SAR Satellite Data Solutions for Disaster Response and Mitigation

SAR satellites can rapidly assess damage situations over broad areas by comparing observation data acquired before and after a disaster. For instance, they can identify damage such as building collapse, subsidence, and landslides in an earthquake. In the case of flooding, they can observe inundated areas and rising water levels. Furthermore, by utilizing Interferometric SAR (InSAR) analysis with time-series SAR data, it becomes possible to monitor ground risks such as landslides and subsidence, enabling the detection of hazardous areas.
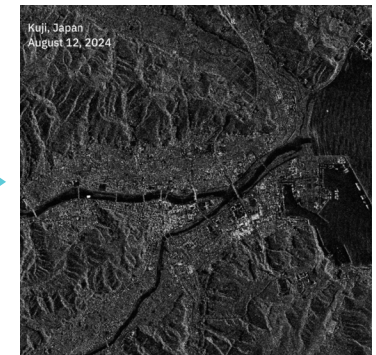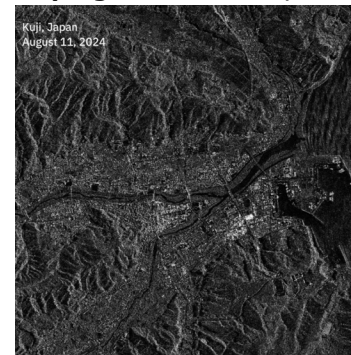
Company name	Synspective Inc.
Service Overview	SAR (Synthetic Aperture Radar) satellites are effective for assessing damage after disasters. They can observe the Earth's surface in all weather conditions, day and night. Synspective offers SAR satellite data solutions, including Disaster Damage Assessment (DDA), Flood Damage Assessment (FDA), and Land Displacement Monitoring (LDM), to contribute to disaster response and mitigation efforts. > DDA detects damage to buildings and ground changes caused by earthquakes and damage from volcanic eruptions by comparing SAR satellite data taken before and after a disaster. > FDA enables rapid assessment of flooded areas and water depth over a wide area during flood events. > LDM assesses ground deformation over a wide area by using continuous observation and Interferometric SAR (InSAR) analysis techniques to find risks such as landslides and subsidence.
User	・Government and international public organizations ・Civil engineering and Construction ・Insurance companies, etc.
Satellite	・Synspective "StriX" ・Other SAR satellites
URL	https://synspective.com/

(1) Noto Peninsula Earthquake, Wajima City (January 2024)

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(2) Typhoon Maria, Kuji City, Iwate Prefecture (August 11 and 12, 2024)

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