Semantic Knowledge Extraction

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Plants, Chemistry, Climate, Software, Corpora, Semantics, Community

Laptop-friendly, OpenNotebookScience, OpenAccess

UNIVERSITY OF CAMBRIDGE

ipcc

WIKIMEDIA FOUNDATION

United Nations Climate Change

SHUTTLEWORTH FUNDED

NATIONAL INSTITUTE OF PLANT GENOME RESEARCH — NIPGR

CC BY

Climate tweets 2024-01-17

Leon Simons ✔ @LeonSimons8 · Jan 16
🎥 Amazing pictures of the biggest iceberg in the world,

It's melting, which takes about as much heat as it would
750,000 km² of sea ice.

About a trillion (1,000,000,000,000) tonnes of ice. 😲

"It's mind-bogglingly big. I actually don't think we can fat
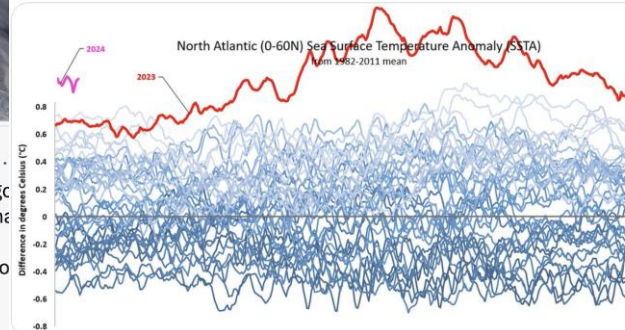Show more

Leon Simons ✔
@LeonSimons8

🌀🌡️📈
This is what a 218 day record high streak of Sea Surface Temperatures
looks like for the North Atlantic.

On average, temperatures were 0.44ºC higher than ever during this
period!

Averaged over 40,000,000 km² of ocean!
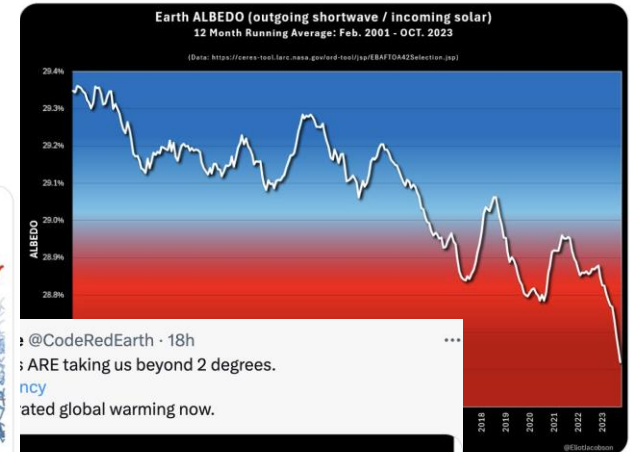
The truth is bad enough:

North Atlantic (0-60N) Sea Surface Temperature Anomaly (SSTA)
from 1982-2011 mean

Prof. Steve Austin @postcarbonsteve ·
the internet should have ushered in a go
connection could have the sum of huma

instead it will likely contribute greatly to

theguardian.com/environment/20...

Third of UK teenagers believe climate change exaggerated, report shows

YouTube criticised for amplifying lies about the climate with disinformation videos watched by young people

YOUTUBE
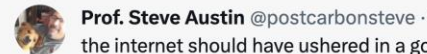STOP PLATFORMING
CLIMATE DENIAL

Prof. Eliot Jacobson @EliotJacobson · 20h
By request, here is an alternative coloring of the Earth Albedo graph
showing the rapid decline of our planet's reflectivity.

As the planet gets less reflective, more incoming solar radiation is
absorbed and radiated back as longwave heat, which is then trapped by
rising GHGs.

Earth ALBEDO (outgoing shortwave / incoming solar)
12 Month Running Average: Feb. 2001 - OCT. 2023
(Data: https://ceres-tool.larc.nasa.gov/ord-tool/jsp/EBAFTOA42Selection.jsp)

@CodeRedEarth · 18h
s ARE taking us beyond 2 degrees.
ncy
ated global warming now.

If we go beyond 2
degrees we really are at
risk of pushing the whole
planet into
**self-amplified
warming**
away from manageable
conditions."

