

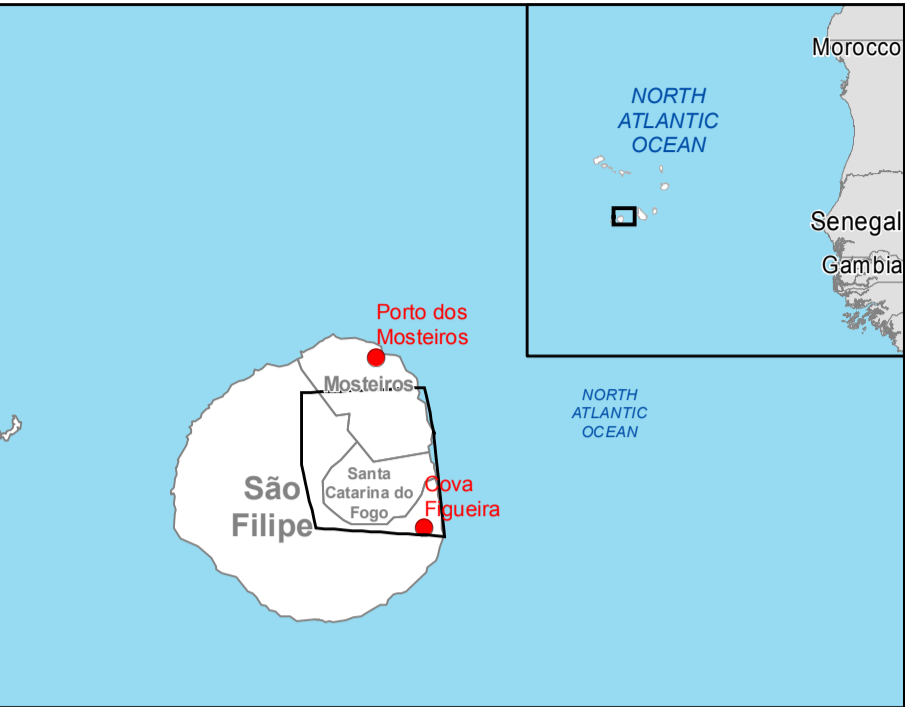
GLIDE number: EP-2014-000039-CIV Activation ID: EMSR-111
Product N.: 01Fogolsland, v3

Fogo Island - CAPE VERDE

Volcanic eruption - 23/11/2014

Grading Map - Detail - Monit04

Production date: 08/01/2015



Cartographic Information

1:25000 Full color ISO A1, medium resolution (200 dpi)



Grid: WGS 1984 UTM Zone 26N map coordinate system
Tick marks: WGS 84 geographical coordinate system

Legend

Crisis Information

- Lava flow (based on Cosmo-SkyMed) (30/11/2014 07:25 UTC)
- Lava flow (based on Pleiades) (29/11/2014 12:27 UTC)
- Lava flow (based on Cosmo-SkyMed) (04/12/2014 19:20 UTC)
- Lava flow (based on Cosmo-SkyMed) (07/12/2014 07:25 UTC)

Settlement Grading

- Highly Affected (70-99%)
- Moderately Affected (40-69%)

Transportation Grading

- Road, Destroyed

General Information

- Area of Interest
- Sensor Footprint

Administrative boundaries

- Municipality

Settlements

- Populated Place
- Residential

Physiography

- Volcano
- Contour lines and elevation (m)
- Transportation
- Local Road

Consequences within the Detail AOI on 07/12/2014						
		Destroyed	Highly affected	Moderately affected	Possibly affected	Total affected
Affected area	ha	306.9	0	0	0	306.9
Estimated population	Inhabitants in related areas	0	160	0	0	160
Settlements	Residential	ha	0	10.01	0	10.01
Transportation	Local Road	km	5.1	0	0	5.1

Map Information

The volcano on the island of Fogo, Cape Verde, started erupting on 23 November at 10:00 (LT), emitting gas and lava. The National Authorities ordered the evacuation of the community of Chã das Caldeiras (700 - 1 000 people), located approximately 3km from the erupting peak, Pico do Fogo. It is the first time the volcano on the island of Fogo has erupted since 1995. This map has not been validated with in-situ data.

Data Sources

Inset maps based on: Administrative boundaries (JRC 2013), Hydrology, Transportation (Natural Earth, 2012), Settlements (Geonames, 2013).
Post-event images: Cosmo-SkyMed © ASI 2014 (acquired on 07/12/2014 07:25 UTC, GSD 3 m and 30/11/2014 7:25 UTC, GSD 3 m) distribution e-GEOS S.p.A.. All rights reserved.
Pleiades © CNES 2014, distribution Airbus Defence and Space Services / SPOT Image S.A. (acquired on 29/11/2014 12:27 UTC, GSD 0.5 m, 0% cloud coverage). All rights reserved.
Pre-event images: Cosmo-SkyMed © ASI 2014 (acquired on 09/10/2014 19:20 UTC, GSD 1 m, and 21/11/2014 07:25 UTC, GSD 3 m) distribution e-GEOS S.p.A.. All rights reserved.
Pleiades © CNES 2014, distribution Airbus Defence and Space Services / SPOT Image S.A. (acquired on 19/07/2013 12:10 UTC, GSD 0.5 m, 0% cloud coverage). All rights reserved.
Base vector layers based on OpenStreetMap © OpenStreetMap contributors, Wikimapia.org, GeoNames (approx. 1:10,000, extracted on 25/11/2014), refined by SIRS. Source information is included in vector data.
Elevation data: SRTM (90 m posting). Height in meters above mean sea level.
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 (shapelite 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 delineation of the lava flow and damage grading on assets in the area of Fogo Island (CAPE VERDE).
The basic topographic features are derived from public datasets, refined by means of visual interpretation of pre-event image Pleiades (acquired on 19/07/2013).
Thematic layers, assessing the delineation of the event and its grading, have been derived from the analysis of optical Pleiades image interpretation (acquired on 29/11/2014 12:27 UTC) and COSMO-SkyMed interferometric image pairs (acquired on 09/10/2014 and 04/12/2014, and acquired on 21/11/2014 and 30/11/2014, and acquired on 30/11/2014 and 07/12/2014) and MultiTemporal Coherence (MTC) derived from these images. This analysis of COSMO-SkyMed images is based on environmental change detection. Please note that the lava flow extents differ to the one displayed on the Overview map due to the use of different imagery resolution and spectral bands (optical infrared and SAR) and different acquisition dates.
Ancillary data provided by Instituto Nacional de Gestão do Território have also been used.
The COSMO-SkyMed images have been geocoded using SRTM elevation data and coregistered to the Pleiades image.
The estimated geometric accuracy of this product is 5 m CE90 or better, from native positional accuracy of the background satellite.
The estimated thematic accuracy of this product is 85% or better, as it is based on previous experience in using very high resolution SAR and optical imagery for volcanic eruption.
Only the area enclosed by the Area of Interest has been analyzed.
Map produced on 08/01/2015 by GAF AG under contract 257219 with the European Commission. All products are © of the European Commission.
Name of the release inspector (quality control): eGEOS (ODO).

Volcanic eruption

- Civil Protection
- Response
- Grading Map - Detail
- Planning
- COSMO-SkyMed © ASI 2014
- 23-11-2014