Climate Policy Radar

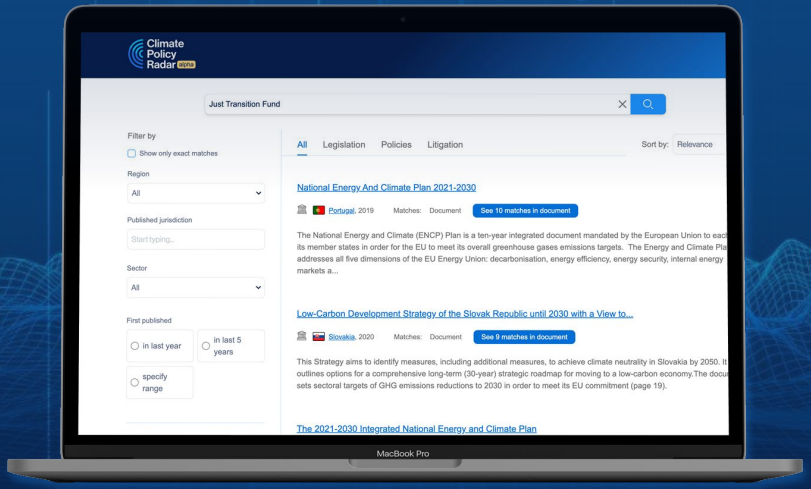
Who we are

We are on a mission to organise, analyse and democratise data on global climate law and policy.

Our tools help people discover, understand and generate useful, data-driven insight.

What we do

We're building a comprehensive, independent, open digital infrastructure and knowledge graph for climate law & policy



We harness leading data science and machine learning methods to massively scale and automate the collection, organisation and analysis of previously untapped data. Our platform and analytical tools are a pioneering application of AI to the global climate policy landscape.

Our work provides a foundational layer of rich and accessible data, catering to a variety of stakeholders, from policymakers and researchers to civil society and the private sector.

SAVES COUNTLESS HOURS

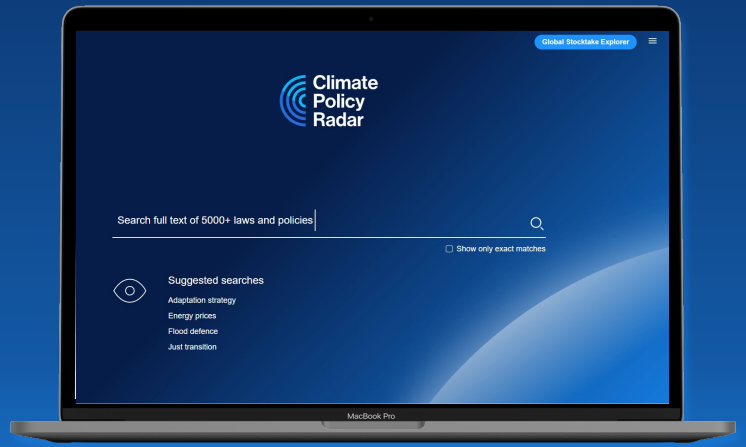
BREAKS DATA SILOS

ENABLES RESEARCH AND ACTION

Core Product Overview

Our app allows users to quickly and easily find relevant information for exploration, analysis and understanding of global climate legislation and policy.

- Full-text semantic search for over 5000+ climate laws, policies and UNFCCC submissions from every country.
- Find net zero targets and other climate targets linked to laws and policies for each country with over 200 country profiles
- Open data, open source, free to use, democratising access to the information in our tools

