



Japan's Life Cycle Management Approach towards 2050 Carbon Neutrality Goal

July 3

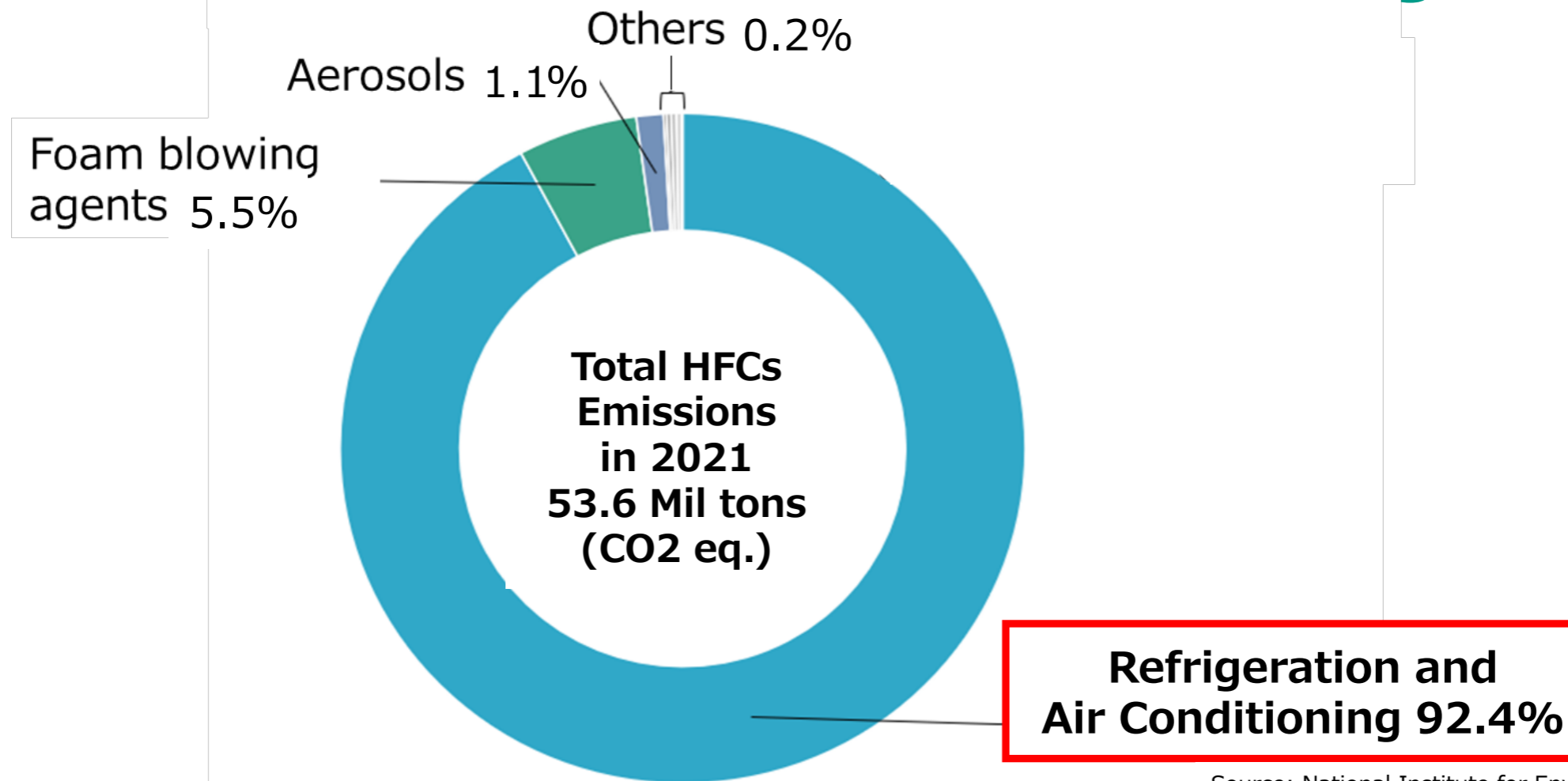
