Reference Land Cover in Great Virunga 2016-2018 (vector) - version 1, Feb. 2019

This metadata refers to the Land Cover vector data generated over Virunga (Africa) for 2016 in the framework of the Copernicus Global Land Hot Spot Mapping (C-GL-HSM) contract under the coordination of JRC. This area of interest is either mapped with the generic 8 classes dichotomus legend (CAF_02_lc_a) or the detailed modular legend (CAF_02_lc_b).

The mapped area of interest (AOI) represents a Key Landscape for Conservation area (KLC). The KLC has a total size of about 4 million ha (40,000 km²) and is situated at the border between the Democratic Republic of Congo (DRC), Uganda and Rwanda. The main National Park is represented by the Virunga National Park, with a total area of 7768.93 km². Several parks in Rwanda and Uganda are adjacent and connected to Virunga

Reference time: 2016 - 2018

Simple

Date (Creation)	2019-02-25
Date (Publication)	2019-02-25
Date (Revision)	2019-02-25
Edition	01.00
Citation identifier	jrc_v_4326_30_m_c-gl-hsm-virunga_p_2016-2018_v01_r00

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	Not planned
GEMET - INSPIRE themes, version 1.0	• Human health and safety • Land cover
Keywords	
Continents, countries, sea regions of the world.	• Rwanda • Democratic Republic of the Congo • Uganda • Africa
Keywords	
GEMET	• land cover • landscape alteration

	- landscape - land use - land
[Spatial scope](#)	- [Regional](#)
EEA topics	- Environmental health impacts - Land use
Temporal resolution	- Not planned
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	Vector
Distance	30 m
Denominator	30000
Language of dataset	English
Character set	UTF8
Topic category	- Geoscientific information - Environment - Imagery base maps earth cover

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Begin date	2016-01-01
End date	2018-12-31
Additional Information	The Virunga National Park is not only the oldest park in africa (established in 1925), but also the richest in terms of biological diversity. The abundant wildlife includes the last of the worlds endangered mountain gorillas.

Virunga is located in the centre of the Albertine Rift, between Rwanda and Uganda. The park extends from the Virunga Massif in the south (including Mount Nyiragongo, the largest active volcano lake on earth) to the 5,109 m high Rwenzori Mountains in the north. The centre is dominated by the large Lake Edward. The park is characterised by a huge landscape diversity, including savannas, peat bogs, marshes, lava plains, eastern steppe vegetation, and various types of forests, including tropical rainforest and bamboo. This diversity is reflected also in the climate, which varies from as little as 500 mm annual rainfall around Lake Edward to more than 3,000 mm annual rainfall in the Mount Rwenzori region and permanent snow on top of the mountain.

Exceptional for the park is also the commitment to support local communities. The Virunga Alliance, a public-private-partnership, focuses on three main sectors for development, including tourism, sustainable energy and access to credit, and sustainable agriculture and fisheries.

The World Database on Protected Areas (WDPA 2019) has been used in the Copernicus Global Land Hot Spot mapping (C-GL-HSM) contract under the coordination of JRC to obtain statistics on land cover changes inside and outside the protected areas.

To see how much of the Key Landscapes for Conservation area is a Protected Area, consult the WMS service found at the Service section of this metadata. |
| **Coordinate reference system identifier** | EPSG:4326 |
| **Distribution format** | • SHP (1.0) |

OnLine resource

Protocol	Linkage	Name
WWW:URL	https://land.copernicus.eu/en/products/lclcc-hot-spots/present_land_cover#download	Great Virunga – Dichotomous and Modular Reference Land Cover
OGC:WMS	https://geospatial.jrc.ec.europa.eu/geoserver/hotspots/wms	all_present_lc_b_pol
WWW:LINK-1.0-http--link	https://land.copernicus.eu/global/hsm	HotSpot Land Cover Change Explorer
OGC:WMS	https://geospatial.jrc.ec.europa.eu/geoserver/hotspots/wms	all_present_lc_a_pol
WWW:DOWNLOAD-1.0-http--download	https://land.copernicus.eu/en/technical-library/great-virunga-report-files/@@download/file	

