



Introducing the beta version of ISIpedia, the open climate- impacts encyclopedia

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What's ISIpedia?

- **ISIpedia** aims to develop an user-friendly online portal delivering climate-impact assessments based on the ISIMIP simulation data archive through **knowledge co-production between modellers and stakeholders**
- **Focus regions:**
 - West Africa
 - Eastern Europe
- **Project Timeline:** Sep 2017- Sep 2020?
- **Funder:** German Ministry for Research and Education (BMBF) within the JPI-Climate scheme (ERA-NET)



ISIMIP and ISIpedia

The Inter-Sectoral Impact Model Intercomparison Project (ISIMIP)

- climate impact models for the past, present and future
- 100+ models covering 13 sectors



ISIpedia

- Impact assessments based on cross-sectoral indicators on national level
- Impact visualisation for easier comprehension

Topic →

Specify the climate change impact topic of your interest, e.g. agriculture, water, or extreme events, and one or more impact indicators for this topic and create the climate change impact assessment report of your choice.



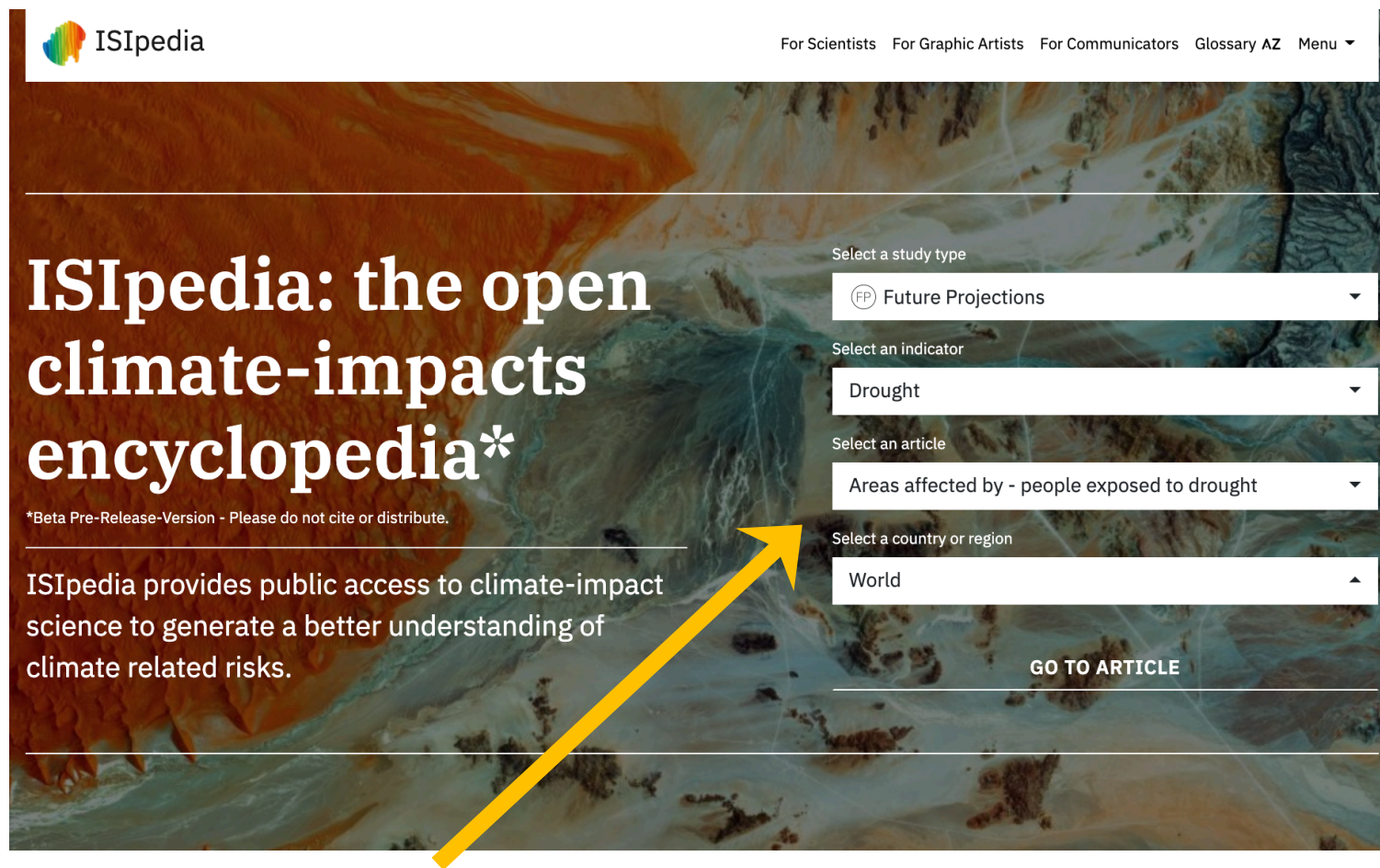
Development Process

- Kick-off Meeting
 - Identifying current landscape of climate services
 - Envisioning possible structure and use cases
- Stakeholder survey (131 responses)
 - Current use of climate services
 - academic research, adaptation strategies, public outreach
 - Barriers to climate service use
 - lack of high-precision or high-accuracy information
 - too coarse spatial scale
 - costs to accessing climate-impact information or data
 - Desired design/content elements
 - Easily understandable, downloadable and reusable
 - Both national and global assessments, methodological background information

Development Process

- Indicator Development Workshops
(Krakow, Poland & Ouagadougou, Burkina Faso)
 - Facilitated dialogues between data providers/processors and future users
 - Understanding of the potential and the limitation of ISIMIP data
 - What info is required in the policy/administrative domain
 - New indicator development from existing indicators
