

Relaunching the website Skeptical Science to include prebunking tools

EGU 2026 – EOS1.1 – EGU26-4107

Bärbel Winkler & John Cook – Skeptical Science



INTRODUCTION TO SKEPTICAL SCIENCE

- Skeptical Science (SkS) is a website and non-profit science education organization with international reach founded by John Cook in 2007.
- Main objective is to debunk misconceptions and misinformation about human-caused climate change
- Features a database that currently has more than 250 rebuttals based on peer-reviewed literature.
- SkS has evolved from a one-person operation to a multinational team project and formal NGO.

The screenshot shows the Skeptical Science website homepage. At the top, there is a navigation bar with links for Home, Arguments, Software, Resources, Comments, The Consensus Project, Translations, About, and Support. Below the navigation bar is a search bar and social media icons for Twitter, Facebook, LinkedIn, YouTube, and MeWe. The main content area features a large article titled "Explaining climate change science & rebutting global warming misinformation" with a sub-headline "Global warming is real and human-caused. It is leading to large-scale climate change. Under the guise of climate 'skepticism', the public is bombarded with misinformation that casts doubt on the reality of human-caused global warming. This website gets skeptical about global warming 'skepticism'." Below this is a mission statement: "Our mission is simple: debunk climate misinformation by presenting peer-reviewed science and explaining the techniques of science denial, discourses of climate delay, and climate solutions denial." There are three buttons: "Newcomers, start here", "History of Climate Science", and "The Big Picture". A section titled "Skeptical Science New Research for Week #15 2026" is posted on 9 April 2026 by Doug Bostrom, Marc Kodack. Below this is a section for "Open access notables" with a link to "Why we need to explore conflict and competition around solar geoengineering" by Möller & Young, PLOS Climate. A sidebar on the left lists "MOST USED Climate Myths" with a numbered list from 1 to 10, including "Climate's changed before", "It's the sun", "It's not bad", "There is no consensus", "It's cooling", "Models are unreliable", "Temp record is unreliable", "Animals and plants can adapt", "It hasn't warmed since 1998", and "Antarctica is gaining ice". At the bottom of the sidebar are links for "IPCC FACTS", "Guide to RCPs", "the consensus project", "TREND CALCULATOR", "PRUDENT PATH", "Lessons from Predictions", "OA not OK", and "CLIMATE MYTHS FROM POLITICIANS". On the right side, there is a "Cranky Uncle" cartoon character and a "Winner of the 2011 Australian museum Eureka Prize Advancement of climate change knowledge" award. At the bottom right, there is a "DROPTUTU" logo.

WHY TACKLE A RE-DESIGN?

- The main design hasn't changed a lot since 2007
- Our website is not responsive
- The backend is a challenge to maintain
- The "busy" margins can distract from the content
- The data from our "Experiment" indicated room for improvement



HOW TO POTENTIALLY TACKLE THE RE-DESIGN?

Go with an off-the-shelve solution via WordPress?

“Only” re-design the frontend and make it responsive?

Take up one of the unsolicited offers dropping into our inbox?

Hi contact@skepticalscience.com,
Hope you are doing well.
I just wanted to check in and see if you have any requirement for Web Design/Re-design of the website.
We have created some pretty AMAZING sites. Our rates are very AFFORDABLE.
Let me know what you think.
Thanks & Regards
Anshika,
IT Consultant

Go “all-in” and do a complete re-design of front- and back-end?

CHALLENGES WITH RE-DESIGN OPTIONS

 Custom translations

Sun & climate: moving in opposite directions

What the science says...
Select a level... Basic Intermediate Advanced [Link to this page](#)

Three rebuttal levels

The sun's energy has decreased since the 1980s but the Earth keeps warming

Special tools like our glossary to define terms and provide references

An examination of the past 1150 years found temperatures to have closely matched solar activity for much of that time (Usoskin et al. 2005). But also for much of that time, greenhouse gas concentrations hardly varied at all. This led the study to conclude, "...so that at least this most recent warming episode must have another source."

Solar activity over the last 1150 years: does it correlate with climate?

Usoskin, I. G., Schüssler, M., Solanki, S. K., & Mursula, K. (2005, March). Solar activity over the last 1150 years: does it correlate with the 13th Cambridge Workshop on Solar Systems and the Sun. [Link to paper](#)

Source
Any process, activity or mechanism that releases a **greenhouse gas**, an **aerosol** or a **precursor** of a greenhouse gas or aerosol into the **atmosphere**.

