



EUSATfinder - EUropean Space, Aerial and Terrestrial assets supporting first responders' operations in the context of landslide-induced emergency

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Natural disasters - intended as landslides, hurricanes, fires, avalanches, flooding, earthquakes, industrial accidents, terroristic attacks, eruptions, pollution, have been seriously threatening the well-being of the global society. Over the past 50 years, more than 11,000 disasters have been attributed to weather, climate and water-related hazards, involving 2 million deaths. While the average number of deaths recorded for each disaster has fallen by a third during this period, the number of recorded disasters has increased five times, and the economic losses have increased by a factor of seven. Current findings from the United Nations Global Assessment Report on Disaster Risk Reduction (DRR) points out that the economic loss from disasters range from US\$250 billion to US\$300 billion each year.

In this context Space assets and remotely piloted aircraft (drones) play a crucial role in emergency response and disaster management, especially after the occurrence of landslides. First responders ask for a quick to deploy *in-situ* solution based on resilient and robust infrastructure to perform accurate mapping and extended surveillance for people and assets localisation.

Accordingly, EUSATfinder is about demonstrating the effectiveness of a synergic use of three main European space programs, namely GOVSATCOM, Copernicus and Galileo in such critical situations. The purpose of the EUSATfinder is to provide an innovative integrated and scalable solution to support first responders in real-life during different operational phases (detection, preparedness, response, recovery and mitigation of emergencies) with particular focus to first responders' activities in situ for a landslide-disaster management.

The solution is based on a mobile operational centre (MOC) able to join in the proximity of the emergency area and to deploy several assets to support the operations:

- a quick to deploy resilient communication infrastructure;
- a fleet of heterogenous drones for mapping (integrated with Copernicus Emergency Management Service), for extended environmental surveillance and for people and asset localisation;
- innovative equipment for first responders' health monitoring and localisation (Galileo);

- a distributed platform for First responder operations and citizens alerting management.

The above introduced objectives confer to the EUSATfinder project a worldwide dimension, having European public authorities, industries and research centres with the clear role to bring innovation and know-how to allow an effective crisis area management in emergency situations worldwide.

The EUSATfinder project has received funding from the European Union Agency for the Space Programme (EUSPA), under the European Union's Horizon Europe research and innovation programme (call HORIZON-EUSPA-2023-SPACE-01-61 and Grant Agreement No 101180157).