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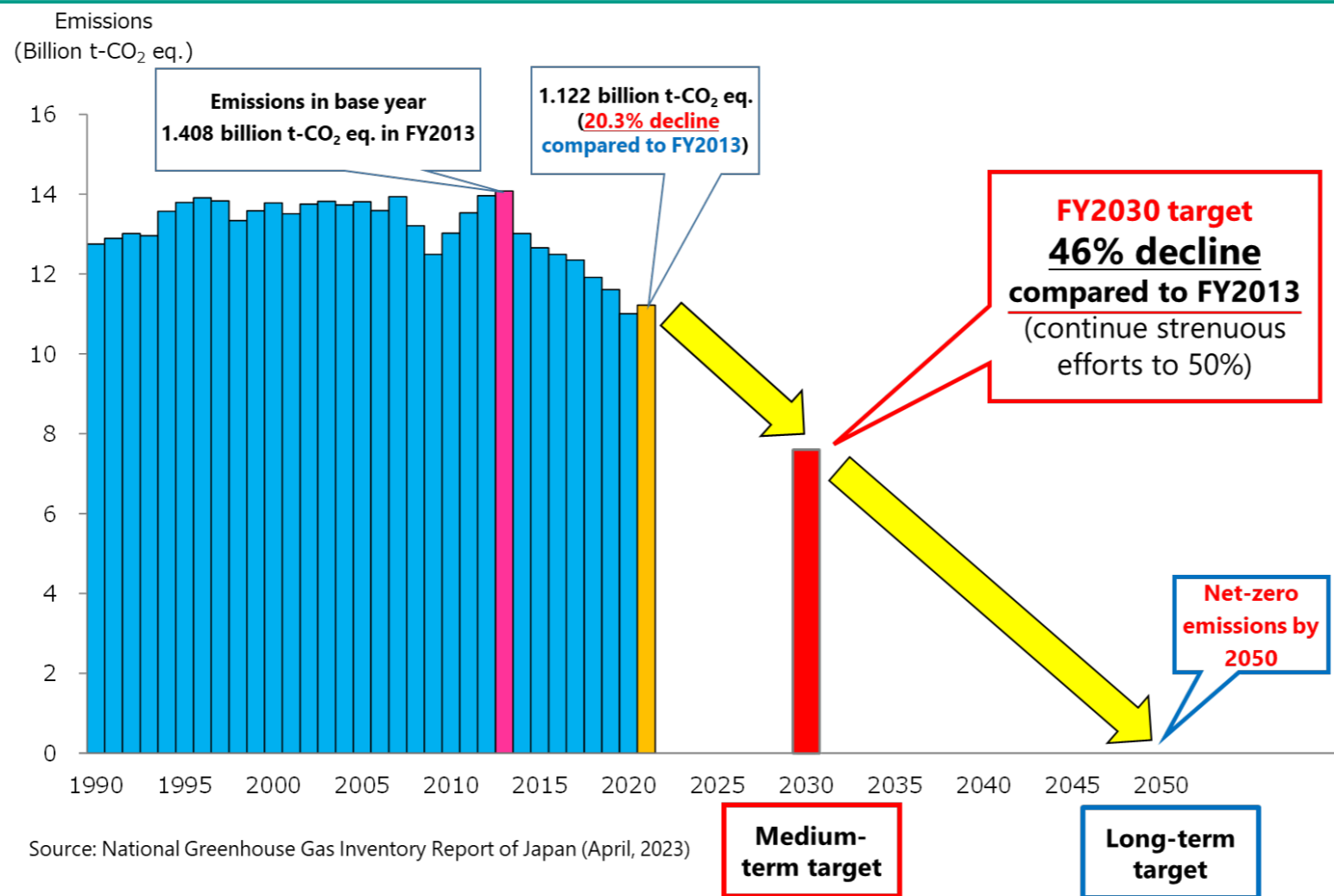
HFCs emission in Japan