Definition courtesy of IPCC AR4.



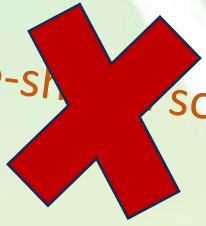
Climate Myth...

It's the sun

"Over the past few hundred years, there has been a decrease in sunspots, at the time when the Earth has been getting warmer. This solar activity is influencing the global climate causing the warming."

WHY RE-DESIGN EVERYTHING?

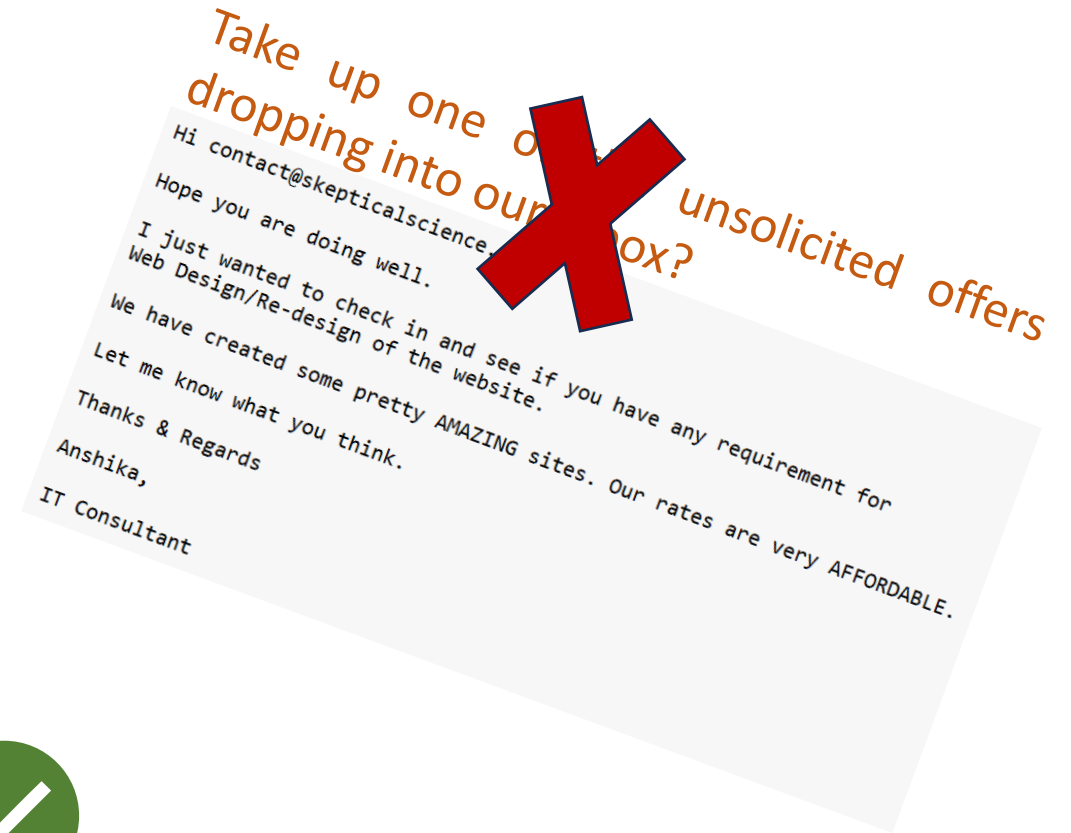
Go with an off-the-shelf solution via WordPress?



“Only” re-design the front-end and make it responsive?



Go “all-in” and do a complete re-design of front- and back-end!



HOW TO ACTUALLY TACKLE THE RE-DESIGN?

