



Mercator Research Institute on
Global Commons and Climate Change gGmbH

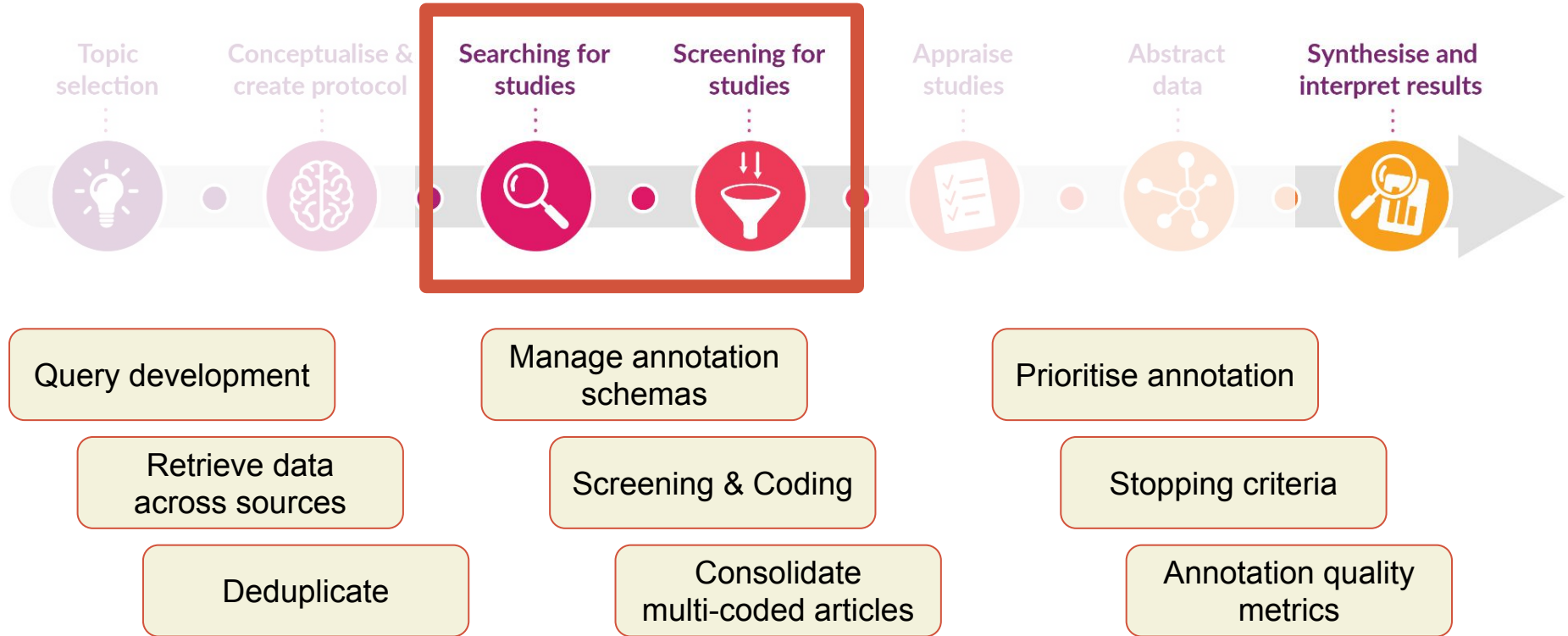
Computer-aided research synthesis

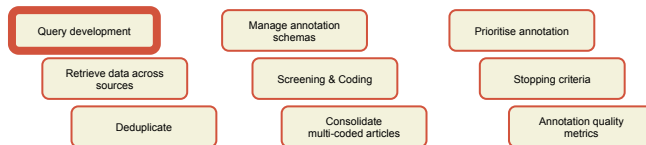


WWCS Workshop
Potsdam

Max Callaghan
Tim Repke
29.09.2022

Steps in a systematic review

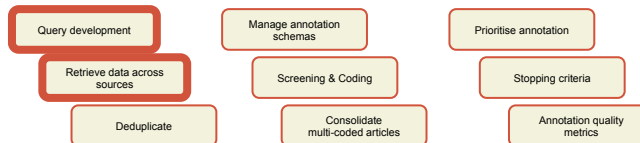




Query development



- Open source scientific database
- 244M publications (bibliographic meta-data, citations, ...)
- Self-hosted mirror for full control (solr and postgres)
 - Snowballing via citations or similarities (vector search)
 - Better understanding of wildcard expansion
 - Reference metrics on entire fields or all of science



Coverage of OpenAlex

OpenAlex (~244M)

Climate (~1M)

Cities (~48k)

Mentions (~22k)

~900

~300

~2,000

3,220

3,721

71,863

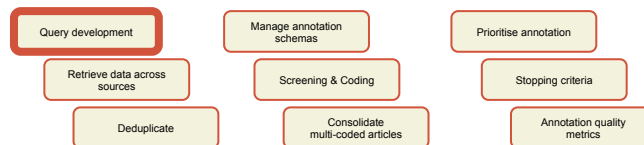
8,908

IPCC AR6 (~81k)

WG2-Ch6 (~2k)

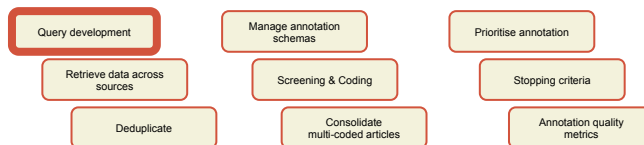
CCP-Ch2 (~900)

WG3-Ch8 (~900)



Query development

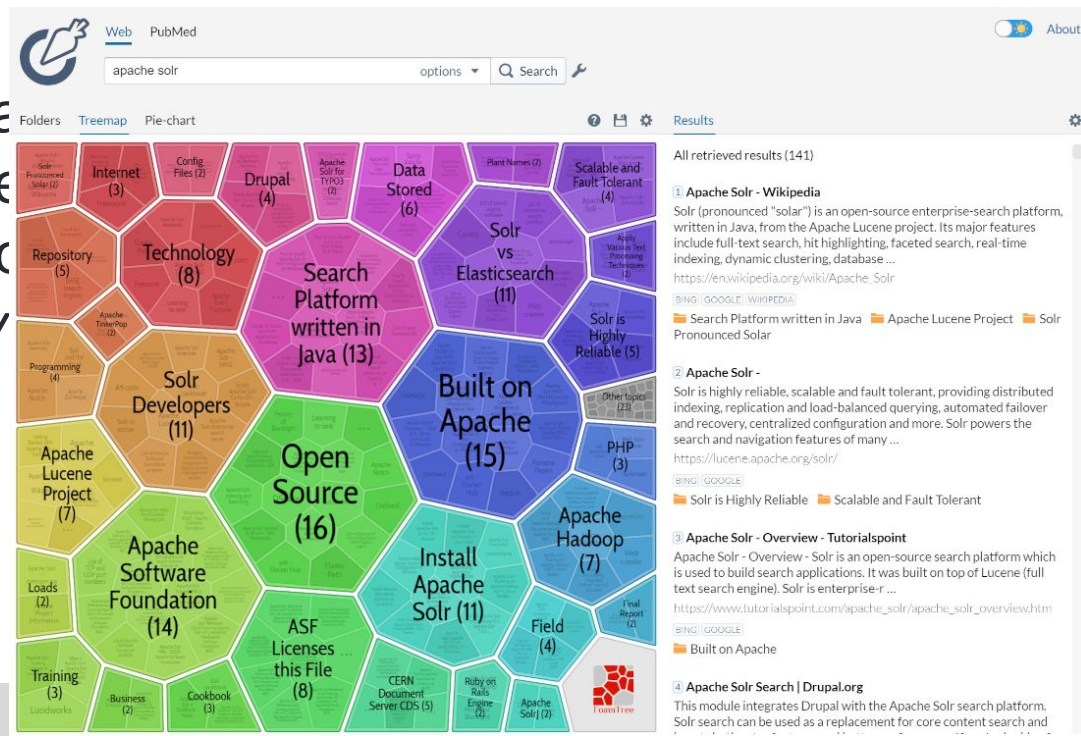
- Query OpenAlex (our solr mirror) directly from the platform
- Compare to “gold standard” references (*soon, probably*)
- Compare different queries (*soon, possibly*)
- Keyword recommendations (*let’s see*)
- Similar documents (*maybe*)
- Follow citations (*likely*)