 - “changes to heating costs” = energy efficiency and cost + heating/cooling degree days
 - “population at risk of contracting malaria per month” = climatic conditions favorable for malaria spread + population
 - Capacity building
 - Vocabulary reconciliation
 - Conceptualization of climate models & climate-impact indicators

ISIpedia landing page



The screenshot shows the ISIpedia landing page. At the top left is the ISIpedia logo. At the top right are links: "For Scientists", "For Graphic Artists", "For Communicators", "Glossary AZ", and a "Menu" dropdown. The main heading is "ISIpedia: the open climate-impacts encyclopedia*". Below it is a disclaimer: "*Beta Pre-Release-Version - Please do not cite or distribute." A paragraph states: "ISIpedia provides public access to climate-impact science to generate a better understanding of climate related risks." On the right is a selection panel with four dropdown menus: "Select a study type" (set to "Future Projections"), "Select an indicator" (set to "Drought"), "Select an article" (set to "Areas affected by - people exposed to drought"), and "Select a country or region" (set to "World"). Below these is a "GO TO ARTICLE" button. A yellow arrow points from the bottom left towards the selection panel.

ISIpedia

For Scientists For Graphic Artists For Communicators Glossary AZ Menu ▾

ISIpedia: the open climate-impacts encyclopedia*

*Beta Pre-Release-Version - Please do not cite or distribute.

ISIpedia provides public access to climate-impact science to generate a better understanding of climate related risks.

Select a study type
Ⓢ Future Projections ▾

Select an indicator
Drought ▾

Select an article
Areas affected by - people exposed to drought ▾

Select a country or region
World ▲

GO TO ARTICLE

Selection panel

- Future projections
- Detection & attribution
- etc.
- Drought
- Wildfire
- Crop yield
- etc.
- Area affected
- Population affected

<https://demo.isipedia.org/>

Published: 15 January 2020

<https://doi.org/None>

Key messages

Global ranking map

Data Explorer

How have we got the results?

