Fugro performed lidar data collection over the World Trade Centre site, before and after 9/11.

In times of crisis, accurate information about fire lines, flood extents and damage assessment is of vital importance to first responders. Geospatial data delivered by Fugro improves situational awareness, helping to allocate resources, mitigate damage and save lives.

Fugro is ready to support rescue and recovery efforts by rapidly producing accurate, timely, high-resolution geospatial information and delivering it directly into the hands of those who need it. We have more than 20 years’ experience in rapid deployment and processing to deliver the precise data needed to assess emergency incidents accurately.

We specialise in mobilising aircraft quickly and efficiently during disasters. Our fleet of aircraft is equipped with state-of-the-art technology to support airborne imaging and topographic data products to aid emergency response and recovery efforts.

We have a wide range of geospatial capabilities, but orthoimagery and PanoramiX (oblique imagery) are the most commonly used in crisis response. Vertical multispectral imagery is typically used to support large, wide-area projects where viewing or measuring horizontal features is important. Oblique imagery, with a 360-degree view, provides a perspective useful for analysis, measuring heights of features and inspecting the condition of infrastructure. Each product provides unique advantages and both could be used for change detection purposes.

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PROJECT PLANNING BASED ON DISASTER PREDICTION

Planned events
Hurricanes, land fires, and flooding are examples of planned events. Preliminary planning is conducted in advance of any damage or decisions, driven by forecasts and models (predicted storm track, wind, storm surge, drought and flood models). Planning activities determine not only the number and type of aircraft and sensors required, but also the initial forward operating locations and launch times. The models drive overall project area boundaries and help to delineate the priorities areas for collection. For example, areas in the immediate crisis zone will be characterised by severe damage and may have a higher or lower priority, depending on response and recovery needs.

No-notice events
Earthquakes, tsunami, industrial events, and terrorist events are examples of no-notice events. As the name implies, there is no warning for this type of emergency and planning is conducted based on actual incident locations. In some cases, seismic and wind models are used to drive the flight planning process and indicate priorities based on predicted levels of damage.

A LEGACY OF EXPERIENCE
With a large fleet of aircraft and one of the most advanced mapping production facilities in the world, Fugro has supported diverse disaster response missions for government agencies, utility companies, and engineering firms. Our relief and recovery operations have included many natural and man-made disasters across the United States.