

European Ground Motion Service: Calibrated product between 2015 and 2020, Jul. 2022

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 second product level of EGMS: Calibrated.

This product is considered the main EGMS product as it serves the needs of most users. It contains the same type of information as the Basic product (https://sdi.eea.europa.eu/catalogue/srv/eng/catalog_search#/metadata/9bd4186b-7e99-4630-86e0-df4581169a00), but the measurement points are referenced to a model derived from global navigation satellite system data. Thus, the measurements are not relative anymore and are considered as absolute. The calibrated product makes it possible to compare ground motion measurements from adjacent areas belonging to different products of the same level.

EGMS Calibrated is visualised as a vector map of measurement points, colour-coded by average velocity, 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. The product is generated for both ascending and descending orbits.

Simple

Date (Creation)	2021-10-05				
Date (Publication)	2022-07-15				
Edition	01.00				
Citation identifier	copernicus_v_3035_20_m_egms-calibrated_p_2015-2020_v01_r00				
Status	Superseded				
Point of contact	Organisation name	Individual name	Electronic mail address	Website	Role
	European Environment Agency		copernicus@eea.europa.eu	https://land.copernicus.eu	Distributor
	European Environment Agency		copernicus@eea.europa.eu	https://land.copernicus.eu	Custodian
	European Environment Agency		copernicus@eea.europa.eu	https://land.copernicus.eu	Point of contact

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 EU27 (from 2020) Norway United Kingdom
Keywords	
GEMET	<ul style="list-style-type: none"> landslide

	<ul style="list-style-type: none"> • risk reduction • geo-referenced data • geological process • subsidence • urban area • built environment • earth observation • infrastructure
Spatial scope	<ul style="list-style-type: none"> • European
Temporal resolution	<ul style="list-style-type: none"> • Weekly
EEA topics	<ul style="list-style-type: none"> • Land use • Buildings and construction • Production and consumption
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	20 m
Language of dataset	English
Character set	UTF8
Topic category	<ul style="list-style-type: none"> • Geoscientific information

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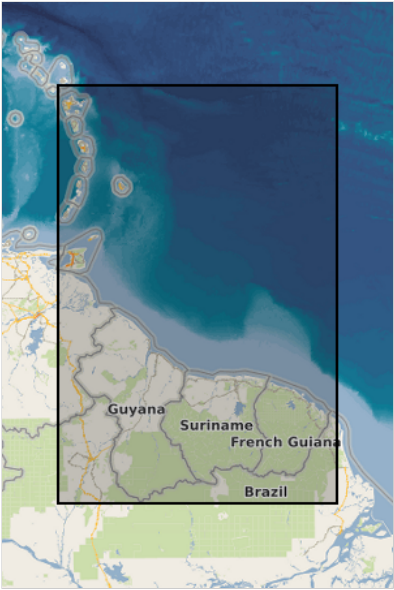
Begin date	2015-02-01
End date	2020-12-31

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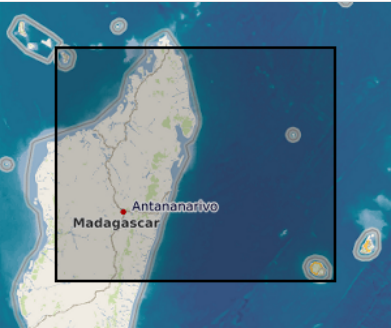


