EEA geospatial data catalogue

Imperviousness Change 2015-2018 (raster 20 m), Europe, 3-yearly, Aug. 2020

The High Resolution Layer Imperviousness Change (IMC) 2015-2018 is a 20m raster dataset showing change in imperviousness between 2015 and 2018 reference years, produced in the frame of the EU Copernicus programme.

The high resolution imperviousness products capture the percentage and change of soil sealing. Built-up areas are characterized by the substitution of the original (semi-) natural land cover or water surface with an artificial, often impervious cover. These artificial surfaces are usually maintained over long periods of time. A series of high resolution imperviousness datasets (for the 2006, 2009, 2012, 2015 and 2018 reference years) with all artificially sealed areas was produced using automatic derivation based on calibrated Normalized Difference Vegetation Index (NDVI). This series of imperviousness layers constitutes the main status layers. They are per-pixel estimates of impermeable cover of soil (soil sealing) and are mapped as the degree of imperviousness (0-100%). Imperviousness change layers were produced as a difference between the reference years (2006-2009, 2009-2012, 2012-2015, 2015-2018 and additionally 2006-2012, to fully match the CORINE Land Cover production cycle) and are presented 1) as degree of imperviousness change (-100% -- +100%), in 20m and 100m pixel size, and 2) a classified (categorical) 20m change product.

This dataset is provided as 20 meter rasters (fully conformant with EEA reference grid) in 100 x 100 km tiles grouped according to the EEA38 countries and the United Kingdom.

More information about the product can be found here https://land.copernicus.eu/en/products/high-resolution-layer-imperviousness/imperviousness-change-2015-2018 .

Simple

Date (Creation)	2020-08-28
Date (Publication)	2020-08-28
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Code	10.2909/e3284161-abef-4a2e-a291-cd8ce1cab54e

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No information provided.

Maintenance and update frequency	Continual
GEMET - INSPIRE themes, version 1.0	• Land cover • Land use
Keywords	
Continents, countries, sea regions of the world.	• EEA38 (from 2020) • United Kingdom

Keywords	
GEMET	• urban area • landscape alteration • land use • built-up area • built environment • sealing • land cover • soil surface sealing
Spatial scope	• European
EEA Management Plan	• 2018 3.6.1
EEA topics	• Buildings and construction • Land use • Soil
Access constraints	Other restrictions
Other constraints	no limitations to public access
Use constraints	Other restrictions
Other constraints	Access to data is based 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. This regulation establishes registration and licensing conditions for GMES/Copernicus users. Free, full and open access to this data set is made on the conditions that: 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	Grid
Distance	20 20 m
Language of dataset	English
Character set	UTF8
Topic category	• Environment • Imagery base maps earth cover
Begin date	2015-01-01
End date	2018-12-31

72.05	N	34.54	S	46.58	E	-27.25	W

Coordinate reference system identifier	EPSG:3035
Distribution format	• GeoTIFF (1.0)

OnLine resource

Protocol	Linkage	Name
ESRI:REST	https://image.discomap.eea.europa.eu/arcgis/rest/services/GioLandPublic/HRL_ImperviousnessChange_15_18/ImageServer	
OGC:WMS	https://image.discomap.eea.europa.eu/arcgis/services/GioLandPublic/HRL_ImperviousnessChange_15_18/ImageServer/WMSServer?request=GetCapabilities&service=WMS	
WWW:LINK-1.0-http--link	https://land.copernicus.eu/en/products/high-resolution-layer-imperviousness/imperviousness-change-2015-2018#Download	Download (requires authentication)

OnLine resource

Protocol	Linkage	Name
DOI	https://doi.org/10.2909/e3284161-abef-4a2e-a291-cd8ce1cab54e	

Hierarchy level	Dataset

Conformance result

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

Statement

Quality assurance follows the ISO9000 standards for Quality Management and comprises of dedicated procedures of ongoing quality checks (QA breakpoints) during implementation of the production chain, in order to keep persistent control over the various stages of production, assure fitness-for-purpose of the end-products and that all quality requirements are fulfilled. Priority has been given to the target thematic accuracies to be achieved by each product, as well as to the issues of product consistency (spatial, thematic, temporal) and homogeneity. Quality Assessment: The quality assessment has been performed according to INSPIRE Data Specifications. The data quality elements considered are:

(i) Completeness,

(ii) Logical Consistency,

(iii) Thematic Accuracy,

(iv) Temporal quality and

(v) Usability.

Each of them (excl. the Thematic Accuracy hereafter) forms a section in the QA/QC Procedures.

