

Making Climate Data Relevant to Decision Makers

Climate Wizard and the Knowledge Portal

Chris Zganjar

TNC – Climate Change Team



Submit

THE WORLD BANK GROUP
Climate Change Knowledge Portal
Climate Analysis Tool - Powered by Climate Wizard

To use this tool, draw polygons on the map below, or select a pre-defined area from the drop down boxes. Then select the input parameters you wish to use. When you submit this form, processing will take place on the server. You will receive an email with a link to the results.

Toggle Map Feature Count: 0 [Help & FAQs](#)

Add Area to Map
 Pre-Defined Area
 Upload Shapefile

Add Pre-Defined Areas
Select one or more region from any of the region types below and click "add regions". Your choices will then be added to the map display.

Region Types (Select One)	Countries
BACWIW	Aruba
EXF Regions	Antigua and Barbuda
Africa Basins - Major	Afghanistan
Countries	Algeria
	Azerbaijan
	Abkhaz
	Armenia

Temperature Variables
(hover over variable for details)

- Average Low Temperature
- Average High Temperature
- Hottest Temperature
- Coldest Temperature
- Hot Days Temperature (Annual Only)
- Number of Frost Days
- Number of Warm Days
- Number of Cold Days
- Number of Warm Nights
- Number of Cold Nights
- Heat Wave Duration (Annual Only)
- Growing Degree Days
- Heating Degree Days
- Cooling Degree Days

Precipitation Variables
(hover over variable for details)

- Total Rainfall
- Consecutive Dry Days (Annual Only)
- Number of Dry Periods (Annual Only)
- Number of Wet Days
- Wet Days
- Wet Day Rainfall
- 5 Day Rainfall (Annual Only)
- Daily Rainfall

Time Options

Time Period:

Annual Monthly

Climate Model Options
(To download model documentation, click the model labels)

General Circulation Model:
GFDL-CM2.1 Run 1
GFDL-CM2.1 Run 2
GFDL-CM2.1 Run 3
GFDL-CM2.1 Run 4
GFDL-CM2.1 Run 5

Greenhouse Gas Concentration (CO₂)
GFDL-CM2.1 Run 1
GFDL-CM2.1 Run 2
GFDL-CM2.1 Run 3
GFDL-CM2.1 Run 4
GFDL-CM2.1 Run 5

A2 (High) A1B (Med) B1 (Low)

Results:

Analysis Output Name:
Identical names will be overwritten.
No special characters such as #, %, etc.

Email Address:
(Your results will be emailed to you)



Making Climate Data Relevant to Decision Makers

Downscaled climate models

- climate projections developed by climate scientists

Climate impacts relevant to people

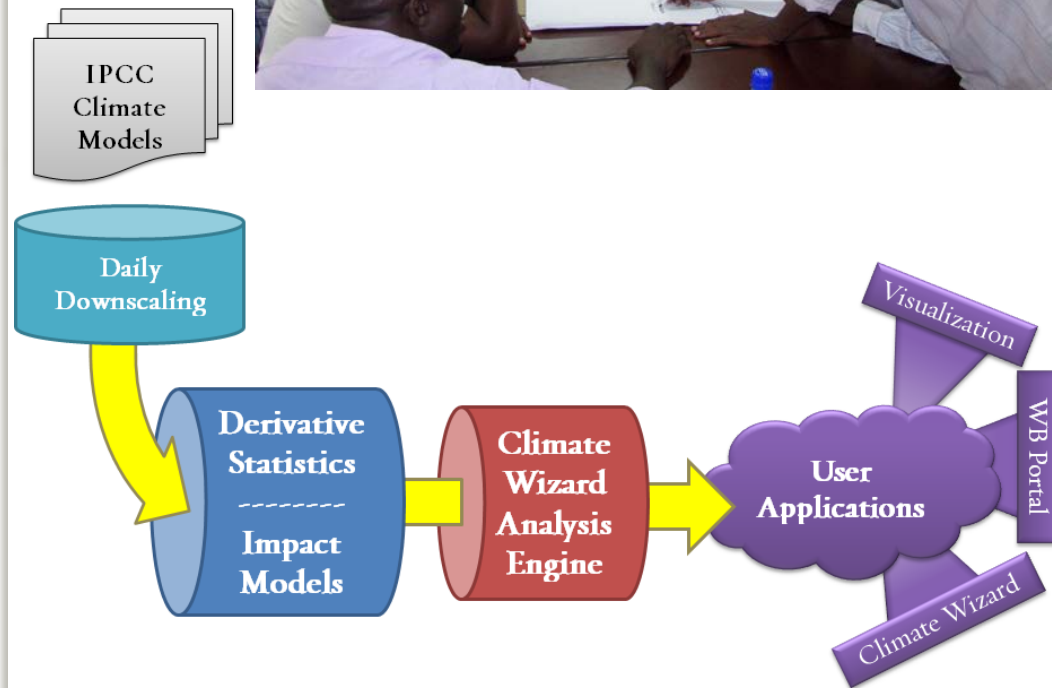
- translating changes to temperature and precipitation into specific sector based impacts

