METI
Ministry of Economy, Trade and Industry

Overview of progress on Decommissioning and Fukushima reconstruction

September 2025

Ministry of Economy, Trade and Industry (METI)

Japan

Agenda

1. Progress of the Decommissioning of Fukushima Daiichi NPS

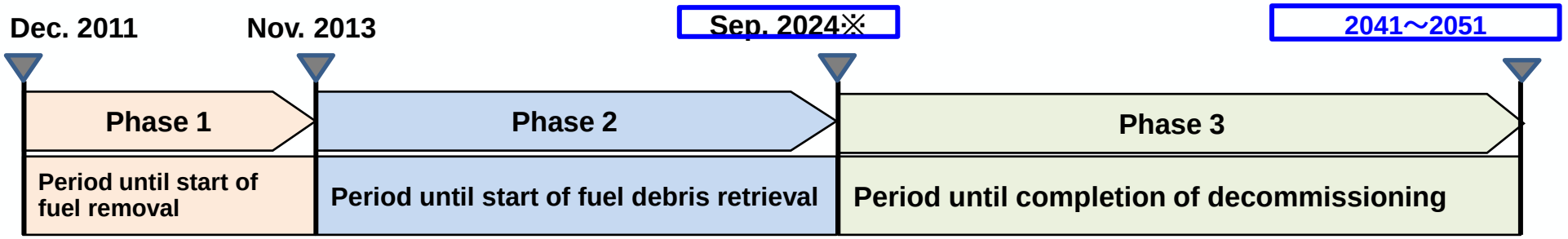
2. Reconstruction of Surrounding Area of Fukushima Daiichi NPS

Decommissioning

And

Reconstruction

Mid-and-Long-Term Roadmap towards the Decommissioning of FDNPS



※2024.9 Start of fuel debris retrieval and entering the Phase 3

- **Fukushima Daiichi Decommissioning is a continuous risk reduction activity** to protect the people and the environment from the risks associated with radioactive materials.
- **Safe and steady decommissioning is a prerequisite for reconstruction of Fukushima**.
- Basic principles:
  1. Reconstruction and Decommissioning : need to be conducted in parallel
  2. Ensuring transparency
  3. Continuous update of the roadmap
  4. Government's leading role in decommissioning

History of the decommissioning of the FDNPS

2011 2013 2015 2017 2019 2021 2023 2025

General

▼2011.3
Accident

▼2011.12
Establishment of the Roadmap
Achievement of cold-shutdown

▼2019.12
Roadmap 5th Revision

2024.9 ▼
Shifting to Phase 3 of Roadmap


Exhaust stack

Work condition

▼2018.5
General clothing workable area to 96%

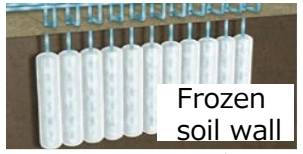
▼2020.5
Unit 1 & 2 common exhaust stack dismantled

Water treatment

▼2013. 3 Started test-running of ALPS

▼2013.12
Established Basic Policy on Contaminated water treatment

▼2023.8
Start of discharging ALPS treated water


Frozen soil wall

▼2015.9 Start of sub-drainage pumping and drainage

▼2016. 3
Start of freezing of frozen soil wall

2025.2▼
Dismantling of tanks in the J9 area started

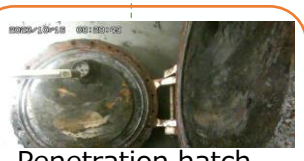
2025.9▼
12 tanks in the J9 area have been dismantled

Fuel removal

▼2014.12
Unit 4 fuel removal completed

▼2021.2
Unit 3 fuel removal completed


Unit 4 SFP


Penetration hatch opened

▼2019.2
Grasping sediment believed to be Fuel debris at Unit 2

▼2023.3
Survey inside Unit 1 pedestal

Fuel debris retrieval

▼2025.7
Announcement of the design deliberation for fuel debris retrieval method

2023.10▼
Unit 2 penetration hatch opened

2024.11 ▼
Completion of fuel debris retrieval(1st)

