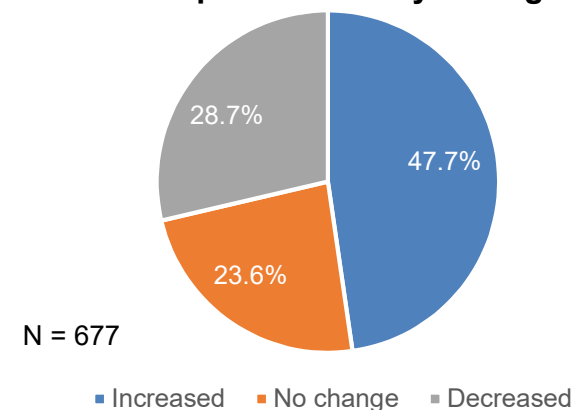
4-1. Issues in the industrial waste management industry

- **Competition within the industry is intensifying**, and securing human resources is becoming even more difficult. In addition, **polarization among businesses is progressing in terms of the treatment amount**. Employment conditions in the industry are not favorable, as **the minimum wage is less than 1,000 yen for about 64% of the total businesses**.

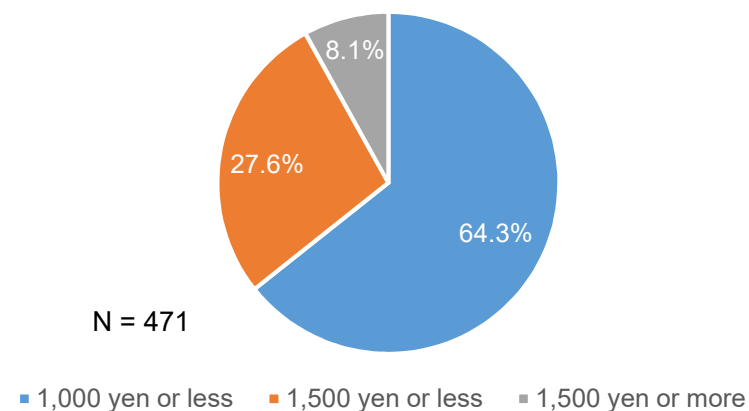
Problem awareness in the industrial waste management industry



Changes in waste treatment amount compared with 10 years ago



Minimum wage in the industrial waste management industry



4-2. Requests for the national and local governments

- The strongest request for the national and local governments include **creating a system to appropriately evaluate excellent industrial waste management businesses and thoroughly informing waste generators about their responsibility**. Furthermore, there are requests to support the promotion of sound recycling and the provision of opportunities for human resource development as well as the enhancement of the qualification system.



