LIFECYCLE REFRIGERENT
MANAGEMENT WORKSHOP
BANGKOK

SESSION 2:

COUNTRY EXPERIENCES WITH LIFE-CYCLE REFRIGERANT MANAGEMENT

Country: JAPAN

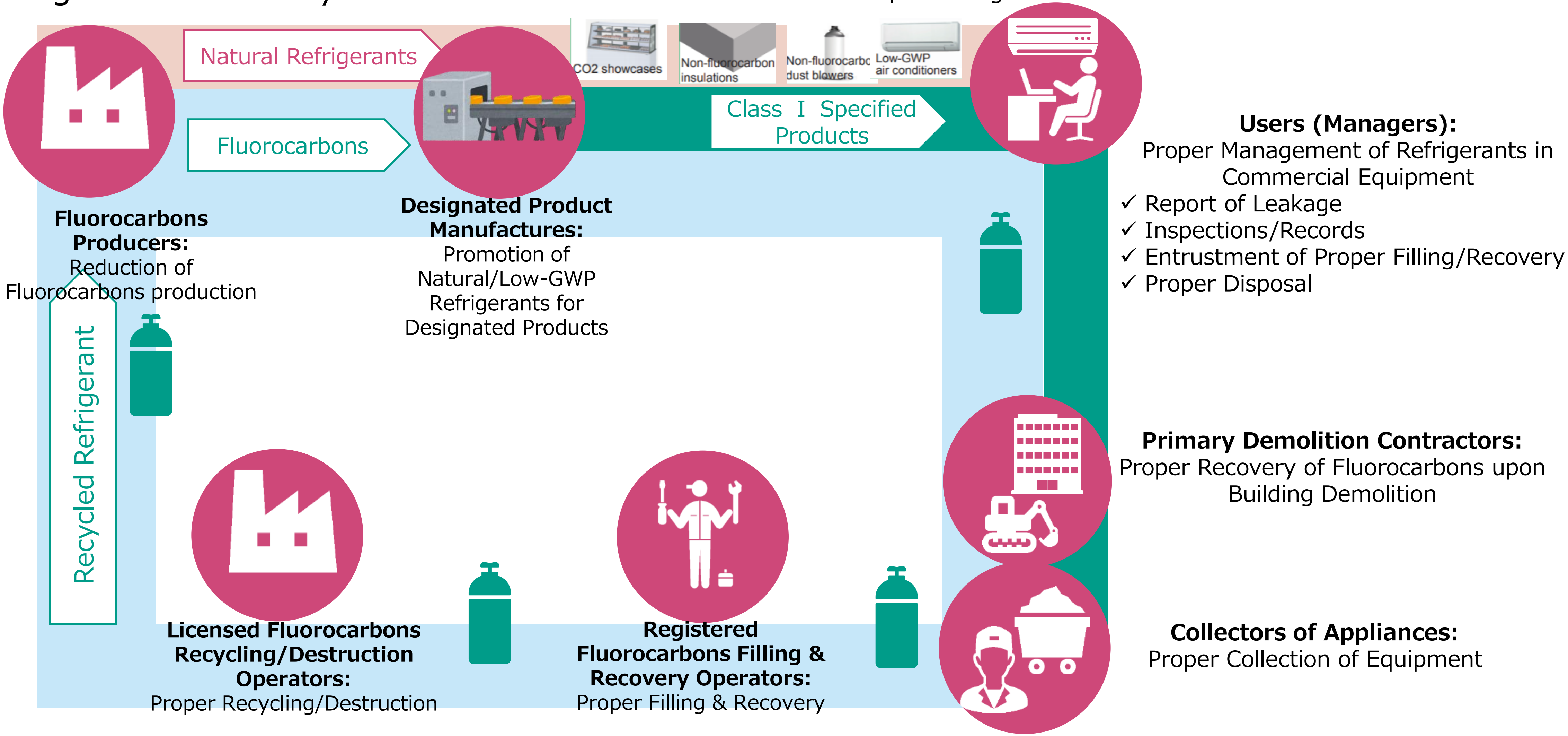
REPRESENTATIVE NAME: Teruo KOGU
TITLE: LRM Policy in JAPAN