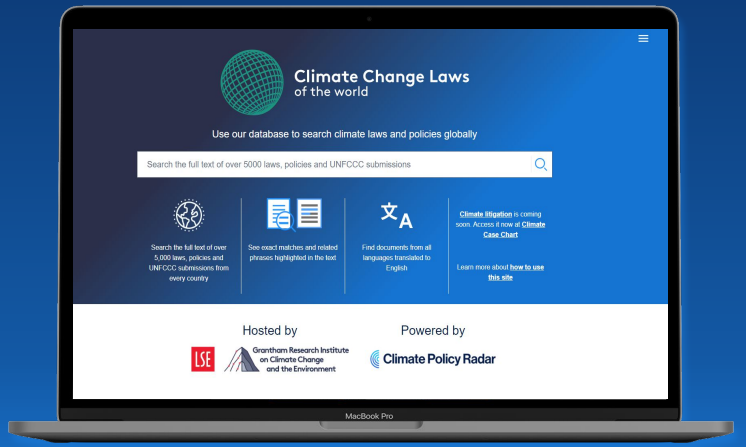


https://climate-laws.org/

Climate Change Laws of the World

Powered by Climate Policy Radar, the CCLW database builds on more than a decade of data collection by the Grantham Research Institute at the London School of Economics and Political Science, with institutional partners.

- Now powered by machine learning and natural language processing technology developed by Climate Policy Radar
- Together, CPR and GRI maintain and update what is currently the most comprehensive global resource on climate law and policy
- The database has over 5000+ climate laws, policies and UNFCCC submissions from every country, updated by GRI & CPR on a rolling basis



https://climate-laws.org/

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Our Impact

Our impact is multi-faceted, as demonstrated by our web-based apps, open publishing, and community building initiatives.

Our app

Our app, launched in May 2022 and integrating the LSE database (climate-laws.org) draws over **300,000 annual users** globally. The **Global Stocktake Explorer** (gst1.org), unveiled at the UN Climate negotiations in June 2023, received acclaim from UN leaders and thousands of users.

Our Ecosystem

We actively engage in open publishing and community empowerment. Data and code are shared on **Github** and **HuggingFace**, advancing collaborative climate policy research. By convening a **Climate NLP community**, we facilitate knowledge sharing through online collaborations, calls, and hackathons.

External recognition

Our influence is recognised worldwide. Featured on the BBC, Carbon Brief, Financial Times and Business Insider, we've presented at forums like WIRED Impact, Reuters Impact, and the World Law Congress. We were acknowledged by **UNESCO** as a Top 100 Global AI project, and cited in over 10 papers and several PHD theses, solidifying our role in the climate AI ecosystem.

Impact, equity and community in CPR’s data science

CPR's data science work centres around classification of spans in documents

DATE GRID_TECHNOLOGY

As of 30 June 2021, there were 25.2 million smart and advanced meters in homes and 211 businesses across Great Britain, representing 46% smart coverage.[2]

These text spans are only useful at scale if we can link them to real-world concepts

DATE

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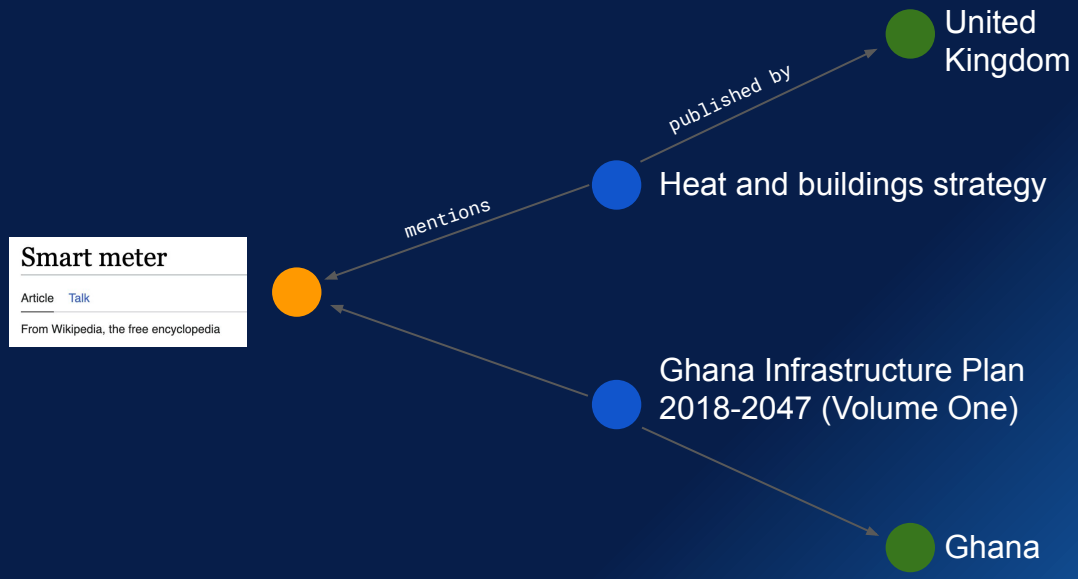
GRID_TECHNOLOGY