JOHN ROCKSTROM
DIRECTOR OF THE POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH

@jrockstrom

Disease and Climate

5 mins, 300 articles

unsupervised

supervised

PMCarticle   **country**   **disease**   **funders**

Show 10 entries   Search:

articles	bibliography	dic:country	dic:disease	dic:funders	word:frequencies
PMC3346786 local	*titl:* An ill wind? Climate change, m ... *date: jour:* *abst:* BACKGROUND: Climate change is ...	Ethiopia x 3, Ireland x 2, Sudan x 2, Djibouti, United States,	infectious disease x 6, malaria x 5, hepatitis x 2, schistosomiasis x 2, obesity x 2	United Nations x 4, La Trobe University, x 2, University of Melbourne, Australian National University,	collab: x 58, population x 37, health x 138, likely x 22, climate x 85
PMC3488916 local	*titl:* Climate change, migration, and ... *date: jour:* *abst:* Local climate changes can impa ...		asthma x 26, allergy x 16, chronic obstructive pulmonary disease, shortness rhinitis	European Respiratory Society	allergic x 21, respiratory x 28, pollen x 21, changes x 21, Allergy x 21
PMC4847105 local	*titl:* Exploring the Climate Change, ... *date: jour:* *abst:* The potential link between cli ...	Bangladesh x 7, India x 6, Pakistan x 4, United States x 3, Mali x 3		United Nations	climate x 113, change x 68, migration x 129, potential x 35, conflict. x 29
PMC6038986 local	*titl:* Cli... *date:* jo... *abst:* In ...				
PMC6068872 local	*titl:* Ma... *date:* jo... *abst:* Th...				
PMC6110464 local	*titl:* Cli... *date:* jo... *abst:* On...				
PMC6164733 local	*titl:* Imp... *date:* jo... *abst:* Gi...				

titl: Climate change and women's hea ...
date: jour:
abst: In a Policy Forum, Cecilia Sor ...

United States x 2
Bangladesh
Ghana

malaria x 5
anemia x 4
cardiovascular disease x 3
gestational hypertension,
heart disease

titl: Management of Leishmaniases in ...
date: jour:
abst: The proliferation of vector-bo ...

Morocco x 14
Algeria
Tunisia

leishmaniasis x 19
cutaneous leishmaniasis x 9
visceral leishmaniasis x 4
malaria x 2
visceral leishmaniasis.

EssOilDB

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The EssOilDB (the ESSential OIL DataBase) is a continually updated knowledge resource for plant volatile emissions, conta experimental records of essential oil composition data, from published reports. EssOilDB also contains information on relate morphological factors at the time of collection and extraction in order to appreciate volatile profile patterns from a global pe EssOilDB provides an opportunity for context based scientific research, through a multitude of queries on volatile profiles of invasive, normal or stressed plants, across taxonomic clades, geographical locations and several other biotic and abiotic influ

EssOilDB presently contains 141329 essential oil records spanning a century of published reports on volatile profiles, with d plant taxonomic families, spread across diverse geographical locations all over the globe.

Enter The Database

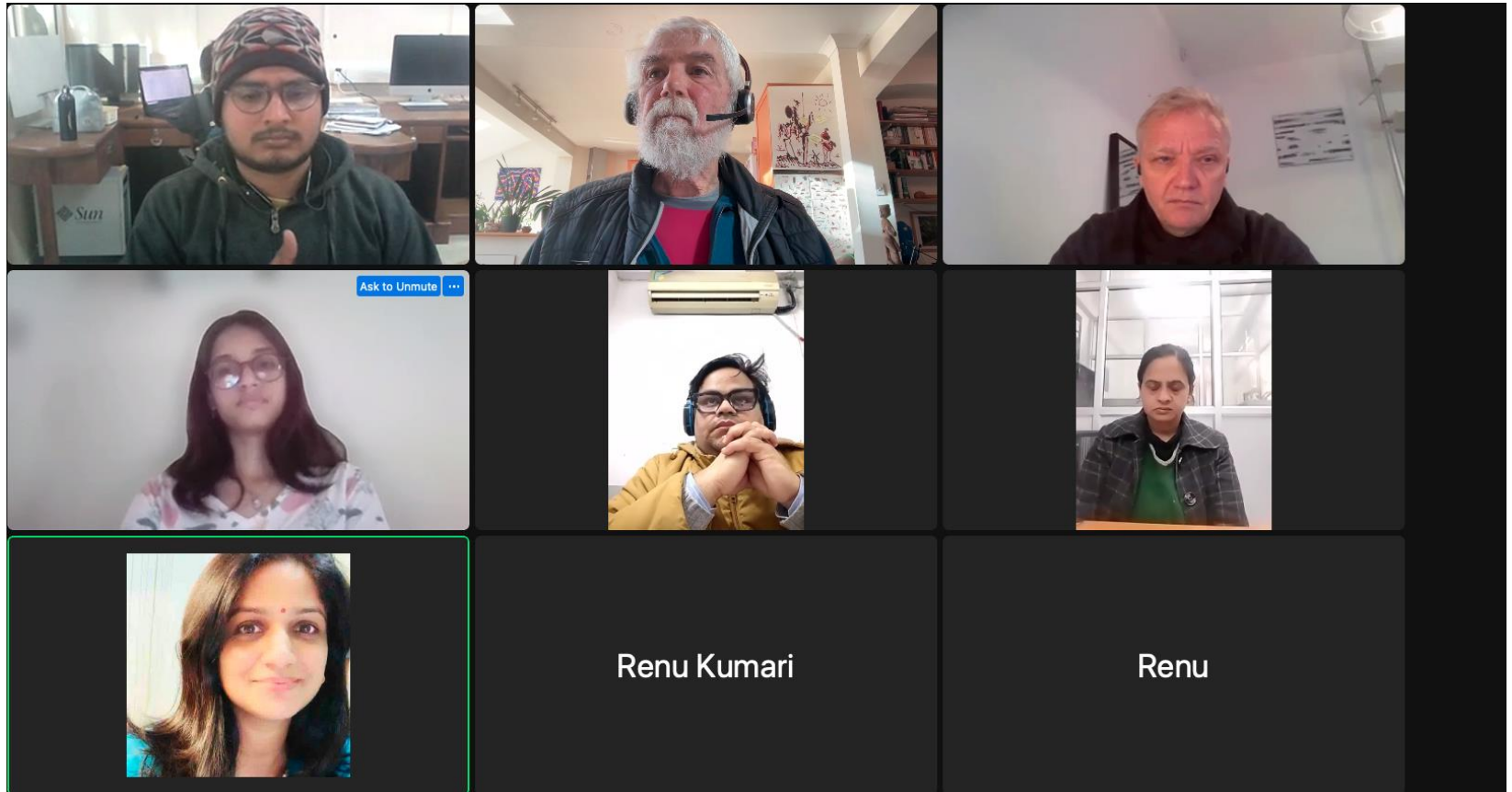National Institute of Plant Genome Research, New Delhi, India