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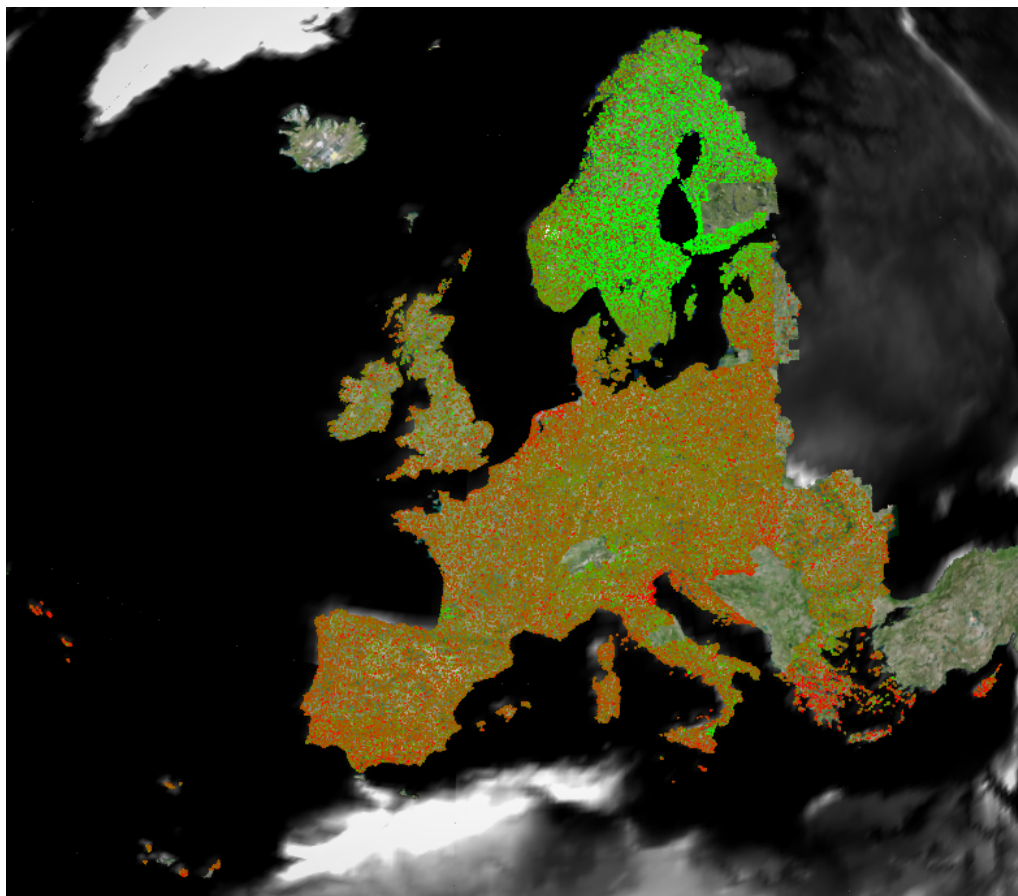
Coordinate reference system identifier	EPSG:3035																													
Coordinate reference system identifier	EPSG:32788																													
Coordinate reference system identifier	EPSG:32740																													
Coordinate reference system identifier	EPSG:32620																													
Coordinate reference system identifier	EPSG:32622																													
Distribution format	<ul style="list-style-type: none">• <code>ascii (.csv, .txt, .sql)</code> ()																													
OnLine resource	<table><tr><th>Protocol</th><th>Linkage</th><th>Name</th></tr><tr><td>WWW:DOWNLOAD-1.0-http--download</td><td>https://egms.land.copernicus.eu/</td><td>European Ground Motion Service platform</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://land.copernicus.eu/user-corner/technical-library/egms-gnss-calibration-report</td><td>EGMS-GNSS calibration report</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://land.copernicus.eu/user-corner/technical-library/egms-product-user-manual</td><td>Product User Manual</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://land.copernicus.eu/user-corner/technical-library/egms-algorithm-theoretical-basis-document</td><td>Algorithm Theoretical Basis Document</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://land.copernicus.eu/user-corner/technical-library/egms-quality-assurance-control-report</td><td>Quality Assurance & Control Report – Harmonisation Tests</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://land.copernicus.eu/user-corner/technical-library/egms-quality-control-report</td><td>Quality Assurance & Control Report 1, 2</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://ieeexplore.ieee.org/abstract/document/9553562</td><td>Scientific paper</td></tr><tr><td>WWW:LINK-1.0-http--link</td><td>https://land.copernicus.eu/pan-european/european-ground-motion-service</td><td>Other useful documents</td></tr></table>	Protocol	Linkage	Name	WWW:DOWNLOAD-1.0-http--download	https://egms.land.copernicus.eu/	European Ground Motion Service platform	WWW:LINK-1.0-http--link	https://land.copernicus.eu/user-corner/technical-library/egms-gnss-calibration-report	EGMS-GNSS calibration report	WWW:LINK-1.0-http--link	https://land.copernicus.eu/user-corner/technical-library/egms-product-user-manual	Product User Manual	WWW:LINK-1.0-http--link	https://land.copernicus.eu/user-corner/technical-library/egms-algorithm-theoretical-basis-document	Algorithm Theoretical Basis Document	WWW:LINK-1.0-http--link	https://land.copernicus.eu/user-corner/technical-library/egms-quality-assurance-control-report	Quality Assurance & Control Report – Harmonisation Tests	WWW:LINK-1.0-http--link	https://land.copernicus.eu/user-corner/technical-library/egms-quality-control-report	Quality Assurance & Control Report 1, 2	WWW:LINK-1.0-http--link	https://ieeexplore.ieee.org/abstract/document/9553562	Scientific paper	WWW:LINK-1.0-http--link	https://land.copernicus.eu/pan-european/european-ground-motion-service	Other useful documents		
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Hierarchy level	Dataset																													
Conformance result																														

Date (Publication)	2010-12-08
Explanation	See the referenced specification
Statement	<p>The Calibrated product has been produced by calibrating the Basic product with a reference velocity model derived from global navigation satellite system data. The model is transformed to the reference frame of the interferometric data, projected to the radar line-of-sight, interpolated at each measurement point, and used to provide the information needed to harmonize all the different reference points that characterise the Basic product.</p> <p>More information on the interferometric technique and the approach used to produce EGMS and the Calibrated product. Algorithm Theoretical Basis Document: https://land.copernicus.eu/user-corner/technical-library/egms-algorithm-theoretical-basis-document</p> <p>More information on the velocity model. GNSS Calibration Report: https://land.copernicus.eu/user-corner/technical-library/egms-gnss-calibration-report</p> <p>More information on the quality of products. Quality Assurance & Control Report 1, 2, etc.: https://land.copernicus.eu/user-corner/technical-library/egms-quality-control-report</p> <p>A scientific paper on the EGMS production system and results. Costantini et al., 2021 IGARSS21 https://ieeexplore.ieee.org/abstract/document/955356 2</p>
Source	<ul style="list-style-type: none"> European Ground Motion Service: Basic product between 2015 and 2020. Jul. 2022

Metadata

File identifier	dbc229ee-b94e-44e1-b0db-9bc57076bef1 XML		
Metadata language	English		
Character set	UTF8		
Hierarchy level	Dataset		
Date stamp	2023-02-17T10:27:41.095Z		
Metadata standard name	ISO 19115/19139		
Metadata standard version	1.0		
Metadata author	<div><div><div>Organisation name</div><div>Individual name</div></div><div>European Environment Agency</div></div>	<div><div>Electronic mail address</div><div>sdi@eea.europa.eu</div></div>	<div><div>Website Role</div><div>Point of contact</div></div>

Overviews



Provided by

