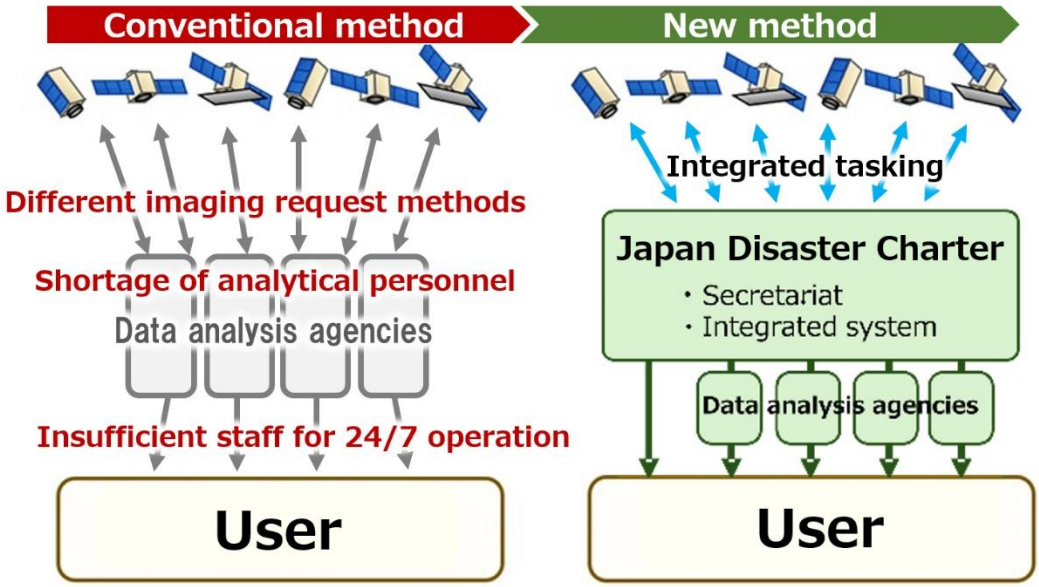
NIED, Fujitsu, SDS and Mitsubishi Electric sign joint research agreement to advance Japan Disaster Charter operational framework

Supporting initial response and post-disaster reconstruction through utilization of satellite data

TOKYO, KAWASAKI and TSUKUBA, May 22, 2025 – The National Research Institute for Earth Science and Disaster Resilience (NIED), Fujitsu Limited, Satellite Data Service Co., Ltd. (SDS) and Mitsubishi Electric Corporation have signed a joint research agreement aimed at enhancing the operational scheme[1] for the full-scale launch of the "Japan Disaster Charter", a systematic framework for disaster response utilizing satellite data promoted by the Cabinet Office and private sectors.



Japan Disaster Charter conceptual diagram

Under this agreement, concluded on May 15, the four parties will work on strengthening the secretariat functions and improving the supporting systems of the Japan Disaster Charter.

In the aftermath of large-scale disasters such as earthquakes and floods, it is essential to quickly grasp the overall situation of the damaged areas to facilitate the initial response and recovery phases. Earth-observation satellites can capture a wide comprehensive view of the disaster-stricken area, making it highly effective for disaster response. However, data analysis institutions, such as satellite data analysis service providers, alone cannot process the diverse satellite data analysis or respond to unpredictable disasters on a 24/7 basis. Particularly in Japan, where disasters frequently occur, there has been a need to establish a framework for efficiently leveraging satellite data.

[1] A scheme required for the Japan Disaster Charter to provide its services

The Japan Disaster Charter is a framework aimed at swiftly observing disaster-affected areas using Earth observation satellites, and promptly providing tailored analytical data in response to requests from users such as disaster-response agencies, designated public institutions, local governments and private-sectors. This initiative is a collaboration between the Cabinet Office and the private sector, aiming to launch information provision services under this framework. Leveraging this service provided by the Japan Disaster Charter, users can obtain a comprehensive and overall picture of the affected areas quickly after a disaster, enabling faster initial response and more efficient reconstruction efforts.

From the fiscal year ending March 2024 through 2025, the four parties have been working on the Cabinet Office's BRIDGE[2] project, "Construction and demonstration of Japan Disaster Charter to integrate satellite remote sensing resources." This initiative includes developing a system to acquire, analyze and provide satellite data, establishing and demonstrating the operational processes of the Japan Disaster Charter secretariat, and examining public-private business models and identifying outstanding challenges. With the newly signed joint research agreement, the four parties will further enhance the secretariat functions and the information provision system, "Satellite One-Stop System," a system that quickly identifies satellites capable of disaster-area observation and executes end-to-end data acquisition and delivery, operated by the secretariat. Regarding secretariat functions, the focus will be on examining the public-private business models, strengthening common satellite-data analysis capabilities and enhancing systems for rapid data sharing. For the information provision system, the aim is to automate the process from disaster detection to the issuance of satellite tasking commands[3] and eliminate manual work, significantly shortening the time required to deliver damage assessments needed in the critical initial response phase.