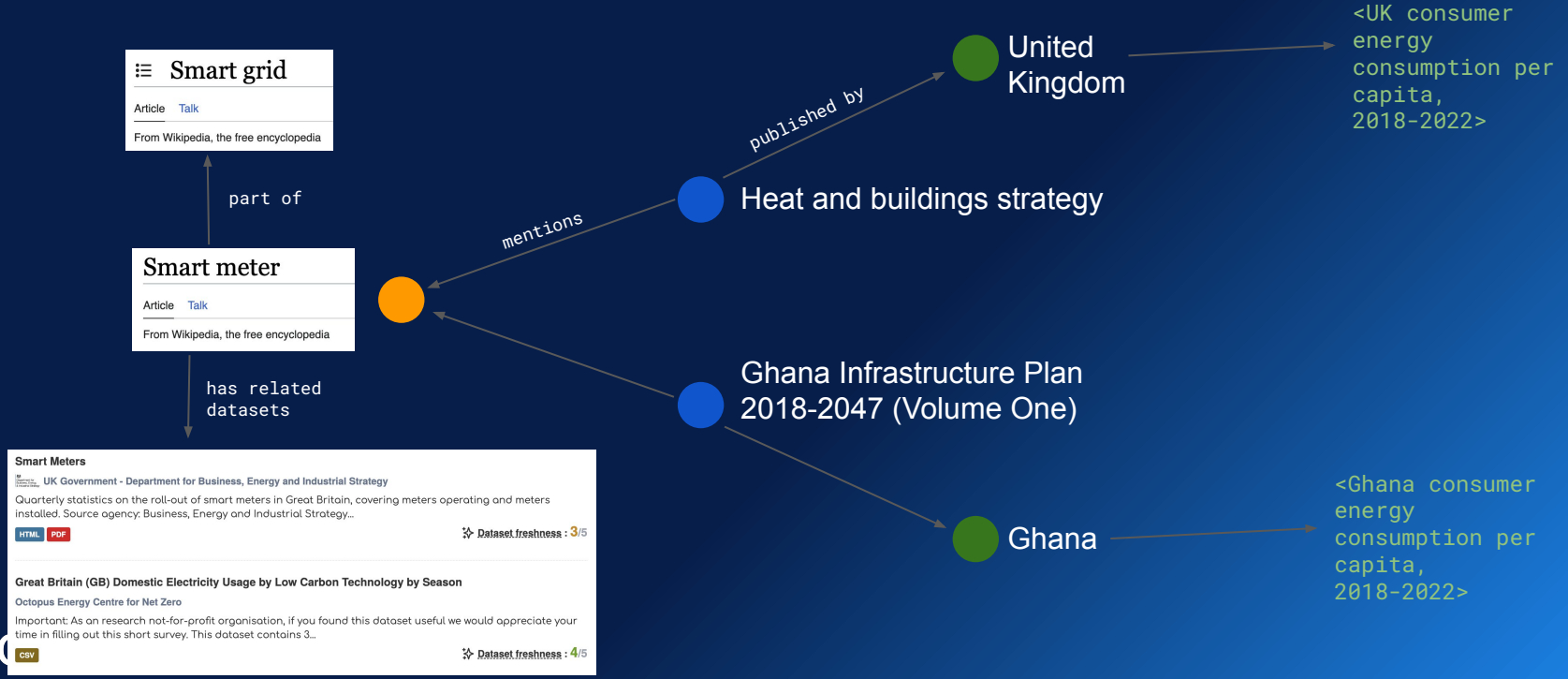
GRID_TECHNOLOGY

i. Advanced Metering Infrastructure and Automatic Meter Reading; Automatic Meter Reading (AMR) system will provide a facility for remote disconnection and reconnection of electricity supply from an AMR control centre