UN environment programme | ozone secretariat

Vienna Convention
MONTREAL PROTOCOL

Legal Framework for LRM

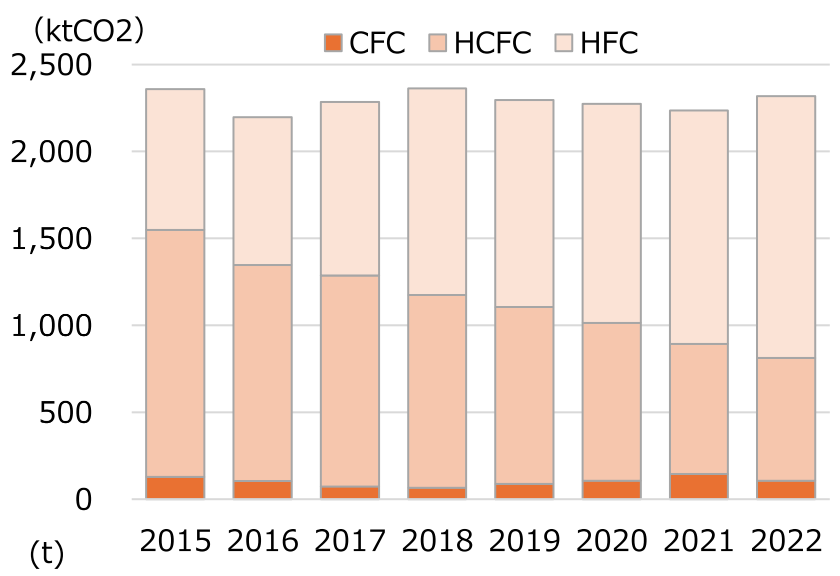
The Fluorocarbon Emissions Control Act* controls the emissions from commercial equipment throughout their life cycle. *Official name: Act on Rational Use and Proper Management of Fluorocarbons



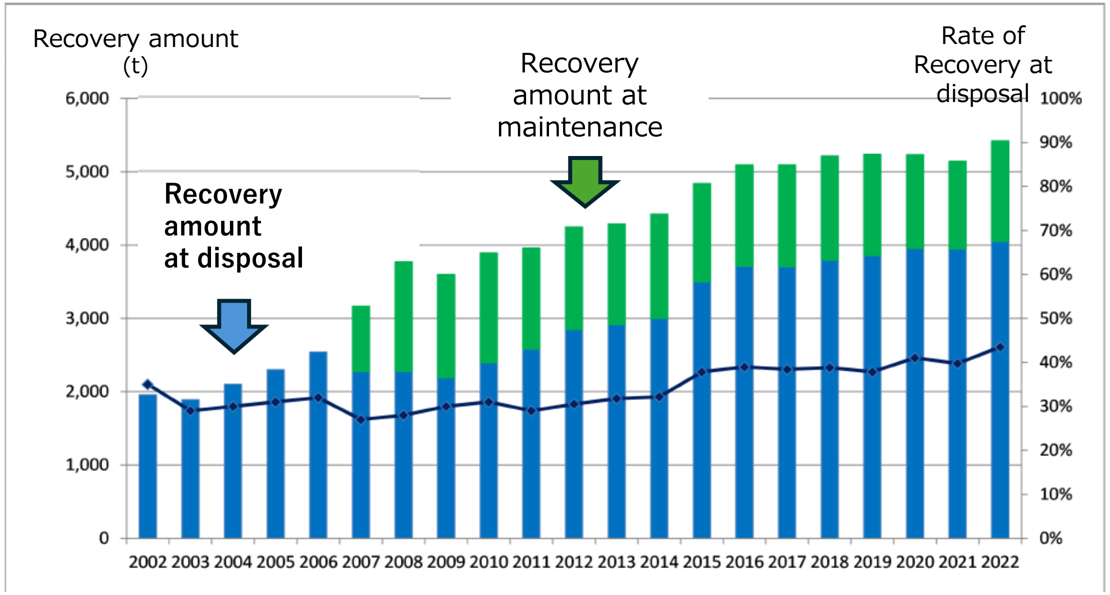
(Note) Fluorocarbons in household appliances and automobile AC are recovered under the scheme of the Home Appliance Recycling Act and the End-of-life Automobile Recycling Act respectively.

