Reference Land Cover in Kundelungu-Upemba 2016-2018 (vector) - version 1, Nov. 2019

This metadata refers to the Land Cover vector data generated over Kundelungu-Upemba (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_11_lc_a) or the detailed modular legend (CAF_11_lc_b). The mapped area of interest (AOI) represents a key landscape for conservation area (KLC).

The KLC has a total size of 4,731,810 ha (47,318.1 km²) and is comprised by the Kundelungu Upemba National Parks complex. The Upemba National Park in the northern part of the KLC has a reported area of 1,367,365 ha (13,673.65 km²) while the Kundelungu National Park in the southern sector of the KLC has an area of 823,636 ha (8236.36 km²).

Reference time: 2016 - 2018

Simple

Date (Creation)	2019-11-14
Date (Publication)	2019-11-14
Date (Revision)	2019-11-14
Edition	01.00
Citation identifier	jrc_v_4326_30_m_c-gl-hsm-kundelungu-upemba_p_2016-2018_v01_r00

Point of contact	Organisation name	Individual name	Electronic mail address	Website	Role
	European Commission			https://commission.europa.eu	Owner
	Copernicus Land Monitoring Service		copernicus@eea.europa.eu	https://land.copernicus.eu	Custodian
	European Commission's Joint Research Centre			https://joint-research-centre.ec.europa.eu/	Publisher
	Copernicus Land Monitoring Service helpdesk		copernicus@eea.europa.eu	https://land.copernicus.eu/en/contact-service-helpdesk	Point of contact

Maintenance and update frequency	Not planned

GEMET - INSPIRE themes, version 1.0	• Land cover • Human health and safety

Keywords	

Continents, countries, sea regions of the world.	• Africa • Democratic Republic of the Congo

Keywords	

GEMET	• land • landscape alteration • landscape • land use

	• land cover
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	The Copernicus component 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 component, a portfolio of land monitoring activities has been delegated by the European Union to the European Environment Agency (EEA) and the DG Joint Research Centre of the European Commission. The Copernicus land monitoring products and services are made available on a principle of full, open and free access, as established by the Commission Delegated Regulation (EU) No 1159/2013 of 12 July 2013. Free, full and open access to the products and services of the Copernicus Land Monitoring Service is made on the conditions that: 1. When distributing or communicating Copernicus Land Monitoring Service products and services (data, software scripts, web services, user and methodological documentation and similar) to the public, users shall inform the public of the source of these products and services. 2. Where the Copernicus Land Monitoring Service products and services have been adapted or modified by the user, the user shall clearly state this. 3. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed 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

N		S		E		W	

Begin date	2016-01-01
End date	2018-12-31
Additional Information	The Upemba National Park is one of the oldest parks in Africa, established in 1939. In 2017 in order to improve the management of both parks the Kundelungu Upemba National Parks complex was established. The two parks are characterised by a wide diversity of habitats, including a full transitional gradient from highland steppe through miombo woodland to both wooded and grassland savannah and areas distinguished by rivers, waterfalls (the Lofoi Falls are one of the largest in Africa), wetlands and gallery forests. This in the past almost "forgotten park" suffered substantially from illegal poaching and bushmeat hunting. Nevertheless, many species remain and the park is a refuge for the last savannah elephants in the region as well as the last zebras in Democratic Republic of Congo (DRC). Other notable species include the endemic Upemba lechwe, roan antelope, black sable, buffalo, leopard, giant ground hornbill and many other bird species (https://africanconservation.org/). 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	Kundelungu-Upemba – 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://hsm.land.copernicus.eu/	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 /kundelungu-upemba-report-file-2000-2016/@@download /file	Report file for download
	WWW:DOWNLOAD-1.0-http--download	https://land.copernicus.eu/en/technical-library /kundelungu-upemba-validation-file-2000-2016 /@@download/file	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

Title	Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services
Date (Publication)	2010-12-08
Explanation	See the referenced specification
Pass	Yes