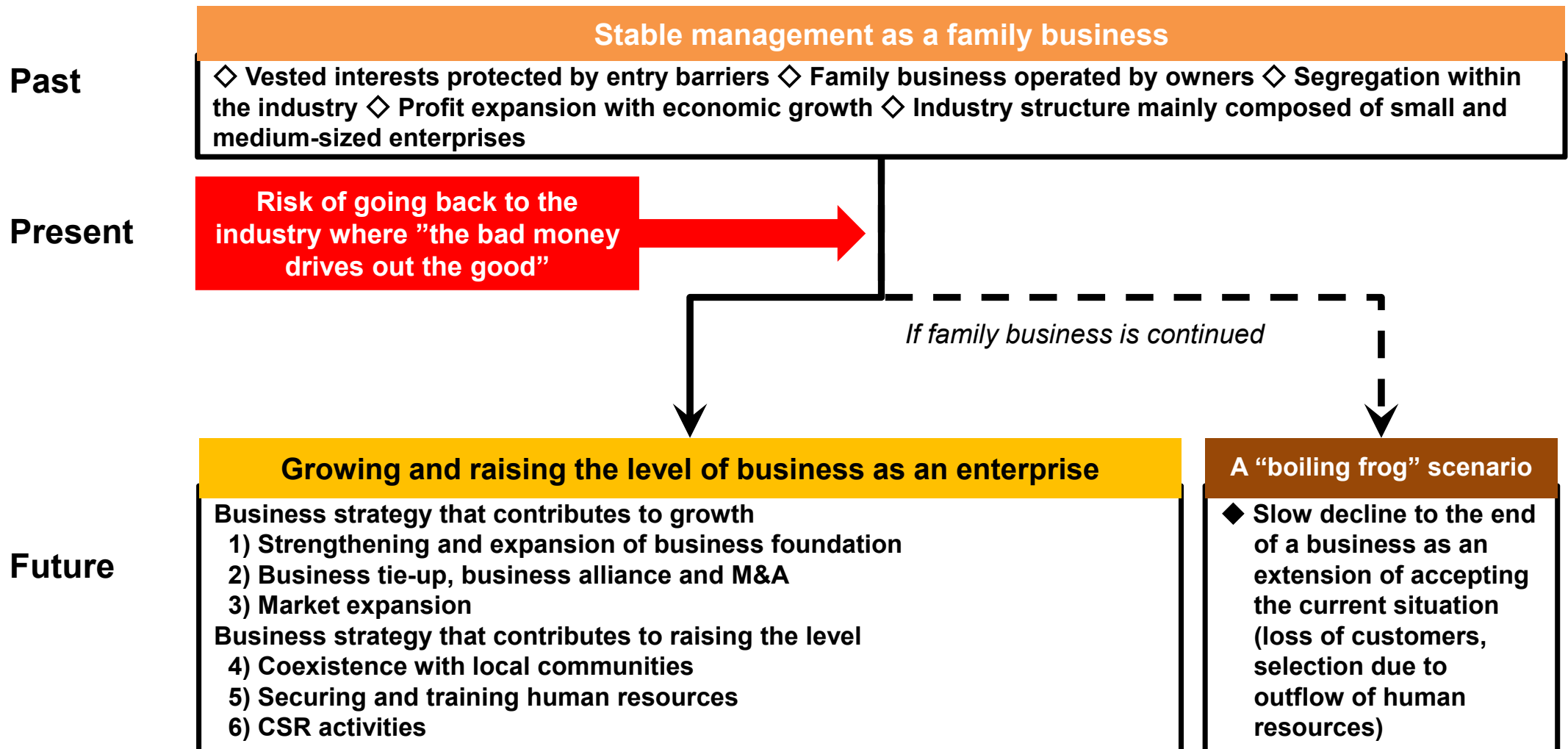
4-3. Risks faced by the industrial waste management industry

- Without a proper evaluation axis, the industry may face price competition under the intensifying competition within the industry and changes in the external environment requiring new roles. In addition, with the improvement of the employment situation nationwide, various existing problems, such as low wages and a negative image, have come to the surface. Immature competitive environment, worsening working environment and the outflow of human resources increase the risk that the industry may revert to one where “the bad money drives out the good.”



4-4. Growing out of family businesses

- Risks associated with socio-economic trends have come to the surface, and if nothing is done, industrial waste management companies may fall into a scenario where they fail to become aware of the need to change, and slowly lose their business foundation if they continue with the existing business management. They are required to **grow and raise their level of business as enterprises**.



4-5. Necessity of achieving both growth and raising the level

- In order for the industrial waste management industry to raise its level, it must achieve a healthy sales increase in order to secure the necessary resources. As in other industries, they should create a virtuous cycle as a private company by **effectively utilizing the resources acquired through growth to raise the level and contribute to the development of infrastructure for further growth.**

Securing resources for raising the level through growth

Efforts that contribute to growth (examples)

- Reducing carbon emissions by improving efficiency in collection and transport
- Improving the cyclical use rate by expanding capital investment
- Promoting digitization and improving efficiency by introducing IT
- Acquisition of ISO14001 and other certifications
- Utilizing unused resources such as timber offcuts (for biomass)
- Promoting the wider area recycling (such as solar panels)
- Entry into businesses other than those with waste treatment licenses
- Developing overseas markets utilizing excellent environmental technologies, etc.

