



## **GIO-EMS and International Collaboration in Satellite based Emergency Mapping**

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During the last decade, satellite based emergency mapping has developed into a mature operational stage. The European Union's GMES Initial Operations – Emergency Management Service (GIO-EMS), is operational since April 2012. It's set up differs from other mechanisms (for example from the International Charter "Space and Major Disasters"), as it extends fast satellite tasking and delivery with the value adding map production as a single service, which is available, free of charge, to the authorized users of the service. Maps and vector datasets with standard characteristics and formats ranging from post-disaster damage assessment to recovery and disaster prevention are covered by this initiative. Main users of the service are European civil protection authorities and international organizations active in humanitarian aid. All non-sensitive outputs of the service are accessible to the public. The European Commission's in-house science service Joint Research Centre (JRC) is the technical and administrative supervisor of the GIO-EMS. The EC's DG ECHO Monitoring and Information Centre acts as the service's focal point and DG ENTR is responsible for overall service governance.

GIO-EMS also aims to contribute to the synergy with similar existing mechanisms at national and international level. The usage of satellite data for emergency mapping has increased during the last years and this trend is expected to continue because of easier accessibility to suitable satellite and other relevant data in the near future. Furthermore, the data and analyses coming from volunteer emergency mapping communities are expected to further enrich the content of such cartographic products.

In the case of major disasters the parallel activity of more providers is likely to generate non-optimal use of resources, e.g. unnecessary duplication; whereas coordination may lead to reduced time needed to cover the disaster area. Furthermore the abundant number of geospatial products of different characteristics and quality can become confusing for users. The urgent need for a better coordination has led to establishment of the International Working Group on Satellite Based Emergency Mapping (IWG-SEM). Members of the IWG-SEM, which include JRC, USGS, DLR-ZKI, SERVIR, Sentinel Asia, UNOSAT, UN-SPIDER, GEO, ITHACA and SERTIT have recognized the need to establish the best practice between operational satellite-based emergency mapping programs. The group intends to:

- work with the appropriate organizations on definition of professional standards for emergency mapping, guidelines for product generation and reviewing relevant technical standards and protocols
- facilitate communication and collaboration during the major emergencies
- stimulate coordination of expertise and capacities.

The existence of the group and the cooperation among members already brought benefits during recent disasters in Africa and Europe in 2012 in terms of faster and effective satellite data provision and better product generation.