Built from TNC's Climate Wizard

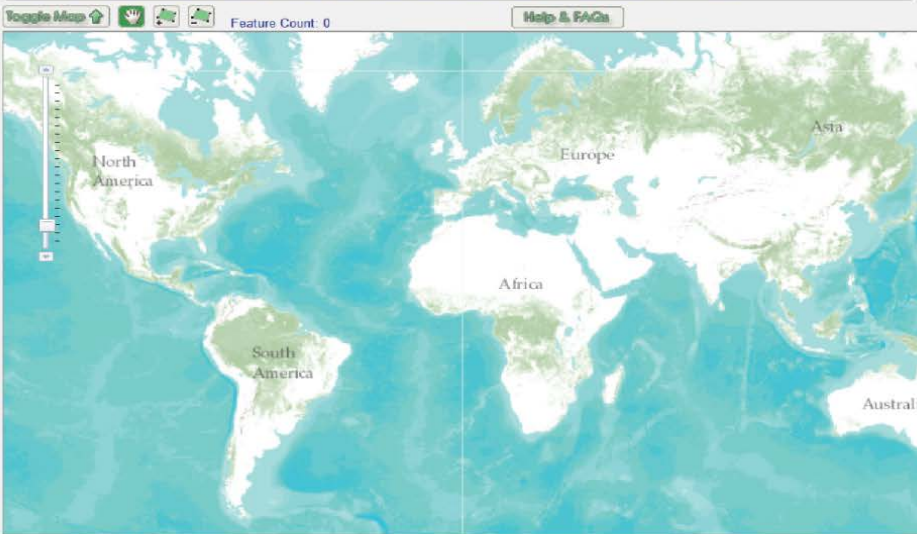
- Query and analyze climate databases for geographic places

Freely accessible climate analysis

- Interfaces links users to web-based mapping applications



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BASWIN CKP Regions Africa Basins - Major Countries	Aruba Antigua and Barbuda Afghanistan Algeria Azerbaijan Albania Armenia

add selected regions

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 Wet Day Rainfall
 5 Day Rainfall (Annual Only)
 Daily Rainfall

Time Options

Time Period:

- Annual Monthly

Climate Model Options

(To download model documentation, click the model labels)

General Circulation Model:

IPCC 2007_WG1-AR4

(Choose one or more)

CGCM3.1 (T47) Run 1
 CGCM3.1 (T47) Run 2
 CGCM3.1 (T47) Run 3
 CNRM-CM3 Run 1
 GFDL-CM2.0 Run 1
 GFDL-CM2.1 Run 1

Greenhouse Gas Concentration (CO₂)

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(Choose one or more)

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Submit

Strengths

Visualize and explore climate

Geographic areas (global to local)

Climate Variables (temperature, precipitation)

Time Domains (annual, monthly)

Time periods (historic, future)

Climate change analysis

Terabytes of downscaled climate data

Stored at a central location

Powerful computers run statistical analysis

User friendly web interface



Climate Change Knowledge Portal

Climate Analysis Tool - Powered by Climate Wizard

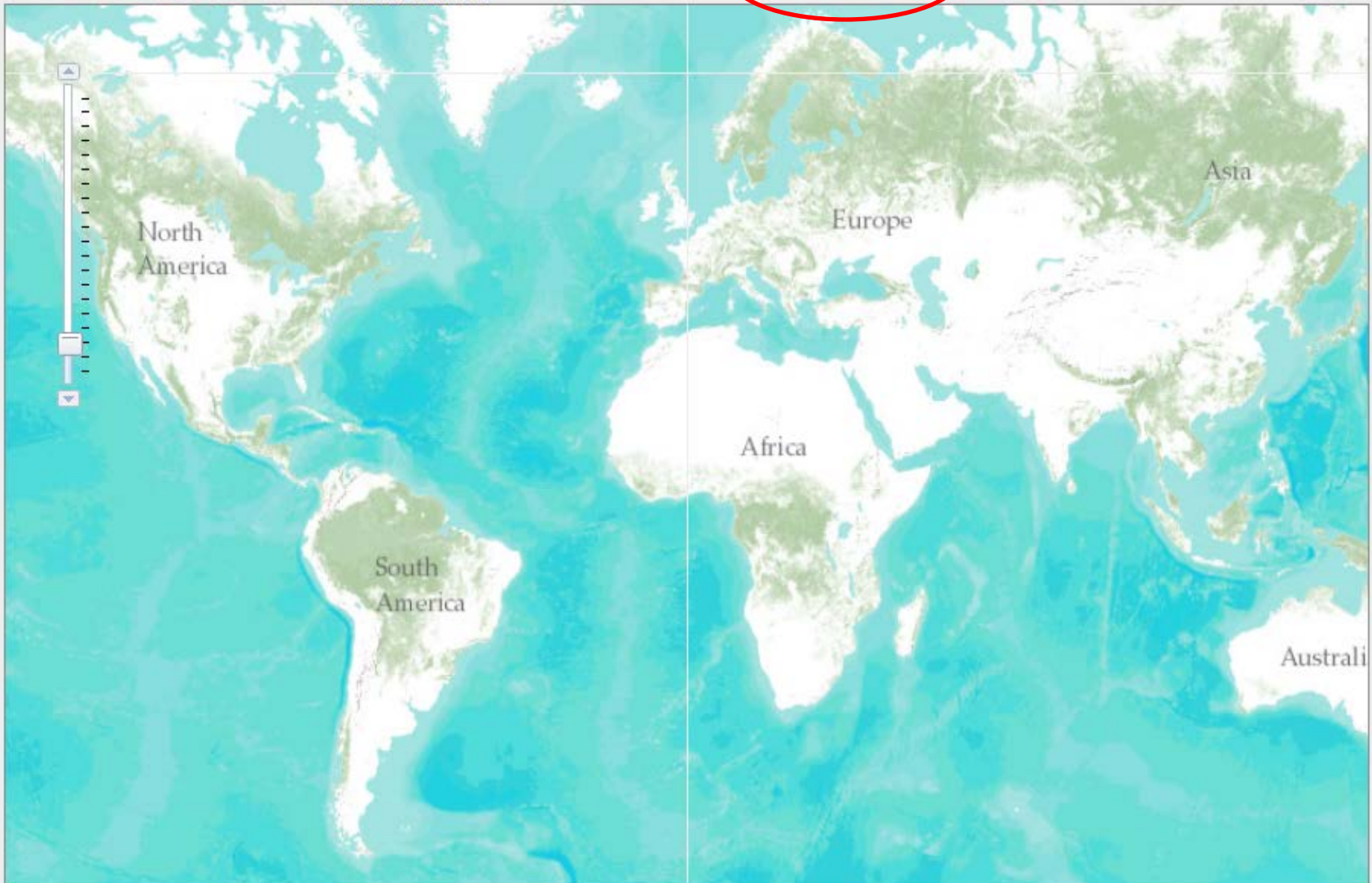
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Toggle Map 