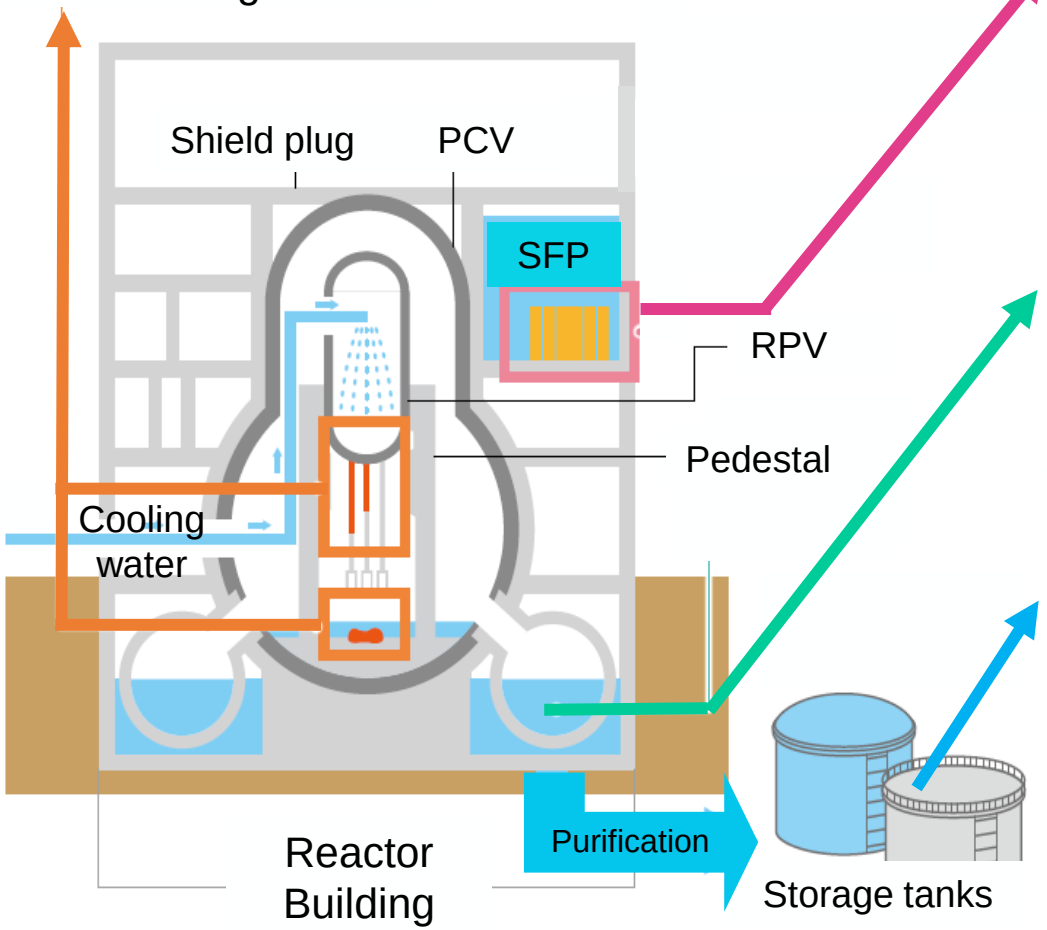
▼ 2025.4
Completion of fuel debris retrieval(2nd)

Update of the decommissioning of FDNPS

Fuel debris retrieval

- Trial retrievals at Unit 2 (Nov 2024, Apr 2025) collected totally 0.9g of samples (under analysis).
- Design deliberation for fuel debris retrieval method at Unit 3 (Jul 2025)

→ Continuing more detailed/broad studies



Spent Fuels removal

- Unit1, Unit2 : preparation works continues
- Unit3, Unit4 : fully completed

→ Removal to be totally completed by 2031

Contaminated water management

- 540 m^3/d (May 2014)→70 m^3/d (Fy2024) by frozen soil walls installation etc.