- **Growing HFCs emissions trend**
- **4.6% of Japan's total GHGs emission in 2021**
- **92% of HFCs emissions come from Refrigeration & AC**



Japan's NDC and Long-term Strategy

- Japan aims to reduce its greenhouse gas emissions **by 46 percent in fiscal year 2030** from its fiscal year 2013 levels, setting an ambitious target which is aligned **with the long-term goal of achieving net-zero by 2050**.








HFCs emissions target in Japan's LTS and NDC



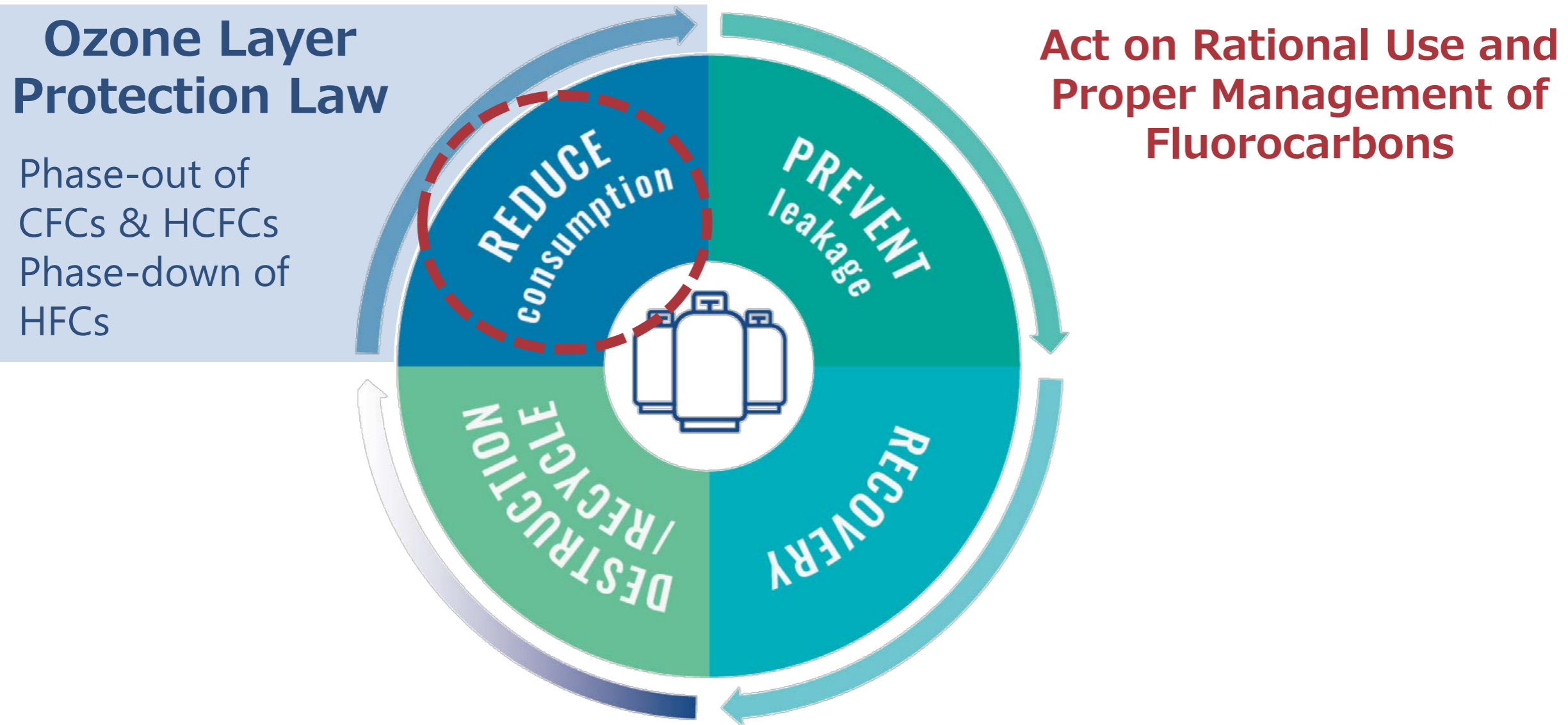
- **55% reduction of HFCs emissions in 2030 compared to 2013 level** (from Japan's revised NDC)
- **CN by 2050 in the HFCs area through promoting its life cycle management and its phase-down**

Measures to achieve Carbon Neutrality in the field of HFCs

-  ◆ Steady implementation of the Kigali Amendment to the Montreal Protocol
-  ◆ Promotion of RAC equipment using green refrigerants
-  ◆ Leakage prevention of fluorocarbons in RAC equipment usage
-  ◆ Recovery and proper management of fluorocarbons from RAC equipment
-  ◆ International cooperation on fluorocarbons reduction

HFCs Regulations in Japan

- Regulating HFCs from upstream to downstream, life cycle management of HFCs, is effective in achieving its smooth phase-down and emission reduction.