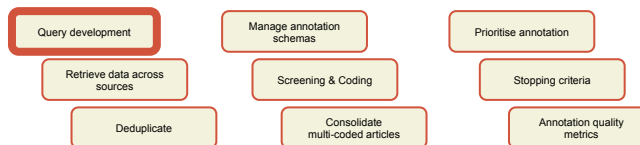
Query development

- Query OpenAlex (our solr mirror) directly from the platform

- Compare to “gold standard”
- Compare different queries
- Keyword recommendations
- Similar documents (*may*)
- Follow citations (*likely*)
- Instant topic maps (*??*)



Query development



Overview

Import

Imports

OpenAlex Solr

Dataset

Annotation

Artefacts

Pipelines

Annotations

Project

Projects About tim.repke

Search OpenAlex (Solr)

Query setup

"climate change" and "CDR"

Limit

20

Offset

0

OP

AND

Field

title_abstract

Parser

edismax

☒ Histogram

1990

2024

Query

Found 321 works in 1123ms

↓ Tokens ⓘ Help



Is carbon dioxide removal 'mitigation of climate change'?



Carbon dioxide removal (CDR) is often characterized as separate from climate change mitigation. Discussion of CDR governance – despite enjoying growing interest – tends to overlook how key provisions on mitigation apply. Similarly, many climate policy processes have ignored CDR. CDR may have been discursively held separate from 'mitigation' due to a partial conceptual overlap with 'geoengineering'. We unpack how the 'mitigation of climate change' – as defined in the United Nations Framework Convention on Climate Change and its Paris Agreement – includes CDR as defined by the Intergovernmental Panel on Climate Change. We point to important implications and opportunities for strengthening governance by enhanced clarity regarding parties' obligations, principled equitable distribution of removal efforts, prioritization of rapid emissions reductions and careful paths to long-term removals, and a need for considering sustainability and human rights issues in the pursuit of CDR.

2021 Matthias Honegger · William C. G. Burns · David R. Morrow

The influence of learning about carbon dioxide removal (CDR) on support for mitigation policies



A wide range of carbon dioxide removal (CDR) strategies has been proposed to address climate change. As most CDR strategies are unfamiliar to the public, it is unknown how increased media and policy attention on CDR might affect public sentiment about climate change. On the one hand, CDR poses a potential moral hazard: if people perceive that CDR solves climate change, they may be less likely to support efforts to reduce carbon emissions. On the other hand, the need for CDR may increase the perceived severity of climate change and, thus, increase support for other types of mitigation. Using an online survey of US adults (N = 984), we tested these competing hypotheses by exposing participants to information about different forms of CDR. We find that learning about certain CDR strategies indirectly reduces support for mitigation policies by reducing the perceived threat of climate change. This was found to be true for participants who read about CDR in general (without mention of specific strategies), bioenergy with carbon capture and storage, or direct air capture. Furthermore, this risk compensation pattern was more pronounced among political conservatives than liberals – although in some cases, was partially offset by specific

Query development

Manage annotation
schemas

Prioritise annotation

Retrieve data across
sources

Screening & Coding

Stopping criteria

Deduplicate

Consolidate
multi-coded articles

Annotation quality
metrics

Token Wildcard Expansion

Wildcards (e.g. `clim*`) are very bad for query performance and add a lot of uncertainty. It is much better to explicitly expand those (e.g. `(climate OR climatic)`) and in the process exclude false-positives like `climb`, `climax`, ...

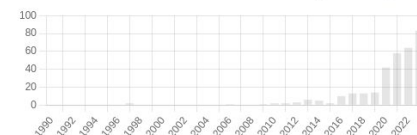
Results include term frequency (tf) and document frequency (df).

trad



traditional (4,367,640 3,336,034)	trade (2,283,075 1,258,966)	tradition (741,911 571,371)
traditionally (469,056 452,426)	traditions (344,721 277,624)	trading (473,445 267,987)
tradicional (127,853 106,850)	tradeoff (104,027 84,757)	traded (91,789 68,194)
traders (102,810 61,627)	traduction (83,917 57,091)	tradeoffs (68,101 56,926)
tradicionales (63,504 55,028)	tradisional (108,371 54,205)	trades (63,587 48,194)
traduit (47,691 45,129)	tradicionais (45,346 36,977)	traducción (44,601 34,270)
tradición (34,400 30,833)	trademark (57,896 30,607)	tradicionalmente (31,277 30,366)
tradisi (73,246 28,825)	tradicion (31,723 26,931)	traditionnelle (24,946 22,342)
tradução (30,221 19,116)	traditionnelles (20,291 18,486)	tradiciones (20,334 17,648)
tradição (19,750 16,574)	traduccion (28,661 16,187)	trader (21,439 15,380)
traditionnels (16,714 15,022)	traditionnel (15,655 14,048)	trademarks (19,576 12,831)
traduire (14,010 12,736)	tradicao (15,428 12,401)	tradizione (13,908 12,394)
trad (17,082 11,847)	tradable (18,884 11,597)	traditionellen (12,698 11,532)
traditionnellement	traductions (13,149 10,265)	traduzione (12,246 10,032)

Projects About tim.repke

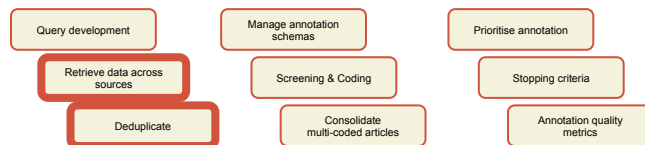


... of CDR governance – despite enjoying growing interest – tends to overlook how key provisions on ... held separate from 'mitigation' due to a partial conceptual overlap with 'geoengineering'. We unpack ... Change and its Paris Agreement – includes CDR as defined by the Intergovernmental Panel on Climate ... regarding parties' obligations, principled equitable distribution of removal efforts, prioritization of ... and human rights issues in the pursuit of CDR.

... most CDR strategies are unfamiliar to the public, it is unknown how increased media and policy ... moral hazard: if people perceive that CDR solves climate change, they may be less likely to support ... of climate change and, thus, increase support for other types of mitigation. Using an online survey of ... different forms of CDR. We find that learning about certain CDR strategies indirectly reduces support for ... ants who read about CDR in general (without mention of specific strategies), bioenergy with carbon ... d among political conservatives than liberals ... although in some cases, it was partially offset by positive ...

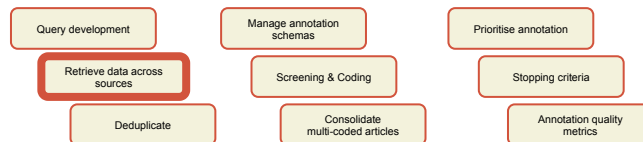
Data gathering (importing queries)

- Import data from
 - Scopus (via CSV)
 - Web of Science (via RIS)
 - OpenAlex (via solr)
 - Any other source (you just need to translate it to the platform format)
- Automatic deduplication of publications during import



The screenshot shows the 'Create new data import' interface of the NAC SOS system. On the left is a sidebar with a menu containing 'Overview', 'Import' (highlighted in blue), 'Imports', 'OpenAlex Solr', 'Dataset', 'Annotation', 'Artefacts', 'Pipelines', 'Annotations', and 'Project'. The main content area is titled 'Create new data import' and includes a brief description of an 'import'. Below this is a 'Basic information' section with a text input for 'Name for this import' (containing 'New import') and a larger text area for 'Description of this import'. The 'Select import type' section features a dropdown menu with options: 'Select import type', 'Upload JSONI file (AcademicItemModel)', 'Upload OpenAlex file', 'Import from OpenAlex (Solr)', 'Upload Scopus CSV file(s)', and 'Upload Web of Science text file(s)'. The 'Import from OpenAlex (Solr)' option is currently selected. At the bottom, the 'Import stats' section contains a 'load' button.