If we run this NLP across a bunch of documents, we end up with a graph structure. This is our knowledge graph; or ‘evidence base’.



As each node on the graph is a real-world concept, we can embellish the graph with things we know about each concept



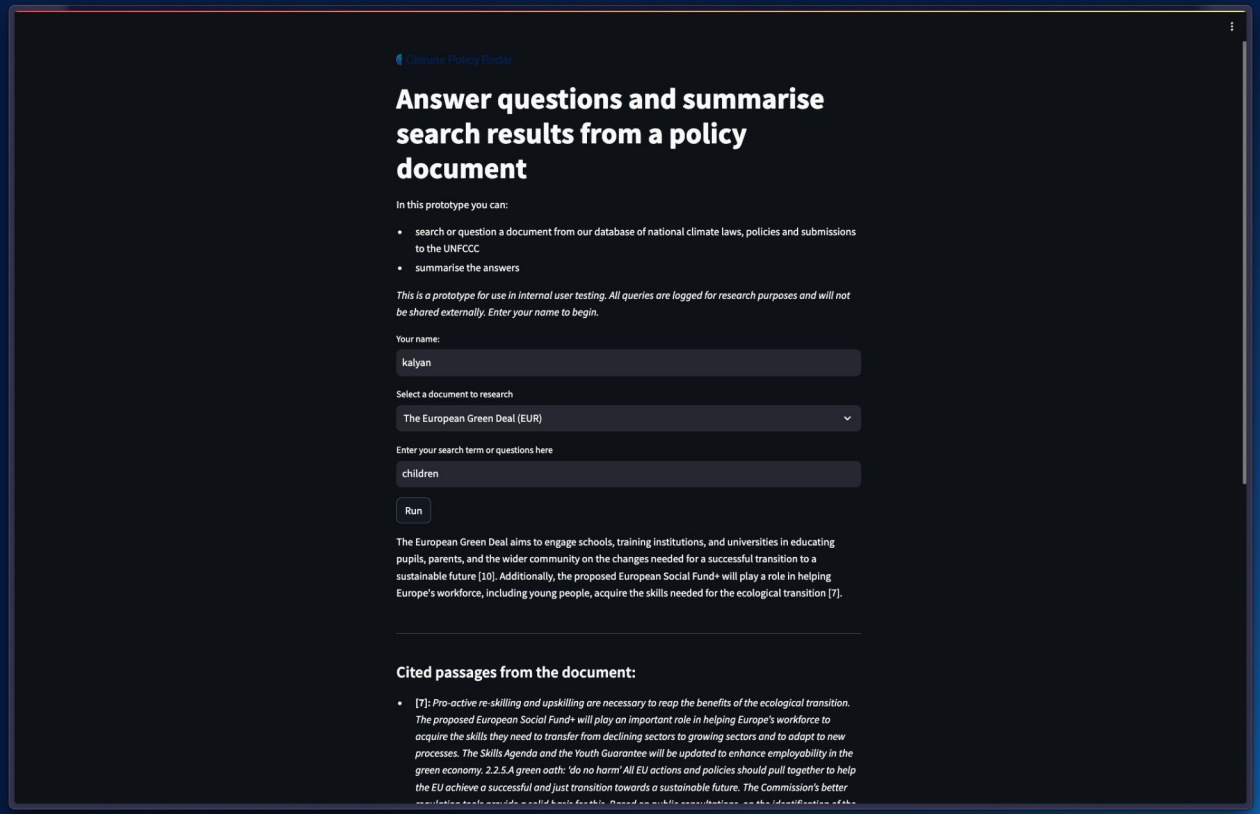
This graph can be used to help to answer new types of questions that are difficult to answer using text search alone