SKS-Projects
and IT analyst



Bärbel
Winkler

Creator of SKS
and Researcher



John
Cook



Backend
Developer



Collin
Maessen

Project
Manager



Leon
Corsten

Backend
Developer



Tjardo
Ortan

Server admin
and scripting



Doug
Bostrom

Frontend
Developer



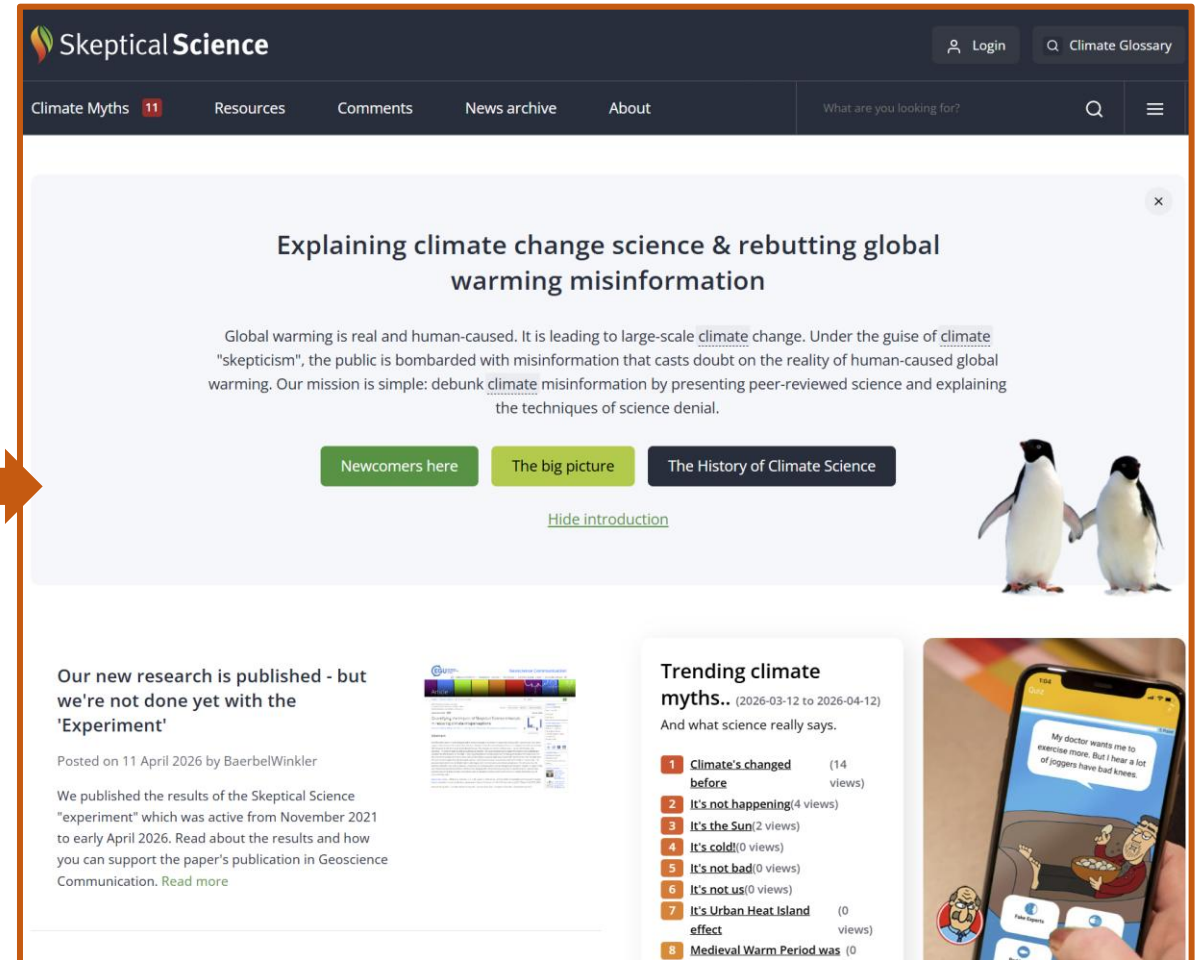
Stef
Vossen



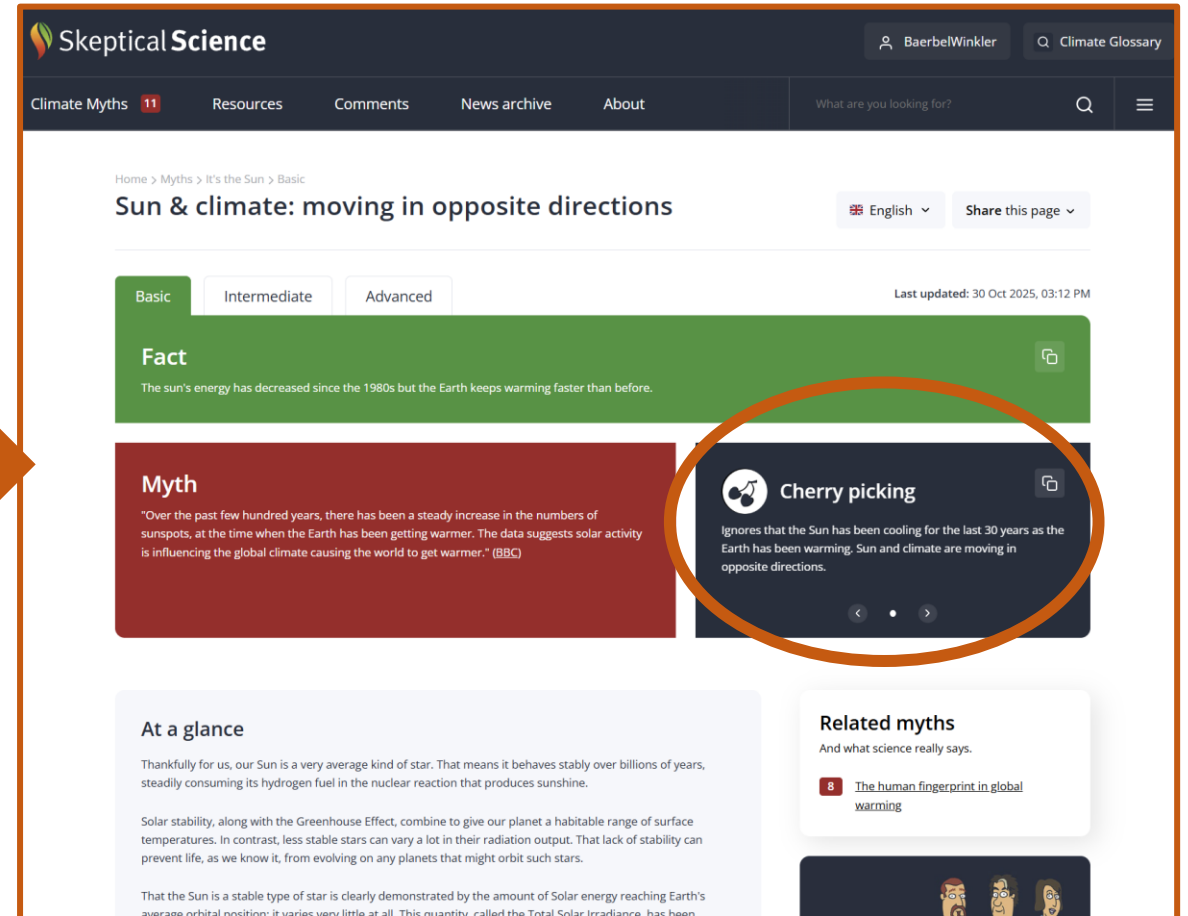
Skeptical Science



NEW DESIGN - HOMEPAGE



NEW DESIGN - REBUTTALS



NEW DESIGN - FALLACIES

The screenshot shows the 'List of fallacies' page on Skeptical Science. The page features a dark navigation bar with the site logo, user name 'BaerbelWinkler', and search bar 'Climate Glossary'. Below the navigation bar, there are links for 'Climate Myths 11', 'Resources', 'Comments', 'News archive', and 'About'. The main content area includes a breadcrumb 'Home > Fallacies', the title 'List of fallacies', and a language selector 'English (11)'. A paragraph explains the FLICC framework and its purpose. Below this is a search bar for keywords. The core of the page is a table listing various fallacies with their respective icons and one-liner descriptions.

Icon	Fallacy	One Liner
	Fake experts	Presenting an unqualified person or institution as a source of credible...
	Logical fallacies	Arguments where the conclusion doesn't logically follow from the premises. ...
	Impossible expectations	Demanding unrealistic standards of certainty before acting on the science.
	Cherry picking	Selecting data that appear to confirm one position while ignoring other ...
	Conspiracy theories	Proposing that a secret plan exists to implement a nefarious scheme such
	Oversimplification	Simplifying a situation in such a way as to distort understanding, leading to....

The screenshot shows the 'Impossible expectations' page. It features a dark navigation bar with the site logo, user name 'BaerbelWinkler', and search bar 'Climate Glossary'. Below the navigation bar, there are links for 'Climate Myths 11', 'Resources', 'Comments', 'News archive', and 'About'. The main content area includes a breadcrumb 'Home > Fallacies > Impossible expectations', the title 'Impossible expectations', and a language selector 'English'. A paragraph explains the fallacy. Below this is a table with columns for Name, Description, and Example. There is also a 'Most viewed myths' sidebar and a 'Related Fallacies' section.

