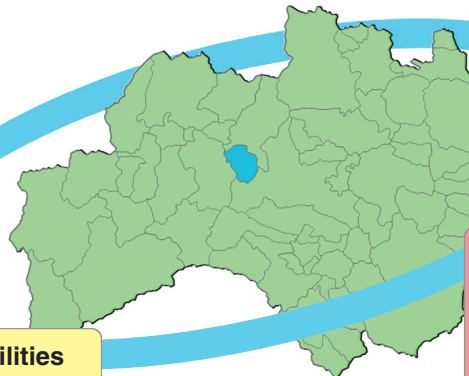


Assistance in Environmental Restoration and Decommissioning

As Japan's sole comprehensive institute in the field of nuclear energy, JAEA is progressing the R&D into Fukushima Daiichi NPS Decommissioning and the environment restoration as well as sustainable human resource development.



Constructing the R&D facilities

- Operating of the R&D facilities
- Progressing the R&D and human resource development by collaboration between industry, academia, and the government
 - Operating NARREC
 - Operating Tomioka Collaborative Laboratories of Collaborative Laboratories of CLADS
 - Operating Okuma Analysis and Research Center
 - Building a network that allows interactions between human resources from domestic and overseas universities, research institutions, and industry to delete.

R&D for environmental restoration

- Conducting R&D based on policies, such as the "Basic Guidelines for the Reconstruction and Revitalization of Fukushima" and social needs, such as the basic policy for Fukushima recovery and Revitalization
 - R&D on environmental monitoring and mapping (Topics 1-10, 1-11, and 1-12)
 - Research on environmental dynamics (Topics 1-13, 1-14, 1-15, 1-16, 1-17, and 1-18)

R&D for decommissioning of Fukushima Daiichi NPS

- Conducting R&D based on the "Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi NPS" and NDF's "Technical Strategic Plan"
- Reflecting the needs of the Fukushima Daiichi NPS decommissioning site in R&D
 - Handling the fuel debris (Topics 1-1, 1-2, 1-3, and 1-4)
 - Treatment and disposal of radioactive wastes (Topic 1-5)
 - Clarify Fukushima Daiichi NPS accident progression scenario (Topic 1-6)
 - Remote handling technics (Topic 1-7)
 - Nuclear reactor integrity assessment (Topic 1-8)
 - Improving the safety of the work environment at 1F decommissioning site (Topic 1-9)

Fig.1-1 Overview of activities regarding the decommissioning of Fukushima Daiichi NPS based on the Mid-and-Long-Term Road Map

As Japan's only comprehensive institute in the field of nuclear energy, the Japan Atomic Energy Agency (JAEA) began restoration efforts in Fukushima Prefecture immediately after the accident at TEPCO's Fukushima Daiichi NPS (1F). JAEA has been engaged in research and development (R&D) into decommissioning 1F and the environmental restoration of Fukushima and has aimed to improve JAEA's R&D facilities with the Sector of Fukushima Research and Development at the core. Currently, JAEA is conducting R&D related to the 1F accident, mainly in the fields shown in Fig.1-1.

Three facilities in the Sector of Fukushima Research and Development are part of the Fukushima Innovation Coast Framework (field of decommissioning) and contribute to the decommissioning of 1F through R&D: Tomioka Collaborative Laboratories of the Collaborative Laboratories for Advanced Decommissioning Science (CLADS), Naraha Center for Remote Control Technology Development (NARREC), and Okuma Analysis and Research Center. CLADS has also set up a laboratory in the Fukushima Prefectural Centre for Environment Creation (Miharu Town and Minamisoma City), where researchers are performing R&D related to environmental restoration in Fukushima through collaboration with Fukushima Prefecture and The National Institute for Environmental Studies. Furthermore, JAEA has increased collaboration with the Sector of Fukushima Research and Development and other sectors to work on decommissioning 1F and the environmental restoration across all sectors of JAEA. We at JAEA are focused on improving collaboration between industry, academia, and the government and cooperating with research institutes abroad. Human resource development for mid-and-long-term R&D activities is also underway.

According to the "Mid-and-Long-Term Roadmap toward

the Decommissioning of 1F" formulated by the Japanese government and the "Technical Strategic Plan" detailed by the Nuclear Damage Compensation and Decommissioning Facilitation Corporation (NDF), TEPCO and companies related to 1F decommissioning are expected to conduct applied research and practical application research, whereas JAEA is responsible for basic and fundamental research. Thus, collaboration among these R&D projects must be promoted to ensure 1F decommissioning. To ensure that the R&D activities are truly based on the needs of the 1F decommissioning site, the Sector of Fukushima Research and Development has formulated the Overall Map of Basic and Fundamental Research, which is updated every year in collaboration with various stakeholders, including TEPCO, governmental organizations, and companies related to 1F decommissioning. In the field of environmental restoration, JAEA conducts R&D based on social needs and policies, such as the Basic Guidelines for the Reconstruction and Revitalization of Fukushima, and contributes to helping evacuated residents return, industry restoration, reconstruction, and residents' safety by publishing the results and providing technology to local governments.

The Sector of Fukushima Research and Development will continue to progress R&D for 1F decommissioning and environmental restoration by integrating international insights and actively disseminating the results obtained domestically and internationally. Additionally, the Sector of Fukushima Research and Development will contribute to the reconstruction of Fukushima by continuing to promote the revitalization of local industries and human resource development as a platform for collaboration by building a network of local companies and research/educational institutions in Fukushima.