WWW:DOWNLOAD-1.0-http--download	https://land.copernicus.eu/en/technical-library/great-virunga-validation-file/@@download/file	Report file for download
		Validation file for download
WWW:URL	https://land.copernicus.eu/en/products/lclcc-hot-spots/satellite_images	Satellite images
OGC:WMS	https://geospatial.jrc.ec.europa.eu/geoserver/hotspots/wms	protected_areas

OnLine resource

No information provided.

| Hierarchy level | Dataset |

Conformance result

| Date (Publication) | 2010-12-08 |

| Explanation | See the referenced specification |

| Pass | Yes |

| Statement | e-GEOS Production Site produced this product by satellite analyses in the context of the Copernicus Global land Hot Spot Mapping (C-GL-HSM) framework. |

Data and products are based on medium to high and very high resolution satellite images (from approximately 1 to 30m spatial resolution) with a change assessment frequency between 1 to 20 years. The Image data sources used for mapping are Landsat 7 and 8. The validation process made use of Spot-6 and Sentinel-2 images as reference data.

Images temporal range: 2014-2018

It is the time frame that has been accepted to collect the satellite images useful to produces the vector data.

The Reference year is included in this time frame and correspond to mean year considering all the image's year used. It is the year on which the majority of the used images are.

The classification scheme follows the Land Cover Classification System (LCCS) developed by the United Nations Food and Agriculture Organization (FAO).

Since LCCS is a hierarchical system, the modular legend can be aggregated to the dichotomus legend.

The FAO LCCS handbook which describes each class in detail, can be downloaded here: http://www.fao.org/3/a-i5232e.pdf

This LCCS Land Cover map includes the following land cover classes (associated raster code in [ ]):

A11 - Cultivated and Managed Terrestrial Area(s) [3]

A12 - Natural And Semi-Natural Primarily Terrestrial Vegetation [4]

A23 - Cultivated Aquatic or Regularly Flooded Area(s) [6]

A24 - Natural And Semi-Natural Aquatic or Regularly Flooded Vegetation [7]

B15 - Artificial Surfaces and Associated Area(s) [0]

B16 - Bare Area(s) [11]

B27 - Artificial Waterbodies, Snow and Ice [13]

B28 - Natural Waterbodies, Snow and Ice [14]

The produced and independently validated Land Cover and Land Cover Change maps and statistics are available to global users.

The report and the validation file can be downloaded from the link section.

Basic image processing: Cloud/Shadow masking, Data Selction (based on occlusion and sesonality considerations), Atmospheric correction (TOA) of satellite data, Coregistration.

Automatic classification: Feature extraction from Dense Multitemporal Time Series (D MTS), statistics generation, automatic classificaiton (ROI based or decision tree) and labeling according to the required output LCCS legend schema.

Visual inspection and refiment: check and refinement of the LCCS product generated through the automatic procedure in order to corrected classification errors and to refine borders where necessary.