Efforts that contribute to raising the level (examples)

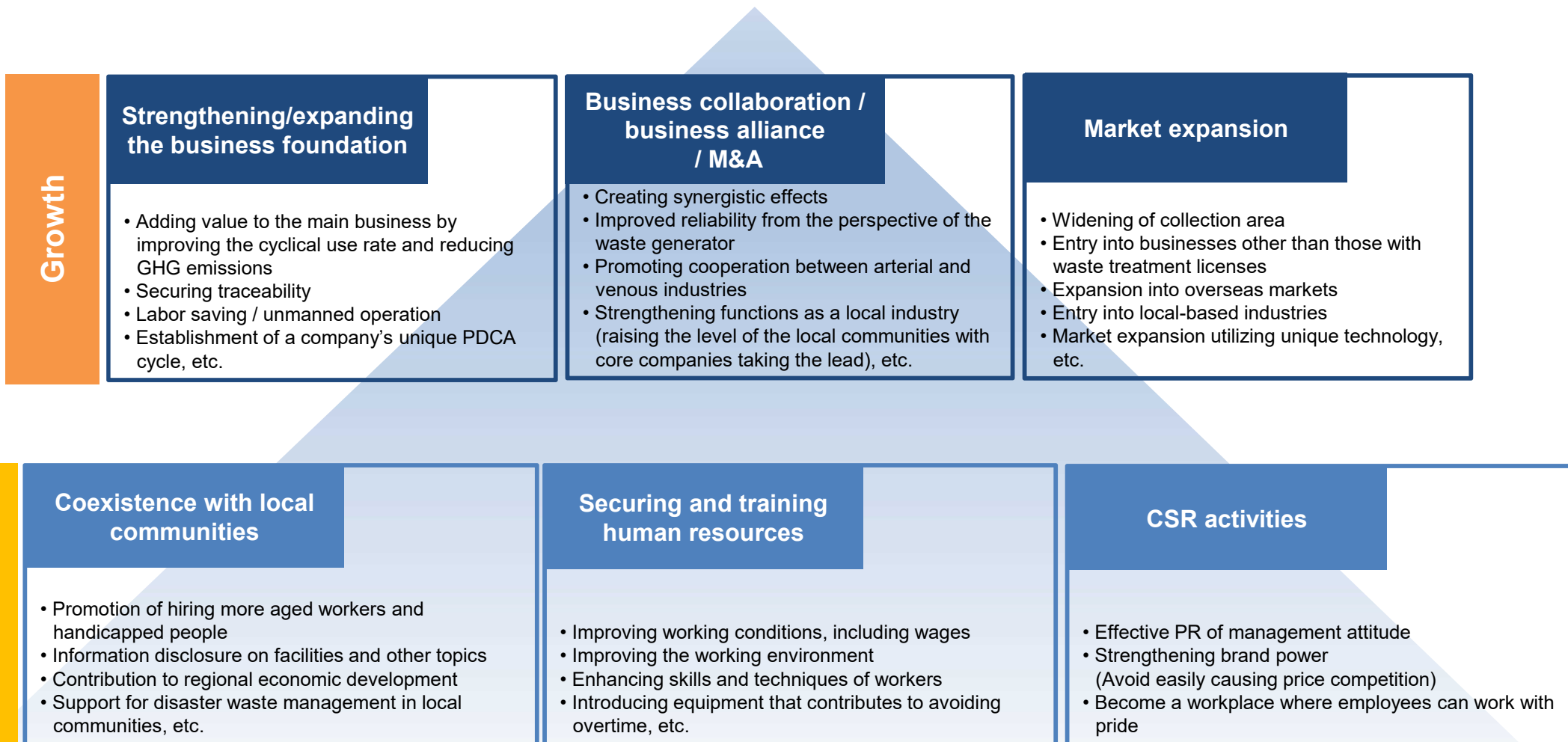
- Outgrowing low wage structure
- Thorough payment of social insurance premiums
- Training that contributes to the improvement of skills
- Thorough management of occupational safety
- Active information disclosure about the acquisition of excellent certification and other topics
- Hiring more aged workers and handicapped people
- Providing learning programs on the environment for local residents
- CSR activities in collaboration with local communities

etc.