Measurable Outcomes

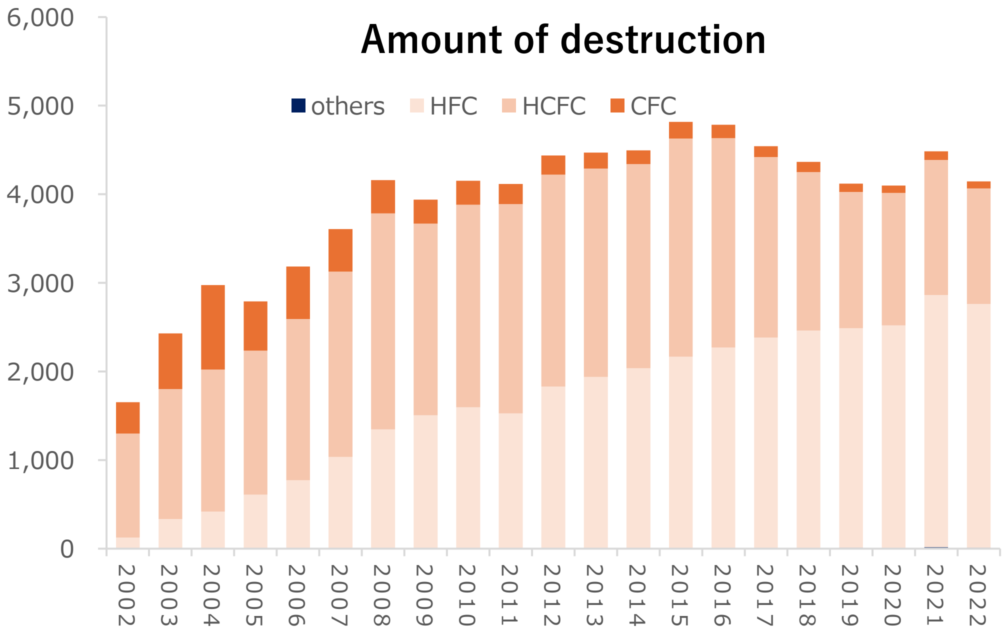
Amount of reported leakage in use



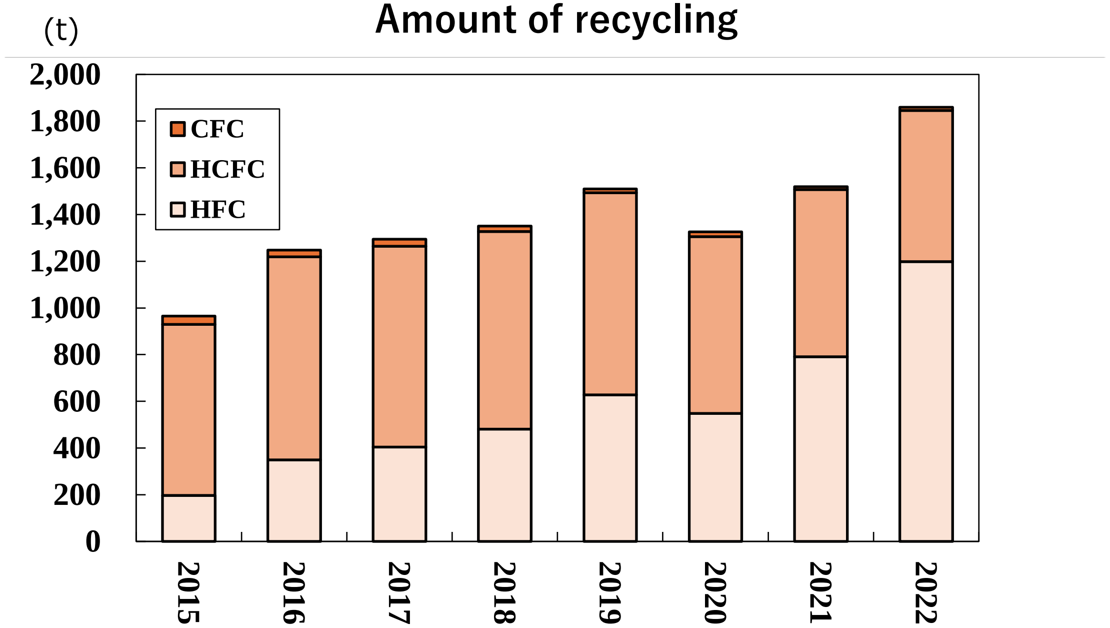
Recovery amount and rate of recovery at disposal