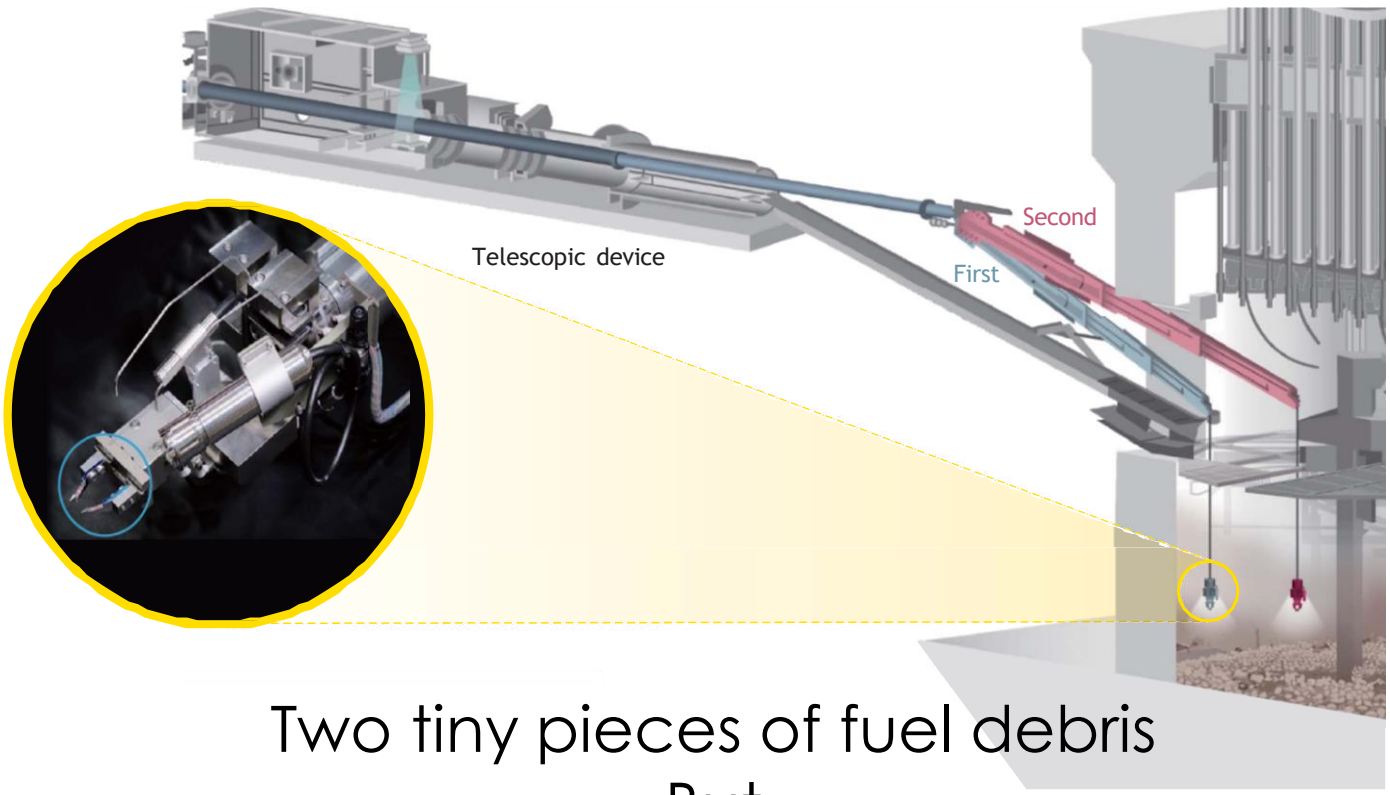
→ Extra measures to be taken to achieve the next goal (50 to 70 m^3/d by Fy2028)

ALPS treated water discharge

- Totally 14 batches of discharge completed since Aug 2023
- 12 empty tanks dismantled (as of Sep 3)

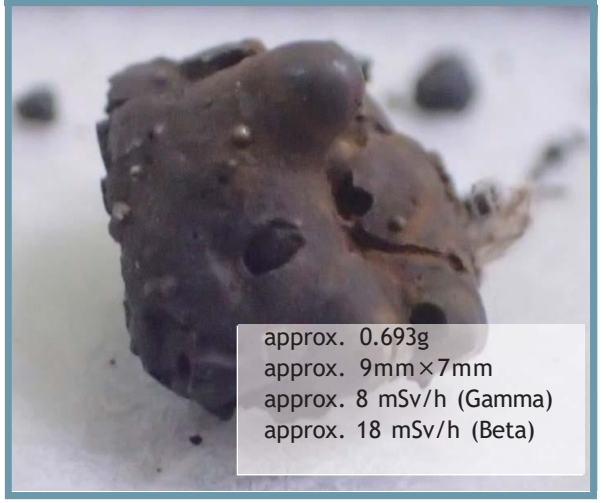
→ Continuing discharge in a safe/stable manner

Trial retrieval of fuel debris at Unit 2



Two tiny pieces of fuel debris
But
one giant leap for decommissioning!!

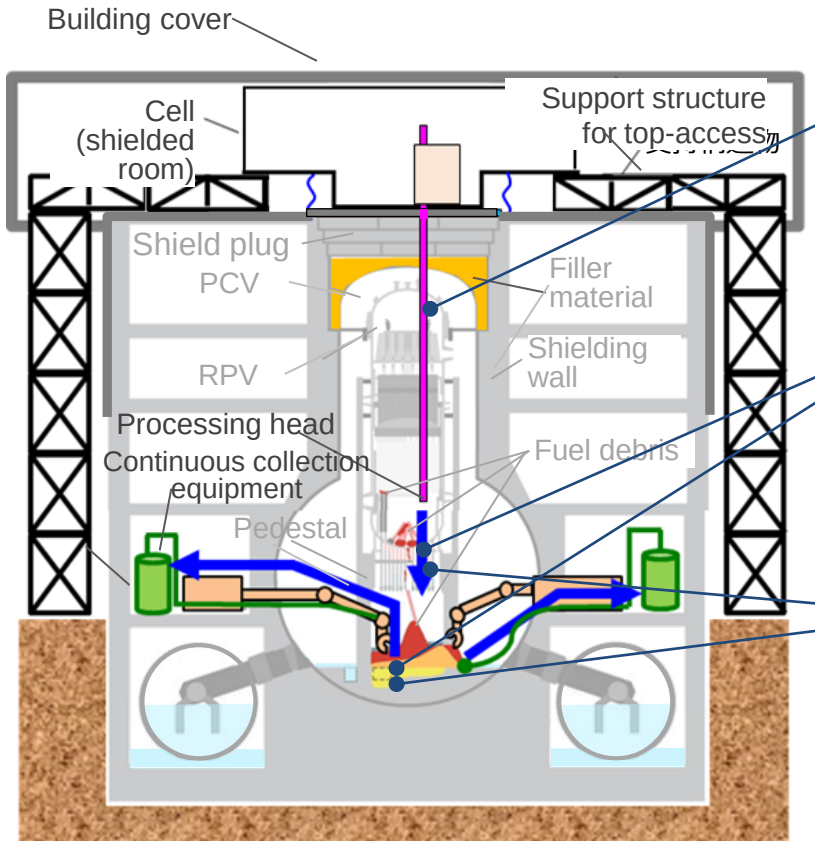
First time (Nov. 7, 2024)