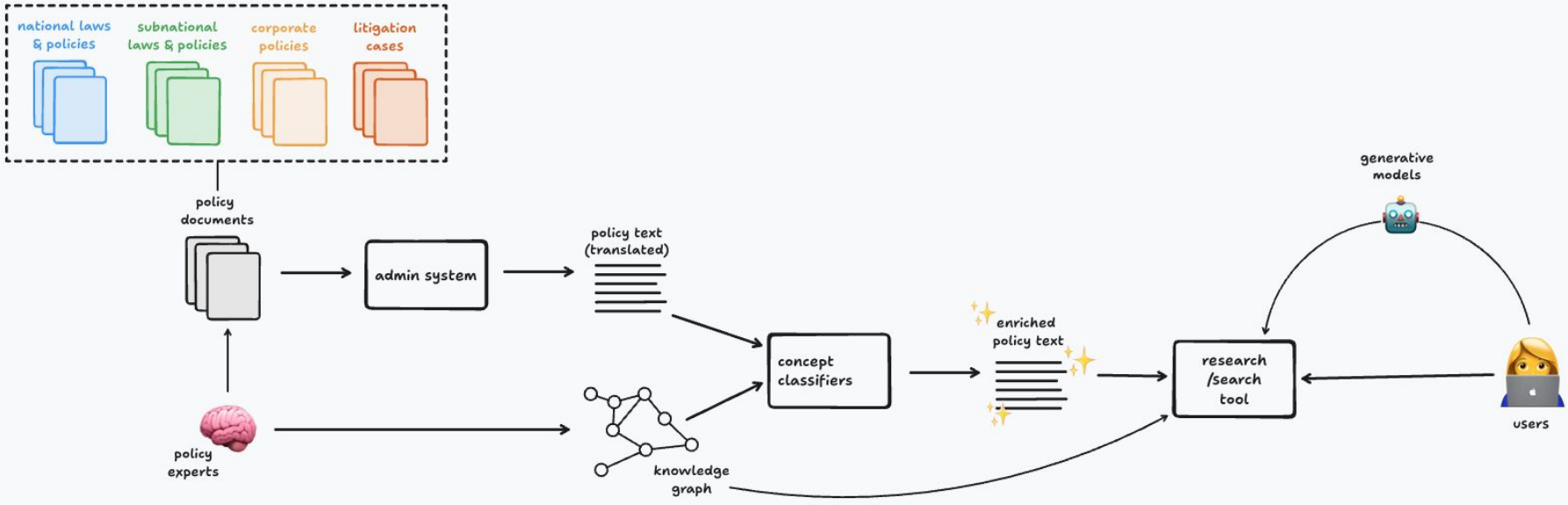
Precise queries:

What targets about energy efficiency have been made in climate laws and policies since 2015, and what years are they targeting?

Show me every document that mentions risks and potential dangers of wind energy, alongside a table of wind energy projects for each geography.

and, search and generative AI are important tools in getting this right too




national laws & policies
subnational laws & policies
corporate policies
litigation cases
policy documents
admin system
policy text (translated)
generative models
enriched policy text
concept classifiers
research /search tool
users
policy experts
knowledge graph

Climate change is a ‘high-stakes domain[1]’

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[1]Sambasivan, Nithya et al. ““Everyone wants to do the model work, not the data work”: Data Cascades in High-Stakes AI.” *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (2021)

Climate change is a ‘high-stakes domain[1]’

- High impact on human wellbeing and safety
- Mistakes can have an outsized impact on vulnerable communities and contexts
- Every 1% performance can be crucial

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[1]Sambasivan, Nithya et al. ““Everyone wants to do the model work, not the data work”: Data Cascades in High-Stakes AI.” *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (2021)