Feature Count: 0

[Help & FAQs](#)



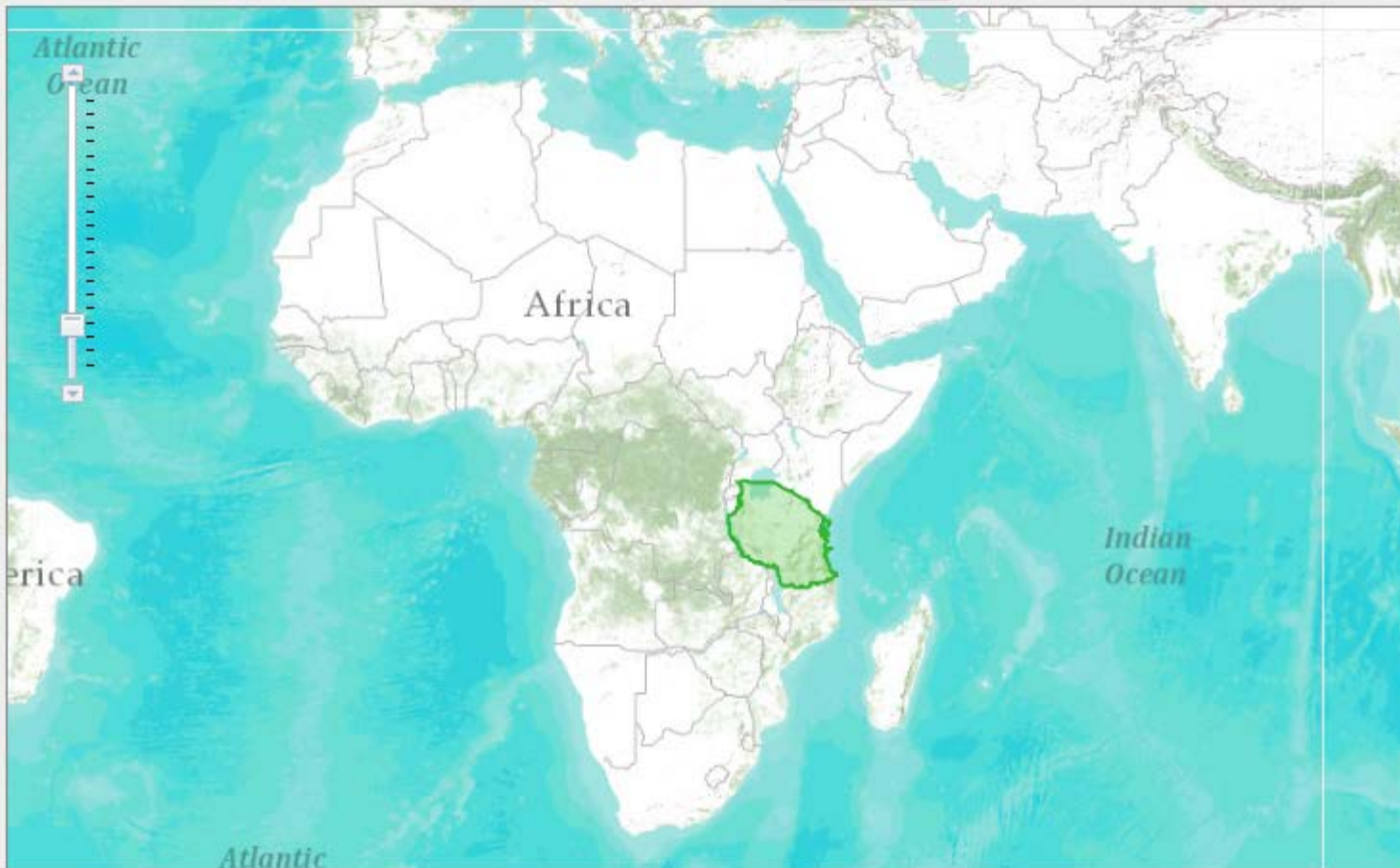
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Toggle Map 