Establishing the foundation for growth through raising the level

4-6. Direction of business strategy that the industrial waste management industry should pursue

- The directions that companies engaged in industrial waste management should take can be broadly divided into two: **business strategies for growth** and **those for raising the level**. Companies are required to introduce appropriate measures in consideration of the business form, business scale, and the role played in local communities.





5. Promotion measures of the industrial waste management industry

5-1. Expectations for the development of the industrial waste management industry

- The industrial waste management industry is a **social infrastructure** that takes on a significant mission: to protect the environment, support the whole industry including the aterial industry, and help waste generators to fulfill their management responsibilities. It assumes the heavy responsibility of promoting proper treatment and building a sound material-cycle society. It is also required to play **new roles including the supply of circulative resources and renewable energy** while being active as a local industry.

Expectations for the development of the industrial waste management industry: Social infrastructure that supports people's lives

[1] Mission of industrial waste management businesses

- ◇ The industrial waste management industry is a social infrastructure that takes on a significant mission: to protect the environment, support the whole industry including the aterial industry, and plays **an important role for waste generators to fulfill their treatment responsibilities**. It is also responsible for the **promotion of proper management of waste and establishing a sound material-cycle society**.



[2] New roles required to play

- ◇ Businesses need to **establish themselves as environmental businesses** that supply circulative resources and renewable energy, **strengthen competitiveness as a growth industry** that will contribute to the expansion of Japan's GDP, and play a role as a **green innovation** promoter aiming to enhance resource productivity and the recycling rate.



[3] Presence as a local industry

- ◇ Unlike the manufacturing industry, which can improve productivity through production in the optimal location in or outside Japan for maximum efficiency, industrial waste maagement industry is a local industry that should seek coexistence by gaining the understanding of local residents. **Coexistence with the local communities is a requirement for existence**.
- ◇ It is desirable to **proactively disclose information** and engage in **social contribution activities** as a member of the local community, while **reducing the potential environmental load** generated by the accumulation of vehicles and operation management of the treatment facilities.

5-2. Pillars of promotion measures to support the industrial waste management industry

- The industrial waste management industry is indispensable for ensuring the livelihood of people and the development of the local economy. The pillars of promotion measures to support it include: [1] building excellent advanced companies, [2] raising the awareness of waste generators, [3] establishing a system to support motivated companies, and [4] PR and dissemination of information on best practices. These pillars should be achieved with the cooperation of all stakeholders.

Business strategy for industrial waste management businesses that aims to achieve both growth and raising the level



Pillars of promotion measures to support the industrial waste management industry as a social infrastructure