Dataset insights



*more to come!



Projects About tim.repke

Overview

Import

Dataset

Explore

Statistics

Export

Annotation

Artefacts

Pipelines

Annotations

Project

Project statistics

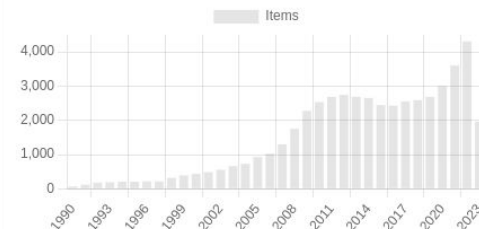
Core stats

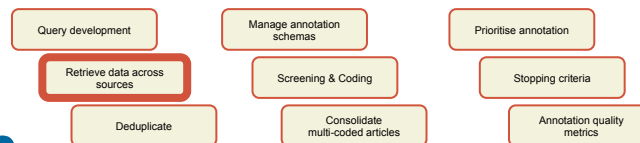
This project contains 51625 items imported via 8 imports. There are 3 annotation schemes and 22 assignment scopes amounting to a total of 129236 labels for 5491 (10.64%) unique documents.

Annotator Leaderboard

1. **Niklas Döbbling:** 94954 labels for 4385 items
2. **Alessandra Landa:** 4827 labels for 1758 items
3. **Arianna Avallone:** 2217 labels for 1057 items
4. **Klaas Miersch:** 12534 labels for 868 items
5. **Jan Minx:** 10140 labels for 591 items
6. **Finlay Hatch:** 2398 labels for 361 items
7. **Leonhard Schneider:** 2166 labels for 360 items

Histogram

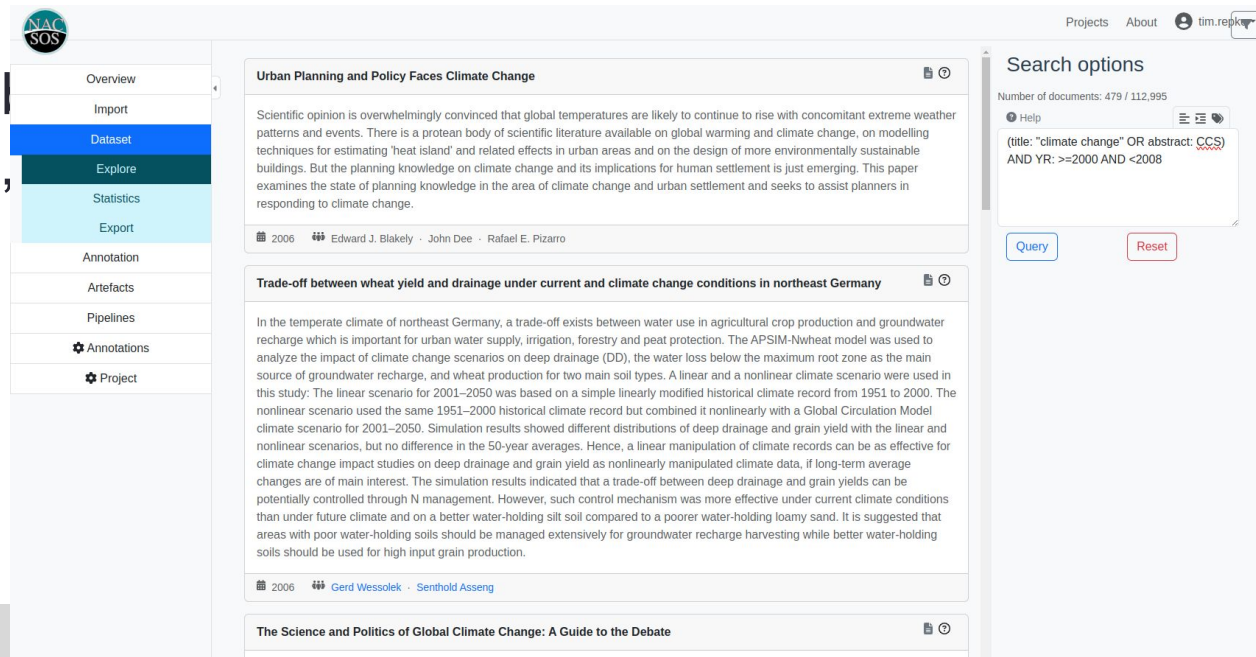




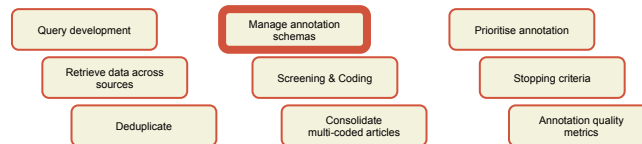
Searching on the platform

Search the project dataset with our expressive query language, e.g.

- Title, abstract, publication year, annotations,



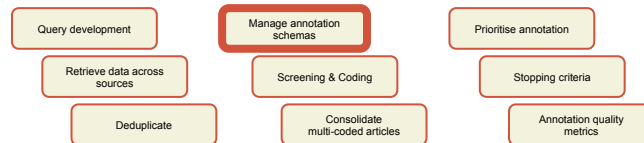
The screenshot shows the NAC SOS platform interface. On the left is a sidebar with navigation options: Overview, Import, Dataset (highlighted), Explore, Statistics, Export, Annotation, Artefacts, Pipelines, Annotations, and Project. The main content area displays a list of documents. The first document is titled "Urban Planning and Policy Faces Climate Change" by Edward J. Blakely, John Dee, and Rafael E. Pizarro, dated 2006. The abstract discusses the scientific consensus on global warming and the need for sustainable urban planning. The second document is titled "Trade-off between wheat yield and drainage under current and climate change conditions in northeast Germany" by Gerd Wessolek and Senthil Asseng, dated 2006. The abstract discusses the trade-off between water use in agriculture and groundwater recharge. On the right, there is a "Search options" panel showing the number of documents (479 / 112,995) and a search query: "(title: 'climate change' OR abstract: CCS) AND YR: >=2000 AND <2008". There are buttons for "Query" and "Reset".



Annotation schema

Arbitrarily complex (doc-level) from screening to coding

- Simple yes/no labels
- Text fields (e.g. for comments)
- Labels with several options
- Multi-labels (for tagging multiple classes)
- Nesting of labels for “conditional labels”



Annotation schema

from screening to coding


(the classes)
of labels”

Related to cities 

☒ Yes

☐ No

☐ Maybe

Explicit mention of one or more cities 



Climate

document is about climate change



Comment

Annotation

Related to cities

☒ Yes

☐ No

☐ Maybe

Explicit mention of one or more cities

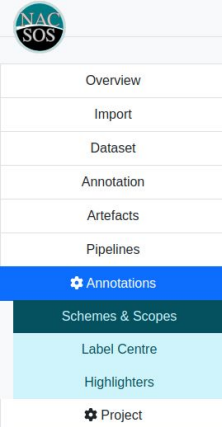


Climate

document is about climate change



Comment



City related

Annotations for IPCC references related to cities

Save

Note: Please use positive numbers only for choice values (zero included).