Feature Count: 1

[Help & FAQs](#)



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Africa Basins - Major	Tunisia
CKP Regions	Turkey
Countries	Tuvalu
BASWN	Taiwan
	Turkmenistan
	Tanzania - United Republic of
	Uganda

[add selected regions](#)

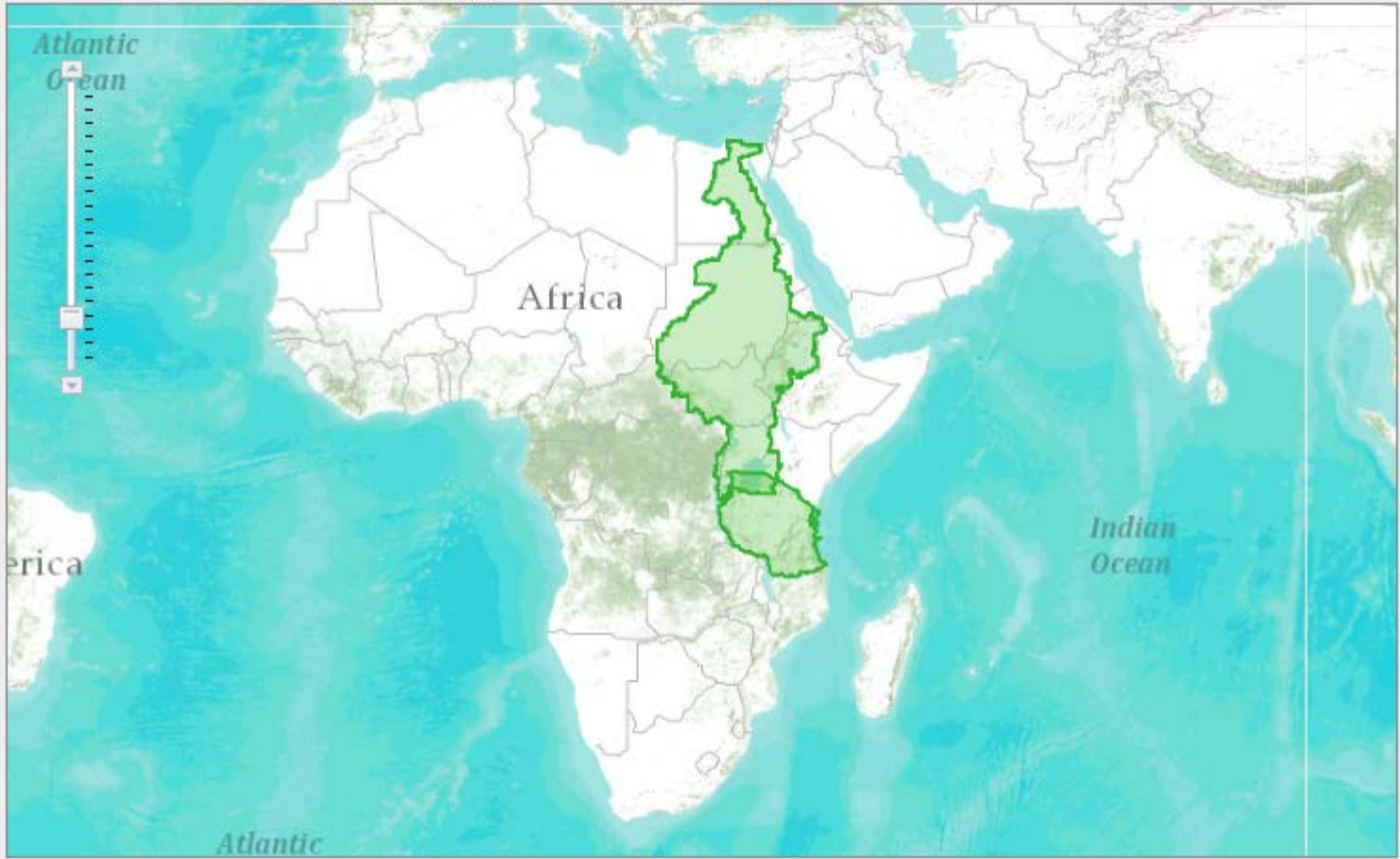
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Toggle Map



Feature Count: 2

[Help & FAQs](#)



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Region Types (Select One)	Africa Basins - Major
Africa Basins - Major	Congo
CKP Regions	Niger
Countries	Nile
BASWN	Zambezi

[add selected regions](#)

