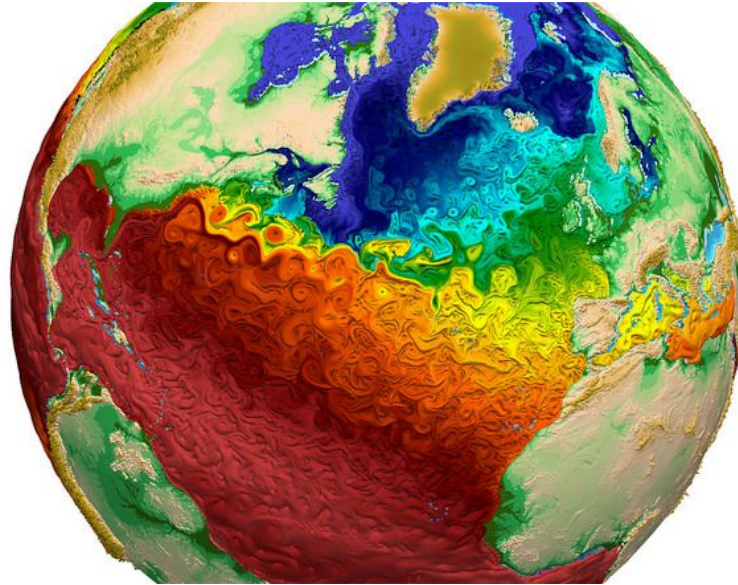


# Disrupting the Destruction of our Natural World with **Openness**



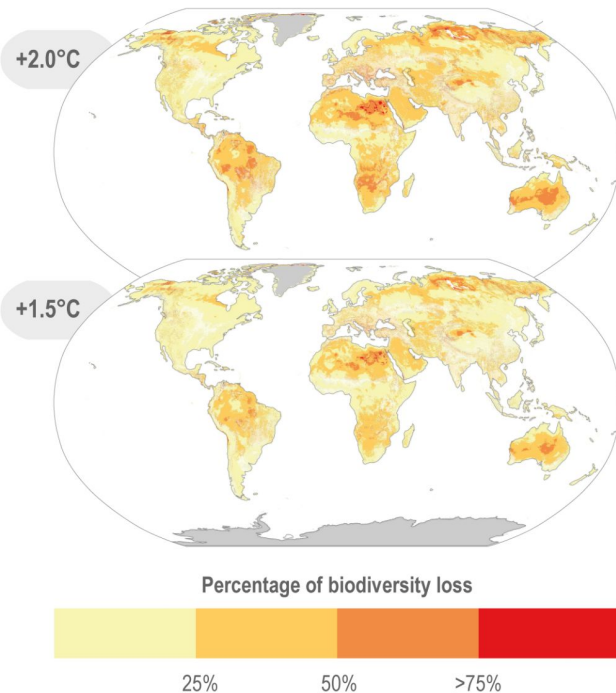
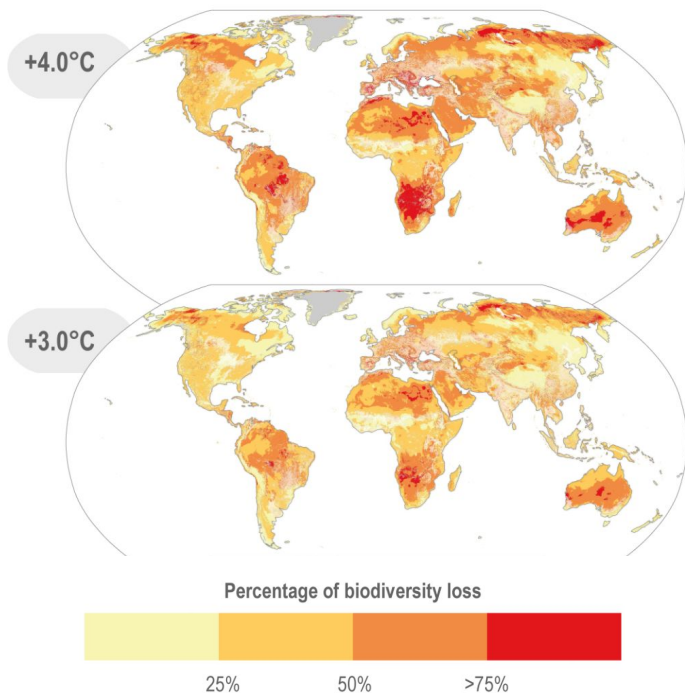
**Tobias Augspurger**