Second time (Apr. 22, 2025)

→ *Details to be provided later by Mr. Ono,TEPCO*

Design Deliberation for Fuel Debris Retrieval Method



Access through small opening

- ✓ Use of the shielding function of the existing shielding walls
- ⇒ Minimize the size of the cells to be added

Unifying and simplifying the handling of fuel debris (processing, collection)

- ✓ Processing fuel debris into small pieces
- ✓ Continuous collection of small pieces of fuel debris

Combination of top and side-access

- ✓ Drop fuel debris processed by top-access through an opening at the bottom of the RPV⇒ Continuous collection in conjunction with side-access.
- ✓ Continuous collection even with side- access alone

→ *Details to be provided later by Mr. Ono, NDF*

ALPS treated water discharge

ALPS Treated Water Discharge

*As of Sep. 2025

Discharged

14 batches

with safety confirmation by the IAEA

Amount reduced

5 %

since Aug. 2023

Dismantling tanks

*As of Sep. 2025

Tanks onsite

over **1,000**

Tanks dismantled

12

since Feb. 2025

→ *Details to be provided later by Mr. Ono,TEPCO*

IAEA contributions to ALPS treated water discharge
(over the past year)

Review after the discharge

- IAEA review missions conducted (3rd: Dec 2024, 4th: May 2025)
- In both missions, IAEA Task Force did not identify anything that is inconsistent with the requirements in the relevant international safety standards.

Monitoring missions

- IAEA conducted sampling of sea water etc. and Interlaboratory comparisons (Oct 2024 & Jul 2025)
- Reports published on Dec 2024 & Mar 2025 confirmed Japan possesses capability for conducting reliable and high-quality monitoring.

Additional measures on monitoring

- In Sep 2024, IAEA and Japan concurred in conducting the additional measures under the IAEA framework, responding to international interest.
- Since Oct 2024, four additional measures have been conducted with the participation of experts from third-party laboratories in the concerned countries.

→ *Details to be provided later by Mr. Caruso, IAEA*

→ *IAEA's continuous contributions would be highly appreciated*

Actions toward Regional Coexistence

- Promoting symbiosis with local communities
- Enhancing communication

→ **Highly essential for steadily proceeding long-term decommissioning work**

Local Entities Involvement

Exhaust stacks dismantling
by the local company

Human Resource Development

Creative Robot Contest for Decommissioning

Public Communication

Site visit & dialogue

8th Inter-Ministerial Council (Aug 26, 2025)

(Photo)
https://japan.kantei.go.jp

Prime Minister's closing remarks

(Extracts, Provisional translation)

ALPS treated water discharge

- Relevant ministers are urged to steadily implement necessary measures to dispel concerns and anxieties, including ensuring safety, disseminating information based on scientific evidence, and supporting the fisheries industry.