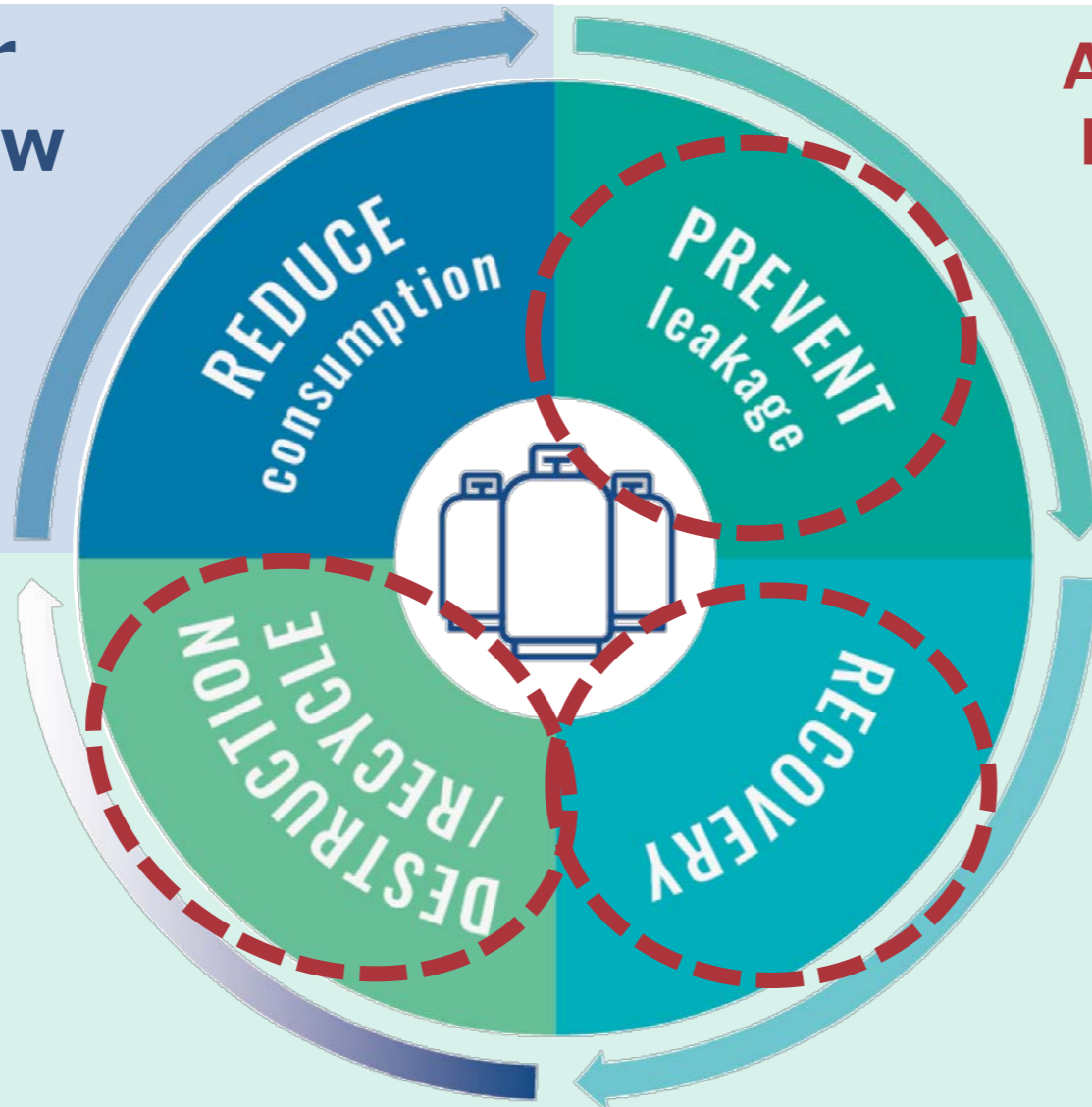


HFCs Regulations in Japan

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Ozone Layer Protection Law

Phase-out of CFCs & HCFCs
Phase-down of HFCs



Act on Rational Use and Proper Management of Fluorocarbons



RAC Users etc.:

Proper Management of Refrigerants in RAC
✓ Report of Leakage
✓ Inspection/ Log Book
✓ Proper Disposal



Registered Filling & Recovery Operators:

Proper Filling & Recovery of Fluorocarbons



Approved Recycling/ Destruction Operators:

Proper Recycling/ Destruction of Fluorocarbons

Life Cycle Management of Fluorocarbons



1 REDUCE consumption