Related to cities cities Hint message

Type single Max. Repeat 1 Required Use dropdown

Choices:

Yes 1 Hint message

Sub-annotations:

Explicit mention of one or more mention Hint message

Type bool Max. Repeat 1 Required

Add Label

No 0 Hint message

Maybe 2 Hint message

Sub-annotations:

Explicit mention of one or more mmention Hint message

Type bool Max. Repeat 1 Required

Add Label

Add choice

Climate climate document is about climate ch

Type bool Max. Repeat 1 Required

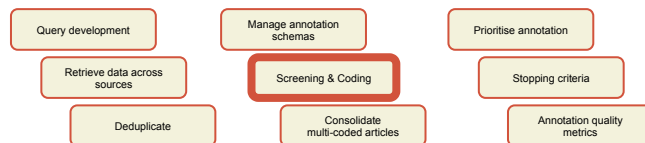
Comment com Hint message

Type str Max. Repeat 1 Required

Add Label

Annotating

Intuitive annotation interface for users



Projects About tim.repke

Overview

Import

Dataset

Annotation

Artefacts

Pipelines

Annotations

Project

The Genome of Cardinium cBtQ1 Provides Insights into Genome Reduction, Symbiont Motility, and Its Settlement in Bemisia tabaci

Many insects harbor inherited bacterial endosymbionts. Although some of them are not strictly essential and are considered facultative, they can be a key to host survival under specific environmental conditions, such as parasitoid attacks, **climate** changes, or insecticide pressures. The whitefly Bemisia tabaci is at the top of the list of organisms inflicting agricultural damage and outbreaks, and changes in its distribution may be associated to global **warming**. In this work, we have sequenced and analyzed the genome of Cardinium cBtQ1, a facultative bacterial endosymbiont of B. tabaci and propose that it belongs to a new taxonomic family, which also includes Candidatus Amoebophilus asiaticus and Cardinium cEper1, endosymbionts of amoeba and wasps, respectively. Reconstruction of their last common ancestors' gene contents revealed an initial massive gene loss from the free-living ancestor. This was followed in Cardinium by smaller losses, associated with **settlement** in arthropods. Some of these losses, affecting cofactor and amino acid biosynthetic encoding genes, took **place** in Cardinium cBtQ1 after its divergence from the Cardinium cEper1 lineage and were related to its **settlement** in the whitefly and its endosymbionts. Furthermore, the Cardinium cBtQ1 genome displays a large proportion of transposable elements, which have recently inactivated genes and produced chromosomal rearrangements. The genome also contains a chromosomal duplication and a multicopy plasmid, which harbors several genes putatively associated with gliding motility, as well as two other genes encoding proteins with potential insecticidal activity. As gene amplification is very rare in endosymbionts, an important function of these genes cannot be ruled out.

2014

Diego Santos-Garcia · Pierre-Antoine Rollat-Farnier · Francisco J. Beitia · Einat Zchori-Fein · Fabrice Vavre · Laurence Mouton · Andrés Moya · Amparo Latorre · Francisco J. Silva

Annotation Panel

Show scheme description

Is about cities

Mentions one or more cities

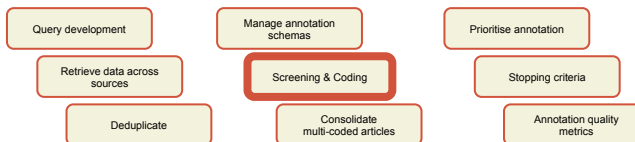
Topic: Adaptation

Topic: Mitigation

Topic: Impacts

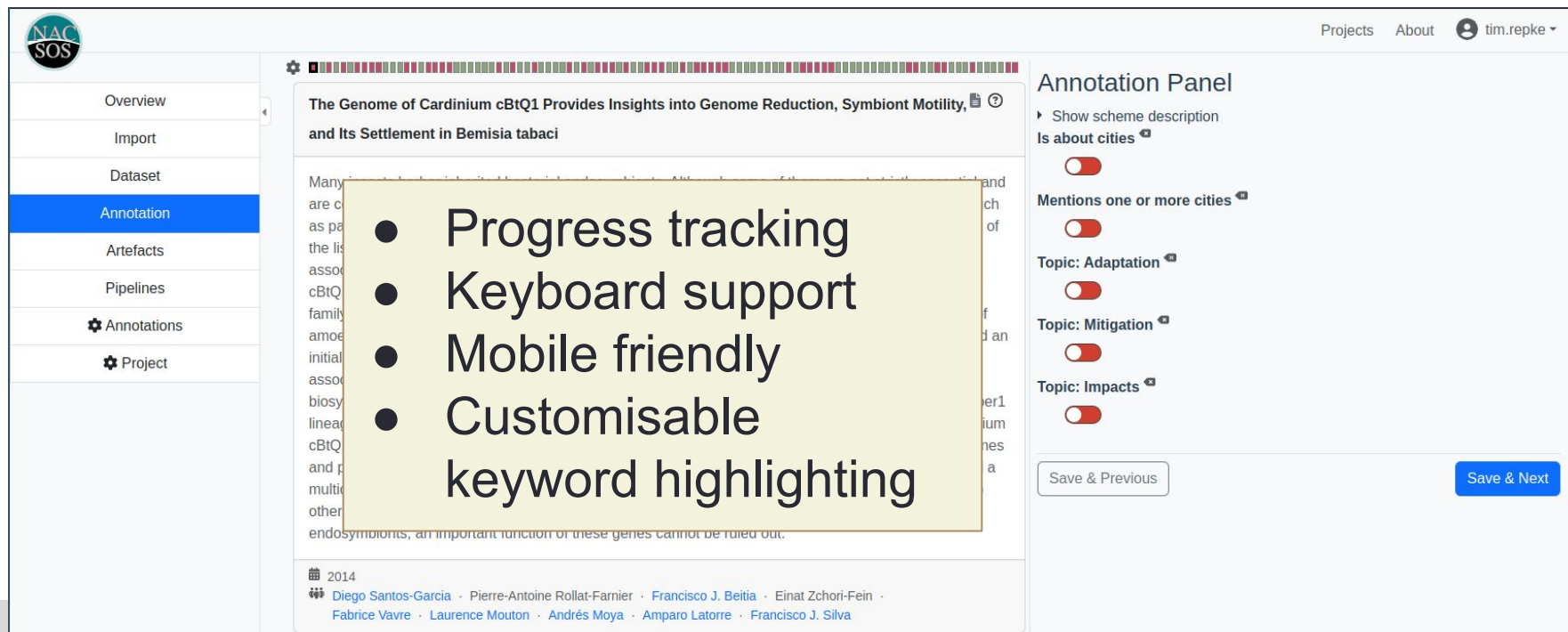
Save & Previous

Save & Next



Annotating

Intuitive annotation interface for users



The screenshot shows the NAC SOS web application interface. On the left is a sidebar with navigation links: Overview, Import, Dataset, **Annotation** (highlighted), Artefacts, Pipelines, Annotations, and Project. The main content area displays a document titled "The Genome of Cardinium cBtQ1 Provides Insights into Genome Reduction, Symbiont Motility, and Its Settlement in Bemisia tabaci". A yellow callout box is overlaid on the text, listing features: Progress tracking, Keyboard support, Mobile friendly, and Customisable keyword highlighting. On the right is an "Annotation Panel" with a "Show scheme description" link and several toggle switches for "Is about cities", "Mentions one or more cities", "Topic: Adaptation", "Topic: Mitigation", and "Topic: Impacts". At the bottom right are "Save & Previous" and "Save & Next" buttons. The top right of the interface shows "Projects", "About", and a user profile for "tim.repke".

