



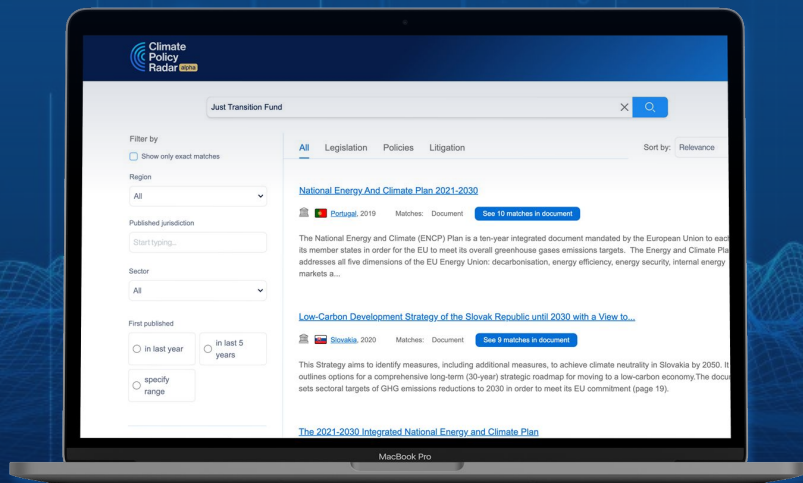
## Who we are

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.



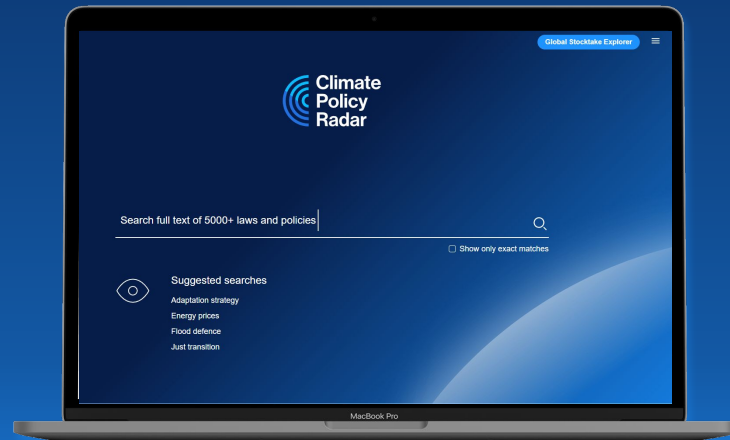
Full-text semantic search for over 5000+ climate laws, policies and UNFCCC submissions from every country.



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.



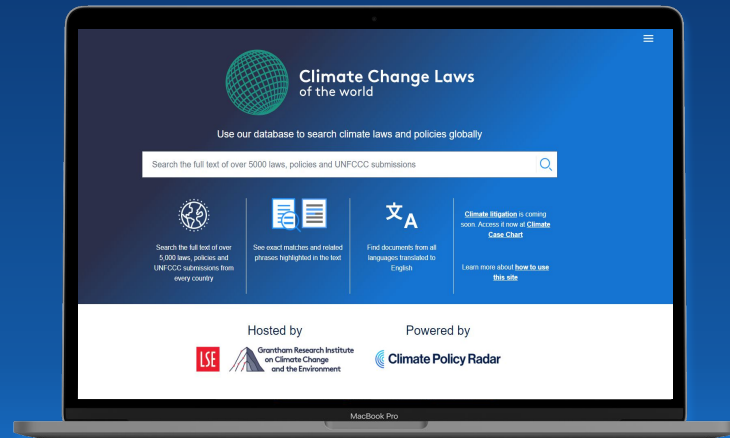
Now powered by machine learning and natural language processing technology developed by Climate Policy Radar



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/>

# 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](https://climate-laws.org)) draws over **300,000 annual users** globally. The **Global Stocktake Explorer** ([gst1.org](https://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**

As of DATE **30 June 2021**, there were 25.2 million GRID\_TECHNOLOGY **smart and advanced meters** in homes and 211 businesses across Great Britain, representing 46% smart coverage.<sup>2</sup>



