Geo Week:

Where geospatial data meets disaster preparedness

Carla Lauter explores how geospatial technology is reshaping disaster preparedness and emergency response at Geo Week 2026

Photo: Geo Week

WHEN A DISASTER STRIKES, the first casualty is often information. Roads are impassable, communications are down, and the people responsible for directing a response are making decisions based on incomplete or hours-old intelligence. That is the gap geospatial technology has spent the last decade learning to close, and it is closing faster than most people outside the industry realise.

A convergence of tools, including lidar, aerial and satellite imagery, GIS platforms, uncrewed aerial systems (UAS), and artificial intelligence, means that the people responsible for managing crises have access to a quality and quantity of spatial data that was unimaginable even a decade ago.

What is changing now is how quickly that data can be gathered, processed, and turned into actionable intelligence on the ground. Geo Week, North America's premier conference and trade event for the geospatial community, explores these advances each year.

The conference brings together thousands of geospatial professionals to take a look at the latest updates, ideas, and real-world applications shaping the industry. Among the applications highlighted in previous editions is the growing role of aerial imagery in disaster response. As a disaster strikes, there is an immediate need for situational awareness, and satellite, drone platform, and crewed aircraft imagery can help fill that gap.

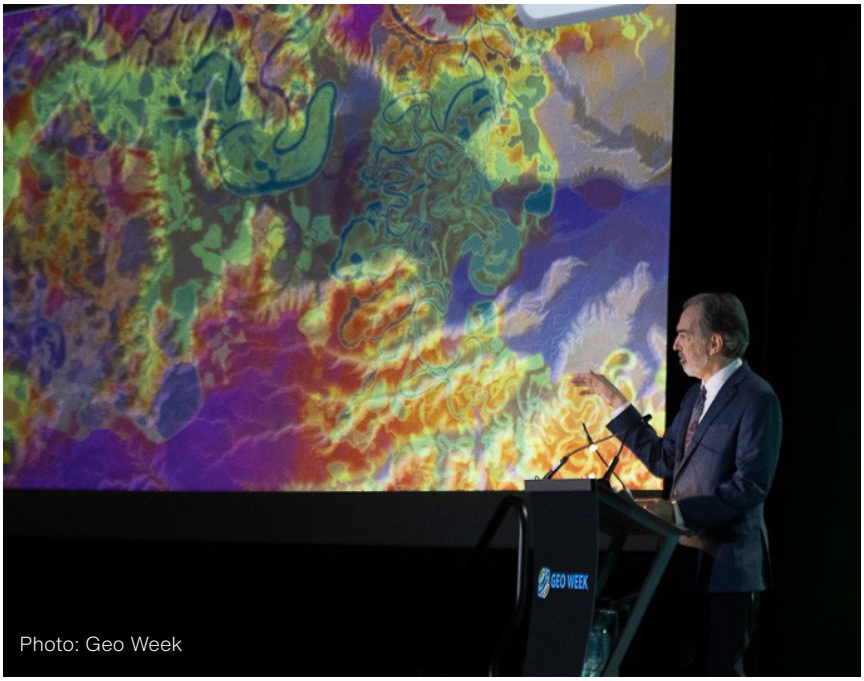

Photo: Geo Week

However, the imagery is only one part of the complete picture. Beneath it lies an increasingly powerful foundation: high-resolution elevation data. A prominent example featured at Geo Week 2026 was the USGS 3D Elevation Program (3DEP), which has spent years building a national lidar dataset capable of modelling flood extents, identifying landslide risk, and enabling precise evacuation planning. The takeaway during these discussions was clear: Data collected in non-emergency conditions becomes critical infrastructure when disaster strikes. Knowing the exact elevation of a road, levee, or neighbourhood before a flood arrives allows emergency managers to act rather than react.

GIS technology, a foundational layer across virtually every phase of emergency response, was another key focus area at Geo Week 2026. GIS platforms allow incident managers to pull together data from multiple sources into a single, shared operating picture, combining aerial photography, road networks, population data, infrastructure maps, and hazard footprints in ways that make the scale and shape of a disaster legible in real time.