Amount of destruction



Amount of recycling



Successes and Challenges

Successes

- Clear and legally defined responsibilities of stakeholders and directions for their actions
- Close collaboration among governments (national, local) and industry organizations to enhance the compliance

  (ex. dissemination of the laws, training session for technicians)
- Collaboration with other laws

  (ex. on-site inspection of demolition sites by using demolition notices by the Construction Material Recycling Act)
- Identification of issues and improvements based on data collected from various stakeholders

Challenges

- Detection of illegal release of fluorocarbons
- Raising awareness about the laws of numerous small business owners in various industries
- Collection of accurate data

Thank you!

Contact details: Teruo KOGU

Office of Fluorocarbons Control Policy

Global Environment Bureau

Ministry of the Environment, Japan

UN environment programme | ozone secretariat

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History of fluorocarbon control policy in Japan

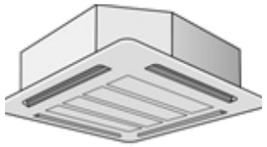
- Laws have been developed in line with international agreements, such as the Montreal Protocol and its amendments.
- Laws have been gradually strengthened in a step-by-step approach, taking a PDCA cycle.

1987
Montreal Protocol

2016
Kigali Amendment

1988
Ozone Layer Protection Act

2018
Revised Ozone Layer Protection Act



2001
Fluorocarbon Recovery and Destruction Act

2013
Fluorocarbon Emissions Control Act

2019
Revised Fluorocarbon Emissions Control Act

1998
Home Appliance Recycling Act

2002
End-of-Life Automobile Recycling Act

Fluorocarbon Emissions Control Act
~Leakage prevention in use by equipment managers~

環境省

In ordinary times

①Installation in appropriate locations

②Inspection of equipment

Inspection category	Equipment category		Inspection frequency
Simple inspections	All class 1 specified product		At least once every 3 months*
Periodic inspections	Refrigeration equipment and freezer equipment	Equipment of 7.5kW or more	At least once per year
	Air conditioners	Equipment of 50kW or more	At least once per year
		Equipment of at least 7.5kW but less than 50kW	At least once every 3 years

*A constant monitoring system can be substituted for "simple inspections"

Response when leakage is detected

③Prohibition of filling without repair

④Keeping records on inspection history

Fluorocarbon Emissions Control Act
~Fluorocarbon Leakage Amount Reporting System~

■ If the total annual amount of leaked fluorocarbons during use exceeds 1,000t-CO_2 eq., the business owner must report it to the national government.

Filling & Recovery Operator

Business Owner (Equipment Manager)

Information Processing Center

Annual fluorocarbon leakage amount must be calculated by all business owners in Japan.