**OpenSustain.tech**

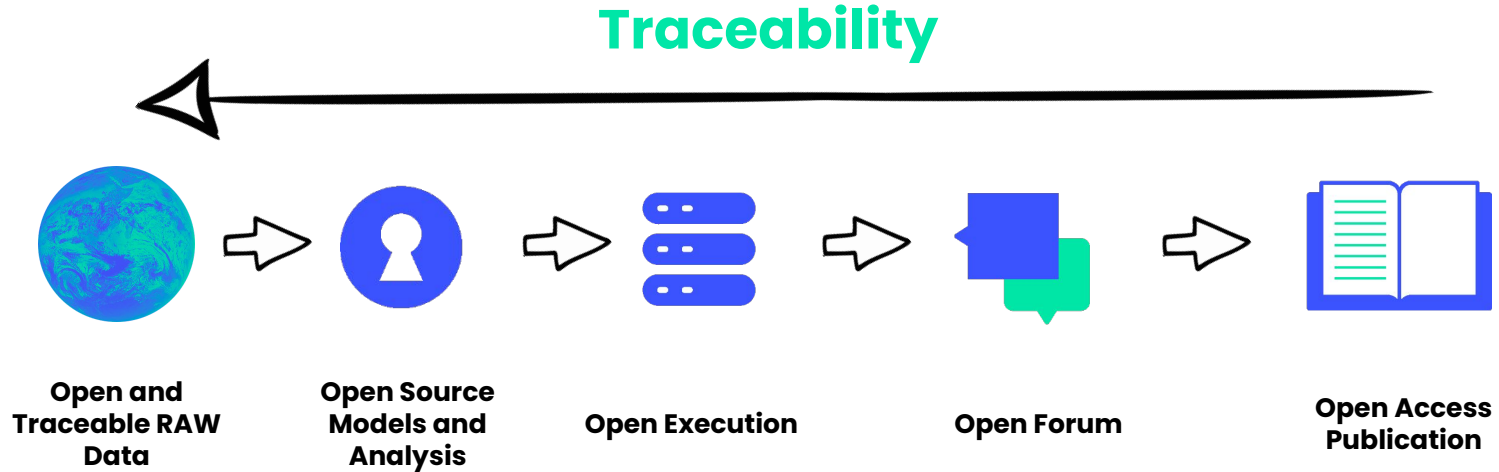
## **Traceability & Accountability**

Image Source: Energy Exascale Earth System Model

# Why are these forecasts **trustworthy**?



# Environmental Facts by Open Science



**Open Science creates a shared understanding of sustainability and reveals sustainable intentions.**

# Pseudo Science in Business Sustainability



**94.9m**  
carbon credits  
claimed



**5.5m**  
real emissions  
reductions



Guardian graphic. Source: The Guardian analysis based on a significant percentage of the projects as looked by West et al studies and Verra registry (accessed in August 2022). All figures are estimates. West et al 2023 is a pre-print. Note: Verra's claims versus analysis of independent scientific studies



# **Core Problem Today: False prophets and false numbers**

**Renewable Energy Is  
unreliable and too expensive**

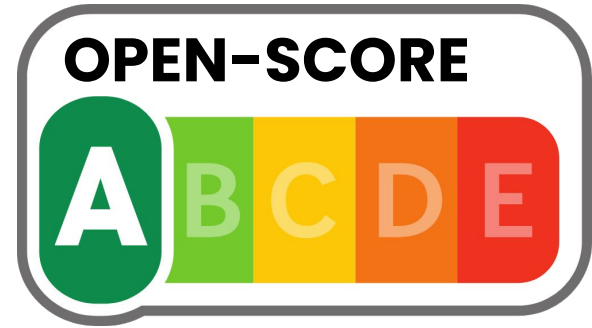
**Climate change is not  
a severe threat to humanity**

**Climate change can be  
reversed with new technologies**



# Openness as a Key Proxy for Sustainability

- Open Access ✓
- Open Data ✓
- Open Source ✓
- Open Execution ✓
- Open Forum ✓



**Traceable Sustainability = Claimed Sustainability • OPEN-SCORE**

# Open Science Labels to Rule them All

Systematic change for the open science assessment of corporate sustainability:

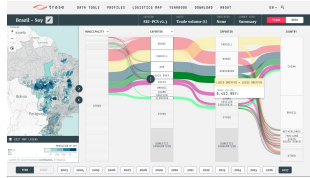
1. Carbon offset and “carbon neutral”
2. Biodiversity offsets
3. Sustainable investment
4. Sustainable forestry
5. Energy planning
6. ...



# Disclosure of the entire sustainability rating process



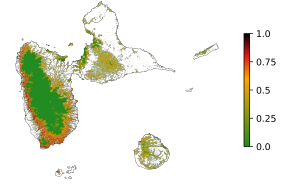
GLOBAL  
FOREST  
WATCH



```
Get started
1. Data
1.1 Import and unzip the data
1.2 Files
1.3 Sampling the observations
```



```
Remove numpy-statistics dependency
Update arc425x in documentation
Replace paty with formulaic
Confusion regarding Cell column in the sample file and the data in forest_13.tif
Forest Cover Change Dataset
CalledProcessError after running country_forest_run
Add an option to build data for Brazilian states automatically
RoadsArray and NoData
```



Global open data platform  
on forest condition and  
agriculture supply chain



forestatrisk  
Python package



Open Execution in a  
Jupyter Notebook



Open Forum  
to discuss



Spatial probability of  
deforestation



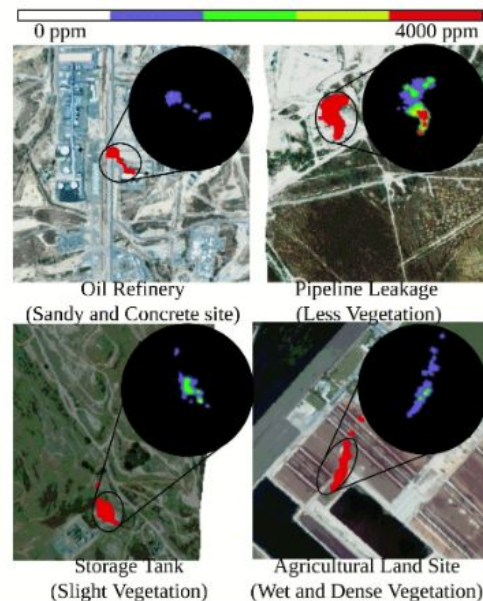


# Enforce Open Science in the Fossil Fuel Industry

Provide **traceable** Open Data about larger point source emissions.

Tying subsidisation to traceability and openness about the environmental impact.

Create an open source platform that tracks all the world's emissions.



<https://github.com/UCSB-VRL/MethaneMapper-Spectral-Absorption-aware-Hyperspectral-Transformer-for-Methane-Detection>