CARBON SINKS ATLAS FOR SOUTH AFRICA
Limpopo MODIS Above Ground Herbaceous Biomass (gC/m²)

Metadata Date Stamp:
27 November 2015

DATASET DESCRIPTION

Dataset Title:
Data:
Limpopo_MODIS_Herbaceous Biomass_(gC_sq.m)_DEA_CSIR_1.1-2015-11-20
Metadata:
Limpopo_MODIS_Herbaceous Biomass_(gC_sq.m)_OR_2015_Q4_METADATA

Dataset Reference Date:
2015/11/20

Data quality:

Good – The product was developed through the relationship between biomass and leaf area index (LAI). Accuracies of this layer are dependent on the accuracy of va base layer used especially the LAI.

Dataset Responsible Party:

Department of Environmental Affairs / Director Enterprise Geospatial Information Management

Geographic Location of the Dataset: *Limpopo , Mpumalanga, KwaZulu Natal_North West, Free State and Gauteng, South Africa*

West   21.543000
East   33.916000
North   -22.163000
South   -30.032000

Keywords:
Herbaceous Biomass, LAI, MODIS, Carbon

Dataset Language:
English (SOUTH AFRICA)

Dataset Character Set:
utf8 - 8 bit UCS Transfer Format

Dataset Topic Category:
007 = Environment (ISO 19115 Topic category)

Dimensions:
X: 1811 Y: 2404 Bands: 1

Spatial Resolution of the Dataset:
500 Meter

No Data Value:
-1

Data Type:

Float32 – Thirty two bit floating point

Raster Format:

GeoTiff

Data Release classification:

Release classification	Description	Time frame	Example
OR	*Official release*	**Quarter 4** *30 November 2015*	*Limpopo_MODIS_Above Ground Biomass_(g/sq.m)_OR_2015_Q4*

Citation:

        Citation Information:

                Originator: *Department of Environmental Affairs*

                Publication Date: *May 2015*

                Title: *South African National Terrestrial Carbon Sink Assessment*
                Location: *Pretoria, South Africa*

                Geospatial Data Presentation Form*: Raster digital data*

                Other Citation Details: *Data of the South African National Terrestrial Carbon Sink Assessment is published on the SAEON shared platform. Link to detailed report: https://www.environment.gov.za/sites/default/files/docs/nationalterrestrial_carbon sinksassessment_sect1.pdf.*

Abstract:

Above Ground Herbaceous Biomass (AGBherb) (MODIS version) is predominantly grasses, but also forbs, restios, sedges. It is based on the relationship between biomass (dry matter) and the leaf area index (LAI) using field data collected in the Lowveld region. The power empirical model based on LAI explained about 62% of variation and the model is as follows;
ABGherb (gC/sq.m) = 264.37 x LAI^0.6374
The first step was to determine the maximum or peak productivity, as determined by the maximum biomass values in the month of January and February, based on the 13 year MODIS time series biomass data based on LAI generated by CSIR. Finally, the ABGherb was determined by deriving the half of the averaged computed biomass, and to determine herbaceous carbon content (gC/sq.m, resulting biomass values were multiplied by 0.5.

Units: gram of biomass (herbaceous) per square meter at 500m x 500m resolution

Purpose:

This data set is part of a series of output data layers generated by CSIR for DEA as part of the South African National Terrestrial Carbon Sink Assessment. Link to detailed report: https://www.environment.gov.za/sites/default/files/docs/nationalterrestrial_carbonsinksass essment_sect1.pdf.
Link to synopsis report:
https://www.environment.gov.za/sites/default/files/reports/nationalterrestrial_carbonsinks_ synopsisreport.pdf

Supplemental Information:

None

Lineage Statement:

The data was produced in November 2015, and is being released on-line for the first time in Nov 2015

ATTRIBUTE INFORMATION

Attribute Description:

Field name	Alias Name	Data Type	Description	Example
Cell value	*Cell value*	*32-bit Floating point*	*This field contains Above Ground Herbaceous Biomass (gC/sq.m)*	*25*

SUPPLEMENTARY INFORMATION

None

DATA MAINTENANCE

Dataset last updated:

2015/11/20

Time Period of Content:

Calculated to represent average above ground herbaceous biomass from 2001 to 2014

Maintenance and update frequency:

No updates

DISTRIBUTION AND CONSTRAINTS

On/line Resource:

 www.egis.environment.gov.za

Distribution Format:

GeoTIFF

Access constraints:

The data can be obtained from The Department of Environmental Affairs and SAEON shared platform. The department must be acknowledged in the use of the data as per citation information.

Distribution constraints:

> **Use limitations:**
>
> *Please refer to the License Agreement. The user shall not sell or license the spatial data or digital maps. The Department of Environmental Affairs cannot give any warranty on the accuracy of the map. The Department of Environmental Affairs shall in no way be liable for results related to the use of these maps. Users of these digital maps must acknowledge the copyright for the digital map. Source: Department of Environmental Affairs.*

METADATA INFORMATION

Metadata Contacts:

> *Barney Kgope*
> *Department of Environmental Affairs*
> *Bkgope@environment.gov.za*
> *+27123999165*
>
> *Itchell Guiney*
> *Department of Environmental Affairs*
> *iguiney@environment.gov.za*
> *+27123999166*
>
> *Director: Enterprise Geospatial Information Management*
> *DEADATA@environment.gov.za*
> *+27 12 399 8916*

Postal Address:

> *Department of Environmental Affairs*
>
> *Directorate: Enterprise Geospatial Information Management Private Bag X447*
>
> *Pretoria*
>
> *Gauteng*
> *South*
> *Africa 0001*

Physical Address:

> *Environmental House*
> *473 Steve Biko, Arcadia*
> *Pretoria*
> *0083*

Producers of Data:

> *Dr. Abel Ramoelo*
> *CSIR-NRE*
> *aramoelo@csir.co.za*

Additional Extent information for the Dataset (Vertical & Temporal):

> *N/A*

Spatial Representation Type:

> *Raster – Area*

Spatial Reference:

> *Coordinate Reference: GCS_WGS_1984*
> *Projection - Albers_Conic_Equal_Area*

Projection:
PROJCS["Albers_Equal_Area_Conic_South_Africa",
GEOGCS["GCS_WGS_1984",
DATUM["D_WGS_1984",
SPHEROID["WGS_1984",6378137,298.257223563]],
PRIMEM["Greenwich",0],
UNIT["Degree",0.0174532925199433]],
PROJECTION["Albers"],
PARAMETER["False_Easting",0],
PARAMETER["False_Northing",0],
PARAMETER["central_meridian",25],
PARAMETER["Standard_Parallel_1",-12],
PARAMETER["Standard_Parallel_2",-31],
PARAMETER["latitude_of_origin",0],

Metadata File Identifier:
Limpopo_MODIS_Herbaceous Biomass_(gC_sq.m)_OR_2015_Q4_METADATA

Metadata Standard Name:
SANS 1878

Metadata Standard Version:
SANS 1878/1:2005

Metadata Language:
English

Metadata Character Set:
US/Ascii