Decommissioning

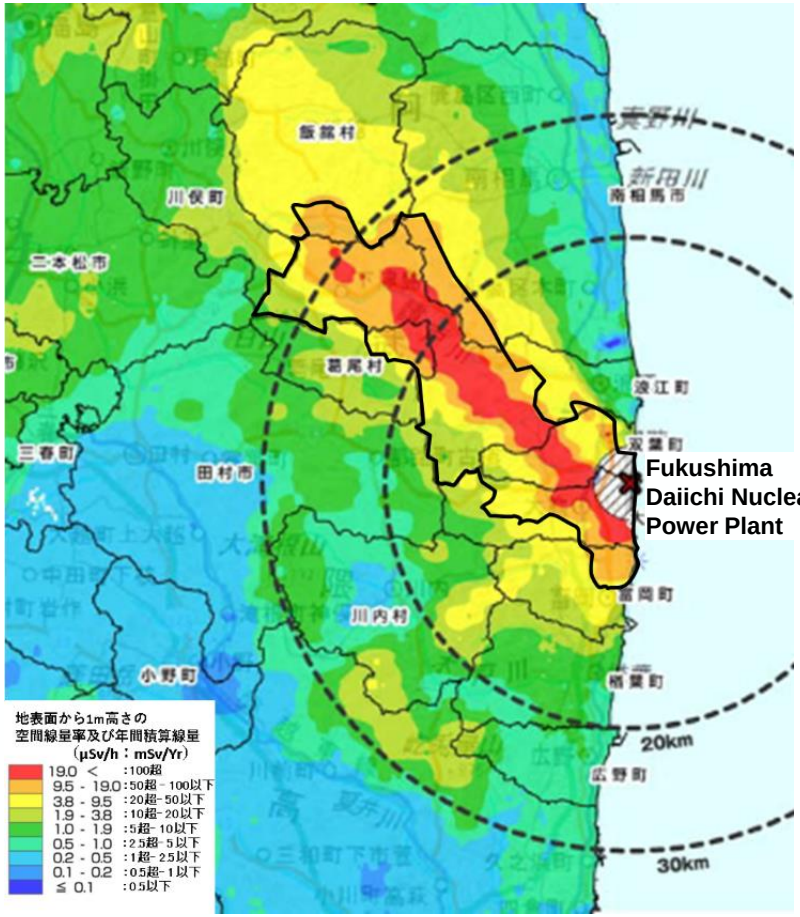
- To advance the long-term decommissioning work, it is vital to ensure the safety of workers and the surrounding environment, introduce new technologies, foster human resources, promote startups, and enhance communication with local communities.
- Relevant organizations must secure sustainable and stable funding and a robust personnel structure, while also advancing the development of methods for the full-scale retrieval of fuel debris.

"Without the reconstruction of Fukushima, there can be no reconstruction of Tohoku. "
"Without the reconstruction of Tohoku, there can be no revitalization of Japan."

Decommissioning
And
Reconstruction

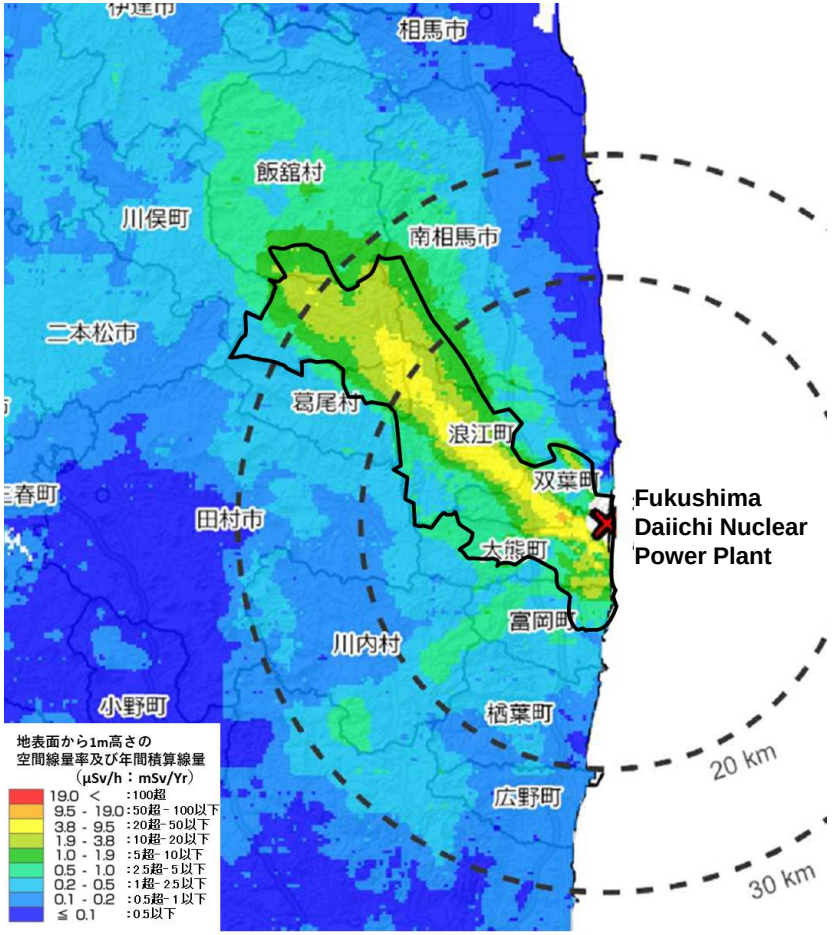
Changes in Radiation Levels

Dose Distribution (Nov.2011)



13 years later

Dose Distribution (Dec.2024)



Source: Created by Support T based on Ministry of Education, Culture, Sports, Science, and Technology, "About Measurement Results of Fourth Aerial Radiation Monitoring by Ministry of Education, Culture, Sports, Science, and Technology," December 16, 2011

Source: Created by Support T based on Nuclear Regulation Authority, "About Results of Aerial Radiation Monitoring in Fukushima Prefecture and Neighboring Prefectures," February 28, 2025

The air dose rate has been significantly reduced due to:

- ***the effects of decontamination, and***
- ***the natural decay of radioactive materials.***

