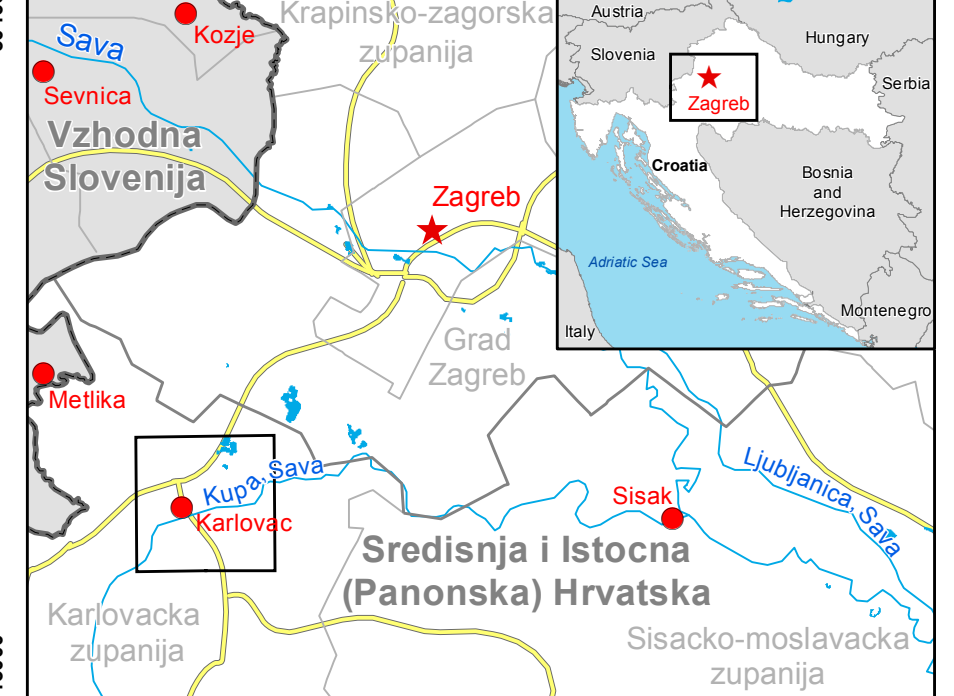


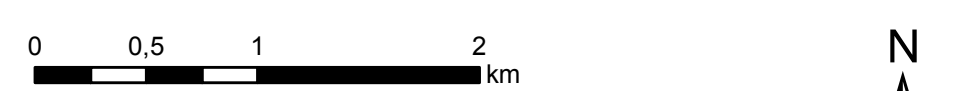
Karlovac - CROATIA Flood - 14/09/2014 Delineation Map - Overview

Production date: 16/09/2014



Cartographic Information

1:34000 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	Settlements	Hydrology
Flooded Area (15/09/2014)	Populated Place	Dam
Area of Interest	Residential	River
Educational	Industrial	Canal
Institutional	Recreational	Lake
Medical	Urbanized Multi-functional	Reservoir
Religious		River
Transportation		
Cemetery		
Stadium		

Consequences within the overview AOI on 15/09/2014			
Flooded area	ha	Affected	Total in AOI
Estimated population	Inhabitants	1141	71509
Settlements	Residential	ha	6
	Industrial	ha	2946
	Recreational	ha	194
	Urbanized	ha	3
		ha	40

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 (Natural Earth, 2012, COM River DB © EU-JRC 2007), Settlements (Geonames, 2013).
Background digital orthophotos © 2014 courtesy of Republic of Croatia (acquired in 2013, GSD 2 m, 0% cloud coverage). TerraSAR-X © Infoterra GmbH (acquired on 15/09/2014 16:41 UTC, GSD 5 m).
Base vector layers based on OpenStreetMap © OpenStreetMap contributors, Wikimapia.org, GeoNames (approx. 1:10,000, extracted on 14/09/2014) refined by e-GEOS. 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 (shapefile 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 Karlovac (CROATIA). The basic topographic features are derived from public datasets, refined by means of visual interpretation of pre-event orthophotos (© 2014 courtesy of Republic of Croatia). Thematic layers assessing the delineation of the event, have been derived from post-event image TerraSAR-X (acquired on 15/09/2014 16:41 UTC). All satellite images have been radiometrically enhanced using SRTM elevation data. The estimated thematic accuracy of this product is 85% or better, based on previous experience 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 limitation of the analysis technique.
Only the area enclosed by the Area of Interest has been analyzed.
Map produced on 16/09/2014 by e-GEOS 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>

Flood

Civil Protection

Response

Delineation Map - Overview

Planning

TerraSAR-X © Infoterra GmbH

14-09-2014