

European Ground Motion Service: Ortho – Vertical Component 2015-2021 (vector), Europe, yearly, Feb. 2023

The European Ground Motion Service (EGMS) is a component of the Copernicus Land Monitoring Service. EGMS provides consistent, regular, standardised, harmonised and reliable information regarding natural and anthropogenic ground motion phenomena over the Copernicus Participating States and across national borders, with millimetre accuracy. This set of metadata describes the third product level of EGMS: Ortho.

The EGMS Ortho product exploits the information provided by ascending and descending orbits of the Calibrated product (https://sdi.eea.europa.eu/catalogue/srv/eng/catalog_search#/metadata/bef2507a-13cf-44c0-a809-0a1566f27631) to derive two further layers; one of purely vertical displacements (the one described by this metadata), the other of purely east-west displacements. Both layers are resampled to a 100 m grid. The Ortho product eases the interpretation process of non-experts since the viewing geometry has not to be considered anymore.

EGMS Ortho is visualised as a vector map of measurement points colour-coded by average velocity (vertical or east-west components) and distributed to users in comma-separated values format. Each point is associated with a time series of displacement, i.e. a plot with values of displacement per acquisition of the satellite.

Simple

Date (Creation)	2022-08-01
Date (Publication)	2023-02-15
Edition	01.00
Citation identifier	copernicus_v_3035_100_m_egms-ortho-vert_p_2015-2021_v01_r00
Code	10.2909/0a94b5d4-b414-4f2b-a6be-eea73094a0f5

Point of contact

No information provided.

Point of contact

No information provided.

Point of contact

No information provided.

Point of contact

No information provided.

Maintenance and update frequency	Annually
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> Natural risk zones
Keywords	
Continents, countries, sea regions of the world.	<ul style="list-style-type: none"> Iceland Norway EU27 (from 2020) United Kingdom
Keywords	

GEMET	<ul style="list-style-type: none"> • infrastructure • geological process • built environment • urban area • earth observation • geo-referenced data • risk reduction • subsidence • landslide
Spatial scope	<ul style="list-style-type: none"> • European
Temporal resolution	<ul style="list-style-type: none"> • Weekly
Access constraints	Other restrictions
Other constraints	no limitations to public access
Use constraints	Other restrictions
Other constraints	<p>The Copernicus programme is governed by Regulation (EU) No 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU. Within the Copernicus programme, a portfolio of land monitoring activities has been delegated by the European Union to the EEA. The land monitoring products and services are made available through the Copernicus land portal on a principle of full, open and free access, as established by the Copernicus data and information policy Regulation (EU) No 1159/2013 of 12 July 2013. The Copernicus data and information policy is in line with the EEA policy of open and easy access to the data, information and applications derived from the activities described in its management plan.</p> <p>Free, full and open access to this data set is made on the conditions that:</p> <ol style="list-style-type: none"> 1. When distributing or communicating Copernicus dedicated data and Copernicus service information to the public, users shall inform the public of the source of that data and information. 2. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the Union. 3. Where that data or information has been adapted or modified, the user shall clearly state this. 4. The data remain the sole property of the European Union. Any information and data produced in the framework of the action shall be the sole property of the European Union. Any communication and publication by the beneficiary shall acknowledge that the data were produced "with funding by the European Union".
Spatial representation type	Vector
Distance	100 m
Language of dataset	English
Character set	UTF8
Topic category	<ul style="list-style-type: none"> • Geoscientific information

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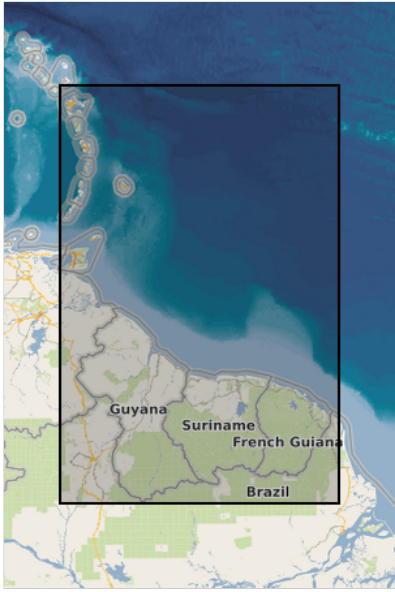
Begin date	2015-02-01
End date	2021-12-31

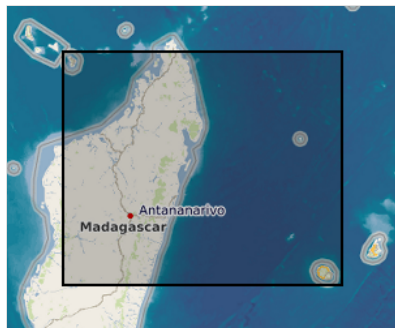
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CRS identifier	EPSG:3035		
CRS identifier	EPSG:32740		
CRS identifier	EPSG:32620		
CRS identifier	EPSG:32622		
CRS identifier	EPSG:32788		
Distribution format	<ul style="list-style-type: none"> • ascii (.csv, .txt, .sql) () 		
OnLine resource	Protocol WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link	Linkage https://egms.land.copernicus.eu/ https://land.copernicus.eu/user-corner/technical-library/egms-algorithm-theoretical-basis-document https://land.copernicus.eu/user-corner/technical-library/egms-product-user-manual https://land.copernicus.eu/user-corner/technical-library/egms-quality-control-report https://land.copernicus.eu/pan-european/european-ground-motion-service	Name EGMS Explorer Quality Assurance & EGMS and the Ortho product Product User Manual Quality Assurance & Control Report Other useful documents
OnLine resource	Protocol DOI	Linkage https://doi.org/10.2909/0a94b5d4-b414-4f2b-a6be-eea73094a0f5	Name
Hierarchy level	Dataset		