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

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.<sup>2</sup>

Smart meter

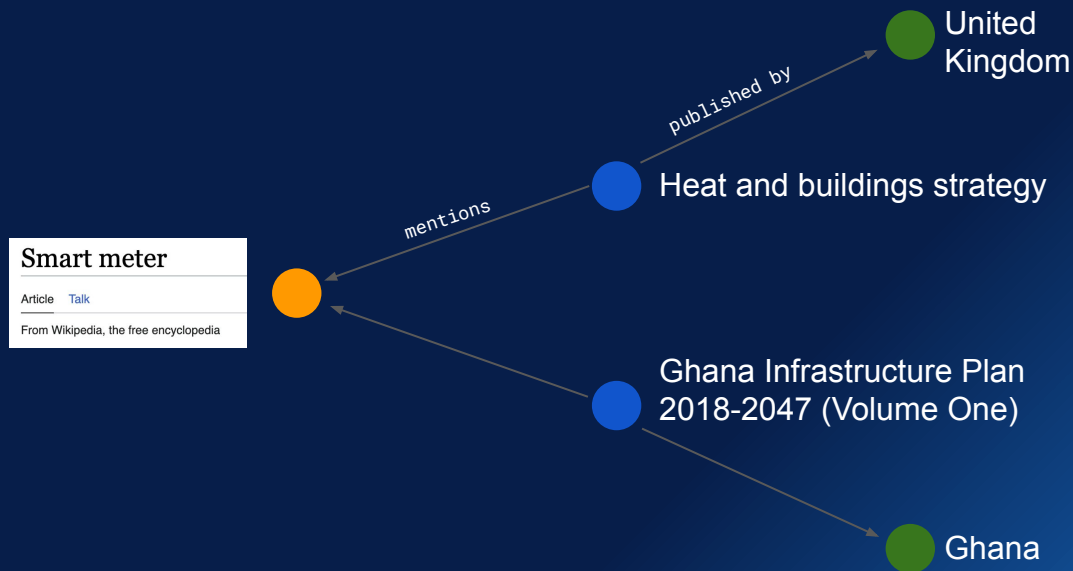
Article [Talk](#)