Name	Description	Example
Impossible expectations	Demanding unrealistic standards of certainty before acting on the science.	"Scientists can't even predict the weather next week. How can they predict the climate in 100 years?"

The screenshot shows the 'Cherry picking' page. It features a dark navigation bar with the site logo, user name 'BaerbelWinkler', and search bar 'Climate Glossary'. Below the navigation bar, there are links for 'Climate Myths 11', 'Resources', 'Comments', 'News archive', and 'About'. The main content area includes a breadcrumb 'Home > Fallacies > Cherry picking', the title 'Cherry picking', and a language selector 'English'. A paragraph explains the fallacy. Below this is a table with columns for Name, Description, and Example. There is also a 'Most viewed myths' sidebar and an 'Arguments using this fallacy' section.

Name	Description	Example
Cherry picking	Carefully selecting data that appear to confirm one position while ignoring other data that contradicts that position.	"Global warming stopped in 1998."



BACKEND CHALLENGES – DATABASE TABLES

Migrating our data from many old to many new tables.

The image displays a complex grid of database table definitions. Each table definition includes a header with the table name and a list of columns with their respective data types and constraints. The tables are arranged in a grid-like fashion, with some tables having more columns than others. The definitions are color-coded, with different colors used for different tables or groups of tables. The overall layout is dense and technical, representing a significant portion of a database schema.

Keeping the data dependencies intact with new key values.

BACKEND CHALLENGES - DEPENDENCIES

Database Dependency Matrix

Target Table (The Task)	Source Table (OLD)	Required Lookup Tables (NEW)	Join Path / Logic Strategy	Migration Level
USERS				0
				1
		USERS		1
ARGUMENTS		USERS		1
REBUTTALS		USERS ARGUMENTS		2
R		USERS REBUTTALS ARGUMENTS		2
N		USERS		1
		USERS NEWS_ITEMS		2
C		USERS ARGUMENTS NEWS_ITEMS		3
		USERS		1
		USERS CITATIONS		2
		GLOSSARY_ITEMS		1
		REBUTTALS		1
				0
LANGUAGES				0
		USERS LANGUAGES		2
		USERS ARGUMENTS LANGUAGES		3
		USERS LANGUAGES REBUTTALS ARGUMENT_TRANSLATIONS		4
		USERS LANGUAGES NEWS_ITEMS		3
		USERS LANGUAGES PAGES		3
FALLACIES				0
		ARGUMENTS FALLACIES		2
		FALLACIES LANGUAGES (USERS)		2
		ARGUMENT_TRANSLATIONS FALLACY_TRANSLATIONS (USERS)		2
				0
		USERS		1
		GRAPHICS GRAPHIC_CATEGORIES		2

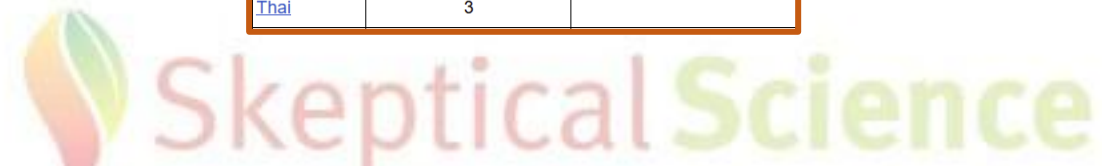
BACKEND CHALLENGES – MISSING DATA

Missing data for translations: different myth and science titles, one-liners and slugs needed, fallacy translation a big plus!