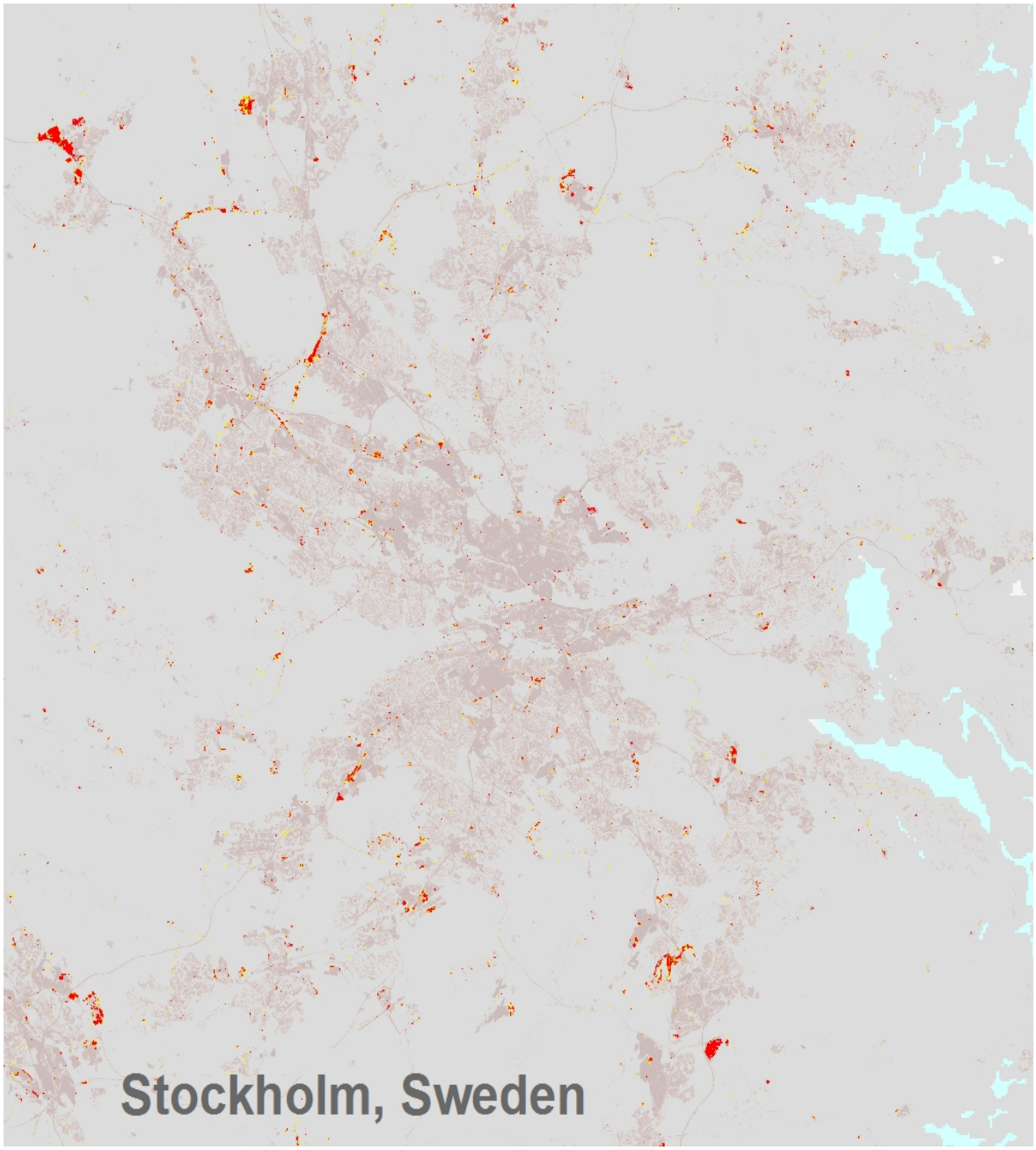
IMPORTANT: Please be aware that we are currently investigating the reliability of the magnitude of imperviousness increase that was mapped for the 2015-2018 period. The change products (as mapped) show a significant increase of the speed to soil sealing /imperviousness as compared to the previous periods for which we have change data (2006-2009, 2009-2012 and 2012-2015). We are

	confident that the trend and the spatial pattern of the trend reflects reality, but the magnitude of the increase needs to be further investigated. See background information in the Quality section here: https://land.copernicus.eu/en/products/high-resolution-layer-imperviousness/imperviousness-change-2015-2018 . The validation report of the product is available here: https://land.copernicus.eu/en/technical-library/hrl-imperviousness-2018-validation-report/@@download/file .
Source	•

Metadata

File identifier	e3284161-abef-4a2e-a291-cd8ce1cab54e XML
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset
Date stamp	2024-02-06T16:44:34.394Z
Metadata standard name	ISO 19115/19139
Metadata standard version	1.0
Metadata author	**Organisation name** / **Individual name** / **Electronic mail address** / **Website** / **Role** European Environment Agency / / sdi@eea.europa.eu / / Point of contact

Overviews



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