(A) Amount of Filling during maintenance

(A)-(B) Leakage amount | (B) Amount of Recovery during maintenance

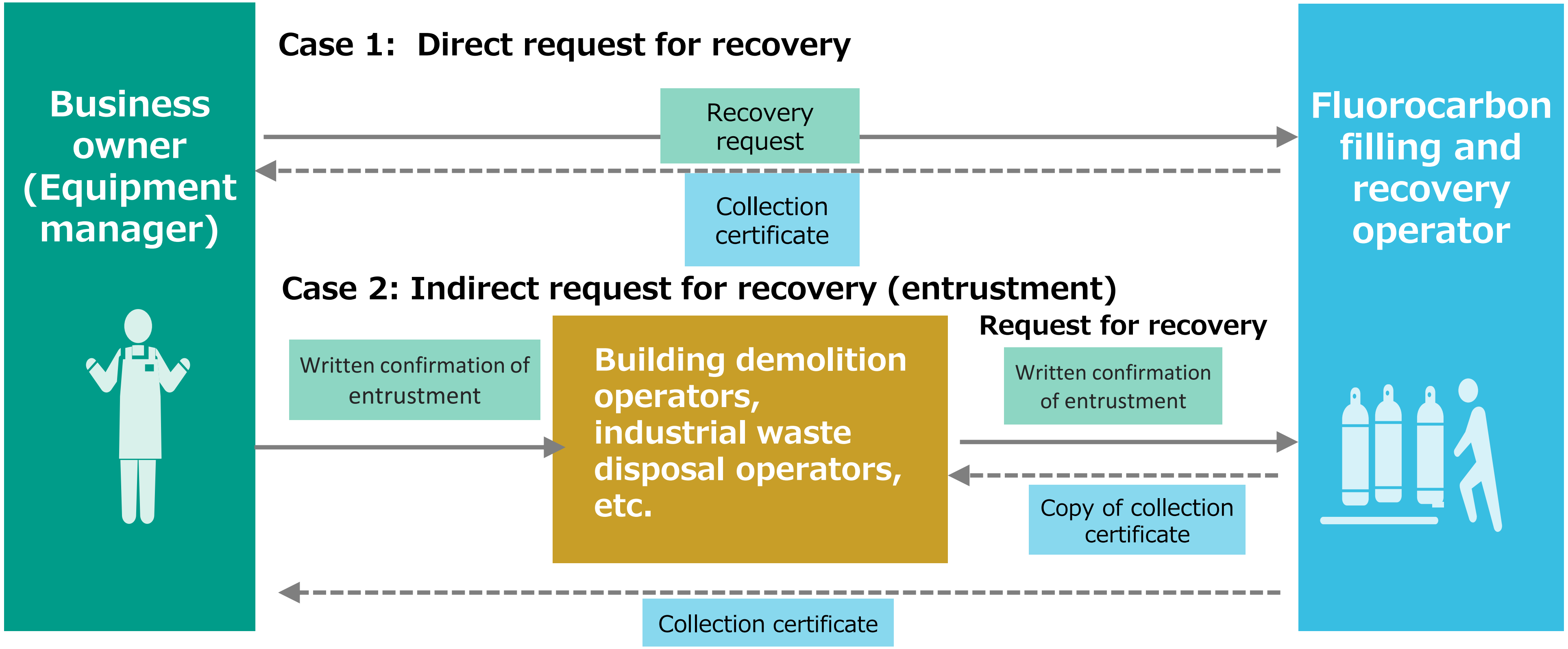
If total leakage amount > 1,000t-CO_2 eq.

The amount must be reported

National Government

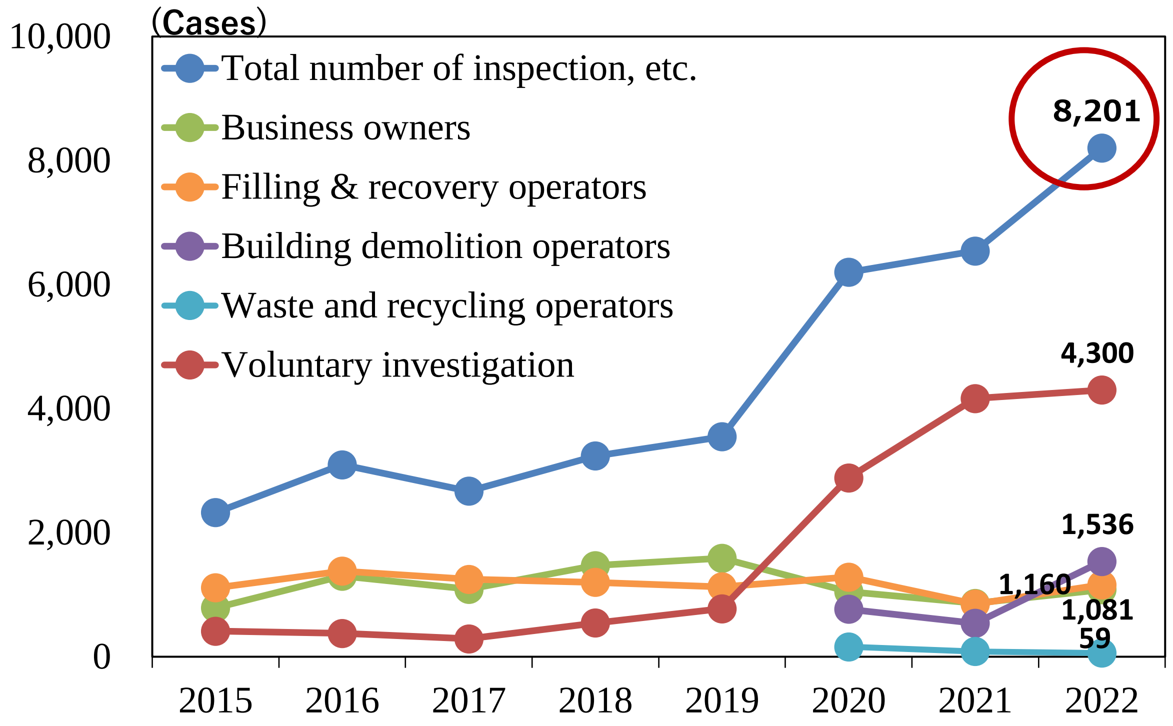
Fluorocarbon Emissions Control Act
~Fluorocarbon recovery process at equipment disposal~

