

ipcc_climate_1985-2015

Type Shapefile

Tags world climate

Summary

This is an updated demonstration of the world climate zones described by IPCC in 2019.

Description

This is an updated demonstration of the world climate zones described by IPCC in 2019. These zones are featured in an updated version of Figure 3A.5.1 in Volume 4, Chapter 3 of *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. They demonstrate a geospatial representation of the classification scheme presented in Figure 3A.5.2 of the same chapter.

Credits

There are no credits for this item.

Use limitations

There are no access and use limitations for this item.

Extent

There is no extent for this item.

Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:150,000,000

Topics and Keywords ▶

Themes or categories of the resource Atmospheric Sciences, Environment, Imagery & Base Maps

Citation ▶

Title ⇌ ipcc_climate_1985-2015

Presentation formats ⇌ digital map

Citation Contacts ▶

Responsible party - author

Individual's name Philip Audebert

Organization's name Food and Agriculture Organization of the United Nations

Contact's position Climate Change Specialist

Responsible party - author

Individual's name Jason A. Tullis

Organization's name University of Arkansas

Contact's position Professor

Responsible party - author

Individual's name Stephen M. Ogle

Organization's name Colorado State University

Contact's position Professor

Responsible party - author

Individual's name Martial Bernoux

Organization's name Food and Agriculture Organization of the United Nations

Contact's position Senior Natural Resources Officer

Responsible party - author

Individual's name Laure-Sophie Schiettecatte

Organization's name Food and Agriculture Organization of the United Nations

Contact's position Climate Change Specialist

Resource Details ▶

Dataset languages ⇌ English (UNITED STATES)

Spatial representation type ⇌ vector

Processing environment ⇌ Microsoft Windows 10 Version 10.0 (Build 19043) ; Esri ArcGIS 12.8.0.29751

ArcGIS item properties

Name ⇌ ipcc_climate_1985-2015

Size ⇌ 0.000

Spatial Reference ▶

ArcGIS coordinate system

Type ⇌ Geographic

Geographic coordinate reference ⇌ GCS_WGS_1984

Coordinate reference details ⇌

GeographicCoordinateSystem

WKID 4326
XOrigin -400
YOrigin -400
XYScale 11258999068426.238
ZOrigin -100000
ZScale 10000
MOrigin -100000
MScale 10000
XYTolerance 8.983152841195215e-09
ZTolerance 0.001
MTolerance 0.001
HighPrecision true
LeftLongitude -180
LatestWKID 4326
WKT
GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433],AUTHORIT

Reference system identifier

Value ⇔ 4326
Codespace ⇔ EPSG
Version ⇔ 6.2(3.0.1)

Spatial Data Properties ►

Vector ►

Level of topology for this dataset ⇔ geometry only

Geometric objects

Feature class name ipcc_climate_1985-2015
Object type ⇔ composite
Object count ⇔ 0

ArcGIS Feature Class Properties ►

Feature class name ipcc_climate_1985-2015
Feature type ⇔ Simple
Geometry type ⇔ Polygon
Has topology ⇔ FALSE
Feature count ⇔ 0
Spatial index ⇔ FALSE
Linear referencing ⇔ FALSE

Lineage ►

Lineage statement

These climate zones were created by Philip Audebert (FAO), Jason Tullis (University of Arkansas), Stephen Ogle (Colorado State University), Martial Bernoux (FAO), and Laure-Sophie Schiettecatte (FAO). The zones are based on climate data from University of East Anglia Climate Research Unit et al. 2017 and global elevation data from USGS EROS Data Center 2008. The classification scheme found in Figure 3A.5.2 of Volume 4, Chapter 3 of "2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories" (Reddy et al. 2019) was first implemented using Google Earth Engine. To explore replicability, the same classification scheme was independently implemented using Esri's ArcGIS Pro 2.8.1 and Python 3.7.10. Strong correspondence was found in the results of the two workflows. The accompanying zones are based on the Esri/Python workflow. While Figure 3A.5.2 provides the logic used to generate the climate zones, the following workflow details are noted:

- 1) The USGS elevation data was spatially aggregated to the CRU TS4.00 half-degree resolution, and TS4.00 mean annual precipitation (MAP) areas not represented in the elevation data were assigned an elevation of 1 m.
- 2) While most decisions in Figure 3A.5.2 were implemented using standard tools available through ArcGIS 2.8.1 ModelBuilder (e.g., Aggregate Multidimensional Raster, Raster Calculator, etc.), the "All Months Average <10°C?" decision (interpreted as "each mean monthly temperature < 10°C?") was implemented using a custom Python script to average the temperature data (1985-2015) by month, resulting in twelve averages per pixel (Jan, Feb, Mar, ...Dec).

Source data ►

Description

University of East Anglia Climatic Research Unit (CRU), Ian C Harris, and Philip D. Jones. 2017. "CRU TS4.00: Climatic Research Unit (CRU) Time-Series (TS) Version 4.00 of High Resolution Gridded Data of Month-by-Month Variation in Climate (Jan. 1901- Dec. 2015)." Application/xml. Centre for Environmental Data Analysis (CEDA). <https://doi.org/10.5285/EDF8FEBFDAAD48ABB2CBAF7D7E846A86>.

Source data ►

Description

USGS EROS Data Center. 2008. "Global Digital Elevation Model (GTOPO30)." Esri Data & Maps. Redlands, California, USA.

Source data ►

Description

Reddy, S., L. Panichelli, R.M. Waterworth, S. Federici, C. Green, I. Jonckheere, S. Kahuri, W. Kurz, R. de Ligt J.P. Ometto, H. Petersson, E. Takahiro, P. Thomas, J. Tullis, Z. Somogyi, M. Pandya, M.T. Rocha and K. Suzuki. 2019. "Consistent Representation of Lands" in 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Intergovernmental Panel on Climate Change Task Force on National Greenhouse Gas Inventories. Adopted at 49th Session of the IPCC, Kyoto, Japan, 8-12 May, 2019.

Distribution ►

Distribution format

Name ⇔ Shapefile

Transfer options
Transfer size ⇌ 0.000

Fields ▶

Details for object ipcc_climate_1985-2015 ▶
Type ⇌ Feature Class
Row count ⇌ 0

Field FID ▶

Alias ⇌ FID
Data type ⇌ OID
Width ⇌ 4
Precision ⇌ 0
Scale ⇌ 0

Field description ⇌
Internal feature number.

Description source ⇌
Esri

Description of values ⇌
Sequential unique whole numbers that are automatically generated.

Field Shape ▶

Alias ⇌ Shape
Data type ⇌ Geometry
Width ⇌ 0
Precision ⇌ 0
Scale ⇌ 0

Field description ⇌
Feature geometry.

Description source ⇌
Esri

Description of values ⇌
Coordinates defining the features.

Field gridcode ▶

Alias ⇌ gridcode
Data type ⇌ Integer
Width ⇌ 10
Precision ⇌ 10
Scale ⇌ 0

Metadata Details ▶

Metadata language ⇌ English (UNITED STATES)
Metadata character set ⇌ utf8 - 8 bit UCS Transfer Format

Scope of the data described by the metadata ⇌ dataset
Scope name ⇌ dataset

Last update ⇌ 2021-07-22

ArcGIS metadata properties

Metadata format ArcGIS 1.0
Standard or profile used to edit metadata NAP

Created in ArcGIS for the item 2021-07-10 14:38:26
Last modified in ArcGIS for the item 2021-07-22 16:43:54

Automatic updates

Have been performed Yes
Last update 2021-07-10 15:37:14