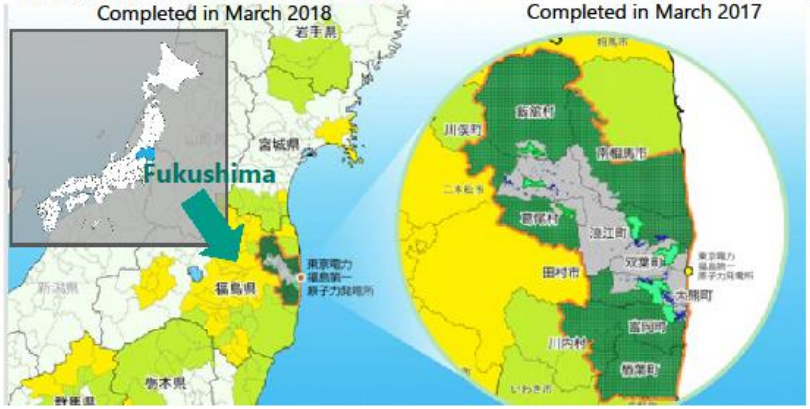
Off-site Environmental Remediation

Progress of off-site decontamination

- Radioactive materials were released into the environment due to the accident at TEPCO's Fukushima Daiichi Nuclear Power Station, causing environmental contamination.
- The Ministry of the Environment implemented environmental restoration measures, including decontamination, resulting in a large amount of removed soil in Fukushima Prefecture.
- Full-scale decontamination was completed in 100 municipalities of 8 prefectures both in the Special Decontamination Areas (SDA), and the Intensive Contamination Survey Areas (ICSA), by March 19, 2018, except for the Restricted Areas. In the Restricted Area, decontamination continues.

Intensive Contamination Survey Areas
(decontamination implemented by municipalities)
Completed in March 2018

Special Decontamination Areas
(decontamination implemented by the national gov.)
Completed in March 2017



Overview of Initiatives for Environmental Restoration after the Accident of the Nuclear Power Station

- Interim storage facilities were established in Okuma Town and Futaba Town, with the consent of the prefecture.
- The Interim Storage Facility covers a vast area of approximately 1,600 hectares in Okuma Town and Futaba Town, and land acquisition is being carried out while providing careful explanations to landowners.
- The law stipulates that necessary measures shall be taken to complete the final disposal of removed soil and waste generated in Fukushima Prefecture outside Fukushima Prefecture within 30 years (by March 2045) after the start of interim storage.

The Interim Storage Facility

Removed Soil stored at the Interim Storage Facility

3

→ *Details to be provided later by Mr. Iwasawa, MOE*

Lifting of Evacuation Orders

	maximum figures	Current status
Areas under evacuation orders	1,150 km^2 (Aug 2013)	309 km^2 (July 2024)
The number of evacuees in whole Fukushima Prefecture	164,865 (May 2012)	25,959 (May 2024)

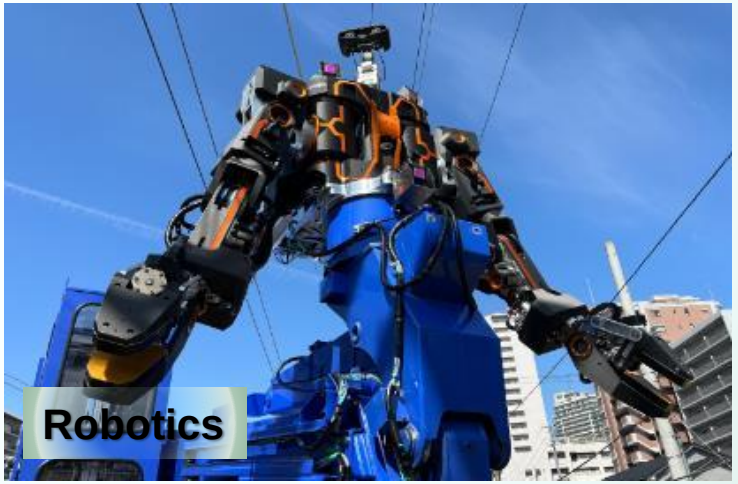
Examples of New buildings in "Specified Reconstruction and Revitalization Base Areas"

Futaba town

Okuma town

Reconstruction of Industry

Investment



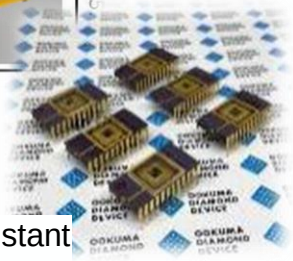
Research and Development

Innovation from Hamadori

Fukushima Innovation Coast Initiative　～6 priority areas～

Decommissioning

Small inspection drone



Radiation-resistant devices

Robots & Drones

Fukushima Robot Test Field

Seaplane UAV

Anthropomorphic heavy machinery

Energy/Environment/Recycling

FH2R (Fukushima Hydrogen Energy Research Field)