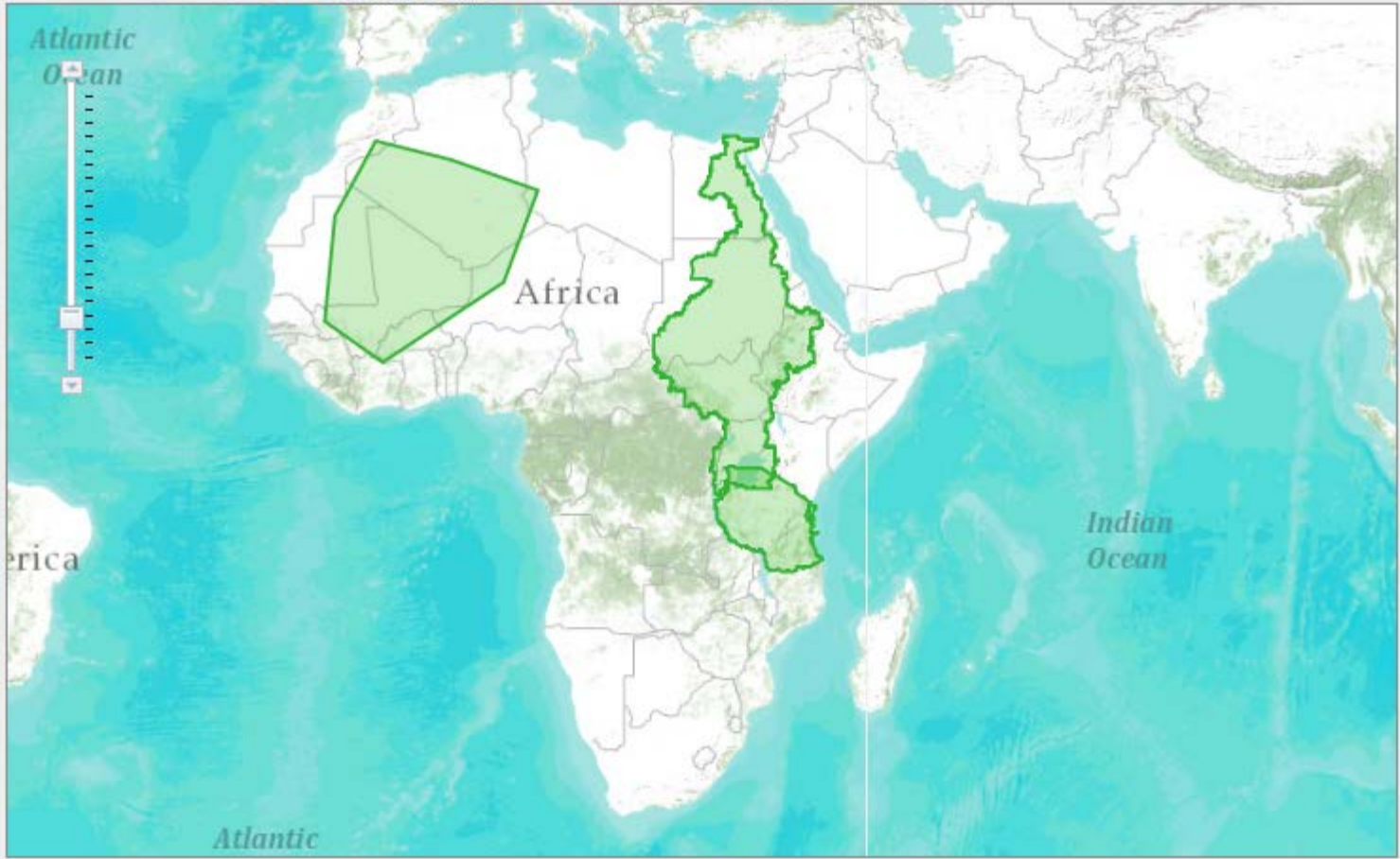
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Toggle Map



Feature Count: 3

[Help & FAQs](#)



Add Area to Map

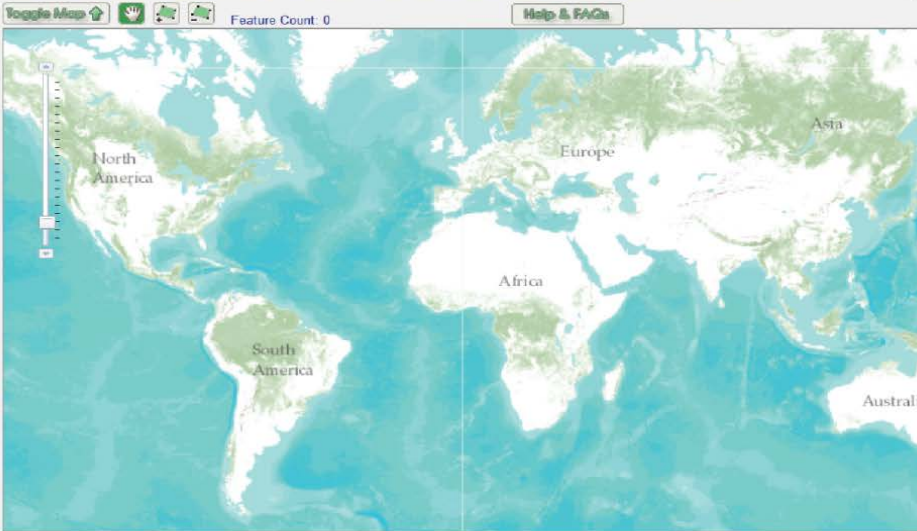
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- 5 Day Rainfall (Annual Only)
- Daily Rainfall

Time Options

Time Period:

- Annual
- Monthly

Climate Model Options

(To download model documentation, click the model labels)

General Circulation Model:

IPCC 2007_WG1-AR4

(Choose one or more)