Annotating

Intuitive annotation interface for users

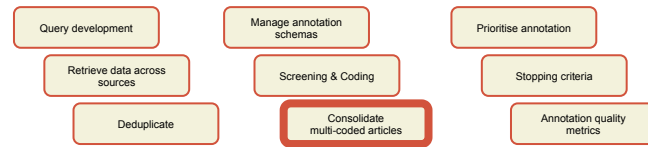
The screenshot displays the NAC SOS web application interface. On the left is a sidebar with navigation links: Overview, Import, Dataset, Annotation (highlighted in blue), Artefacts, Pipelines, Annotations, and Project. The main content area shows a document titled "The Genome of Cardinium cBtQ1 Provides Insights into Genome Reduction, Symbiosis and Its Settlement in Bemisia tabaci". A yellow callout box highlights four key features: Progress tracking, Keyboard support, Mobile friendly, and Customisable keyword highlighting. On the right, an "Annotation Panel" is visible, featuring a list of authors, a "Show scheme description" link, and several toggle switches for "Is about cities", "Mentions one or more cities", "Topic: Adaptation", "Topic: Mitigation", and "Topic: Impacts". At the bottom right are "Save & Previous" and "Save & Next" buttons. The top right corner shows the MCC logo and user information for tim.repke.

- Progress tracking
- Keyboard support
- Mobile friendly
- Customisable keyword highlighting

Annotation Panel

- Show scheme description
- Is about cities
- Mentions one or more cities
- Topic: Adaptation
- Topic: Mitigation
- Topic: Impacts

Save & Previous Save & Next



Label consolidation

- Resolve annotations by multiple users
- Platform proposes a majority vote resolution
- Annotators can resolve disagreements
- Since original annotations are kept, we can analyse how challenging the coding task was and estimate the quality of annotations

Label conso

- Resolve annotations
- Platform project
- Annotators can
- Since original annotations

NAC
SOS

Overview

Import

Dataset

Annotation

Artefacts

Pipelines

Annotations

Schemes & Scopes

Label Centre

Highlighters

Project

Resolve Annotations

Annotation Export Configuration

Descriptive name for this annotation export
Resolve_20230911_01_prioritised_LS_FH

Annotation Scheme

Carbon pricing map

Scheme labels to resolve

☒ meth – Method
☒ outc – Analysed outcome
☒ polname – Policy name
☒ sect – Sector
☒ otherpol – Interaction with other policies
☒ exp – ex-post/ex-ante
☒ imp – Implemented policy
☒ cp – Carbon pricing

Repeats to resolve

☒ 1 ☒ 2 ☒ 3 ☒ 4

☐ Ignore scheme hierarchy
☐ Ignore annotation order (repeats)

Source assignment scopes

☐ 20230901_03_prioritised_LS_FH
☐ 20230927_prioritised_LS_FH
☐ 20230911_02_prioritised_LS_FH
☐ 20230503_relevant_AL_AA_KM_ND
☐ 20230505_relevant_AL_AA_KM
☐ 20230505_relevant_AL_AA
☐ 20230515_prioritised_AL_ND
☐ 20230522_prioritised_AL_AA_ND
☐ 20230901_01_prioritised_ND_LS_FH_training
☐ 20230901_02_prioritised_ND_LS_FH_learning
☒ 20230911_01_prioritised_LS_FH

Annotator selector

☒ leonhard.schneider – Leonhard Schneider
☐ niklas.doebbeling – Niklas Döbbling
☐ alessandra.landa – Alessandra Landa
☐ klaas.miersch – Klaas Miersch
☒ finlay.hatch – Finlay Hatch
☐ arianna.avallone – Arianna Avallone

Resolution algorithm

majority vote

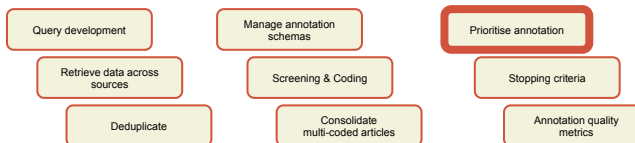
Load

Item

Filter item_id

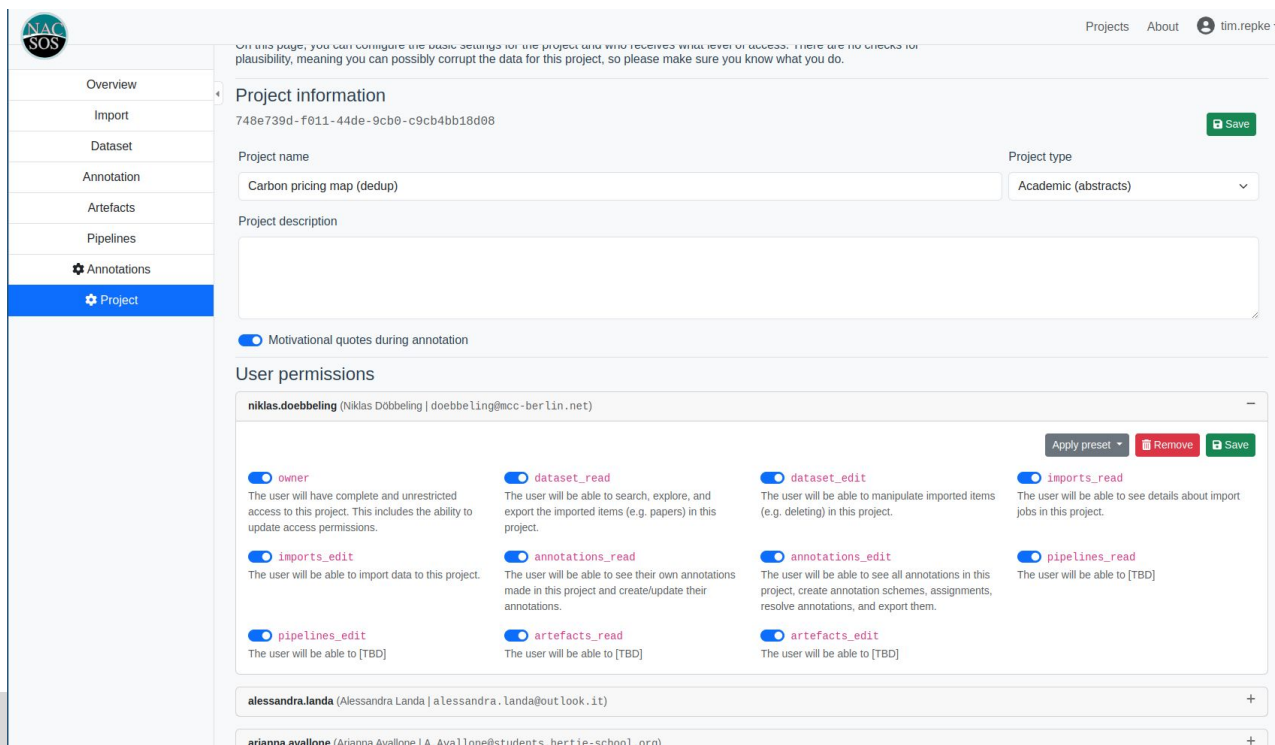
#	Item	cp	imp	exp	meth	otherpol	outc	polname	sect
0	02340393-fc53-402d-aab8-eba37bf82be9	1	1	1	1	1	2	5	2
1	063b3764-bc81-4447-86f3-b5c360fd236d	1	1	1	1	1	0	0	0
2	08e4bc1e-c327-4c2d-9d8e-79458b2b631e	1	1	1	1	1	3	3	3
3	0958b1d1-13d4-414c-86a8-db32e3cb5573	1	1	1	2	1	5	5	

Save



Managing assignments

Fine-grained control over who has access to what in your project



On this page, you can configure the basic settings for the project and who receives what level of access. There are no checks for plausibility, meaning you can possibly corrupt the data for this project, so please make sure you know what you do.