Conformance result

Date (Publication)	2010-12-08
Explanation	See the referenced specification
Statement	

The Ortho product is based on the decomposition of the Calibrated product to provide two discrete geospatial layers containing purely vertical (the one described in this metadata) and purely east-west displacements resampled to a 100 m grid. In summary, the process involves the following tasks:

- i) identify all the cells with at least one measurement point per orbit,
- ii) average the time series per orbit,
- iii) interpolate ascending and descending time series to a common six-day sampling and
- iv) estimate the vertical and east-west components following equations weighted on the estimated accuracy of the input measurements.

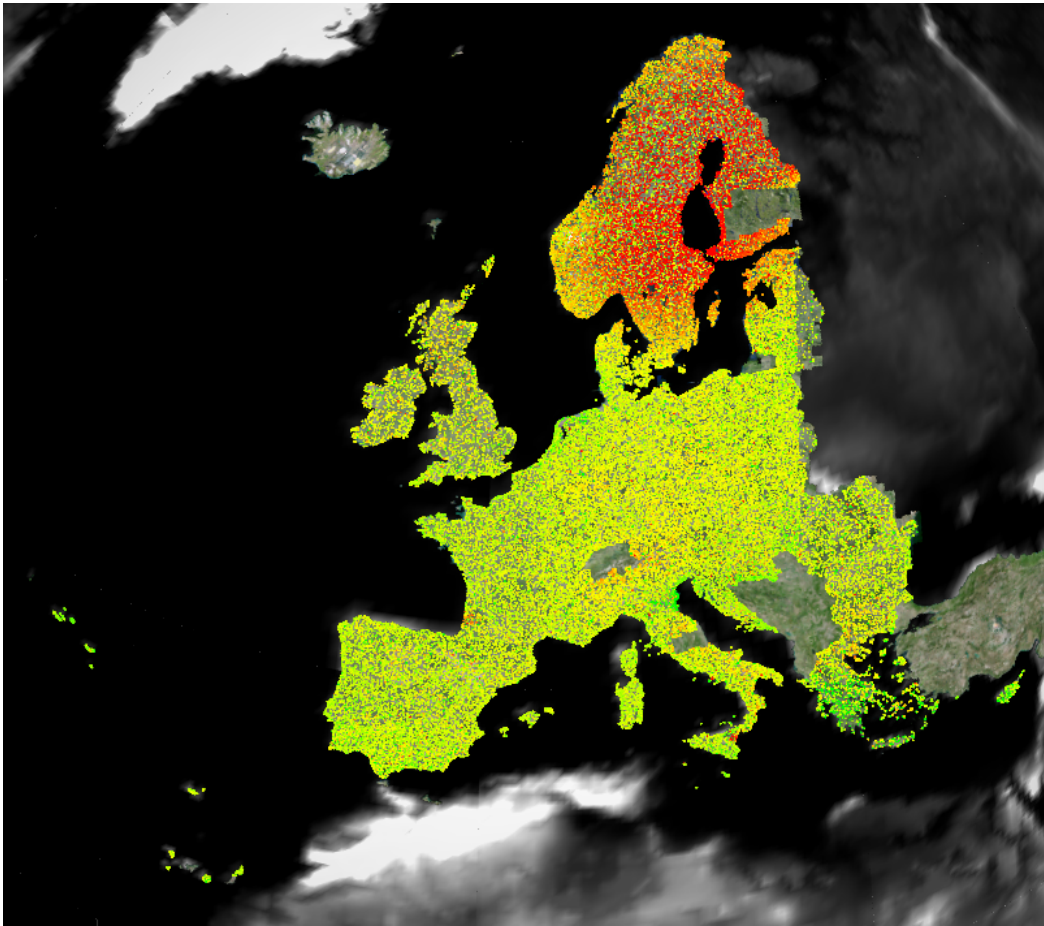
Source

- [European Ground Motion Service: Calibrated 2015-2021 \(vector\), Europe, yearly, Feb. 2023](#)

Metadata

File identifier	0a94b5d4-b414-4f2b-a6be-eea73094a0f5 XML		
Metadata language	English		
Character set	UTF8		
Hierarchy level	Dataset		
Date stamp	2023-09-20T14:44:39.87Z		
Metadata standard name	ISO 19115/19139		
Metadata standard version	1.0		
Metadata author	Organisation name	Individual name	Electronic mail address Role
	European Environment Agency		sdi@eea.eur sdi@eea.europa.eu Point of contact

Overviews



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