The same tools that help model flood extents and predict evacuation bottlenecks

before a storm also support damage assessment in its immediate aftermath, search and rescue co-ordination in remote terrain, and the routing of emergency vehicles through debris-strewn streets.

What has changed in recent years is not the underlying logic of GIS in crisis response, but the speed and sophistication with which that logic can be applied and the degree to which it now connects agencies and disciplines that would previously have been working from different maps entirely. It is precisely this kind of cross-sector collaboration that disaster response professionals come to discuss at Geo Week, where dedicated sessions bring together practitioners from across industries to address these challenges.

This emphasis on co-ordination was further represented through real-world case studies discussed at the conference. One such example was the 2024 collapse of the Francis Scott Key Bridge in Baltimore, USA. When a cargo vessel struck the bridge in the early hours of the morning, the response drew in agencies from across federal, state, and local government, each bringing different data, different expertise, and different mandates.

A previous keynote session at Geo Week brought together representatives from the Army Geospatial Center and the National Oceanic and Atmospheric Administration's (NOAA) National Geodetic Survey to reflect on what that response revealed about the state of geospatial collaboration.

One of the most significant outcomes was the creation of a shared ArcGIS environment linking NOAA and the US Coast Guard, described by those involved as the first time that had been achieved in a response of this kind. The lesson carried forward was less about any single technology and more about the infrastructure of co-operation: that geospatial data already exist and that the limiting factor in a crisis is often how quickly it can be brought together into a common operating picture that everyone can see and act on.

The next edition of Geo Week takes place February 23-25, 2027, in Salt Lake City, Utah, USA. Attendees can expect sessions on real-use cases of crisis response, networking with industry experts, and hands-on demonstrations of the latest technology solutions for crisis preparedness and response.

■ *For more information, visit geo-week.com*

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May 5 – 6, 2026
Solar Power Summit
Brussels, Belgium
solarpowersummit.org

May 11, 2026
Resilience Conference
Copenhagen, Denmark
resiliencemedia.co

May 12 – 13, 2026
DAIMEX Baltic 2026
Vilnius, Lithuania
daimex.lt

May 13 – 14, 2026
FOOTPRINT+ 2026
London, UK
footprintplus.com

May 17 – 22, 2026
World Urban Forum
Baku, Azerbaijan
wuf.unhabitat.org

May 18 – 20, 2026
Defence Exhibition Athens
Athens, Greece
defea.gr

May 19 – 21, 2026
Combined Naval Event
Farnborough, UK
navyleaders.com

May 26, 2026
Expert Security 2026
Kyiv, Ukraine
mvc-expo.com.ua

May 26 – 29, 2026
CyCon
Tallinn, Estonia
ccdcoe.org

June 1 – 6, 2026
INTERSCHUTZ
Hannover, Germany
interschutz.de

June 2 – 4, 2026
Infosecurity Europe
London, UK
infosecurityeurope.com

June 3 – 4, 2026
Climate Chance Summit
Brussels, Belgium
climate-chance.org

June 3 – 4, 2026
International Drone Show 2026
Odense, Denmark
internationaldroneshow.com

June 9, 2026
European Open Source Security Forum
Brussels, Belgium
openssf.org

June 10, 2026
DUT Conference
Brussels, Belgium
dutpartnership.eu

June 9 – 11, 2026
European Sustainable Energy Week
Brussels, Belgium
sustainable-energy-week.ec.europa.eu

June 15 – 19, 2026
Eurosatory
Paris, France
eurosatory.com

June 16 – 17, 2026
Global Offshore Wind
Manchester, UK
renewableuk.com

June 17 – 19, 2026
Urban Resilience Forum
Guimarães, Portugal
urbanresilienceforum.eu

June 17 – 20, 2026
EURA 2026
Venice, Italy
eura2026.org

June 22 – 25, 2026
Intersolar Europe
Munich, Germany
intersolar.de

June 27 – 28, 2026
RE-Source Southeast
Sofia, Bulgaria
events.resource-southeast.eu

July 19 – 23, 2026
Eurasian Grassland Conference
Sofia, Bulgaria
edgg.org

See more dates on our online calendar at www.crisis-response.com