Project information

748e739d-f011-44de-9cb0-c9cb4bb18d08 Save

Project name: Carbon pricing map (dedup) Project type: Academic (abstracts)

Project description:

☒ Motivational quotes during annotation

User permissions

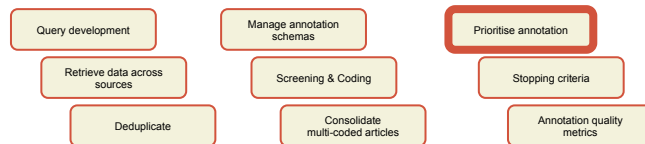
niklas.doebeling (Niklas Doebling | doebeling@mcc-berlin.net)

Apply preset Remove Save

<p><input checked="" type="checkbox"/> owner</p> <p>The user will have complete and unrestricted access to this project. This includes the ability to update access permissions.</p>	<p><input checked="" type="checkbox"/> dataset_read</p> <p>The user will be able to search, explore, and export the imported items (e.g. papers) in this project.</p>	<p><input checked="" type="checkbox"/> dataset_edit</p> <p>The user will be able to manipulate imported items (e.g. deleting) in this project.</p>	<p><input checked="" type="checkbox"/> imports_read</p> <p>The user will be able to see details about import jobs in this project.</p>
<p><input checked="" type="checkbox"/> imports_edit</p> <p>The user will be able to import data to this project.</p>	<p><input checked="" type="checkbox"/> annotations_read</p> <p>The user will be able to see their own annotations made in this project and create/update their annotations.</p>	<p><input checked="" type="checkbox"/> annotations_edit</p> <p>The user will be able to see all annotations in this project, create annotation schemes, assignments, resolve annotations, and export them.</p>	<p><input checked="" type="checkbox"/> pipelines_read</p> <p>The user will be able to [TBD]</p>
<p><input checked="" type="checkbox"/> pipelines_edit</p> <p>The user will be able to [TBD]</p>	<p><input checked="" type="checkbox"/> artefacts_read</p> <p>The user will be able to [TBD]</p>	<p><input checked="" type="checkbox"/> artefacts_edit</p> <p>The user will be able to [TBD]</p>	

alessandra.landa (Alessandra Landa | alessandra.landa@outlook.it) +

arianna.avallone (Arianna Avallone | A.Avallone@students.hertie-school.org) +



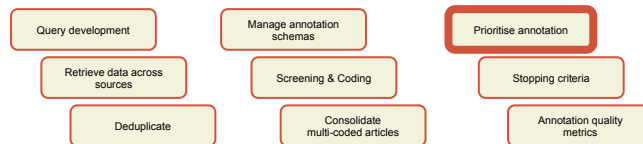
Managing assignments

Assign a user to annotate a specific document using an annotation scheme (in batches/scopes).

- Random / rule-based sampling
 - Determine how many documents to code by how many users
 - Exclude/include specific documents per batch of assignments

Next week (or two):

- Prioritised screening with machine learning
- First platform to implement stopping criteria!!



Managing assignments

Assign a user to annotate a specific document using an annotation scheme (in batches/scopes).

Random assignment

Assignment strategy settings

Random assignment

Configure random assignments

Number of items

150

multi-coded items

150

Min. # coders per item

2

Max. # coders per item

2

Random seed

10829

Make assignments

Results

(Re)load stats

Assignments: 400 (open: 4 | partial: 0 | done: 396)

ke.ge

simon.montfort

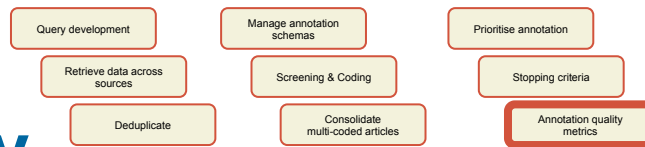
chenxi.lu

any users
signments

Next w

Prioritise

- First platform to implement stopping criteria!!



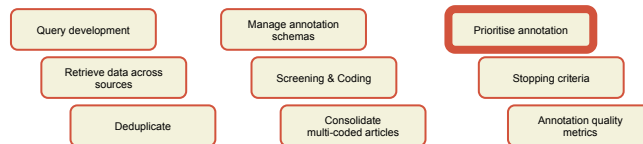
Monitor annotation quality

- Annotator leaderboard
- Track assignment progress

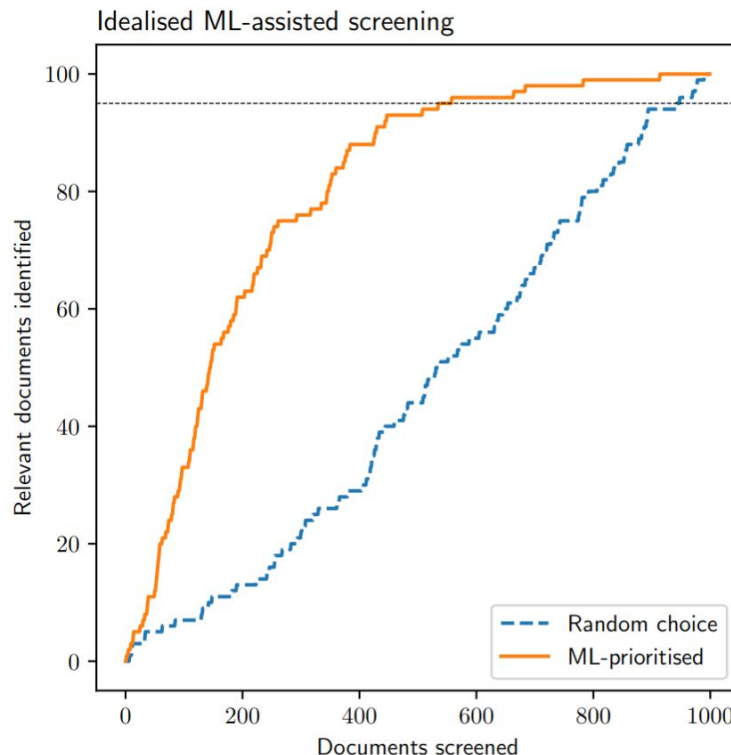
Coming soon...

- Screening/coding coverage of dataset
- Statistics on inter-rater agreement
- Stopping criterion plots
- Recall targets

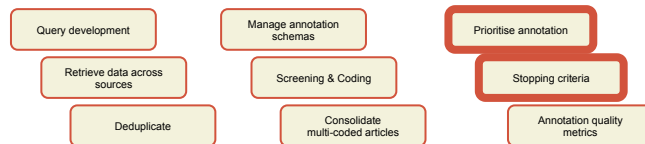
ML-assisted document screening



- Growing number of “researcher-in-the-loop” machine learning applications for screening documents for systematic reviews (O’Mara-Eves et al., 2015; van de Schoot et al., 2021).
- Using machine learning to prioritise documents likely to be relevant, we can achieve high levels of recall without screening all documents.

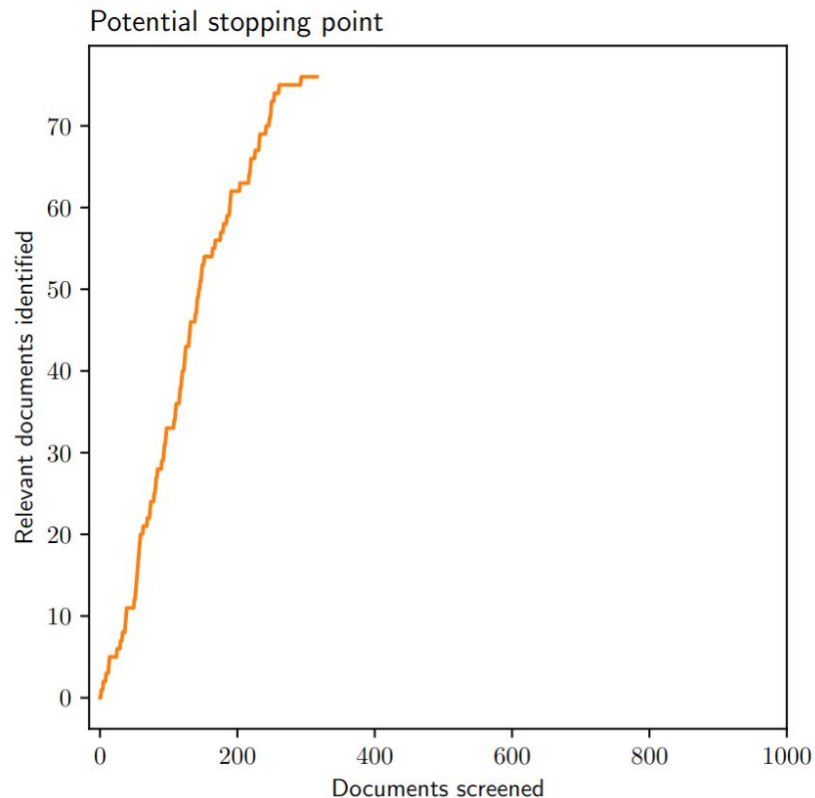


Unleashing AI; But when do we stop?