Renewable power plant at Iitate

Agriculture/Forestry/Fisheries

Winery at Kawauchi

Fisheries Industry at Iwaki

Medical Care

Fukushima MedTech Support Center

Aerospace

Aircraft Engine

Air vehicle

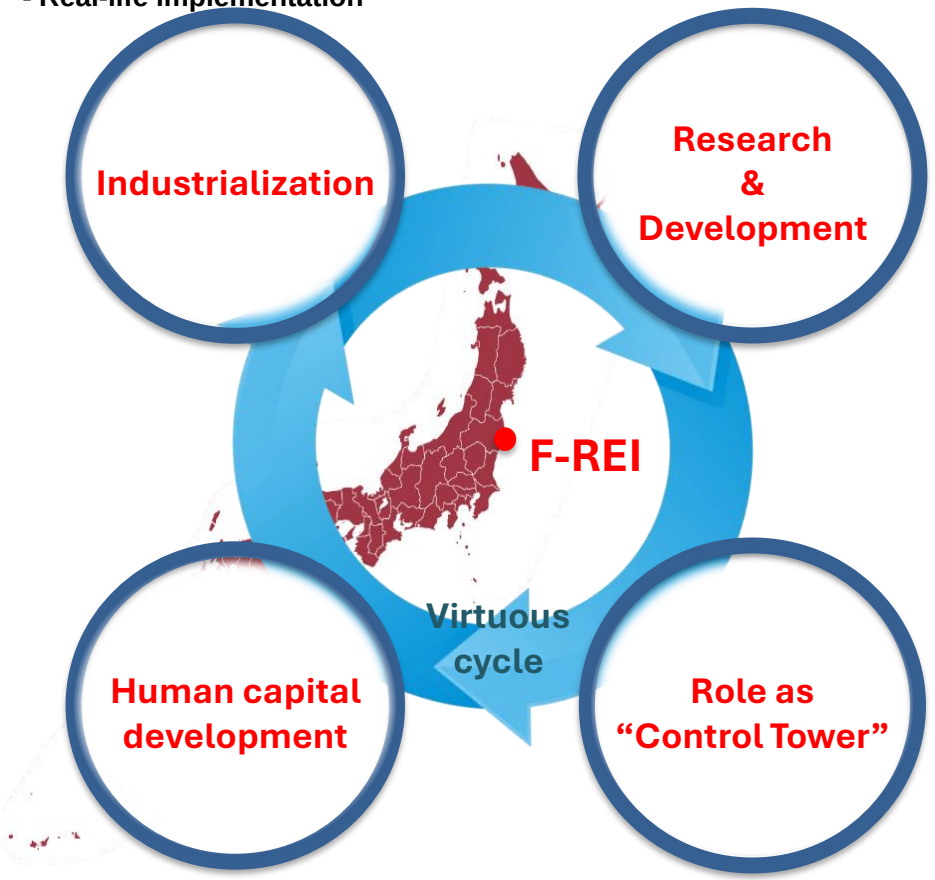
F-REI
Fukushima Institute for Research, Education and Innovation