From Wikipedia, the free encyclopedia

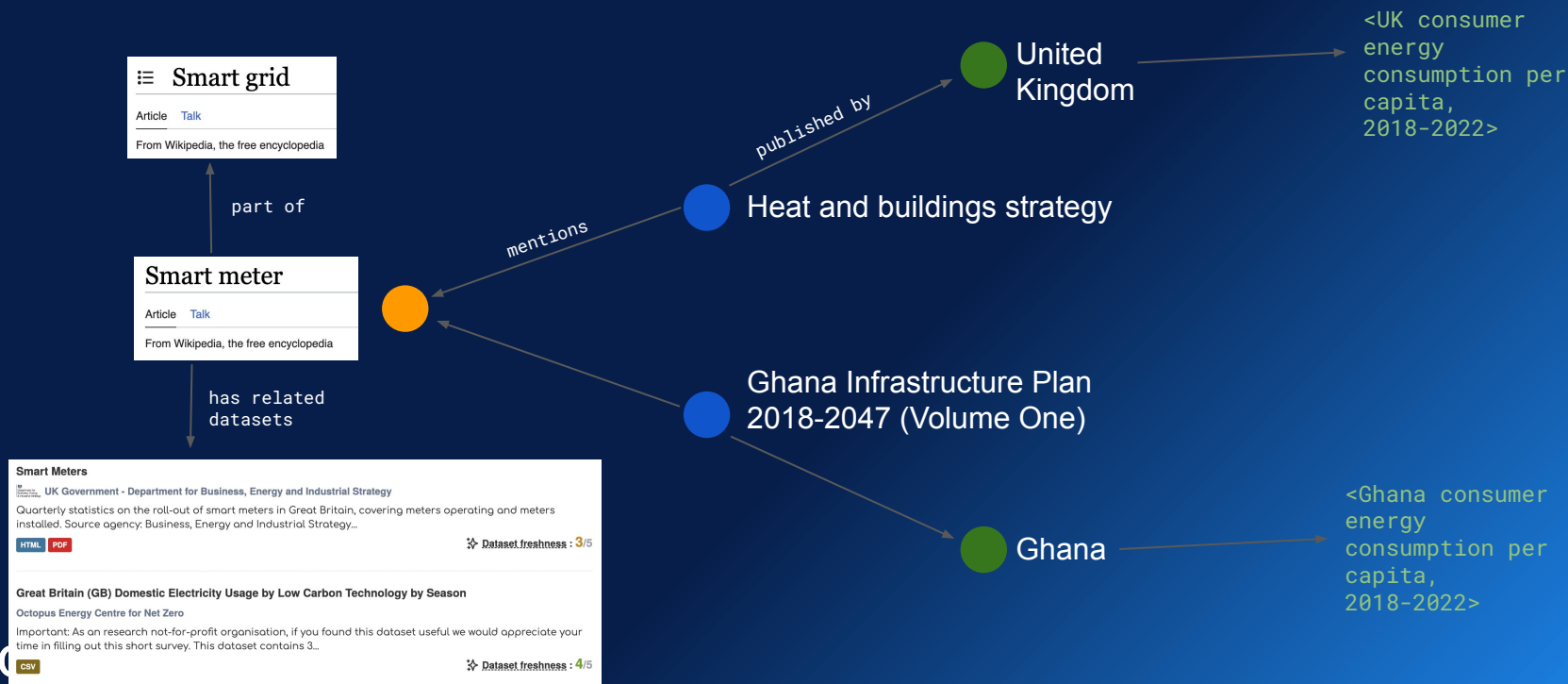
GRID\_TECHNOLOGY

- 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



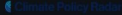
This graph can be used to help to answer **new types of questions** that are difficult to answer using text search alone

### 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

Climate Policy Radar

## Answer questions and summarise search results from a policy document

In this prototype you can:

- search or question a document from our database of national climate laws, policies and submissions to the UNFCCC
- summarise the answers

*This is a prototype for use in internal user testing. All queries are logged for research purposes and will not be shared externally. Enter your name to begin.*

Your name:

Select a document to research

The European Green Deal (EUR) ▾

Enter your search term or questions here

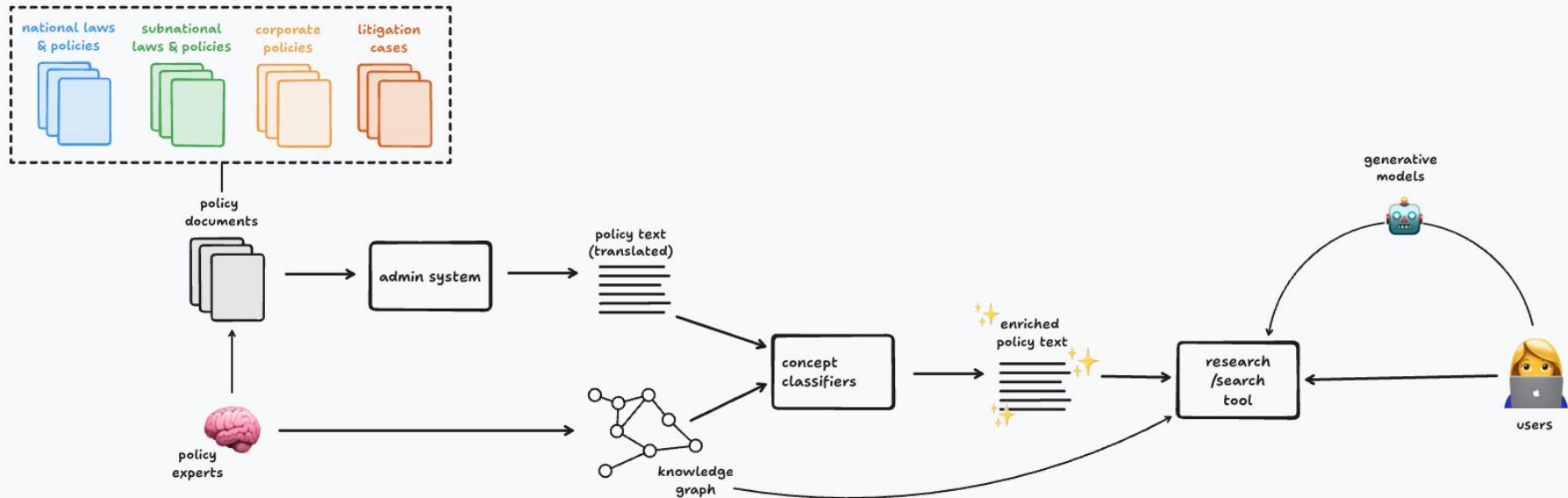
Run

The European Green Deal aims to engage schools, training institutions, and universities in educating pupils, parents, and the wider community on the changes needed for a successful transition to a sustainable future [10]. Additionally, the proposed European Social Fund+ will play a role in helping Europe's workforce, including young people, acquire the skills needed for the ecological transition [7].