High-stakes AI[1] means:

- Low-resource
- Limited existing high-quality datasets
- Naturally interdisciplinary

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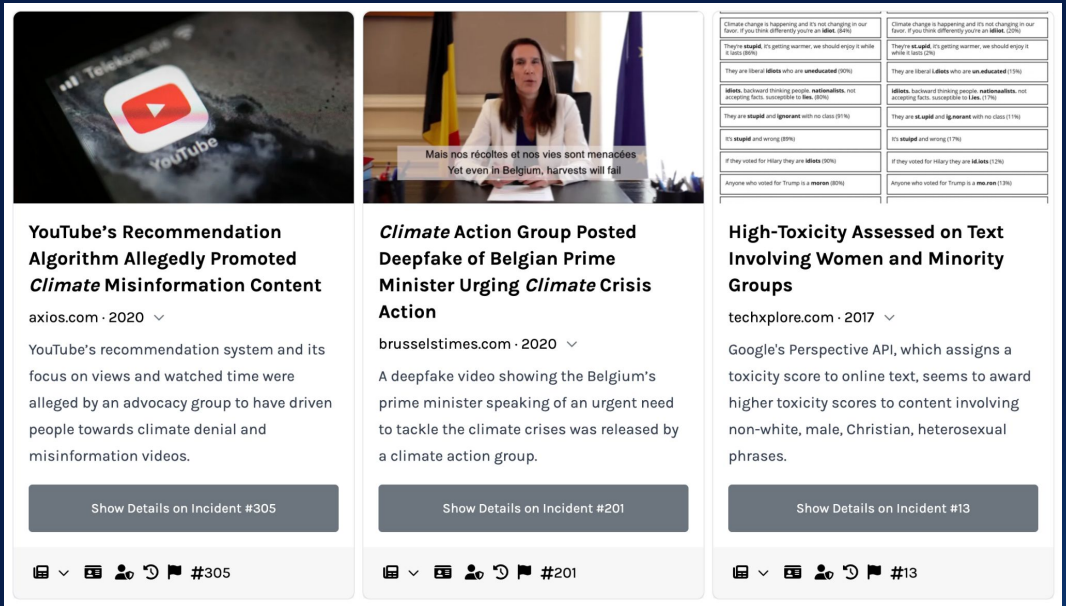
[1]Sambasivan, Nithya et al. ""Everyone wants to do the model work, not the data work": Data Cascades in High-Stakes AI." *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (2021)

AI can cause harms



YouTube's Recommendation Algorithm Allegedly Promoted *Climate* Misinformation Content

axios.com · 2020

YouTube's recommendation system and its focus on views and watched time were alleged by an advocacy group to have driven people towards climate denial and misinformation videos.

Show Details on Incident #305

#305

***Climate* Action Group Posted Deepfake of Belgian Prime Minister Urging *Climate* Crisis Action**

brusselstimes.com · 2020

A deepfake video showing the Belgium's prime minister speaking of an urgent need to tackle the climate crises was released by a climate action group.

Show Details on Incident #201

#201

High-Toxicity Assessed on Text Involving Women and Minority Groups

techxplore.com · 2017

Google's Perspective API, which assigns a toxicity score to online text, seems to award higher toxicity scores to content involving non-white, male, Christian, heterosexual phrases.

Show Details on Incident #13

#13

AI Incident Database:
incidentdatabase.ai

Our aims

Promote accountability of decision makers

Researchers
Policy advisors
Civil society
Journalists

Analyse policy and share insights

Researchers
Policy advisors
Civil servants
Policy analysts
Consultants

Inform deployment of climate finance and risk modelling

Corporations
Policy analysts
Policy advisors
Investors
Consultants
Insurers

Track progress and identify gaps

Researchers
Policy advisors
Policy analysts
Consultants

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High-stakes AI means:

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4 principles for AI in climate:

1. Good quality climate data = public good
2. Measure everything & make measurement a habit
3. Short feedback loops with experts
4. We need to pool resources

How does CPR apply this in practice?