language	language	code	Link to Refutable	argument	Myth Title in English	SEO title (L-science title)	translational	Translated title	length (200)	Translated Myth Title (max 200)	length (200)	Translated Science Title (max 250)	length (250)	One-liner in English	Translated One-liner (max 300)	length (300)	Slug (max 100)	
17	Italian	it	https://it.wikipedia.org/wiki/Periodo_medioevale	4	Medieval Warm Period was warmer	How does the Medieval Warm Period compare to current global temperatures?	296	Il periodo caldo del Medioevo era più caldo dell'attuale	59		0		0	Globally averaged temperature now is higher than global temperature in medieval times.		0		
17	Italian	it	https://it.wikipedia.org/wiki/Roy_Spencer	501	Roy Spencer finds negative feedback	Roy Spencer's paper on climate sensitivity	683	L'esperto articolo di Roy Spencer sulla sensibilità climatica	71		0		0	Spencer's model is too simple, excluding important factors like ocean dynamics and heat-stress feedbacks as forcing.		0		
17	Italian	it	https://it.wikipedia.org/wiki/Regressione	38	Regression is warming	What does regression's brightening mean for global warming?	273	Il regresso si sta riscaldando	26	Anche il regresso si sta riscaldando	77	Certo l'aumento della brillantezza è	77	And the sun is cooling.	Il Sole si sta leggermente raffreddando	38	regressione.it	
17	Italian	it	https://it.wikipedia.org/wiki/Oceano	54	It's the ocean	Why ocean heat can't drive climate change, why it does it	280	Dipende dagli oceani	20		0		0	The oceans are warming and moreover are becoming more acidic, threatening the food chain.		0		
17	Italian	it	https://it.wikipedia.org/wiki/CO2	152	CO2 is coming from the ocean	Oceans are cooling from absorbed CO2	384	La CO2 viene dagli oceani	28		0		0	The ocean is absorbing massive amounts of CO2, and it is becoming more acidic as a result.		0		
17	Italian	it	https://it.wikipedia.org/wiki/Oceano	67	Oceans are cooling	Does ocean cooling prove global warming has ended?	253	Gli Oceani si stanno raffreddando	33	Gli Oceani si stanno raffreddando	33	L'oceano si sta raffreddando?	28	The most recent ocean measurements show consistent warming.	Le osservazioni più recenti mostrano un generale riscaldamento dell'oceano	74	oceano.it	
17	Italian	it	https://it.wikipedia.org/wiki/OSM_Petition	205	Over 31,000 scientists signed the OSM Petition Project	The tracks employed by the flawed OSM Petition Project to cast doubt on the scientific consensus on climate change	317	Oltre 31000 scienziati hanno firmato la petizione della OSM	60		0		0	The OSM petition was signed by only a few climatologists.		0		
17	Italian	it	https://it.wikipedia.org/wiki/CO2	299	CO2 was higher in the late Devonian	Low solar levels during Ordovician Period	320	La CO2 era molto più elevata nel tardo Ordoviciano	51	C'era ancora più CO2 durante l'Ordoviciano	43	Per CO2 durante l'Ordoviciano?	31			0		
17	Italian	it	https://it.wikipedia.org/wiki/Creazione	24	Recent Creationist study on consensus was flawed	What does Recent Creationist study on consensus show?	306	Lo studio di Recent Creationist sul consenso era inesatto										
17	Italian	it	https://it.wikipedia.org/wiki/It's	62	It's core													

language	COUNTA of code	COUNTA of Translated Science Title (max 250)	COUNTA of Translated Myth Title (max 200)	COUNTA of Translated One-liner (max 300)	COUNTA of Slug (max 100)
Chinese	1	0	0	0	0
Croatian	10	0	0	2	35
Czech	37	0	0	0	1
Danish	5	0	0	0	213
Dutch	23	0	0	213	1
Finnish	52	0	0	1	48
French	10	213	0	48	0
German	213	0	48	0	0
Hebrew	57	48	0	3	9
Hungarian	48	0	0	9	0
Icelandic	17	0	9	0	0
Indonesian	60	9	0	8	0
Italian	135	0	0	3	4
Japanese	25	0	0	17	28
Korean	8	0	17	0	99
Macedonian	11	17	0	99	0
Norwegian	17	0	99	0	14
Polish	46	99	0	0	0
Portuguese	99	0	0	0	5
Russian	108	0	0	5	0
Slovak	14	0	0	0	0
Slovenian	60	0	0	0	1
Spanish	38	0	0	0	497
Swedish	10	0	0	0	
Thai	3	0	386	0	
Grand Total	1107				

Language	Number of translations	Translators
Chinese	1	
Croatian	10	Ana
Czech	37	
Danish	5	
Dutch	23	Elisabeth
Finnish	52	Saara
French	10	Marian, Tor, Benoit, Antoine, Alec
German	213	Bärbel, Elisabeth
Hebrew	57	
Hungarian	39	Dénes
Icelandic	17	
Indonesian	60	Kristofora
Italian	135	Gianandrea, Giorgio
Japanese	25	Kenji
Korean	8	
Macedonian	11	
Norwegian	17	Tor, Christian
Polish	46	
Portuguese	99	Claudia
Russian	108	
Slovak	14	
Slovenian	60	
Spanish	38	Emilio
Swedish	10	Ola
Thai	3	



WANT TO HELP US ON THE FINAL STRETCH?

