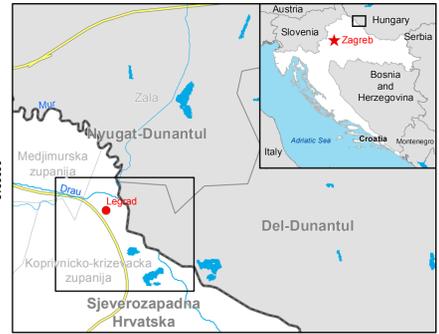


LEGRAD - CROATIA

Flood - 14/09/2014

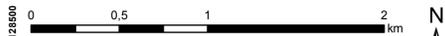
Delineation Map - Overview

Production date: 18/09/2014



Cartographic Information

1:20000 Full color ISO A1, medium resolution (200 dpi)



Grid: WGS 1984 UTM Zone 33N map coordinate system
Tick marks: WGS 84 geographical coordinate system

Legend

- | | |
|----------------------------|------------------|
| Crisis Information | Hydrology |
| Flooded Area (18/09/2014) | River |
| General Information | Stream |
| Area of Interest | Canal |
| Settlements | Ditch |
| Populated Place | Lake |
| Residential | River |
| Agricultural | |
| Cemetery | |
| Green Area | |
| Recreational | |
| Urbanized Multi-functional | |

Consequences within the overview AOI on 18/09/2014			
		Affected	Total in AOI
Flooded area	ha		49.8
Estimated population	Inhabitants	6	73611
Settlements	Sports Ground	ha	0.2
	Residential	ha	0.1

Map Information
Due to severe raining in last days, extremely high water level is recorded on almost all rivers in the northern part of Croatia. Several villages affected by floods have declared emergency situation. The Mura, Sava, Sutila, Kupa and Lonja rivers have all flooded with Sava, rising up to the highest level that has been observed in the last decades. The core users of the maps are Disaster Response Authorities involved in operations.

Data Sources
Inset maps based on: Administrative boundaries (JRC 2013, GISCO 2010, © EuroGeographics), Hydrology, Transportation (Natural Earth, 2012, OCM River DB © EU-JRC 2007), Settlements (Geonames, 2013).
COSMO-SkyMed © ASI 2014 (acquired on 18/09/2014 04:19 UTC, GSD 3 m) provided by e-GEOS S.p.A. All rights reserved.
Background digital orthophotos © 2014 courtesy of Republic of Croatia (acquired in 2013, GSD 2 m). Landsat © USGS (acquired on 16/07/2014, GSD 15 m, 2% cloud coverage).
Base vector layers based on OpenStreetMap © OpenStreetMap contributors, Wikimedia.org, GeoNames (approx. 1:1000, extracted on 14/09/2014) refined by GAF AG. Source information is included in vector data.
Population data: Landscan 2010 © UT BATTELLE, LLC.
All data sources are complete and with no gaps.

Dissemination/Publication
Delivery formats are GeoTIFF, GeoPDF, GeoJPEG and vectors (shapfile 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 the flood delineation in the area of Legrad (CROATIA). The basic topographic features are derived from public datasets, refined by means of visual interpretation of pre-event orthophotos.
Thematic layers, assessing the delineation of the event, have been derived from post-event image COSMO-SkyMed (acquired on 18/09/2014).
All satellite images have been radiometrically enhanced, orthorectified with RPC approach (using SRTM elevation data) and coregistered to the pre-event image.
The estimated geometric accuracy of this product is 10 m CE90 or better, from native positional accuracy of the background imagery.
The estimated thematic accuracy of this product is 85% or better, as it is based on previous experience in using high-resolution SAR 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 18/09/2014 by GAF AG under contract 257219 with the European Commission. All products are © of the European Commission.
Name of the release inspector (quality control): GAF AG (ODO).
E-mail: rush@ems-gmes.eu

Map products available at <http://emergency.copernicus.eu/mapping/list-of-components/EMSR101>