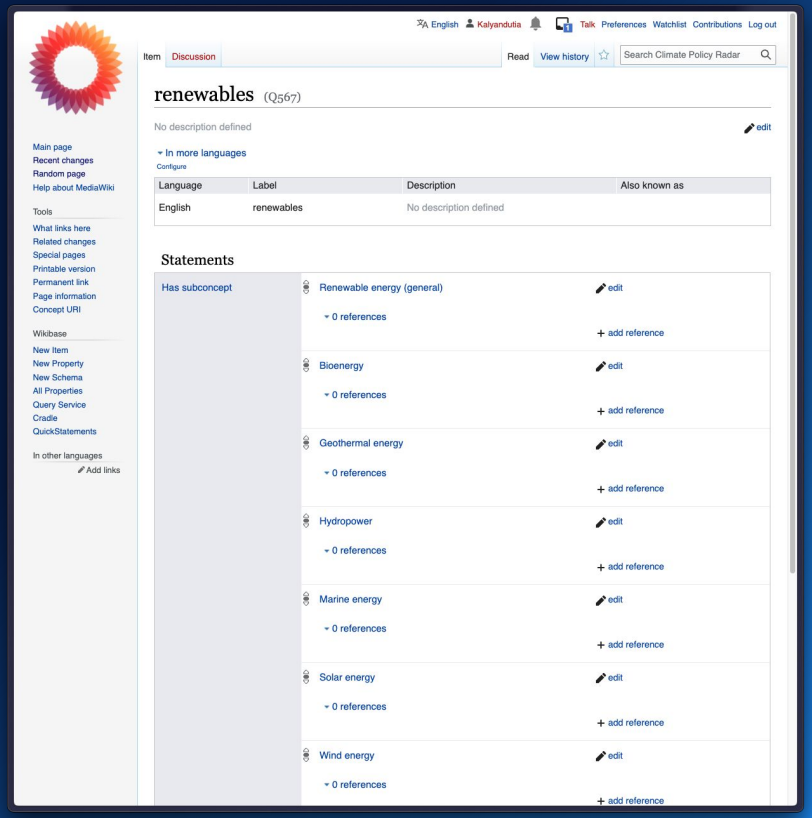
Measuring everything & making measurement a habit

Things we've done so far:

- **Measuring data quality:** text quality metrics; labeller agreement
- **Measuring equity through subpopulations:** we measure performance across world regions; whether text has been translated; different corpora
- **Setting up infrastructure:** concept store; weights & biases

Some current & future challenges:

- Equity in search
- Ethics in gen ai - 'CPR Generation Policy'
- Do we care about classifier stability?
- More public consultation & agenda setting on our ethics policies



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Convening community; pooling data and resources

NLP for Climate Community

We're a group of practitioners who work in the domain of Natural Language Processing for climate change. As this is a naturally interdisciplinary field we're from a range of backgrounds.

As a community, we aim to:

- Collaborate and provide feedback on concrete, impactful climate NLP projects
- Share resources, e.g. data, code, learning, infrastructure and project outcomes
- Share learning, informing each other of current developments and interesting resources
- Proactively mentor female* and underrepresented groups to be involved in the work of this community

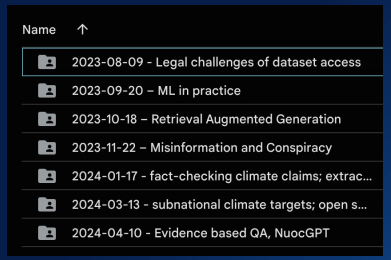
Community resources

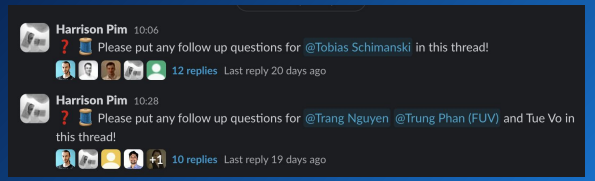
- Slack workspace
- Monthly community calls
- NLP for climate resources: datasets, models, tutorials, publications, ...