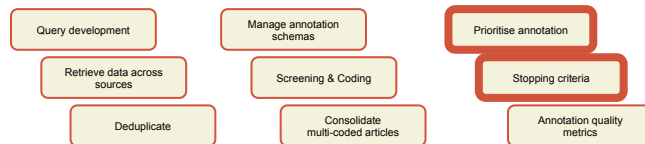


- We do not know *a priori* the true number of relevant documents

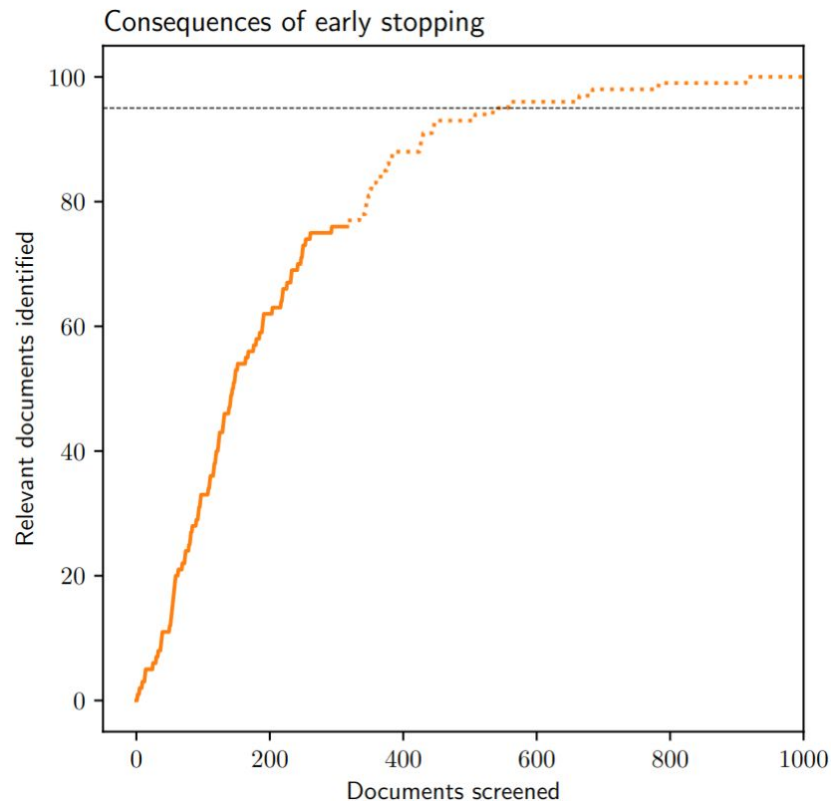
→ We need criteria when to stop screening!



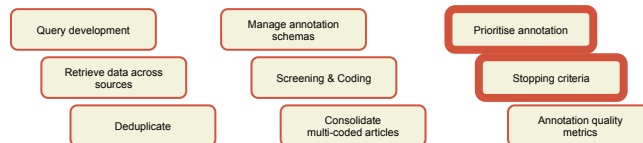
Unleashing AI; But when do we stop?



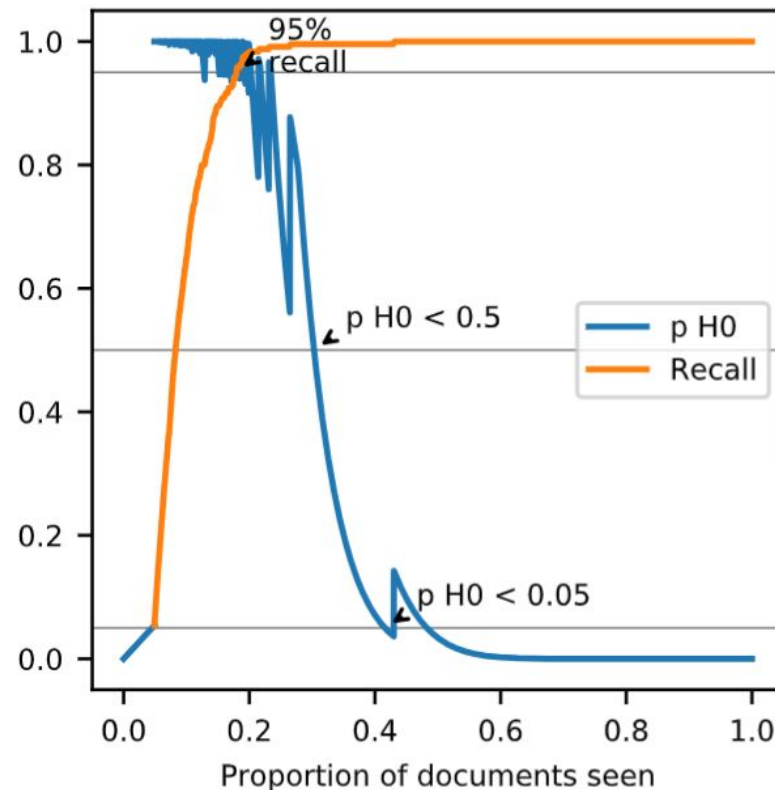
Stopping too early can
lead to huge biases in
reviews!



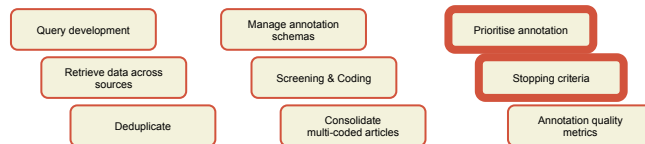
Unleashing AI; But when do we stop?



- Our stopping criterion works by treating documents as if they were white (not relevant) and red (relevant) marbles drawn from an urn without replacement.
- The hypergeometric distribution describes the probability of observing k red marbles in a sample of n marbles, given an urn with N marbles, of which K are red.
- We formulate a null hypothesis H_0 that a given recall target (e.g. 95% of relevant documents) has been missed.
- We calculate a p-score for H_0 and stop screening if this falls below a selected threshold.



Unleashing AI; But when do we stop?




Also available as an R package
<https://mcallaghan.github.io/buscarR/>



Is the first (and only) platform
with a stopping criterion!



Beyond the platform



- Overview
- Import
- Dataset**
- Explore
- Statistics
- Export
- Annotation
- Artefacts
- Pipelines
- Annotations
- Project

Projects About tim.repke

Download/Export Data

Options

- ☐ Ignore annotation hierarchy
- ☒ Ignore annotation order

Users

Select all Unselect all

- ☐ chenxi.lu
- ☐ felix.creutzig
- ☐ jan.minx
- ☐ ke.ge
- ☐ max.callaghan
- ☐ simon.montfort
- ☐ tim.repke

Document fields

Select all Unselect all

- ☐ text
- ☐ title
- ☐ doi
- ☐ wos_id
- ☐ scopus_id
- ☐ openalex_id
- ☐ publication_year
- ☐ source

Resolved annotations / BotAnnotations

Select all Unselect all

- ☐ Settlements annotations

Assignment Scopes

Select all Unselect all

- ☐ WG2, Chapter 6
City related
- ☐ CCP, Chapter 2
City related
- ☐ WG3, Chapter 8
City related
- ☐ Batch 1
Cities and topics
- ☐ settlements_01_CL_KG_SM
Settlements
- ☐ settlements_02_CL_KG_SM

