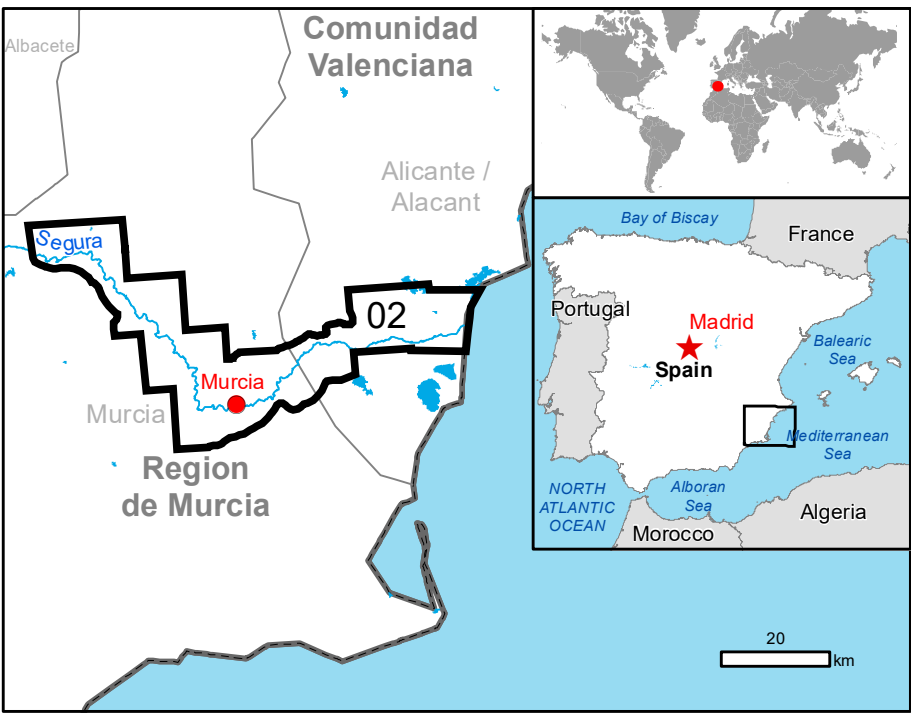


## Murcia - SPAIN

### Flood - Situation as of 16/09/2019

Delineation MONIT01 - Overview map 01



#### Cartographic Information

1:125000 Full color A1, 200 dpi resolution

0 2,5 5 10 Km

Grid: WGS 1984 UTM Zone 30N map coordinate system  
Tick marks: WGS 84 geographical coordinate system

#### Legend

Crisis Information	Administrative boundaries	Hydrography	Transportation
<div><div></div>Flooded Area (16/09/2019 06:10 UTC)</div> <div><div></div>Previous Flooded Area (14/09/2019 17:52 UTC)</div>	<div><div></div>Municipality</div> <div><div></div>Placenames</div> <div><div></div>Area of Interest</div> <div><div></div>Image Footprint</div>	<div><div></div>Coastline</div> <div><div></div>River</div> <div><div></div>Reservoir</div> <div><div></div>River</div>	<div><div></div>Highway</div> <div><div></div>Primary Road</div> <div><div></div>Secondary Road</div>

Land use - Land Cover			
Features available in the vector package			
Consequences within the AOI		Unit of measurement	
Flooded Area		ha	4263.0
Estimated population		Number of inhabitants	4165
Settlements	Residential	ha	77.8
Transportation	Artificial runway	km	0.9
	Highway	km	0.2
	Primary Road	km	1.0
	Secondary Road	km	8.1
	Local Road	km	15.2
	Cart Track	km	135.6
	Long-distance railway	km	0.0
Land use	Arable land	ha	2785.1
	Permanent crops	ha	284.1
	Heterogeneous agricultural areas	ha	1018.2
	Forests	ha	12.5
	Shrub and/or herbaceous vegetation association	ha	3.0
	Open spaces with little or no vegetation	ha	12.3
	Inland wetlands	ha	0.5
	Coastal wetlands	ha	60.3
	Other	ha	122.0

#### Map Information

Heavy rainfall, hail, winds up to 100 kmh and huge waves have affected the Southeast of the Iberian Peninsula, causing floods in many villages with much damage to infrastructure and buildings in the provinces of Valencia, Alicante, Murcia and Albacete. The request is for Delineation and monitoring over large AOIs and damage grading analysis over focused badly hit areas.

The present map shows the flood delineation in the area of Murcia (Spain). The thematic layer has been derived from post-event satellite image using a semi-automatic approach. The estimated geometric accuracy (RMSE) is 15 m or better, from native positional accuracy of the background satellite image.

#### Relevant date records (UTC)

Event	11/09/2019 12:00	Situation as of	16/09/2019 06:10
Activation	12/09/2019 13:37	Map production	16/09/2019

#### Data sources

Pre-event image: Sentinel-2B (2019) (acquired on 19/08/2019 at 10:50 UTC, GSD 10.0 m, approx. 0% cloud coverage in AOI, 0° off-nadir angle) provided under COPERNICUS by the European Union and ESA.  
Post-event image: Sentinel-1B (2019) (acquired on 16/09/2019 at 06:10 UTC, GSD 10.0 m) provided under COPERNICUS by the European Union and ESA.  
COSMO-SkyMed © ASI (2019), distributed by e-GEOS S.p.A. (acquired on 14/09/2019 at 17:52 UTC, GSD 5.0 m), provided under COPERNICUS by the European Union and ESA, all rights reserved.

Base vector layers: OpenStreetMap © OpenStreetMap contributors, GeoNames 2015, Corine Land Cover (CLC) 2012, Global Administrative Areas (GADM), refined by the producer.  
Inset maps: JRC 2013, EuroBoundaryMap 2017 © EuroGeographics, Natural Earth 2012, CCM River DB © EUJRC2007, GeoNames 2013.

Population data: GHS Population Grid © European Commission, 2015  
http://data.europa.eu/89h/jrc-ghs-ghs\_pop\_gpw4\_globe\_r2015a.  
Digital Elevation Model: EU-DEM (25 m)

#### Disclaimer

Products elaborated in this Copernicus EMS Rapid Mapping activity are realized to the best of our ability, within a very short time frame, optimising the available data and information. All geographic information has limitations due to scale, resolution, date and interpretation of the original sources. No liability concerning the contents or the use thereof is assumed by the producer and by the European Union.  
Please be aware that the thematic accuracy might be lower in urban and forested areas due to inherent limitations of the SAR analysis technique.

Delivery formats are Layered Geospatial PDF, GeoJPEG and vector (ESRI shapefiles, Google Earth KML, GeoJSON).

Map produced by ITHACA released by SERTIT (ODD).

For the latest version of this map and related products visit  
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