(message me if you work on climate and NLP and you'd like to join)

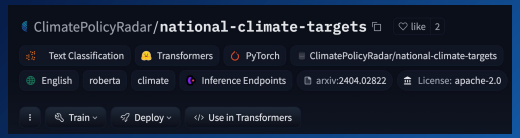
Sharing at conferences / furthering climate as an 'interesting' domain within AI

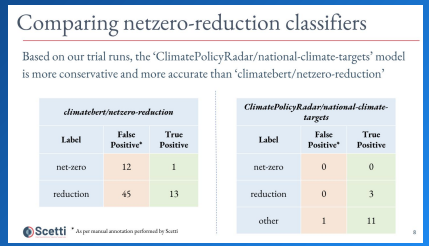
Knowledge sharing





Open data and model reuse





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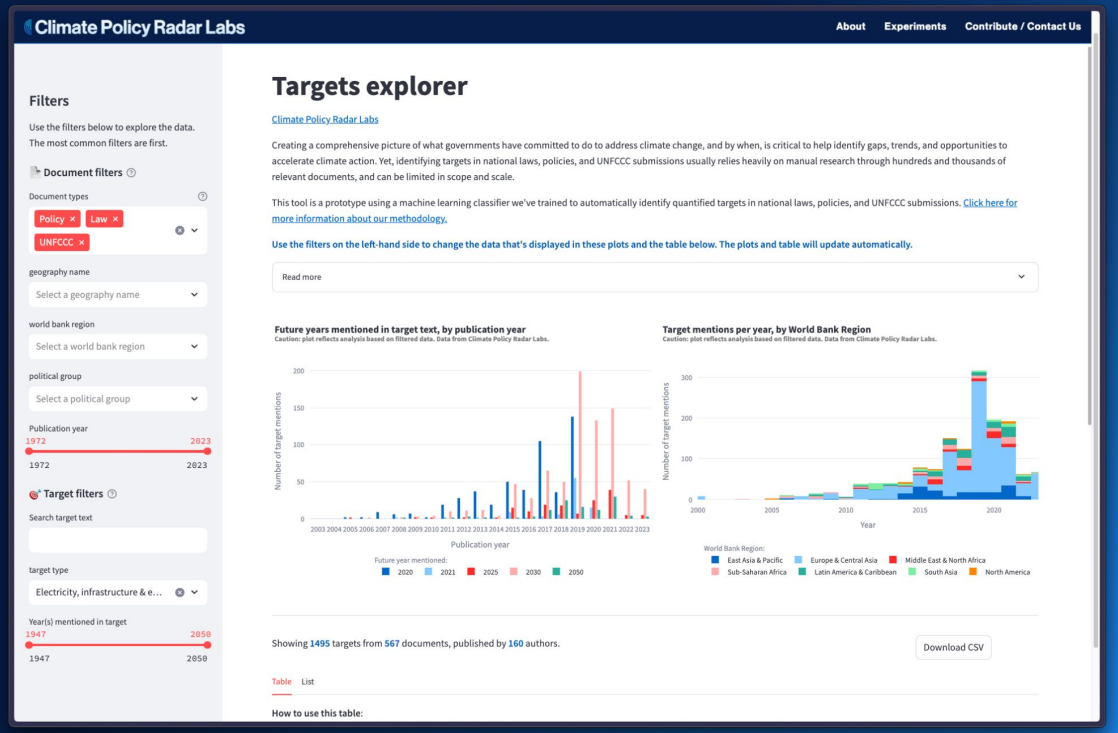
Labs: short feedback loops

We build tools to help people make better decisions around climate law and policy - this needs rigour.

CPR labs is a place for us to show earlier-stage work and validate ideas for our main tool, with suitable warning signs.



labs.climatepolicyradar.org/targets

We’ve got a long way to go. Interested in learning from you and others!