- Phasing down the production and consumption of HFCs.
- Managing the production and import/export of refrigerants.
- Promoting refrigerants transformation to low-GWP/natural refrigerants etc.

2 PREVENT leakage

- Preventing refrigerant leakage from equipment in use.
- Mandating leakage check-up/logging/reporting.
- Capacity building on appropriate technique/technology for servicing etc.

3 RECOVERY

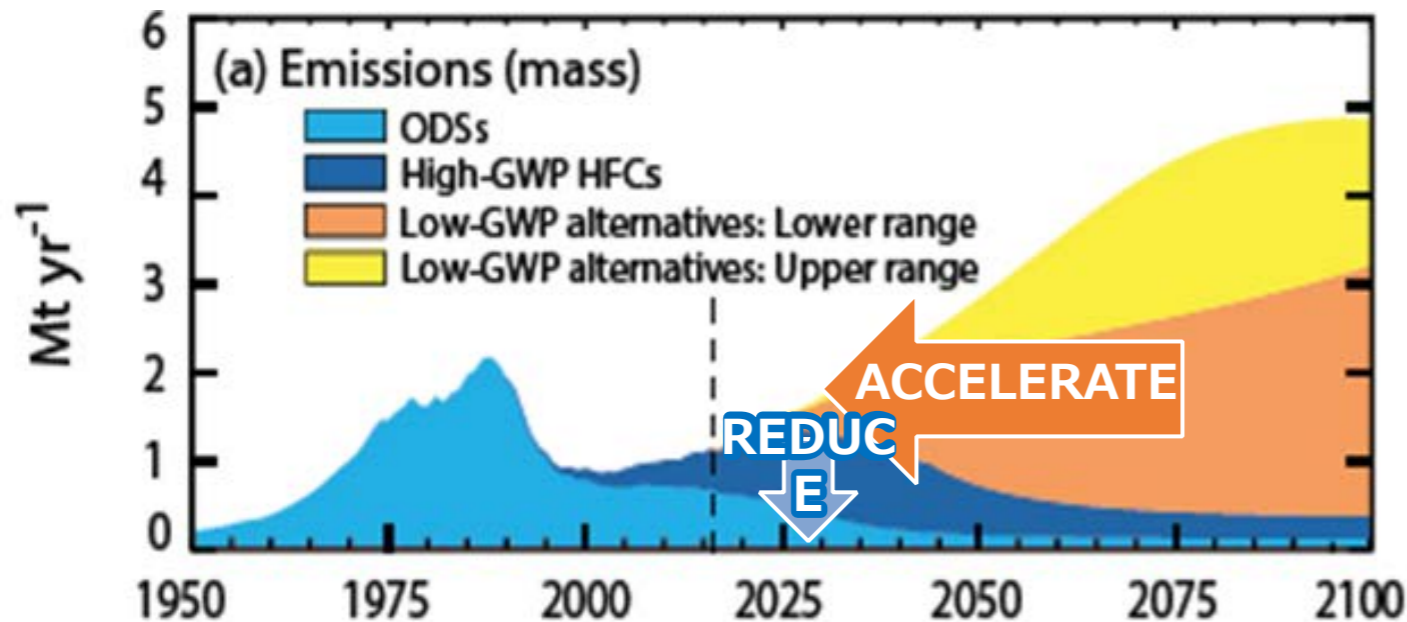
- Mandating the recovery of refrigerants from equipment at disposal stage.
- Capacity building on appropriate technique/technology for recovery.
- Institutionalizing beneficiary payment system for recovery and destruction/recycle etc.