～ Center of excellence for creative reconstruction ～

Four Functions

- Industry-academia-government partnership
- Real-life implementation

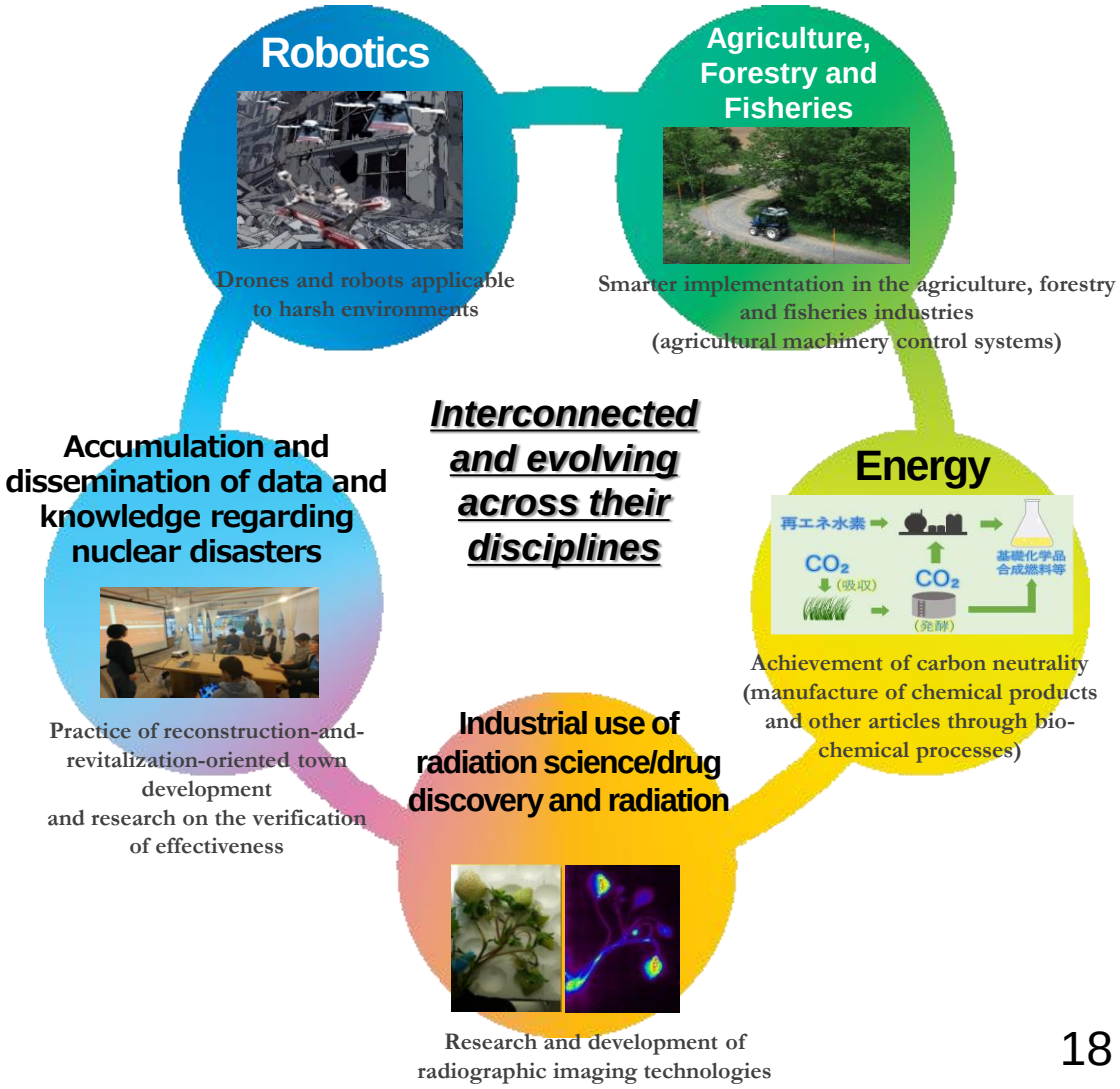
- Unique research objectives



- Nurturing the next generation of talent

- Coordinating local research activities

Five Research Areas



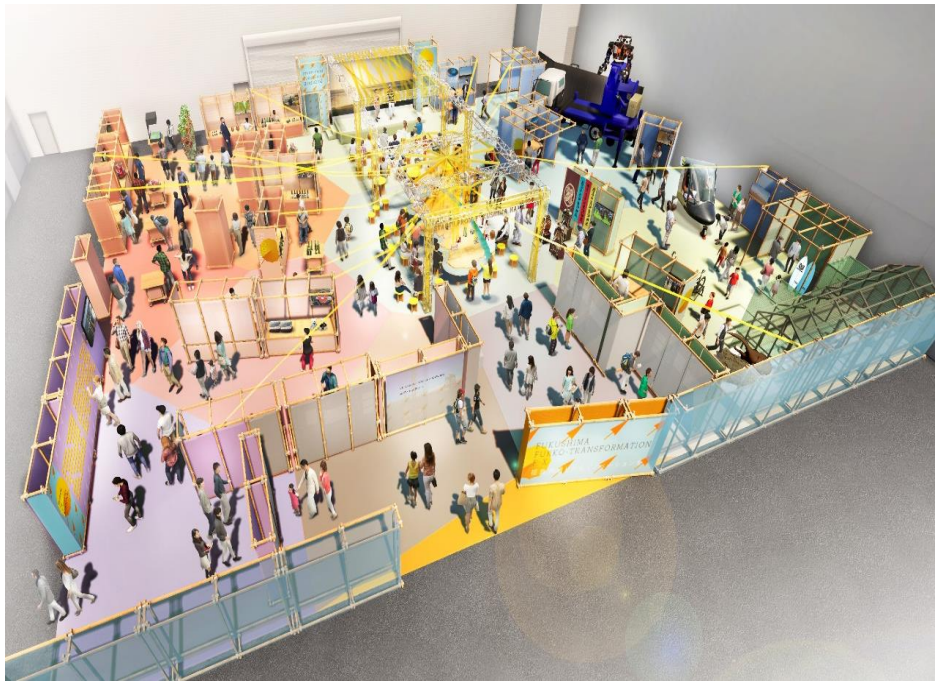
FUKUSHIMA FUKKO-TRANSFORMATION

EXPO Exhibition Centre, Japan

Tuesday, May 20th to Saturday, May 24th, 2025

No reservation required for entry.

- Decommissioning/ From 3.11
- Innovation
- Activities
- Food
- Art & Community
- Future Hamadoori



An estimated 50,000 attendees over five days

https://www.meti.go.jp/earthquake/fukushima-expo2025/english/

Thank you for your attention and continuous support for Fukushima

More info from here

https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/index.html