

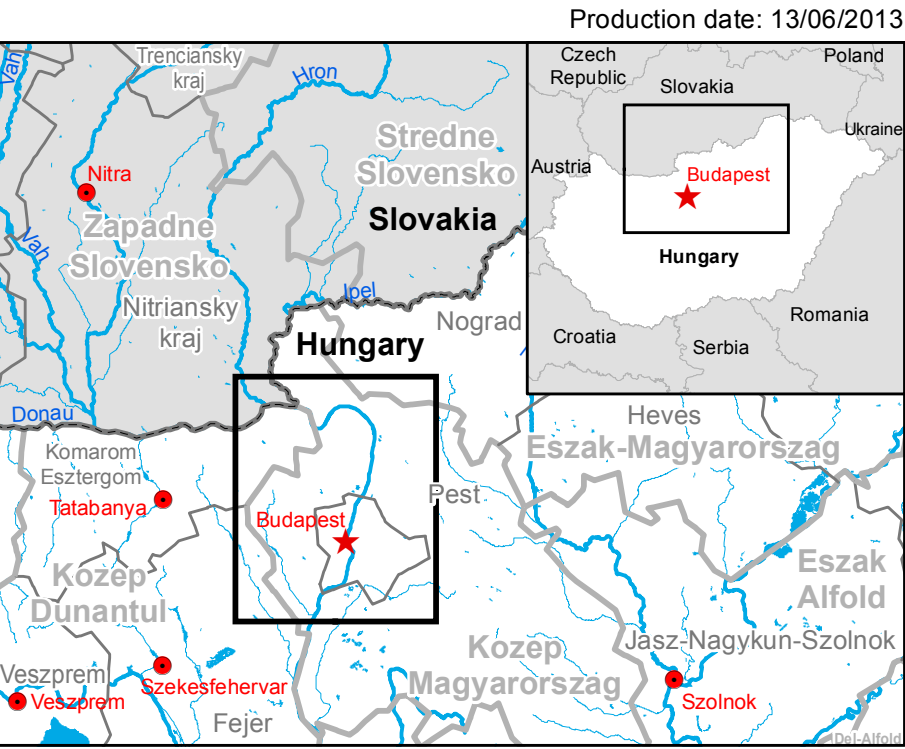


GLIDE number: FL-2013-000068-HUN Activation ID: EMSR-046  
Product N.: 03Budapest, v1

## Budapest - HUNGARY

### Flood - 04/06/2013

#### Delineation Map - Overview - Monit02



#### Cartographic Information

1:120000 Full color ISO A1, medium resolution (200 dpi)



Map Coordinate System: WGS 1984 UTM Zone 34N  
Graticule: WGS 84 geographical coordinates

Legend	Hydrology	Transportation
<b>Crisis Information</b>	River	Aerodrome
Flooded Area (12/06/2013)	Stream	Helipad
<b>General Information</b>	Canal	Railway
Area of Interest	Lake	Runway
Satellite Footprint	Reservoir	Motorway
<b>Administrative boundaries</b>	River	Primary Road
International Boundary		Secondary Road
Region		
<b>Settlement</b>	<b>Point of Interest</b>	
Populated Place	Institutional	
Built-Up Area	Medical	
Quarry	Transportation	
	Physiography	
	Contour lines and elevation (m)	

Consequences within the Overview AOI on 12/06/2013	
Estimated Population	4276 inhabitants
Transportation	1.6 km
Settlement	50.08 ha

**Map Information**

Surging rivers in Hungary, Czech Republic, Germany and Austria caused widespread flooding in the region. Heavy rains had swelled the Elbe, Danube and Vltava rivers over the weekend, along with smaller rivers and tributaries. Hungary declared states of emergency as the waters of the Danube River rose to record levels. There are flood protection alert and preparedness along 753.8 km in the country. On the upper section of Danube the highest ever measured water levels are expected. Peak on Danube River is expected for June 10 in Budapest. Water management experts are forecasting 885 +/- 20 cm water level in Budapest, the highest ever measured water level. Peak in Nagybajcs (near City Győr, HUN/SK border) is expected for June 8, with 900 +/- 10 cm water level (highest ever measured). This is a delineation map for the region of Budapest, showing the situation as of 12/06/2013. The main users of the map are Civil Protection authorities involved in in-field operations. The potential additional users of the map are Civil Protection authorities involved in operations. The scope of the map is to provide support to planning and rescue operations.

**Data Sources**

Inset maps based on: Administrative boundaries (JRC 2013, GISC0 2010, © EuroGeographics), Hydrology, Transportation (Natural Earth, 2012, CCM River DB © EU-JRC 2007), Settlements (Geonames, 2013).  
RADARSAT-2 © MDA (acquired on 12/06/2013 16:46 UTC, GSD 1.56 m).  
COSMO-SkyMed © ASI (acquired on 12/06/2013 16:24 UTC, GSD 2.5 m).  
Landsat imagery © USGS/NASA (acquired in 2000-2002, GSD 15 m, 5% cloud coverage).  
Base vector layers based on OpenStreetmap, Wikimapia, Geonames (approx. 1:10,000, extracted on 06/02/2013), refined by ITHACA.  
Elevation data: EU-DEM (25 m posting), SRTM (90 m posting).  
All Data sources are complete and with no gaps.

**Dissemination/Publication**

No restrictions on the publication of the mapping apply.  
Delivery formats are GeoTIFF, GeoPDF, GeoJPEG and vectors (shapetile and KML formats).

**Framework**

The products elaborated in the framework of current mapping in rush mode activation are realized to the best of our ability, within a very short time frame during a crisis, optimising the available data and information. All geographic information has limitations due to scale, resolution, date and interpretation of the original data sources. The products are compliant with GIO-EMS RUSH Product Portfolio specifications.

**Map Production**

The present map shows basic topographic features such as transportation, hydrology and settlements in the area of Budapest (Hungary). These basic topographic features are derived from public datasets, refined by means of visual interpretation of pre-event Landsat orthomage. Thematic layer assessing the delineation of the flood event has been derived from RADARSAT-2 (1.56 m resolution, acquired on 12/06/2013 16:46 UTC) and COSMO-SkyMed (1.56 m resolution, acquired on 12/06/2013 16:24 UTC) post-event imagery. All satellite images have been radiometrically enhanced and georeferenced. The estimated geometric accuracy of this product is 50 m CE90 or better, from native positional accuracy of the background satellite image. The estimated thematic accuracy of this product is 85% or better, based on previous experience in using high resolution SAR imagery for flood extent delineation. Please be aware that the thematic accuracy might be lower in urban and forested areas due to known limitations of the analysis technique. Only the area enclosed by the Area of Interest has been analyzed. Map produced on 13/06/2013 by ITHACA under contract 257219 with the European Commission. All products are © of the European Commission. Name of the release inspector (quality control): e-GEOS (ODO). E-mail: rush@ems-gmes.eu