4 DESTRUCTION / RECYCLE

- Destroying or recycling recovered refrigerants.
- Disseminating appropriate technique/technology for destruction/recycle etc.

Importance of addressing the fluorocarbons banks

- Fluorocarbons control is important for both **ozone layer protection** and **climate change mitigation**
- **Refrigerants demand** is expected to **increase dramatically** as the demand for cooling rises.
- **Even with the production and consumption control of HFCs under the Kigali Amendment, the HFCs emission is expected to increase approx. 2 billion t-CO₂e** (WMO/UNEP2018).
- **A clear need exists to address fluorocarbons emissions comprehensively**, given the exponentially growing volume of HFCs and remaining ODSs.
- Japan-led **initiative on Fluorocarbons Life Cycle Management (IFL)** is actively working on to **promote awareness on the importance on the refrigerant life cycle management**. The IFL also aims to facilitate **innovation and mutual collaborations** among its partners.

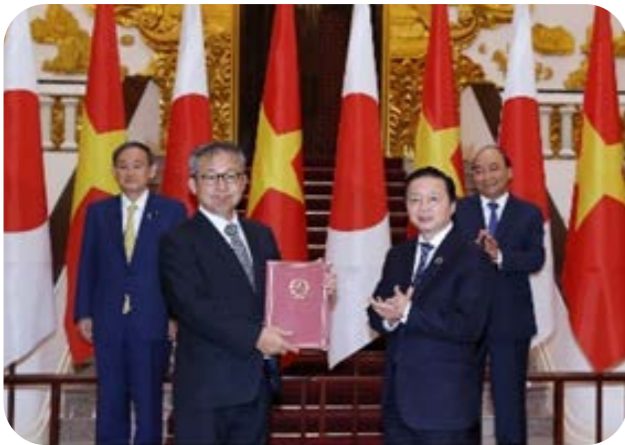


Source:
Scientific
Assessment of
Ozone Depletion:
2018 (WMO, 2018)



**IFL launching ceremony at
UNFCCC COP25**

■ IFL promotes the **global awareness, policy, technology, & capacity building**



Cooperation on strengthening policy and measures



Capacity building trainings



JCM projects on F-gas destruction



Good practice portfolio for policy makers

2022



Outreach & Publication

1. Mitigation ambition and transparency



- NDC and GHGs inventory development regarding HFCs emission

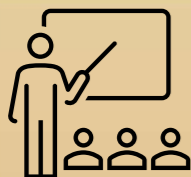
2. Legislation and policy development



- Institutionalizing F-gas Life cycle management
- Demo project on HFCs tracking system



INITIATIVE ON
FLUOROCARBONS
LIFE CYCLE
MANAGEMENT



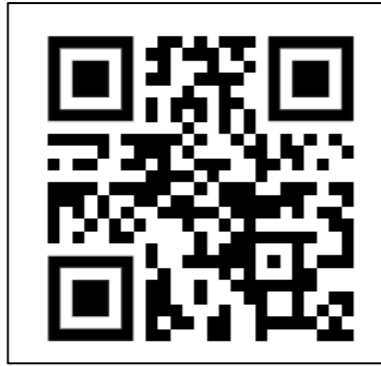
3. Capacity development and investment support

- Online/Offline training
- HFC recovery guideline
- F-gas destruction project under JCM scheme



4. Outreach & awareness raising

- Workshops and seminars
- Publication



Thank you very much!

Visit here for more information on the Initiative!

http://www.env.go.jp/en/earth/ozone/fluorocarbon_initiative/index.html

<https://www.youtube.com/channel/UCtFtrM-SzUUI6r87heLK-gA/videos>