CGCM3.1 (T47) Run 1

CGCM3.1 (T47) Run 2

CGCM3.1 (T47) Run 3

CNRM-CM3 Run 1

GFDL-CM2.0 Run 1

GFDL-CM2.1 Run 1

Greenhouse Gas Concentration (CO₂)

IPCC 2007_WG1-AR4

(Choose one or more)

- A2 (High)
- A1B (Med)
- B1 (Low)

Results:

Analysis Output Name:

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Email Address:

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Time Options

Time Period:

Annual Monthly

Climate Model Options

(To download model documentation, click the model labels)

General Circulation Model:

@IPCC 2007: WG1-AR4
(Choose one or more)

CGCM3.1 (T47) Run 1
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Greenhouse Gas Concentration (CO₂)

@IPCC 2007: WG1-AR4
(Choose one or more)

- A2 (High)
- A1B (Med)
- B1 (Low)

Results:

Analysis Output Name:

identical names will be overwrite
no special characters such as # ? \$ etc.

Email Address:

(Your results will be emailed to you)

Submit

22 Climate Variables



Temperature Variables

(hover over variable for detail)

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- Wet Days
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Helping people adapt to climate change impacts

Making Climate

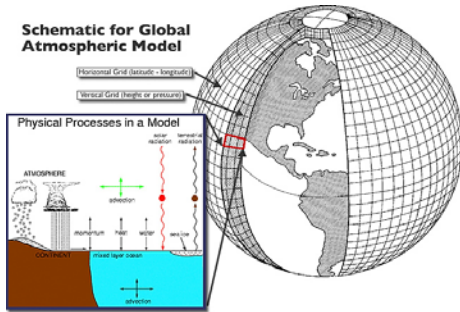
Information Relevant

Application	Relevant Derivative Climate Metrics
Crop Productivity	Total Precipitation Consecutive Dry Days Number of Dry Periods Number of Wet Days Growing Degree Days Heat Wave Duration Index Number of Frost Days Hottest Temperature Coldest Temperature Average Low Temperature Average High Temperature
Water Supply	Total Precipitation Consecutive Dry Days Number of Dry Periods
Flood Risk	Total Precipitation Wet Days Wet Day Rainfall 5 Day Rainfall Daily Rainfall

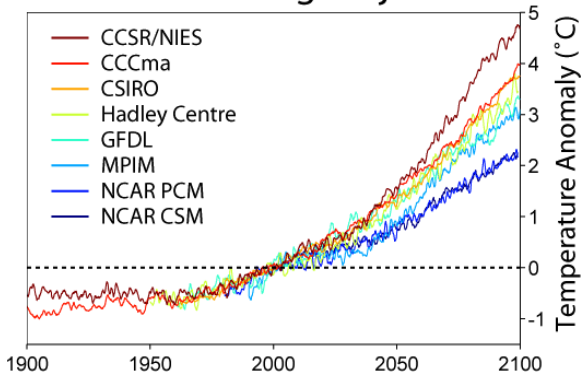
Application	Relevant Derivative Climate Metrics
Human Health	Hottest Temperature Coldest Temperature Number of Warm Days Number of Cold Nights Heat Wave Duration Index
Energy Demand	Heating Degree Days Cooling Degree Days
Ecosystem Resilience	Total Precipitation Consecutive Dry Days Number of Dry Periods Average Low Temperature Average High Temperature Hottest Temperature Coldest Temperature Number of Frost Days Growing Degree Days

54 Global Climate Models

Schematic for Global Atmospheric Model



Global Warming Projections



Climate Model Options

(To download model documentation, click the model labels)

General Circulation Model:

@IPCC 2007: WG1-AR4

(Choose one or more)

CGCM3.1 (T47) Run 1
CGCM3.1 (T47) Run 2
CGCM3.1 (T47) Run 3
CNRM-CM3 Run 1
GFDL-CM2.0 Run 1
GFDL-CM2.1 Run 1

Greenhouse Gas Concentration (CO₂)

@IPCC 2007: WG1-AR4

(Choose one or more)

A2 (High) A1B (Med) B1 (Low)



Choose a time period to analyze

Time Options

Time Period:

Annual Monthly

Time Options

Time Period:

Annual Monthly



Results will be emailed to you

Submit

Results:

Analysis Output Name:

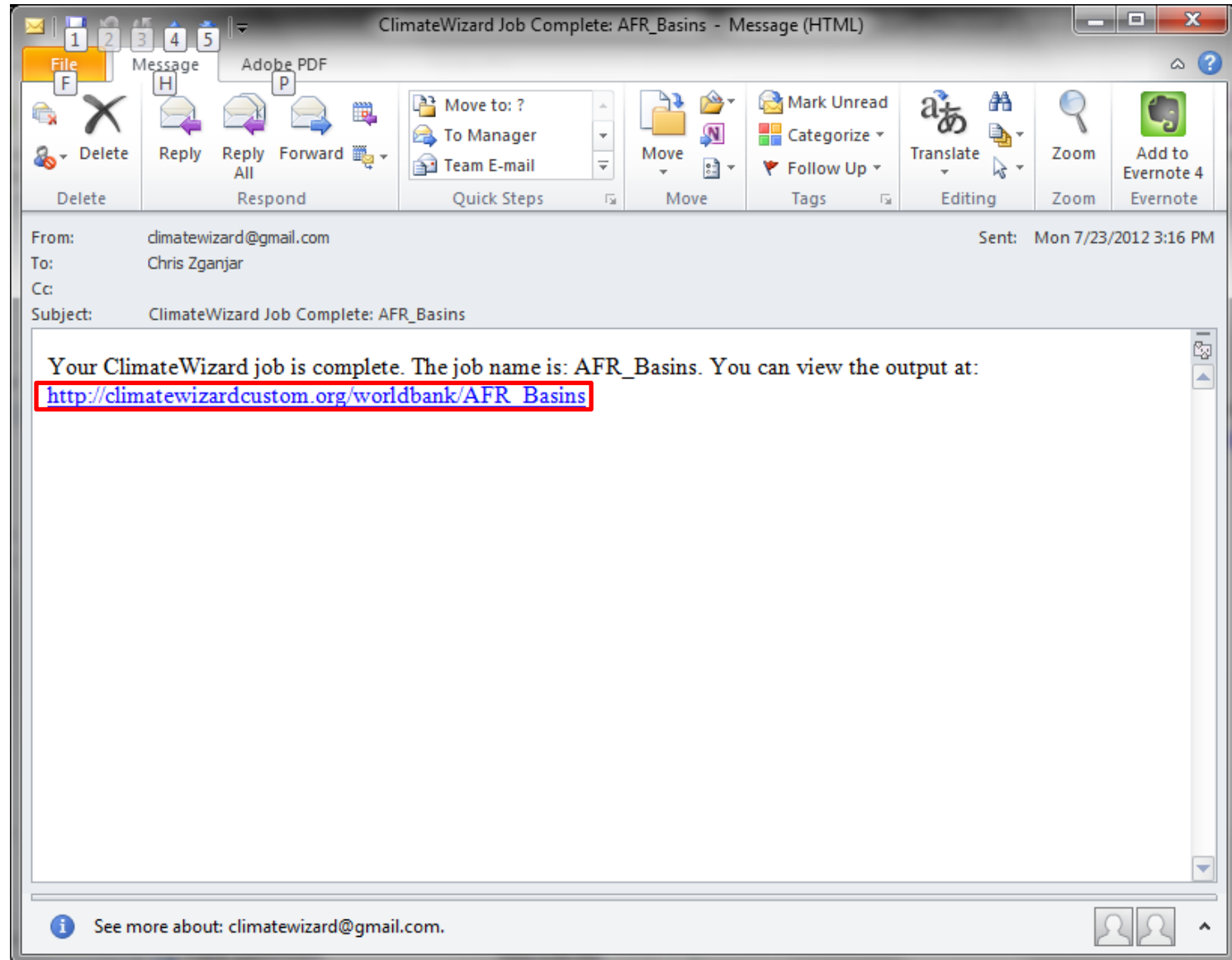
identical names will be overwrite

no special characters such as # ? \$ etc.

Email Address:

(Your results will be emailed to you)

Your custom results website link is emailed to you



Climate Analysis Results: View and Download

THE WORLD BANK GROUP

Climate Change Knowledge Portal

Climate Analysis Tool - Powered by Climate Wizard

Downloads

Map Image

GIS Data

Statistics Table

Complete Download

Documentation

Links

FAQs

About Us

Contact Us

Partners

The Nature Conservancy

World Bank

University of Washington

The University of Southern Mississippi

Climate Central

Santa Clara Univ

Analysis Area

Zambezi

Climate Variables

Hot Days Temperature

Description:

Maximum temperatures exceeded the hottest 10% of all days per year

Measurement

Future Average

Description:

Average future climate variable for the period described in the map title

General Circulation Models

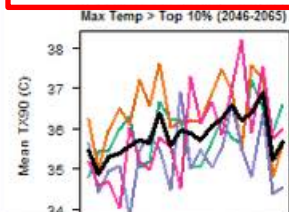
Ensemble Average

Emissions Scenario

High (A2)