[1] Building excellent advanced companies

[2] Raising the awareness of waste generators

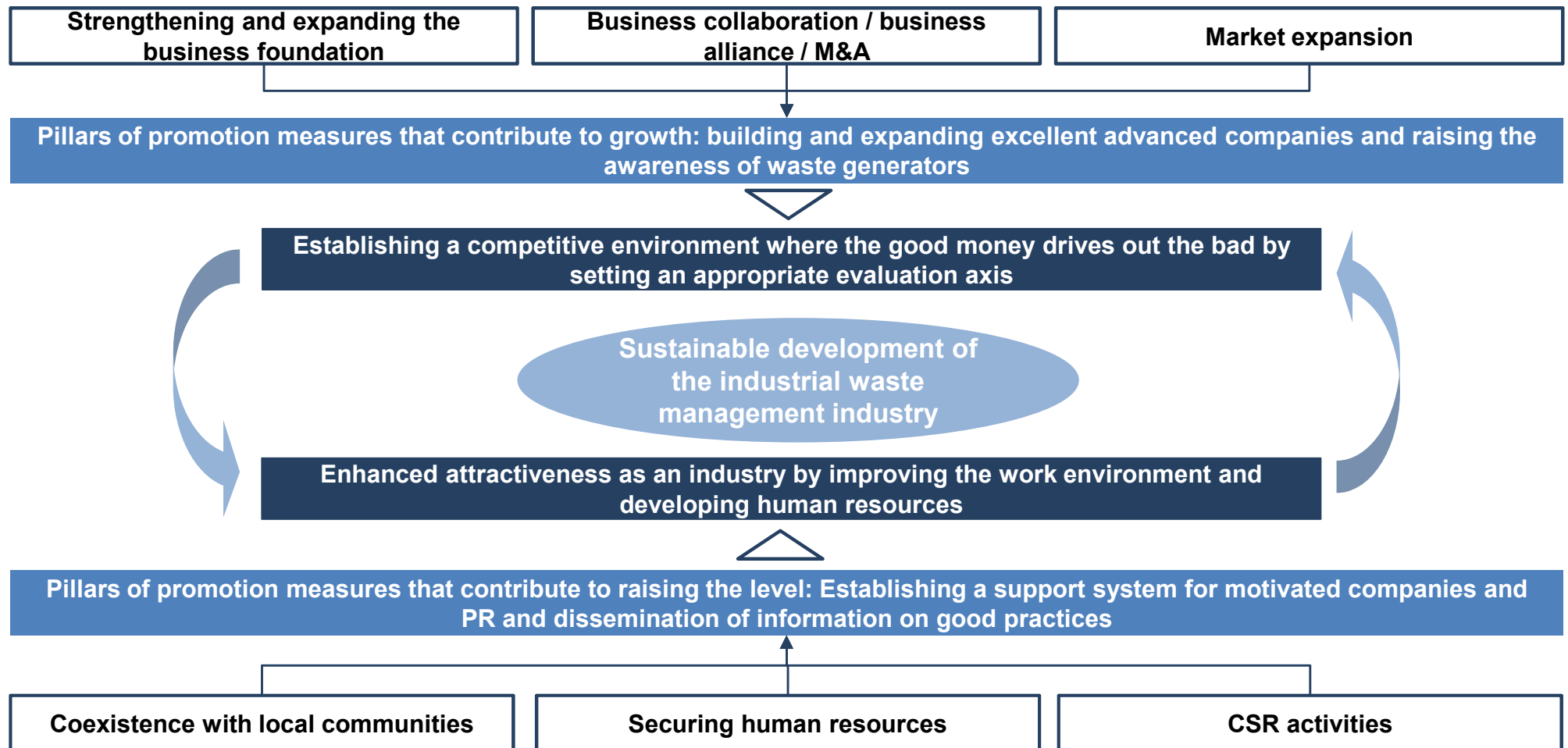
[3] Establishing a support system for motivated companies

[4] PR and dissemination of information on best practices

Ensuring a healthy and cultural life for the entire nation and developing local economies

5-3. Toward the sustainable development of the industrial waste management industry

- To support the growth of the industrial waste management businesses, it is necessary to **establish a competitive environment where the good money drives out the bad by setting an appropriate evaluation axis** through building and expanding excellent advanced companies, and by raising the awareness of waste generators. Furthermore, the industrial waste management industry can achieve sustainable growth if it can **enhance its attractiveness as an industry by improving the work environment, developing human resources** through establishing a support system for motivated companies, and PR and dissemination of information on good practices.



