

## EMERGENCY RESPONSE SERVICE: OVER 12 YEARS OF RAPID MAPPING AT SERTIT

C. URIBE<sup>1</sup>, N. THOLEY<sup>1</sup>, B. ALLENBACH<sup>1</sup>, S. CLANDILLON<sup>1</sup>, K. FELLAH<sup>1</sup>,  
P. DE FRAIPONT<sup>1</sup>, H. YESOU<sup>1</sup>.

<sup>1</sup>*SERTIT, boulevard Sébastien Brant, BP 10413, 67412 Illkirch CEDEX (France)*  
[sertit@sertit.u-strasbg.fr](mailto:sertit@sertit.u-strasbg.fr)

### ABSTRACT

Involved in the GMES SAFER (2) project (EC-FP7) as Emergency Response Service provider, SERTIT's Rapid Mapping Service has more than ten years of activities.

Focused on the rapid delivery of satellite derived crisis information to organizations in charge of emergency management, rescue operations and humanitarian aid, this service is available 24 / 7 and provides in a rush mode up-to-date readily exploitable maps showing the extent and the impact of a catastrophic event and its evolution; these geo-information are extracted from Earth Observation images, acquired before and just after (or during) the event, such as the ones provided within SAFER or by the International Charter "Space and Major Disasters".

A brief review of the service's development and evolution over 12 years will illustrate the experience gained in service delivery and associated product specifications, which have enabled the service to progressively reach its actual operational mode.

Indeed, after several years of R&D and precursor actions, SERTIT's rapid mapping service (<http://sertit.u-strasbg.fr>) was set up during the ESA-EOMD (3) "Plain Flood Monitoring" project and is operational since 2000. This service has been then supported successively by the European Space Agency (ESA) and by the European Commission (EC) within the framework of the European GMES program, i.e. on the one hand through ESA-GSE (4) projects such as RISK-EOS, delivering geo-information services for natural risk management, or RESPOND, supporting humanitarian relief, disaster reduction and reconstruction, and, on the other hand, through EC-FP6 projects such as PREVIEW, developing new information services to support the management of risks, or BOSS4GMES aiming at building operational sustainable services for GMES.

This rapid mapping service is also retained by the French Space Agency (CNES (5)) as technical service provider during International Charter activations placed under French responsibility.

SERTIT's Rapid Mapping Service has been activated more than 100 times since its creation and has provided rapid mapping products related to different types of events all over the world, including floods, fires, earthquakes, hurricanes, storms, tsunamis, .... Examples related to recent major events, such as Honshu earthquake 2011, 2010 Xynthia flood, Haifa and La Reunion forest fires, ..., will illustrate the service's worldwide use and broad application, demonstrating also the potential benefits for the whole risk management community as well as individual citizens. Since the beginning SERTIT has been the service provider covering major events in the Caribbean area being involved in the disaster mapping after: Hurricane Lenny in Guadeloupe on 1999, Earthquake in Salvador on 2001 Landslide in Dominican Republic on 2003, Floods in Haiti on 2004 & 2008, Floods in the French Antilles on 2008, Floods in French Guiana on 2008, Richter Earthquake simulated exercise 2008, and the earthquake in Haiti on 2011.

- (1) SERTIT: Service Régional de Traitement d'Image et de Télédétection
- (2) SAFER: Services and Applications For Emergency Response
- (3) EOMD: Earth Observation Market Development
- (4) GSE: GMES Service Elements
- (5) CNES: Centre National d'Etudes Spatiales