Internal validation: independent validation of the LCCS product based on external reference data (where available) and on other datasets for intercomparison. The scope of the internal validation is to make a qualitative and quantitavie check of the declared Thematic and Positional accuracies.
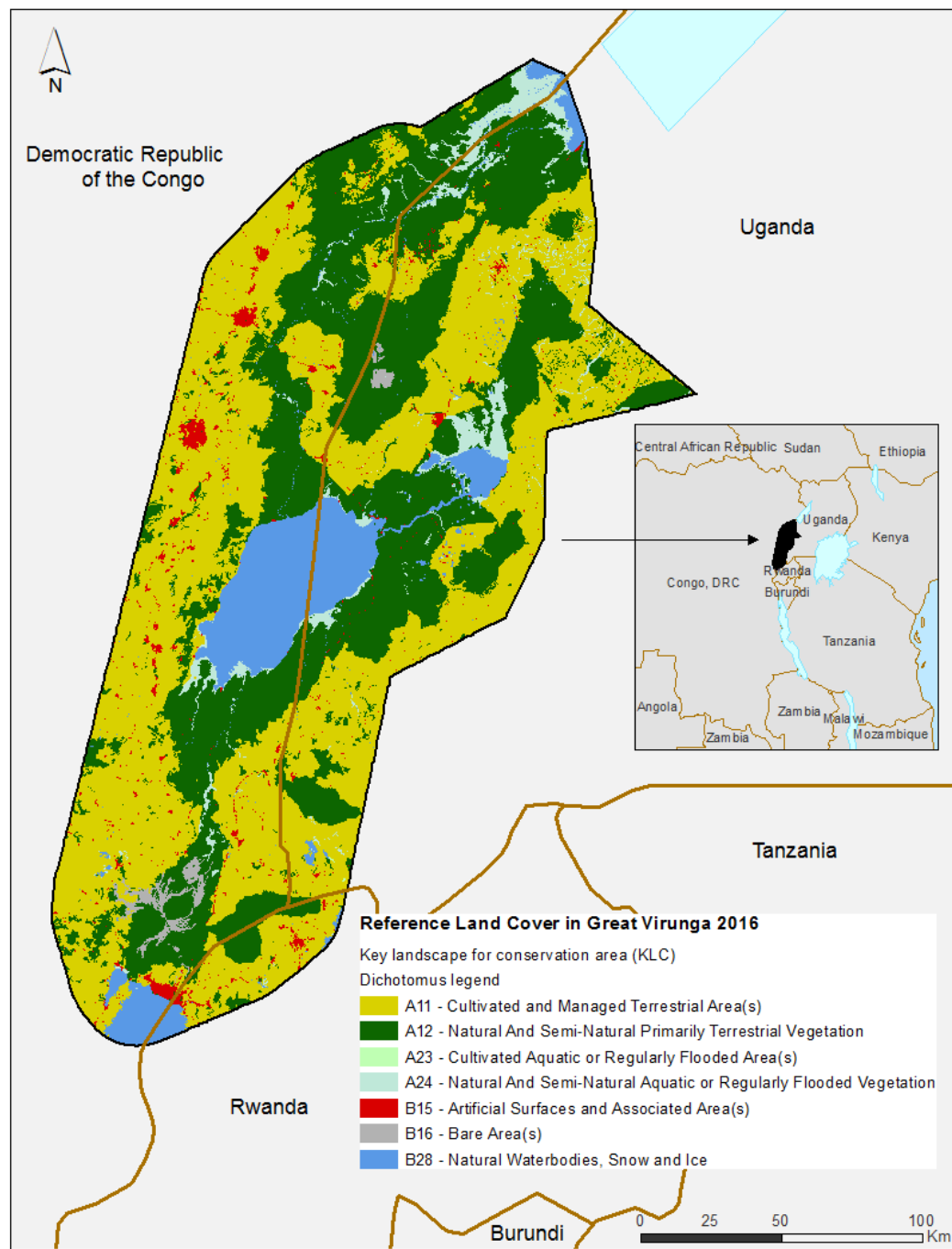
Metadata

File identifier	e5397b58-6e4a-4961-8a6c-5cae51486fc3 XML
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset
Date stamp	2023-12-19T10:42:23.421Z
Metadata standard name	ISO 19115/19139
Metadata standard version	1.0

Metadata author

No information provided.

Overviews

Reference Land Cover in Great Virunga 2016

Key landscape for conservation area (KLC)
Dichotomus legend

- A11 - Cultivated and Managed Terrestrial Area(s)
- A12 - Natural And Semi-Natural Primarily Terrestrial Vegetation
- A23 - Cultivated Aquatic or Regularly Flooded Area(s)
- A24 - Natural And Semi-Natural Aquatic or Regularly Flooded Vegetation
- B15 - Artificial Surfaces and Associated Area(s)
- B16 - Bare Area(s)
- B28 - Natural Waterbodies, Snow and Ice

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