Ongoing: Filling gaps in translations

Google form - <https://forms.gle/BtkdGfCaDZCRtGGX7>



Closer to re-launch: BETA-Testing

Google form - <https://forms.gle/LNbsKNb3EodZkbPPA>



Thanks!

Bärbel Winkler

Skeptical Science

baerbelw@skepticalscience.com

Abstract & Full presentation
<https://sks.to/egu26-eos11>



Companion Blog Post
<https://sks.to/egu26-relaunch>



AUTHOR INFORMATION

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Bärbel Winkler lives and works in Germany. She has always had a lot of interest in environmental issues and has been active as a volunteer at the local zoo and a conservation group for many years. Over time and while learning more and more about it, Bärbel became increasingly aware and concerned about climate change and what it will mean for generations to come. As a means to turn her concerns regarding climate change into something productive, Bärbel joined the Skeptical Science team in 2010 and started translating selected content into German. Since 2013 she has been coordinating the translation efforts for all languages, contributes a blog-post every once in a while, helps with many projects and became co-author of several consensus-related studies the Skeptical Science team has published over the years. From 2015 to 2024 she also coordinated the moderation team for the online course “Denial101x – Making sense of climate science denial”.

<https://sks.to/BaerbelW>



John Cook
Skeptical Science
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Melbourne, Australia

John Cook is a cognitive scientist, researching how to use critical thinking to counter misinformation. He obtained his PhD at the University of Western Australia, studying the cognitive psychology of climate science denial. His research focus is understanding and countering misinformation about climate change. In 2007, he founded Skeptical Science, a website which won the 2011 Australian Museum Eureka Prize for the Advancement of Climate Change Knowledge and 2016 Friend of the Planet Award from the National Center for Science Education. John authored the book Cranky Uncle vs. Climate Change, that combines climate science, critical thinking, and cartoons to explain and counter climate misinformation. He also co-authored the college textbooks Climate Change: Examining the Facts and Climate Change Science: A Modern Synthesis and the book Climate Change Denial: Heads in the Sand. In 2013, he published a paper finding 97% scientific consensus on human-caused global warming, a finding that has been highlighted by President Obama and UK Prime Minister David Cameron.

<https://sks.to/JohnCook>



LIST OF LINKS

INTRODUCTION

Skeptical Science – <https://skepticalscience.com>

Companion article – <https://sks.to/EGU26-Relaunch>

CALLS FOR HELP

Help needed with Translations – <https://sks.to/help-transl-relaunch>

Google form (Translations) – <https://forms.gle/BtkdGfCaDZCRtGGX7>

Google form (BETA-Testing) - <https://forms.gle/LNbsKNb3EodZkbPPA>



[\[Back\]](#) [\[Session EOS1.1\]](#)

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EGU General Assembly 2026

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Oral | Monday, 04 May, 10:05–10:15 (CEST) ■ Room D3

Relaunching the Skeptical Science website to include prebunking tools

Bärbel Winkler  and John Cook

Skeptical Science, International website (baerbelw@skepticalscience.com)

Skeptical Science is a highly-visited website featuring 250 rebuttals of misinformation about climate change and climate solutions. Many of the rebuttals are written at multiple levels—basic, intermediate, and advanced—in order to reach as wide an audience as possible. Results from a survey we've been running on our website since November 2021 indicate that there is some room for improvements in order to make the rebuttals more robust. It is therefore rather good timing that we've been working on a complete overhaul of our website which should increase the effectiveness of rebuttals in reducing acceptance in climate myths and increasing acceptance of climate facts. A key goal of misinformation interventions is to increase reader discernment, the difference between belief in facts and belief in myths. While there was overall an increase in discernment, with the decrease in agreement with myths greater than the decrease in agreement with facts, the result that belief in climate facts decreased for at least some rebuttals is unwelcome and counter to the goal of Skeptical Science. In this presentation, we'll give a sneak peek at how the new website will look like. One important new feature will be the inclusion - where applicable - of the fallacies employed by a climate myth, so that a rebuttal on the new website will then include all three elements of a successful debunking: fact, myth and fallacy. In my presentation, I'll also highlight some of the other updated or new features this website relaunch will include.

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