



DLR provides maps for the relief effort in the Philippines

13 November 2013

Working in shifts around the clock, staff at the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt, DLR) have produced their first maps of the Philippine disaster areas based on satellite image data. When typhoon Haiyan reached the islands on 8 November 2013, extensively damaging large areas, Germany's disaster aid organisation (Technisches Hilfswerk; THW) activated DLR's Center for Satellite Based Crisis Information (Zentrum für Satellitengestützte Kriseninformation; ZKI) via the German Federal Ministry of the Interior and the International Charter 'Space and Major Disasters'. The analysed and processed images are now providing information used as the basis for THW relief efforts on the island of Cebu.

"Individual houses are almost impossible to detect in Bogo City because the destruction is so extensive that not much of anything remains," explains Hendrik Zwenzner, coordinator for this emergency mapping effort at German Remote Sensing Data Center (Deutsches Fernerkundungsdatenzentrum; DFD). On one of these maps, the colour red – which shows the locations of badly damaged infrastructure – predominates. In the night of 12 to 13 November 2013, a four-person ZKI team requested data from the optical Worldview 1 satellite. With this data, the team generated maps with useful information for the on-site THW relief teams. A complicating factor was the cloud cover over the region, which did not permit a clear satellite view of the entire area. "For our maps, we compared the new satellite data with archived data, which gave us information about the destruction of buildings, streets, bridges and other infrastructure. This enables the emergency response teams to more effectively plan their relief efforts."

Maps for the on-site response teams

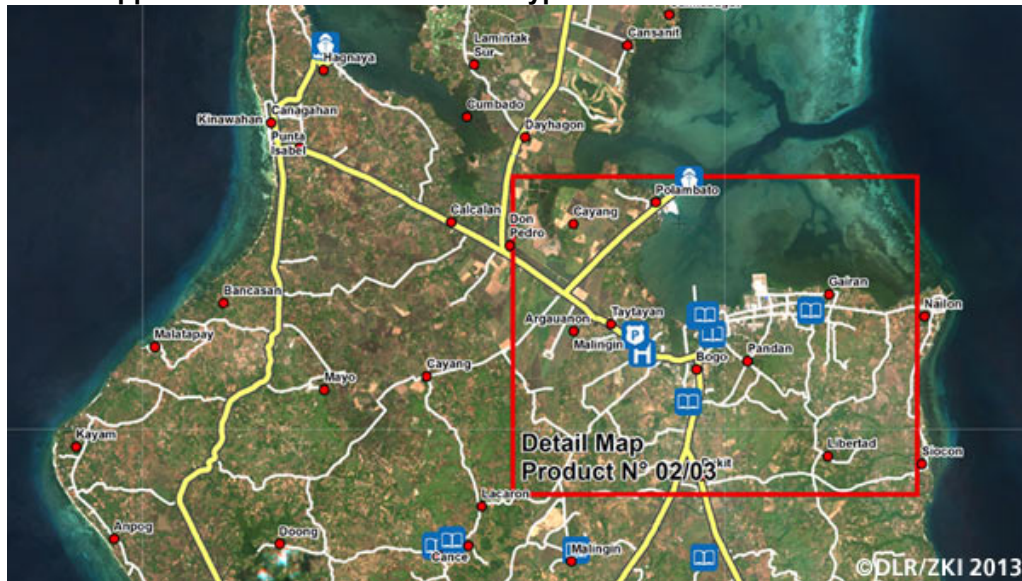
Bogo, a city of some 70,000 inhabitants on the northern tip of the island of Cebu, and the surrounding area are the target of a THW relief team that arrived in the Philippines on 14 November 2013. The equipment brought by the 17-person team includes two water treatment plants. "We want to ensure a supply of drinking water," explains Veronika Wolf, a consultant for relief efforts and projects in THW's international division. "But in order to be able to transport the equipment and the team to various operational sites, we need the advance information provided in DLR's disaster maps." Which streets are open to transport, which regions are destroyed, and to what extent? "We are going to places where no response team has been so far." The satellite images from space and their assessment by DFD are now with the local THW team leaders, who are preparing for the arrival of aid and coordinating their assignments. "The maps are ideal for us," emphasises Wolf.