- Under the Fluorocarbon Emissions Control Act, a business owner must request a certified fluorocarbon recovery operator to recover remaining fluorocarbons in equipment at disposal.
- To manage this recovery process properly, the Act obligates related business operators to issue and retain documents (recovery request, collection certificate, etc.).



Fluorocarbon Emissions Control Act
~Enforcement by prefectural governments and the police~

- ■ The prefectural governments have been conducting on-site inspections to inform related business operators of the Fluorocarbon Emissions Control Act and give guidance, etc.
- ■ The number of on-site inspections has been increasing year by year.
- ■ The police department arrested scrap metal dealers in violation of the Act in 2022.



Total number of on-site inspections, etc.

Illegal disposal and released fluorocarbons

Source: Metropolitan Police Department

Home Appliance Recycling Act

Appliances to be recycled:
Air Conditioner, Refrigerator/Freezer,
Washing Machine/Clothes Dryer, TV

(promulgated in June 1998, fully enforced in April 2001)

Discharge

Dischargers

1) Pass over the used appliances in a proper manner
2) Pay the fees for the appliances to be collected, transported and recycled etc..

Collection/Transport

Retailers

Obligation to collect

1) Appliances they sold in the past and subject to the Act
2) Used appliances which a discharger brought in upon purchasing a new item

Obligation to pass over

Municipalities etc.

Designated Locations for Collection (Designation done by manufacturers etc.)

Recycling etc.

Manufacturers/Importers

Obligation to collect

Items manufactured or imported by themselves in the past and subject to the Act

Obligation to recycle etc.

Fluorocarbons need to be recovered from appliances

Designated Corporations

1) When the responsible does not exist
2) When entrusted by the small and medium-sized businesses

Municipalities etc.

