



DLR releases satellite images of Japanese disaster area

12 March 2011

After the severe earthquake and tsunami in Japan, the International Charter 'Space and Major Disasters' was activated on the morning of the 11 March 2011. All participating institutions were asked to provide satellite imagery of the affected area. The German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) is responding through its Center for Satellite Based Crisis Information (Zentrum für Satellitengestützte Kriseninformation; ZKI), based at its site in Oberpfaffenhofen.

"The information acquired by the German TerraSAR-X radar satellite and the RapidEye imaging satellites, together with data from the American WorldView-2 satellite, show the extent of the disaster," explains Stefan Voigt, a researcher at DLR. "The advantage of satellite data is the extensive coverage of the disaster area that it provides. At the same time, we can map details with a spatial resolution of down to 50 centimetres. In the maps we have compiled, it can be seen that the tsunami penetrated 4–5 kilometres inland. The severe damage to roads, bridges, buildings and other infrastructure can be clearly seen. This is important information for rescue workers on the ground. We are working closely with the German Federal Agency for Technical Relief (Bundesanstalt Technisches Hilfswerk; THW)."

The scientists and engineers at ZKI began working to provide the necessary assistance immediately after the charter was activated. In close coordination with the control centre and commercial satellite operators, the available satellites were tasked for data acquisition over the disaster area. Since the activation of the charter, an enormous amount of data has been received, processed, analysed, and used to generate the first mapping products; meanwhile, archived data serve as a reference. The damage analysis and situation report are based on the newly acquired satellite images.

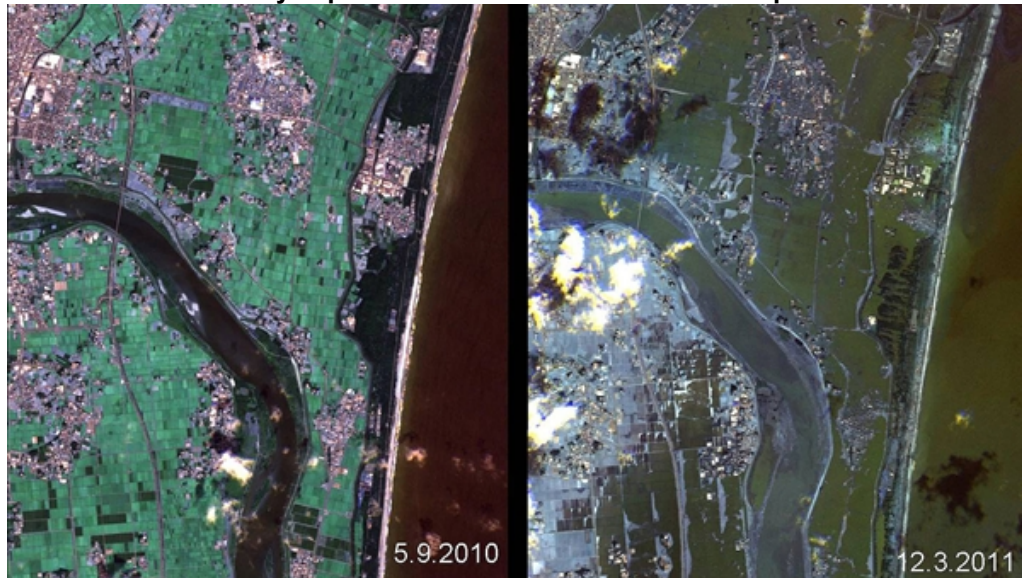
Center for Satellite Based Crisis Information

The task of ZKI is to provide a 24/7 service for the rapid acquisition, processing and analysis of satellite data for natural and environmental disasters, global humanitarian relief activities and for civil security. ZKI operates at the national and international level and is closely linked with various governmental partners, non-government organisations, satellite operators and space agencies. During the different stages – before, during and after a disaster – ZKI makes various contributions to rehabilitation and reconstruction and for early warning and vulnerability assessment, especially for operational disaster management. In the case of major humanitarian emergencies, international assistance is supported by the provision of maps specifically adapted to meet user's requirements.

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Destruction caused by Japan tsunami – before and after comparison



Dieses Bild zeigt die Auswirkungen des Tsunamis in einem Vorher-The effects of the tsunami are shown in a before and after comparison of the Japanese coast between 5 September 2010 (left) and the 12 March 2011 (right). Data: Rapid Eye.

Credit: DLR/Rapid Eye.

DLR's Center for Satellite Based Crisis Information



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