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### Cited passages from the document:

- [7]: Pro-active re-skilling and upskilling are necessary to reap the benefits of the ecological transition. The proposed European Social Fund+ will play an important role in helping Europe's workforce to acquire the skills they need to transfer from declining sectors to growing sectors and to adapt to new processes. The Skills Agenda and the Youth Guarantee will be updated to enhance employability in the green economy. 2.2.5.A green oath: 'do no harm' All EU actions and policies should pull together to help the EU achieve a successful and just transition towards a sustainable future. The Commission's better regulation tools provide a solid basis for this. Based on public consultation, on the identification of the



Climate change is a  
'high-stakes domain'<sup>1</sup>

# Climate change is a 'high-stakes domain'<sup>1</sup>

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

<sup>1</sup>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<sup>1</sup> means:

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

<sup>1</sup>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

# Our aims




**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

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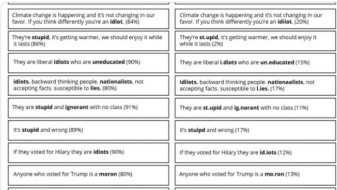
**Climate Action Group Posted Deepfake of Belgian Prime Minister Urging Climate Crisis Action**

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

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**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

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AI Incident Database:  
incidentdatabase.ai

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

## High-stakes AI means:

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

## 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?

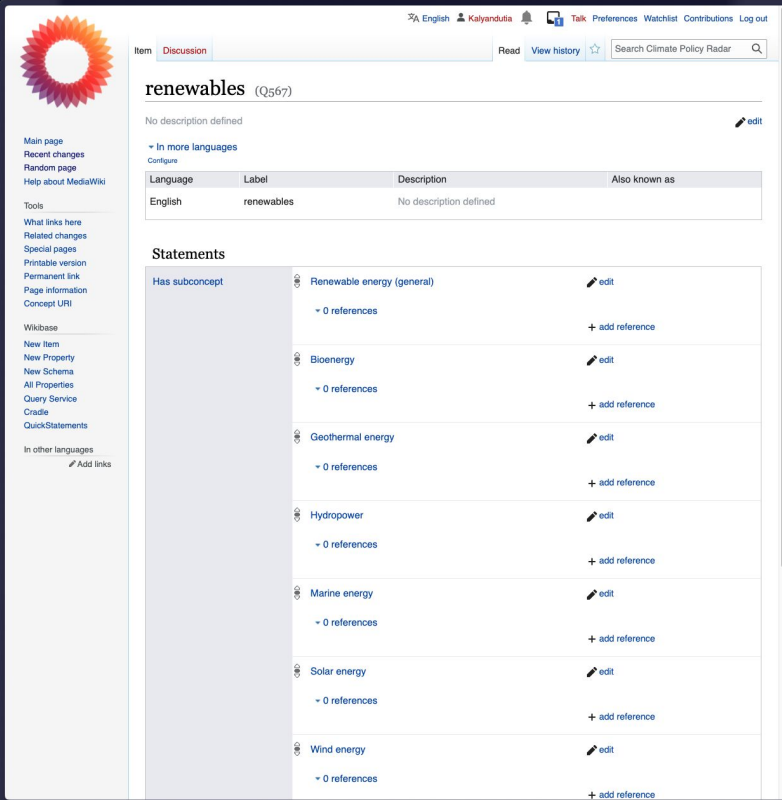
# Measuring everything & making measurement a habit

## 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



The screenshot displays the 'renewables' concept page on the Climate Policy Radar platform. The page features a sidebar with navigation links, a main content area with a table of translations, and a 'Statements' section listing related concepts and their reference counts.

**Navigation Sidebar:**

- Main page
- Recent changes
- Random page
- Help about MediaWiki
- Tools
- What links here
- Related changes
- Special pages
- Printable version
- Permanent link
- Page information
- Concept URI
- Wikibase
- New Item
- New Property
- New Schema
- All Properties
- Query Service
- Cradle
- QuickStatements
- In other languages
- Add links

**renewables (Q567)**

No description defined [edit](#)

[In more languages](#)

[Configure](#)

Language	Label	Description	Also known as
English	renewables	No description defined	

**Statements**

Has subconcept			
	<a href="#">Renewable energy (general)</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>
	<a href="#">Bioenergy</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>
	<a href="#">Geothermal energy</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>
	<a href="#">Hydropower</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>
	<a href="#">Marine energy</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>
	<a href="#">Solar energy</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>
	<a href="#">Wind energy</a>	<a href="#">edit</a>	
	~ 0 references		<a href="#">+ add reference</a>