5-4-1. Recommendations on promotion measures for the national government

		Pillars of the promotion policy	Details of the policy	Roles of the national government
Promotion measures of the industrial waste management industry	Promotion measures for growth	Building excellent advanced companies	[1] Strengthening and effectively using the certification system for excellent industrial waste management companies	<ul style="list-style-type: none"> • Drastic rethink including increasing advantages of acquiring certification
			[2] Dissemination of electronic manifests	<ul style="list-style-type: none"> • Improving convenience of the system and enhancing functions • Expanding PR activities targeting waste generators and management companies • Obligation based on the management situation • Consideration of the use of electronic manifest information including integration with paper manifest information as well as the problems of, and support measures for, local governments establishing an electronic application system
			[3] Support for creating advanced projects	<ul style="list-style-type: none"> • Development of a system that contributes to the establishment of a hazardous substance management system and the promotion of optimizing transboundary movement of waste • Support for the introduction of advanced technology, state-of-the-art technology (including IoT/AI) and business models • Building a framework for standards and certification aimed at promoting cyclical use of recycled products • Support for capacity building and financing through cooperation between governments in overseas expansion and international cooperation • Promotion of environmentally rated loan programs for capital investment and technology development aimed at promoting the effective use of resources and reducing GHG emissions
			[4] Support for promoting the reduction of GHG emissions in the waste sector	<ul style="list-style-type: none"> • Financial support for efforts to reduce GHG emissions through energy saving and renewable energy supply during the operation of waste treatment facilities and recycling facilities • Measures to reduce administrative burden when renewing facilities • Enriching statistical data
		Raising the awareness of waste generators	[5] Raising the awareness of waste generators	<ul style="list-style-type: none"> • Making the responsibility of the waste generators widely known
	Promotion measures to raise the level	Establishing a support system for motivated companies	[6] Enhancing the efficiency of permission procedures	<ul style="list-style-type: none"> • Providing opportunities to exchange opinions with local governments and businesses • Promoting the use of electronic applications
			[7] Support for improving skills related to waste treatment and recycling	<ul style="list-style-type: none"> • Support for technology improvement in the waste management businesses
			[8] Promotion of environmentally friendly contracts and procurement	<ul style="list-style-type: none"> • Promoting the introduction of environmentally-conscious contracts with businesses certified as excellent in public procurement • Promoting the establishment and use of quality standards for recycled materials in collaboration with waste management businesses and the users of recycled materials
			[9] Securing and training human resources	<ul style="list-style-type: none"> • Support for human resource development by industry groups
		PR and disseminating information on best practices	[11] Disseminating information on best practices	<ul style="list-style-type: none"> • Providing incentives for waste management businesses using the award system and dissemination of information through the media • Enhancing PR activities by using pamphlets and websites, organizing events, etc.

5-4-2. Recommendations on promotion measures for local governments

		Pillars of the promotion policy	Details of the policy	Roles of local governments
Promotion measures of the industrial waste management industry	Promotion measures for growth	Building excellent advanced companies	[1] Strengthening and effectively using the certification system for excellent industrial waste management companies	<ul style="list-style-type: none"> • Appropriate operation of the certification system • PR activities related to the certification system
			[2] Dissemination of electronic manifests	<ul style="list-style-type: none"> • Expanding PR activities targeting waste generators and management companies • Developing procedures for submitting the electronic data of status reports on issuance of paper manifests
			[3] Support for creating advanced projects	<ul style="list-style-type: none"> • Support through institutional and operational considerations for the introduction of advanced technologies and business models • Support for capacity building and financing through cooperation between local governments in overseas expansion and international cooperation
			[4] Support for promoting the reduction of GHG emissions in the waste sector	<ul style="list-style-type: none"> • Utilizing industrial waste tax revenue to reduce GHG emissions
		Raising the awareness of waste generators	[5] Raising the awareness of waste generators	<ul style="list-style-type: none"> • Improving instructions to waste generators
	Promotion measures to raise the level	Establishing a support system for motivated companies	[6] Enhancing the efficiency of permission procedures	<ul style="list-style-type: none"> • Clarifying the interpretation of regulatory operations through dialogue with the national government and waste management businesses • Promoting the use of electronic applications
			[7] Support for improving skills related to waste treatment and recycling	<ul style="list-style-type: none"> • Cooperation by industry groups to support enhancing technical skills
			[8] Promotion of environmentally friendly contracts and procurement	<ul style="list-style-type: none"> • Promoting the introduction of environmentally-conscious contracts with businesses certified as excellent in public procurement • Promoting the establishment and use of quality standards for recycled materials in collaboration with waste management businesses and the users of recycled materials
			[9] Securing and training human resources	<ul style="list-style-type: none"> • Support for human resource development by industry groups
			[10] Support for promoting coexistence with local communities	<ul style="list-style-type: none"> • Concluding disaster waste management agreements with industrial waste treatment companies and industry groups to be prepared for large-scale disasters
		PR and disseminating information on best practices	[12] Support for contributions to local communities by industrial waste management businesses	<ul style="list-style-type: none"> • Utilizing industrial waste treatment facilities in the region as a place for environmental education and learning

5-4-3. Recommendations on promotion measures for industrial waste management organizations