What we have found

Land area affected by droughts

Population exposed to droughts

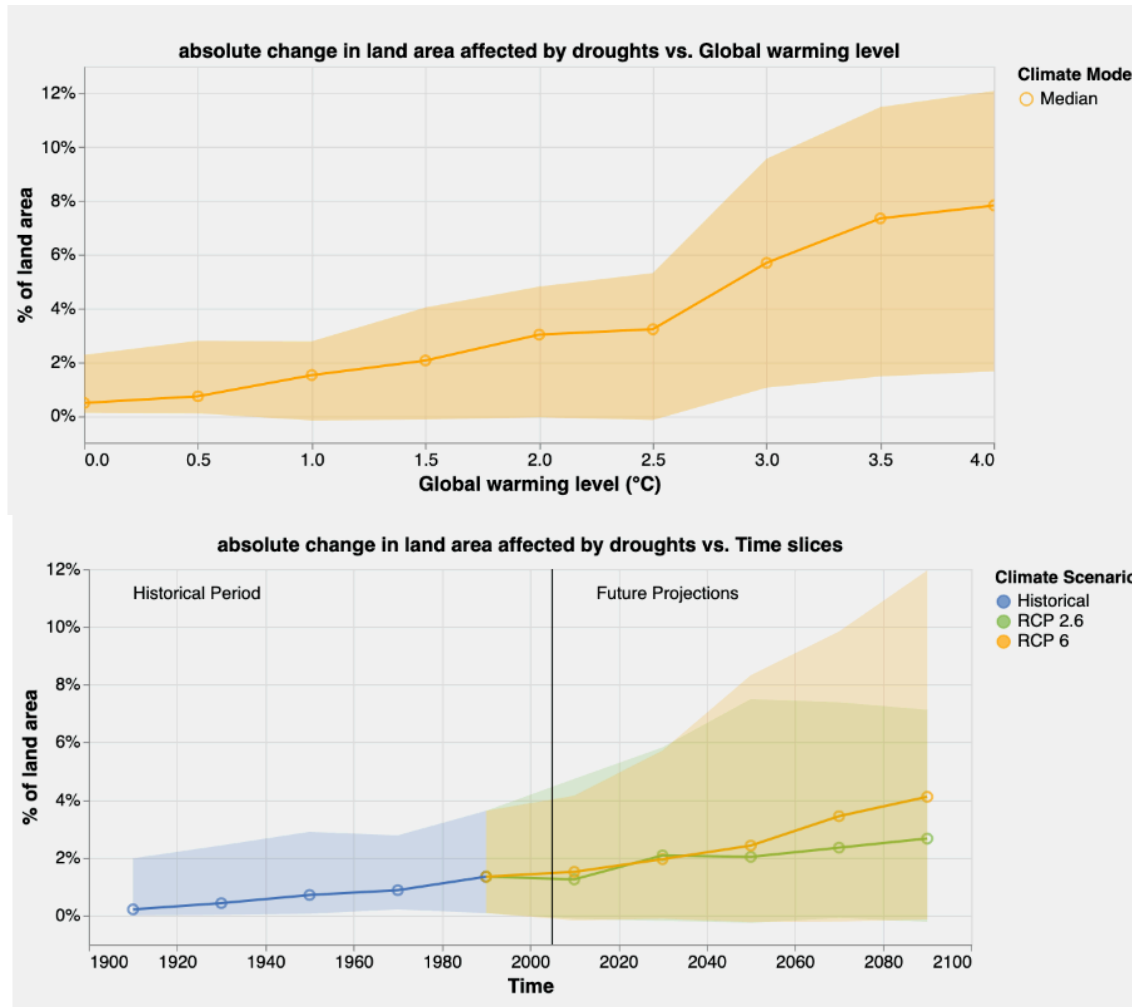
How is soil moisture calculated?

Key messages

- At today's levels of 1°C of global warming the simulated land area affected is already 2000100 km² larger (2.0% of the land area) than in a world without climate change where the annual area affected by droughts is 1861400 km² (1.4% of World's land area). The number of people exposed is 45.2 million (0.6% of the population) larger than without climate change where the annual number of people exposed to droughts was 58.5 million (0.8% of World's population).
- At 2°C of global warming the land area affected by droughts would increase by 3987500 km² (3.0% of the land area) compared to a world without climate change, to 3.9% of the country's land area. Assuming present-day population patterns, World's population exposed to droughts would increase by 1.2 million, to 1.4% of the population.
- Following the higher-emissions scenario (RCP6.0) which can entail over 3°C of global warming by the end of the century (2081-2100) (Frieler et al. 2017) the land area affected by droughts would increase by 7513100 km² (5.7% of the land area) and reach 6.7% of the country's land area. Assuming present-day population patterns the population exposed would reach 2.3% of World's population, and increase by 2.0 million compared to a situation without climate change.