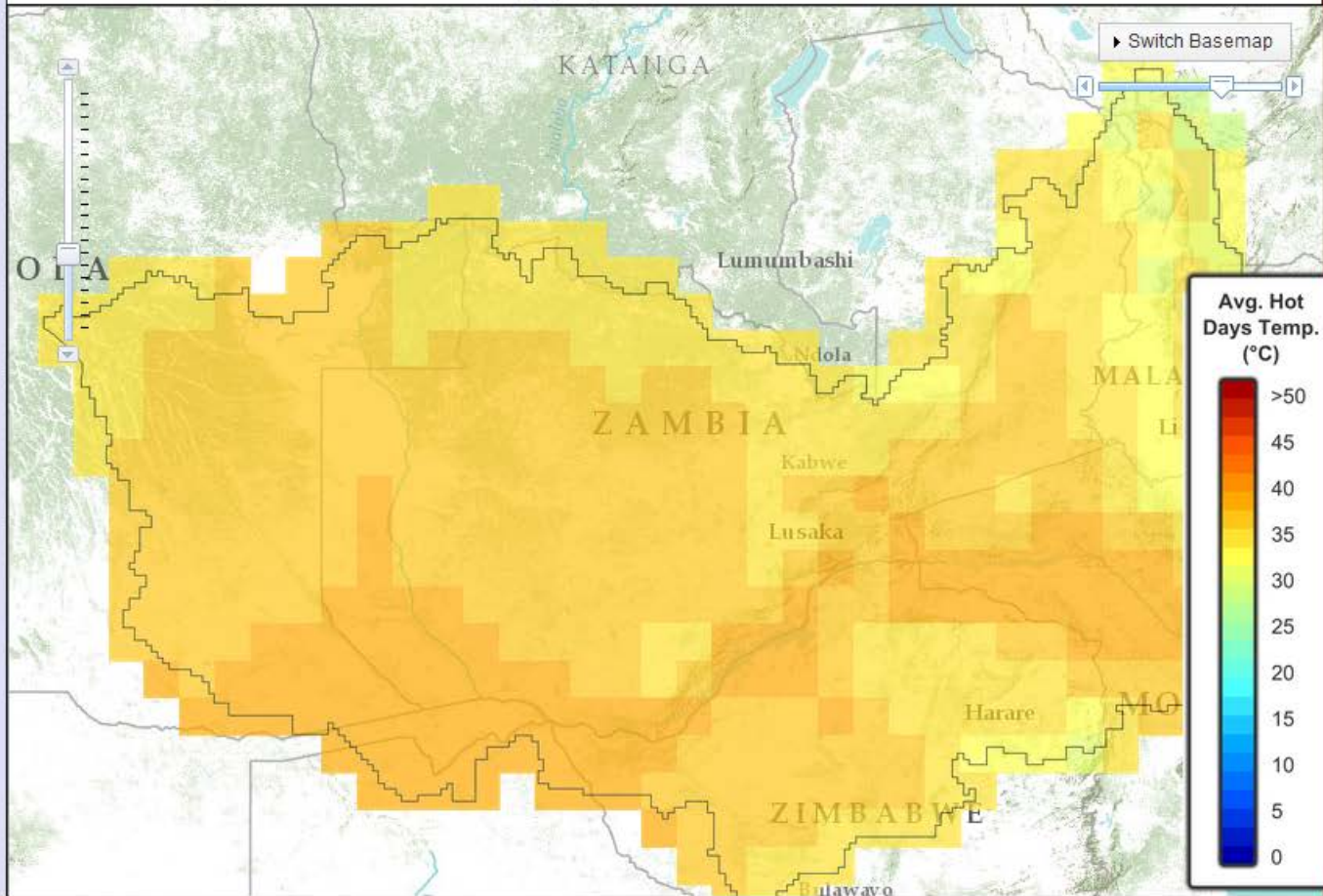
Time Period

Annual



Future Average Hot Days Temperature - 2046 to 2065

Model: Ensemble, SRES emission scenario: High (A2)

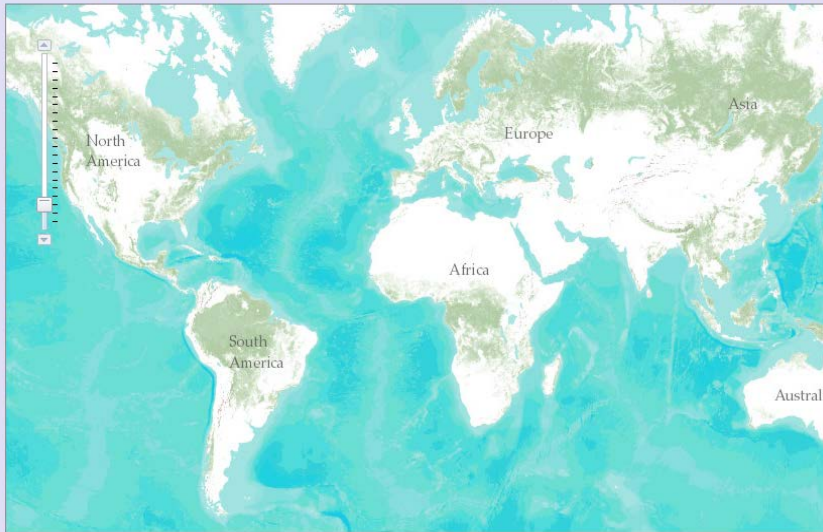


Climate Wizard Custom



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Toggle Map Feature Count: 0 [Help & FAQs](#) [Follow @climatewizard](#)



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US National Forests	Aruba
USFS Compact	Antigua and Barbuda
Countries	Afghanistan
US States	Algeria
TNC Ecoregions	Azerbaijan
Custom Areas	Albania
WWF Ecoregions	Armenia

Choose Climatology

- Current (Past Data) Climatology
- Future Modeled Climate

Region and Scale Options

- United States (Contiguous US)
4 km Current - 12 km Future
- Global (50 km resolution)

Analysis Options

- Departure Analysis (from 1961-1990)
- Linear Trend Analysis
- English Units (metric is default)

Climate Variables

(Choose one or more)

- Precipitation (Absolute Change)
- Precipitation (Percent Change)
- Mean Monthly Temperature
- Minimum Monthly Temperature
- Maximum Monthly Temperature

Time Options

Start Year: 1901 End Year: 2002
 Annual Seasonal Monthly

Results:

Analysis Output Name:
(identical names will be overwritten)
**NO SPACES* no special characters such as () # ? \$ etc*

Email Address:
(Your results will be emailed to you)

Try it @

climatewizard.org

and

climatewizardcustom.org

Thank You