		Pillars of the promotion policy	Details of the policy	Roles of industrial waste management organizations
Promotion measures of the industrial waste management industry	Promotion measures for growth	Building excellent advanced companies	[1] Strengthening and effectively using the certification system for excellent industrial waste management companies	<ul style="list-style-type: none"> Active PR activities to increase certified businesses
			[2] Dissemination of electronic manifests	<ul style="list-style-type: none"> Expanding PR activities targeting waste management companies and waste generators
			[3] Support for creating advanced projects	<ul style="list-style-type: none"> Establishing a system to accept overseas human resources for training in Japan aimed at international cooperation
			[4] Support for promoting the reduction of GHG emissions in the waste sector	<ul style="list-style-type: none"> setting low-carbon goals for the industry and creating a concrete roadmap to achieve the goals
	Promotion measures to raise the level	Raising the awareness of waste generators	[5] Raising the awareness of waste generators	<ul style="list-style-type: none"> PR activities to make the responsibility of the waste generators widely acknowledged
		Establishing a support system for motivated companies	[7] Support for improving skills related to waste treatment and recycling	<ul style="list-style-type: none"> Support for the dissemination and expansion of technologies and equipment to improve work efficiency and thorough occupational safety management
			[9] Securing and training human resources	<ul style="list-style-type: none"> Enhancing human resource development programs and expansion of the applicable human resources
			[10] Support for promoting coexistence with local communities	<ul style="list-style-type: none"> Concluding disaster waste management agreements with local governments to be prepared for large-scale disasters
		PR and disseminating information on best practices	[11] Disseminating information on best practices	<ul style="list-style-type: none"> Both offering incentives for waste management businesses by establishing an award system and disseminating information through the media Enhancing PR activities by using pamphlets and websites, organizing events, etc.
			[12] Support for contributions to local communities by industrial waste management businesses	<ul style="list-style-type: none"> Introducing activities including environmental events organized by industrial waste management businesses

5-4-4. Recommendations on promotion measures for waste generators and local residents

		Pillars of the promotion policy	Details of the policy	Roles of waste generators	Roles of local residents
Promotion measures of the industrial waste management industry	Promotion measures for growth	Building excellent advanced companies	[1] Strengthening and effectively using the certification system for excellent industrial waste management companies	<ul style="list-style-type: none"> • Prioritized selection of certified businesses 	—
			[2] Dissemination of electronic manifests	<ul style="list-style-type: none"> • Promoting utilization as a means to ensure efficient fulfillment of the responsibility of the waste generators 	—
			[3] Support for creating advanced projects	<ul style="list-style-type: none"> • Collaboration with waste management businesses as the bearer of proper waste treatment and sophistication of recycling 	—
			[4] Support for promoting the reduction of GHG emissions in the waste sector	<ul style="list-style-type: none"> • Selecting businesses that also contribute to the promotion of generators' GHG emissions 	—
		Raising the awareness of waste generators	[5] Raising the awareness of waste generators	<ul style="list-style-type: none"> • Selecting appropriate businesses based on the evaluation of added value, such as promotion of resource circulation and reduction of GHG emissions • Active disclosure of information related to waste treatment and recycling in environmental reports and CSR reports 	—
	Promotion measures to raise the level	Establishing a support system for motivated companies	[6] Enhancing the efficiency of permission procedures	—	—
			[8] Promotion of environmentally friendly contracts and procurement	<ul style="list-style-type: none"> • Prioritized selection of certified businesses • Priority procurement of recycled products, etc. 	<ul style="list-style-type: none"> • Priority procurement of recycled products, etc.
			[10] Support for promoting coexistence with local communities	<ul style="list-style-type: none"> • Recognition of the effect of community involvement achieved through the promotion of environmental education by human resource development in the local communities 	—
		PR and disseminating information on best practices	[12] Support for contributions to local communities by industrial waste management businesses	<ul style="list-style-type: none"> • Building communication with waste management businesses • Participation in education and events on the environment 	<ul style="list-style-type: none"> • Building communication with waste management businesses • Participation in education and events on the environment