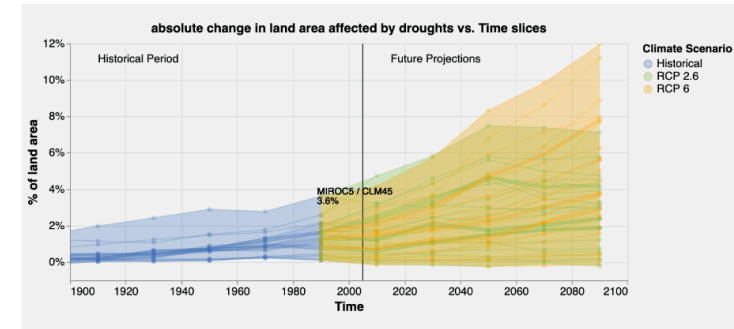
- Clear and concise key messages
- Interactive visualization (line plots, maps)
- Access to data behind the maps and graphs in .csv format
- Transparent methodology
- Full report downloadable as pdf

Report page



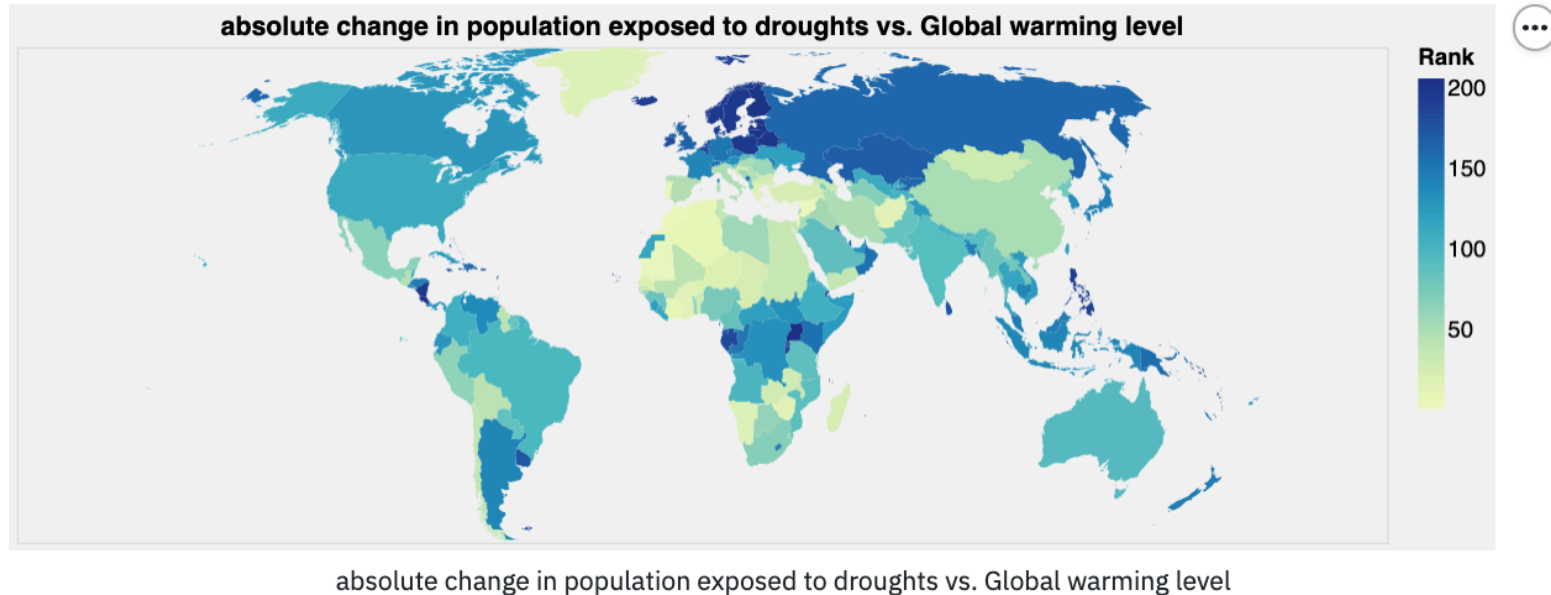
- Visualisation of impact results plotted against both global warming level and time
- Representation of both median and model spread
- Both simplified and detailed (with additional models and scenarios) versions available

*In advanced mode

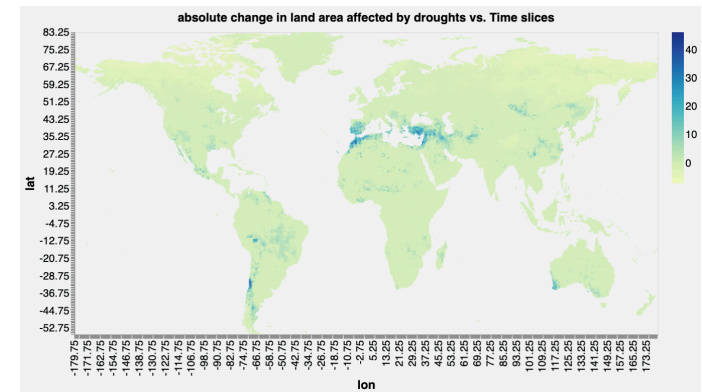


Report page

Global ranking map



- Ranking of countries for selected article for easier comparison
- Maps corresponding to both the time slice plot and the global warming level plot available



Other features

Glossary

Annual maximum

The highest value of an indicator or variable that is attained within one year

Anthropogenic climate change

Climate change that can be identified as resulting from human activities. These activities include the burning of fossil fuels, deforestation, land use changes, livestock, fertilization, etc.

