

## **DOWNSTREAM COPERNICUS SERVICE FOR EMERGENCY MANAGEMENT IN ROMANIA**

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### **ABSTRACT**

Presently, satellite imagery has a major contribution to all the phases of the emergency management process. Space-based information in support of disaster monitoring can be obtained through the International Charter on Space and Major Disasters, Copernicus (The European Earth Observation Programme) Emergency Management Service (EMS) and the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER). All these services offer unified systems of space data acquisition and delivery to the countries affected by natural or man-made disasters, with a worldwide coverage. In this context, a downstream Copernicus service will be built in Romania, acting like a geoinformation platform for local disaster and risk management, in order to provide value-added products that cover all the phases of a disaster. The service will be developed based on the users' requirements and it will generate products that are tailored to the specific conditions in Romania. The emphasis will be put on floods (the most important natural hazard in Romania) and landslides. Earthquakes and technological accidents will be covered within the project using an experimental approach. The downstream emergency response service will provide value-added end products such as reference maps and disaster situation maps, graphics and written reports on the extent of disasters and their effects on infrastructure, agriculture or human settlements. The service will also incorporate new algorithms for the generation of more accurate and complex products. Moreover, a data center for spatial data infrastructure will be defined by creating updated reference Geographic Information System (GIS) geodatabases. In conclusion, the service will provide value-added and validated products for each phase of the emergency management process and it will help the responsible authorities to develop and implement better policies in the field of environment, climate change, and disaster management.

**Keywords:** satellite imagery, geoinformation, disaster management, downstream Copernicus service