These initiatives will refine the operational scheme of the Japan Disaster Charter and accelerate its path towards full social implementation.

Overview of the Joint Research

Period	May 15, 2025 to March 31, 2026	
Scope	Strengthen the function of the Japan Disaster Charter secretariat, upgrade the Satellite One-Stop System, and validate the full operational scheme through user drills and actual disaster demonstrations	
Roles	NIED	Plan and coordinate the drills and demonstrations with end-users and actual disaster scenarios and spearhead social implementation
	Fujitsu	Enhance the Satellite One-Stop System and provide operational support during drills and demonstration in actual disasters
	SDS	Build and verify an automated satellite tasking and data integration platform led by the private sector, and enhance secretariat functions
	Mitsubishi Electric	Reinforce common satellite-data analysis functions, support demonstration activities, and drive examination of a public-private business model

[2] A program led by the Cabinet Office that promotes the social implementation of R&D outcomes. BRIDGE stands for "Programs for Bridging the gap between R&D and the IDeal society (Society 5.0) and Generating Economic and social value"

[3] A tasking command that specifies the target area, timing and sensor parameters, instructing a satellite to capture imagery.

Conceptual Overview of the Japan Disaster Charter

1) Rapid acquisition of diverse satellite observation data contributing to swift and accurate disaster response

- Immediately after a disaster, the emergency observations[4] are conducted using multiple types of satellite. The Satellite One-Stop System provides wide-area damage assessments within a few hours of the disaster, accelerating initial-response.

2) One-stop service from satellite tasking to data provision according to user needs

- The Japan Disaster Charter secretariat selects and tasks the optimal mix of satellites from multiple types of satellite operated by Japan and overseas, based on the types of disaster, time of occurrence, scale and weather, etc., to acquire, analyze and provide satellite data that meets each user's requirements.
- The Japan Disaster Charter secretariat centralizes contracts and coordination with different satellite operators and data analytics agencies for each satellite, allowing users obtain the desired information in a one-stop manner without requiring specialized knowledge.

3) ***Regular monitoring contributing to support post-disaster recovery and damage mitigation***

- By developing technology which conducts scheduled repeat observations of the affected area and visualizes pre-/post-disaster conditions as well as temporal changes, the recovery progress and reconstruction work can be continuously and efficiently tracked.
- By comparing satellite data captured before, immediately after and over time following disaster, areas affected by liquefaction, landslides, etc., can be identified and provided to users, contributing to the mitigation of secondary damage.

Future Development

Based on the outcomes of this joint research, the four partners aim to launch demonstration services through the Japan Disaster Charter in fiscal year ending March 2026, and ultimately extend service coverage to a 24/7 operation. Through the Japan Disaster Charter, they will also broaden the practical use of satellite data in disaster management.

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About National Research Institute for Earth Science and Disaster Resilience

As a core institute for DRR science and technology in Japan, the National Research Institute for Earth Science and Disaster Resilience conducts comprehensive research and development on all natural hazards (earthquakes, tsunamis, volcanic eruptions, heavy rains, landslides, and snowstorms etc.) in all disaster management phases (prediction, prevention, emergency response, and recovery/reconstruction), in order to protect human lives from disasters and realize a disaster resistant society.

About Fujitsu

Fujitsu's purpose is to make the world more sustainable by building trust in society through innovation. As the digital transformation partner of choice for customers around the globe, our 113,000 employees work to resolve some of the greatest challenges facing humanity. Our range of services and solutions draw on five key technologies: Computing, Networks, AI, Data & Security, and Converging Technologies, which we bring together to deliver sustainability transformation. Fujitsu Limited (TSE:6702) reported consolidated revenues of 3.6 trillion yen (US$23 billion) for the fiscal year ended March 31, 2025 and remains the top digital services company in Japan by market share. Find out more: www.fujitsu.com.

[4] Emergency satellite observation performed by altering the normal acquisition plan at the request of national or local governments when a disaster occurs.

About Satellite Data Services Co., Ltd.

Satellite Data Services Co., Ltd.(SDS) was founded in 2021 through the collaboration of seven Japanese companies: Mitsubishi Electric Corporation, MUFG Bank,Ltd., Integrated Design & Engineering Holdings Co., Ltd., PASCO CORPORATION, SKY Perfect JSAT Corporation, Asia Air Survey Co., Ltd., and Remote Sensing Technology Center of Japan. SDS aims to develop a business model that makes satellite data more accessible and user-friendly, thereby promoting its practical adoption across industries. Through these efforts, SDS is committed to contributing to disaster resilience, strengthening national infrastructure, and resolving global challenges.

About Mitsubishi Electric Corporation

With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its "Changes for the Better." The company recorded a revenue of 5,521.7 billion yen (U.S.$ 36.8 billion*) in the fiscal year ended March 31, 2025. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥150=U.S.$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2025

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