Source

aims to estimate changes in drought conditions assuming different re change. To this end the global hydrological models were forced by ent global [climate models](#) following the ISIMIP2b scenario set-up.

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Climate models

A representation of the the climate on a computer. These models range from relatively simple representing only a few variables to complicated systems where a large number of physical, chemical and biological processes are represented. By studying the results of models, we can better understand the current and future climate.

Source

- Hover-boxes with definitions in the main text
- Glossary of climate jargon for non-scientists
- Sources provided for deeper understanding

News

Archive

Measure CO2 in the atmosphere during current economic shock

Coronavirus: in Hawaii's air, scientists seek signs of economic shock on CO2 levels.

2020-04-02

[Read more](#)

COP26 postponed

With no end in sight to the COVID-19 coronavirus pandemic, the UN climate change talks which were due to take place in Scotland later in the year, have been postponed until October 2021.

2020-04-02

[Read more](#)

WMO concerned about impact of COVID-19 pandemic on observing system.

The World Meteorological Organization (WMO) is concerned about the impact of the COVID-19 pandemic on the quantity and quality of weather observations and forecasts, as well as atmospheric and climate monitoring.

2020-04-01

[Read more](#)

Opinion - Coronavirus and climate action

Pausing the World to Fight Coronavirus Has Carbon Emissions Down—But True Climate Success Looks Like More Action, Not Less.

2020-04-01

[Read more](#)

Opinion - What the Coronavirus Means for Climate Change

Lockdowns and distancing won't save the world from warming. But amid this crisis, we have a chance to build a better

For Science Communication Experts

Call for help in raising awareness of the impact of climate change

It is our mission to make the latest climate impact research accessible to the public. To this end we invite joint author teams to distill the societal relevant messages from their scientific publications into ISIpedia articles that will enable citizens, stakeholders and policy makers to take informed decisions in light of climate change. Articles could provide relevant information about future risks, address observed changes in natural or human systems and their attribution to climate change but also inform about the latest progress in these processes.

This is basically a call for help regarding the translation of our scientific papers into ISIpedia articles, videos or other formats that are easily accessible to the public. As we are scientists, we may not have the best feeling of what is easily understandable to the public and it would be great to collaborate with the experts in science communication.

- Climate-related news accessible at the bottom of the landing page or under top right hand menu
- Guidelines for using ISIpedia articles for scientists, graphic artists and science communication experts

Guiding questions for feedback

1. Is the website user-friendly?
2. Are the functions suitable for your needs?
 - Maps, graphs, key messages, methods, glossary, data...
 - What other functions would be useful?
3. How understandable are:
 - The text; any need for change?
 - The graphs; any suggestions for improvement?
 - The maps; do the measures chosen make sense (land and population affected)?
 - The glossary?
4. Do the measures chosen make sense (land area and population affected)?
5. Does the download function satisfy your needs?
6. Uncertainties; are they integrated well?
 - If yes, are they understandable?
 - If not, any suggestions?
7. Are there any steps missing for the provided information to be used directly in your work? Is the portal useful for your work?
8. What indicators are you particularly looking forward to?
9. Any other feedback regarding the content? Anything missing?
10. Feedback regarding the design that you think is important for a better user experience?

Next steps

- Webinars for feedback
 - Objective: to introduce the ISIpedia portal and collect feedback on user-friendliness, usefulness
 - So far, 10 webinars were conducted
- Stakeholder Engagement Workshops (TBA)
 - Asia & Eastern Europe: originally scheduled for early 2020 but postponed
 - West Africa (late 2020)

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Future website: www.isipedia.org

Get in touch with us for:

- Access to the demo website
- Inquiries about future activities in West Africa and Eastern Europe
- Information about webinars and workshops in 2020