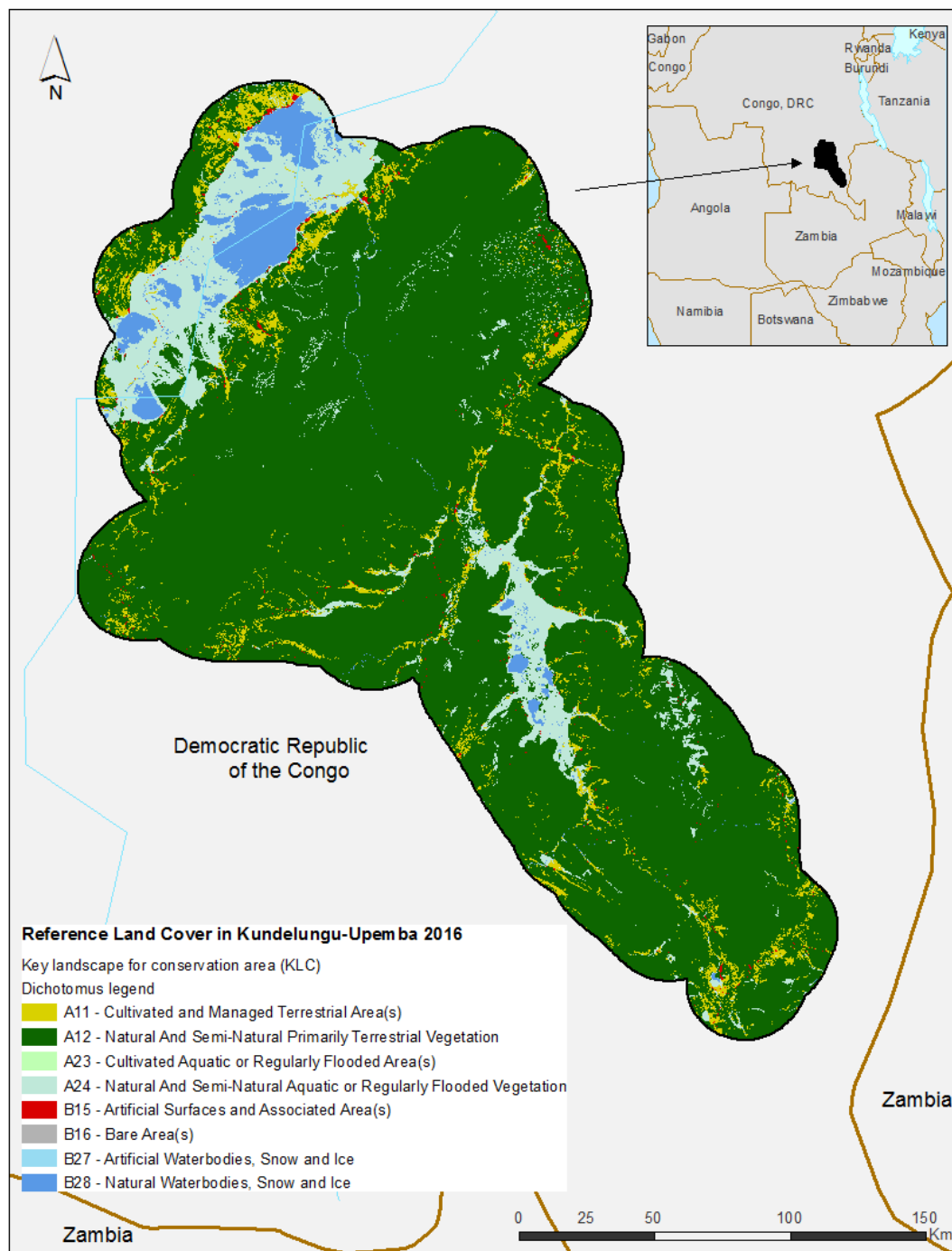| Statement	e-GEOS Production Site produced this product by satellite analyses in the context of the Copernicus Global land Hot Spot Mapping (C-GL-HSM) framework.
	Data and products are based on medium to high and very high resolution satellite images (from approximately 1 to 30m spatial resolution) 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	80d4143b-b99b-4b9d-a8f7-bed0bc94f17d [XML]
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset
Date stamp	2024-07-22T09:22:54.946675Z
Metadata standard name	ISO 19115/19139
Metadata standard version	1.0

Metadata author					
	Organisation name	**Individual name**	**Electronic mail address**	**Website**	**Role**
	Copernicus Land Monitoring Service		copernicus@eea.europa.eu	https://land.copernicus.eu	Point of contact

Overviews

Reference Land Cover in Kundelungu-Upemba 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)
- B27 - Artificial Waterbodies, Snow and Ice
- B28 - Natural Waterbodies, Snow and Ice

Democratic Republic
of the Congo

Zambia

Zambia

N

0   25   50   100   150
                                    Km

Gabon
Congo
Congo, DRC
Angola
Zambia
Namibia
Botswana
Zimbabwe
Mozambique
Malawi
Tanzania
Rwanda
Burundi
Kenya

Provided by

EEA