For the International Charter 'Space and Major Disasters', DLR has supplied up-to-date satellite data and archive images covering an even larger part of the disaster area for distribution to and assessment by international partners. They, in turn, forward this information to various users worldwide. At present, ZKI is preparing additional detailed analyses for the affected areas.

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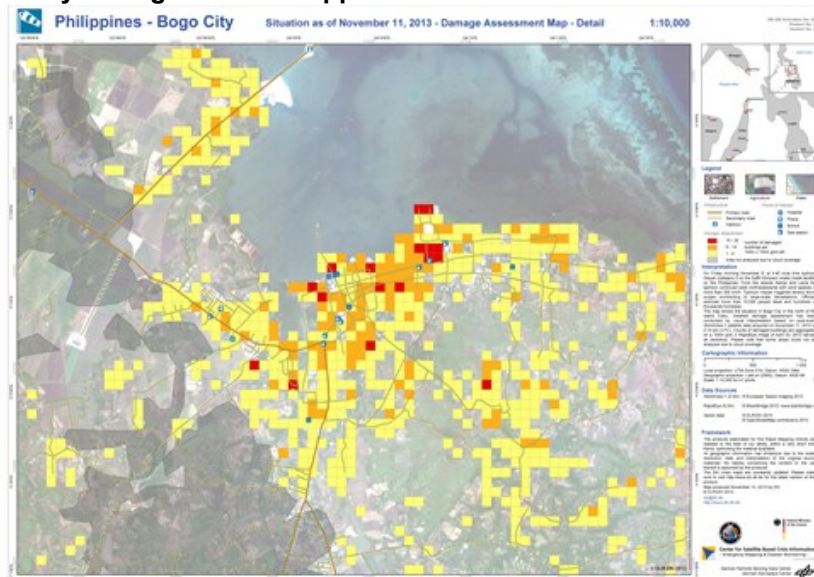
The Philippine island of Cebu before the typhoon



To view the infrastructure in the Philippines as it was before the typhoon, staff at the Center for Satellite Based Crisis Information (Zentrum für Satellitengestützte Kriseninformation; ZKI) of the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) used archive images.

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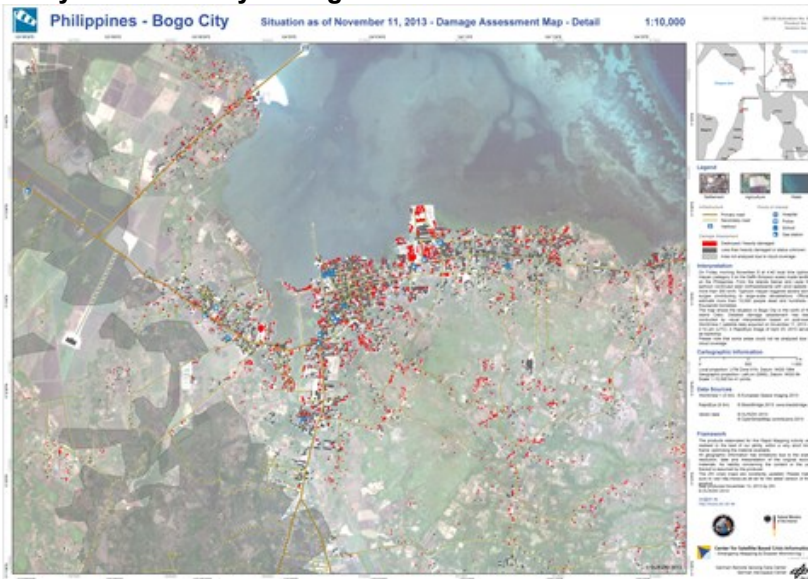
Map of the city of Bogo in the Philippines



The German Remote Sensing Data Center (Deutsches Fernerkundungsdatenzentrum; DFD) has produced maps from satellite images showing the extent of damage on the Philippines.

Credit: DLR (CC-BY 3.0).

Damage analysis for the city of Bogo



The German Remote Sensing Data Center (Deutsches Fernerkundungsdatenzentrum; DFD) has produced maps of the Philippine island of Cebu based on satellite images for use by emergency response teams working there. On this map, damaged buildings are indicated by red dots.

Credit: DLR (CC-BY 3.0).

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