- 📁 dictionaries...eValidated
- 📁 eoActivity
- 📁 eoAnalysisI...nt (inactive)
- 📁 eoAnalysisMethod
- 📁 eoCompound
- 📁 eoExtractionMethod
- 📁 eoGene
- 📁 eoPlant
- 📁 eoPlantExtr...tionProduct
- 📁 eoPlantMaterialHistory
- 📁 eoPlantPart
- 📁 eoTargetOrganism
- 📁 extraction_method
- 📁 geoLocation
- 📁 goldStandard
- 📁 humanDiseases
- 📁 INDEXofOil...Dictionaries
- 📁 Invasive_species
- 📁 Invasive_species-save
- 📄 Multi-Repo...verview.csv
- 📁 pests
- 📁 plant_genus

Essential Oil Database Manually extracted from Literature;
Gitanjali Yadav and colleagues, NIPGR, New Delhi

semanticClimate team meeting 2024-01-15

Zoom, Slack**, Github repos + discussion, Google Colab, PyPI**

Daily recording and transcript of sessions

Peter Murray-Rust 8:18 AM
TUESDAY (yesterday) recording
pygetpapers and docanalysis
video1138985219.mp4 ▾

Zoom

▶ 43:37

Right? I mean, this is a huge advance over what we used to do. So again, remi
this is not permanent. So if we want to the, the recordings... View transcript

Today

Transcript (auto-generated) ⤢ ✕
Peter Murray-Rust at 8:16 AM

Slack?

0:02 Right?

0:03 I mean, this is a huge advance over what we used to do.

0:10 So again, remind you this is not permanent.

0:14 So if we want to the, the recordings actually are permanent so that they're on my machine, if you want to come back to them and then they're there but don't rely on them being permanent on slack, right?

0:32 So now we're going to deal with software.

0:35 But before that, any questions that you might have thought of.

0:44 OK.

0:45 So what we probably need is do we have a review of our software on the resources renew or not?

Demos/Resources

- *Anuv Chakraborty*: **Phytochemical Knowledge from Images**
  https://github.com/petermr/pyamiimage/blob/main/presentations/2021_11_06_InCoB_2021.pdf

- *Simon Worthington:* **IPCC Glossary**
  https://vivliostyle.vercel.app/#src=https://raw.githubusercontent.com/semanticClimate/glossary-demo/main/html/index.html

- *Shweata Hegde*: **IPCC Glossary Knowledge Graph**
  https://tibhannover.github.io/semanticclimate/ipcc_glossary.html

Fuller list of videos, software, semantic resources at: https://semanticclimate.github.io/p/en/posts/resources/

Possible projects

- *Software*: NLP , image extraction, knowledge graphs, semantic dictionaries
- *Subjects*: phytochemistry and/or climate
- *Knowledge*: Literature corpora, Dictionaries, IPCC/UNFCCC conversions

Links and Thanks

- content and software(many repos)
  https://github.com/petermr

- UNFCCC: https://unfccc.int/

- UN/IPCC: https://www.ipcc.ch/

- NIPGR: https://nipgr.ac.in/home/home.php

- Wikimedia DE: https://www.wikimedia.de/

- TiB Hannover: https://www.tib.eu/en/?lang=en

- PMR/UnivOfCam group software:
  https://opsin.ch.cam.ac.uk/ http://www-pmr.ch.cam.ac.uk/wiki/Oscar3
  https://chemicaltagger.ch.cam.ac.uk/