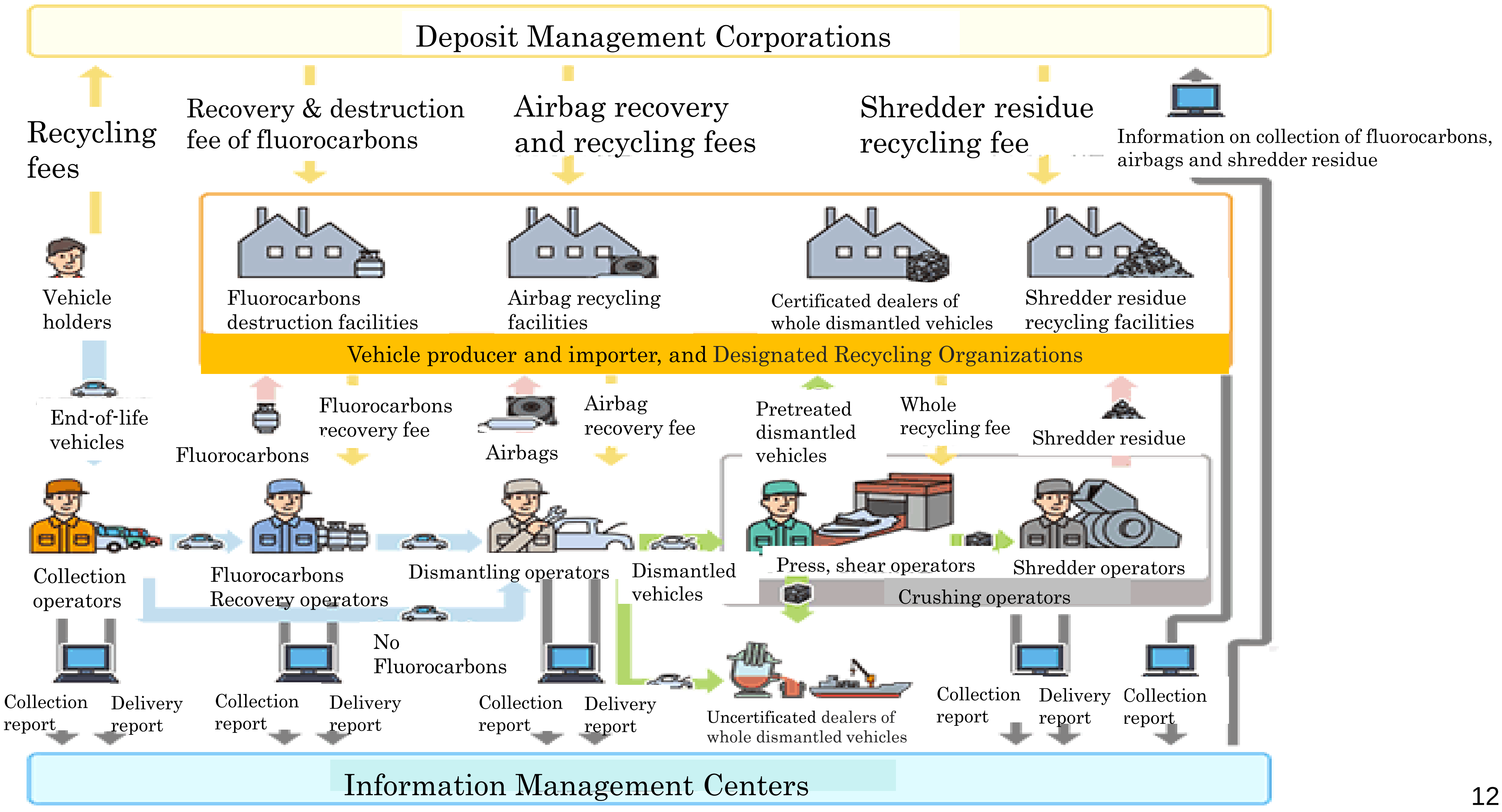
Assure reliable transport by the manifest (recycling ticket) system

Issue and Return the manifests

Monitor the status of enforcement

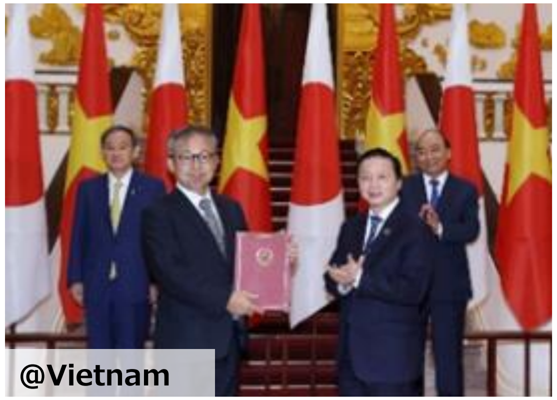
End-of-Life Automobile Recycling Act

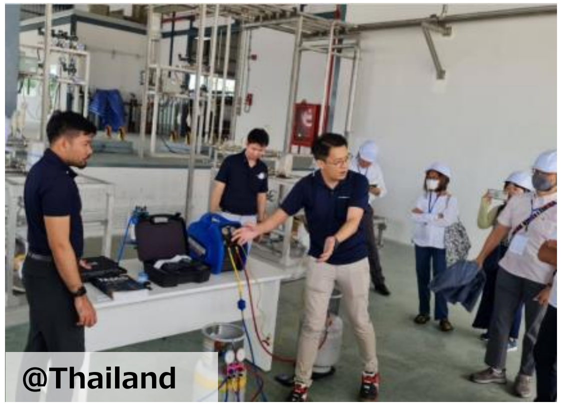
(promulgated in July 2002, fully enforced in January 2005)



Fluorocarbon Initiative (IFL)

Japan has been promoting LRM in developing countries through the Initiative on Fluorocarbons Life Cycle Management (IFL) since 2019.





- Organizing seminars for knowledge sharing by policy makers and practitioners
- Disseminating good practice on mitigation policies and measures
- Supporting legislation on life cycle management of fluorocarbons
- Training for proper use of recovery machines etc.

Visit our booth and join our side event on 31 October!

Check the new IFL website, too!

https://www.ifl.go.jp/