# Convening community; pooling data and resources

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

## 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...](#)

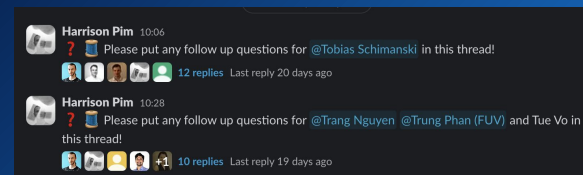
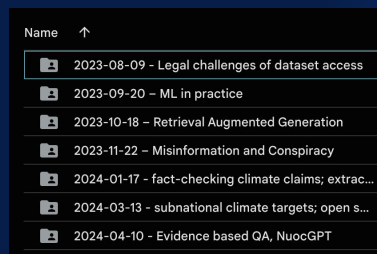
(message me if you work on climate and NLP and you'd like to join)



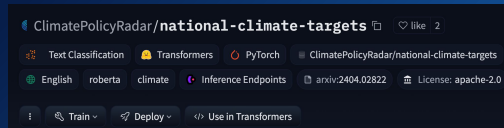
## AMLD 2024 Track: Accelerating Climate Change Action through Machine Learning

About Schedule Organizers

## Knowledge sharing



## Open data and model reuse



## Comparing netzero-reduction classifiers

Based on our trial runs, the 'ClimatePolicyRadar/national-climate-targets' model is more conservative and more accurate than 'climatebert/netzero-reduction'

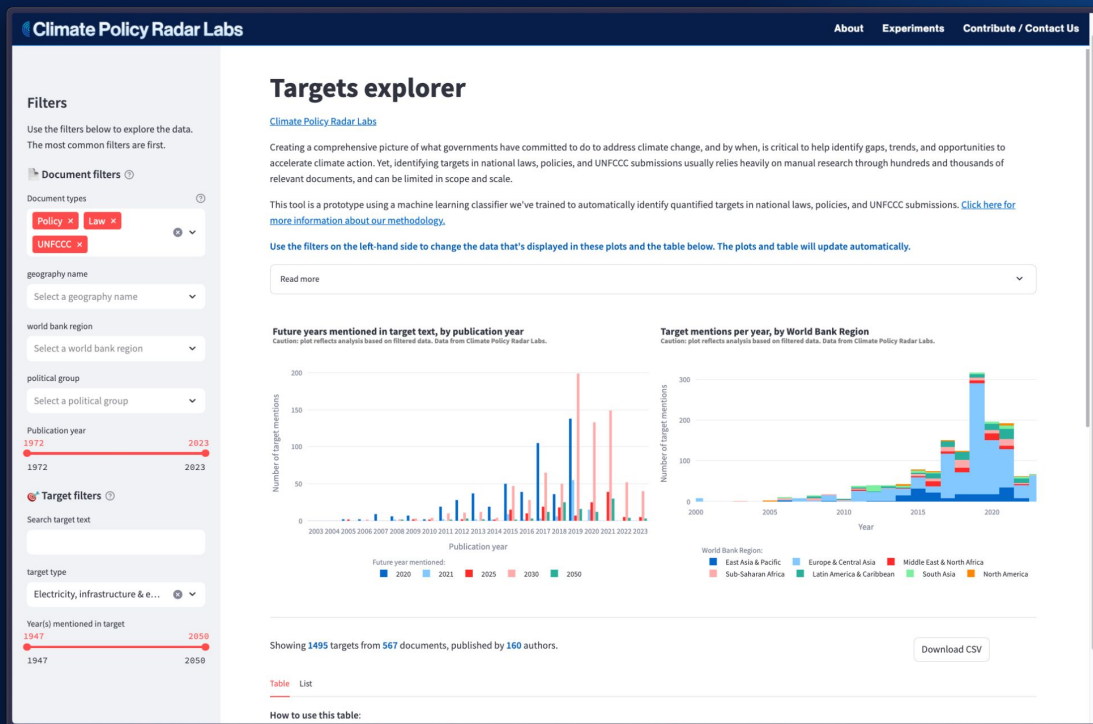
climatebert/netzero-reduction			ClimatePolicyRadar/national-climate-targets		
Label	False Positive*	True Positive	Label	False Positive*	True Positive
net-zero	12	1	net-zero	0	0
reduction	45	13	reduction	0	3
			other	1	11

Scettini \* As per manual annotation performed by Scettini

# 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](https://labs.climatepolicyradar.org/targets)

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