Labels

Select all Unselect all

- adaptation ☐ false ☐ true
- cities ☐ 0 ☐ 1 ☐ 2
- city ☐ false ☐ true
- climate ☐ false ☐ true
- com ☒ Include strings
- human_settlements ☐ false ☐ true

Beyond the platform (soon)

Living evidence maps

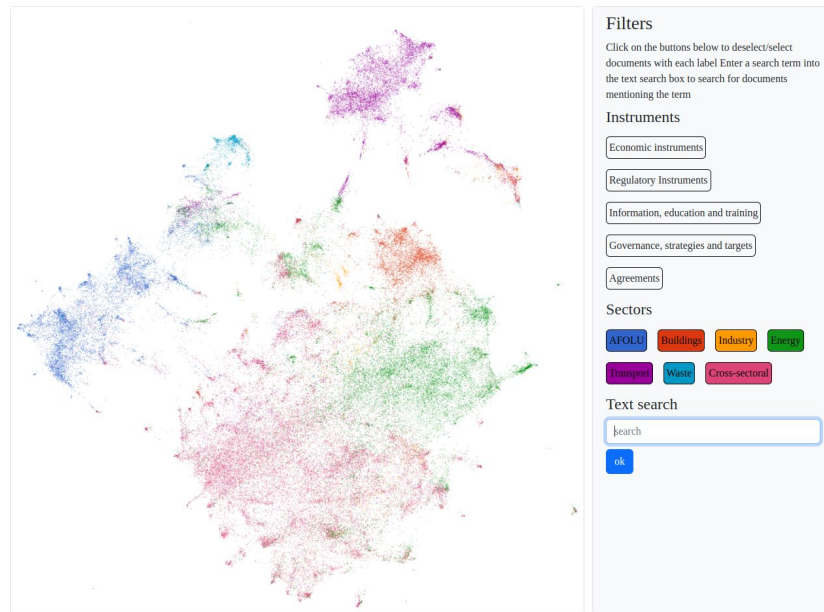
- Regularly update queries
- Classify new data
- Feed filtered and enriched data into map explorer
- Provide open, up-to-date datasets for relevant research areas

Climate Policy Instruments

Max Callaghan

This interactive website accompanies the paper [x], which uses machine learning to identify and classify the literature on climate policy instruments. You can explore this literature in the map below, where each paper is represented by a dot, and papers which are linguistically similar are placed close together on the plot. Hovering over the map will show the titles of the papers.

You can select papers by clicking and dragging on the map to zoom in on an area. Or you can choose a different type of selection method using the icons in the top left. Once you have selected documents, a sample of these will be shown in the box below. You will also have the opportunity to download the complete selection of documents, including the machine-learning generated labels.



Results

78401 [Download](#)

<https://apsis.mcc-berlin.net/climate-policy-instruments-map/>

Disclaimer / Terms of Service

- This is **not a** (commercial) **product** and we are not service providers.
 - We cannot offer 24/7 tech support.
 - We cannot offer to implement custom features.

but...

- We are open to invite others to use the platform.
 - Our “**fee**” is a **co-authorship** in respective publications.
 - If it is in line with our needs, we can implement features.
 - If resources permit, we can run additional analyses.
 - We can support the onboarding and introduction to the platform.
 - You could set up your own instance, it’s open source and “well documented”.

Links

APSYS Website

<https://apsis.mcc-berlin.net/>

NACSOS

<https://apsis.mcc-berlin.net/nacsos/>

NACSOS Documentation

<https://apsis.mcc-berlin.net/nacsos-docs/>

Source code

<https://gitlab.pik-potsdam.de/mcc-apsis/nacsos>



Tim Repke
repke@mcc-berlin.net

Interested?
Get in touch!

Max Callaghan
callaghan@mcc-berlin.net



Other tools

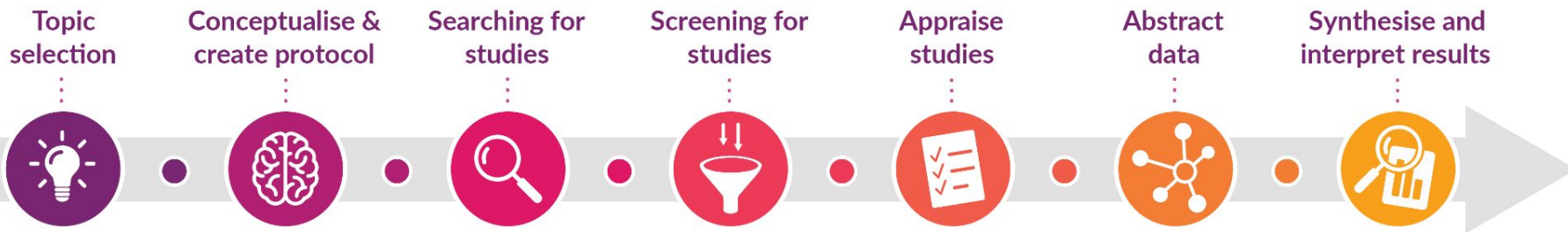
- AS-Review <https://asreview.nl/>
- EPPI Reviewer <https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2914>
- Covidence <https://www.covidence.org/>
- 3ie Evidence Gap Explorer <https://developmentevidence.3ieimpact.org/>
- ...

MATERIALS / DRAFTING

MATERIALS / DRAFTING

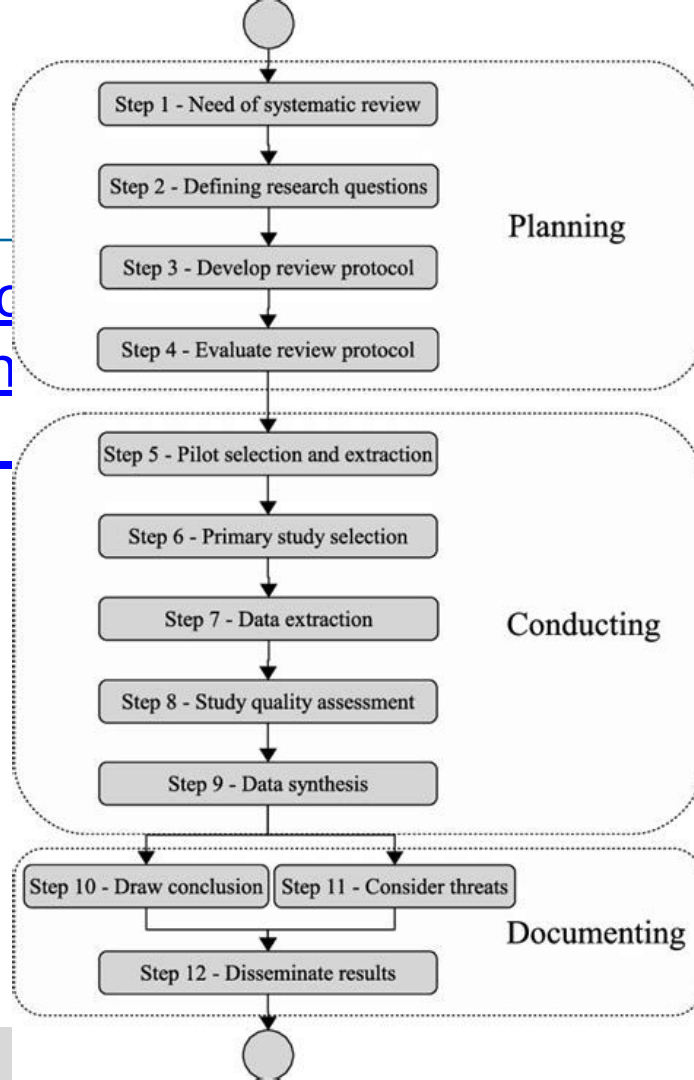
<https://casestudy.sbs/cover-letter/systematic-review-as-topic>

Steps in a systematic review



https://www.researchprotocols.org/2014/37/evaluation-improvement-A_Sys

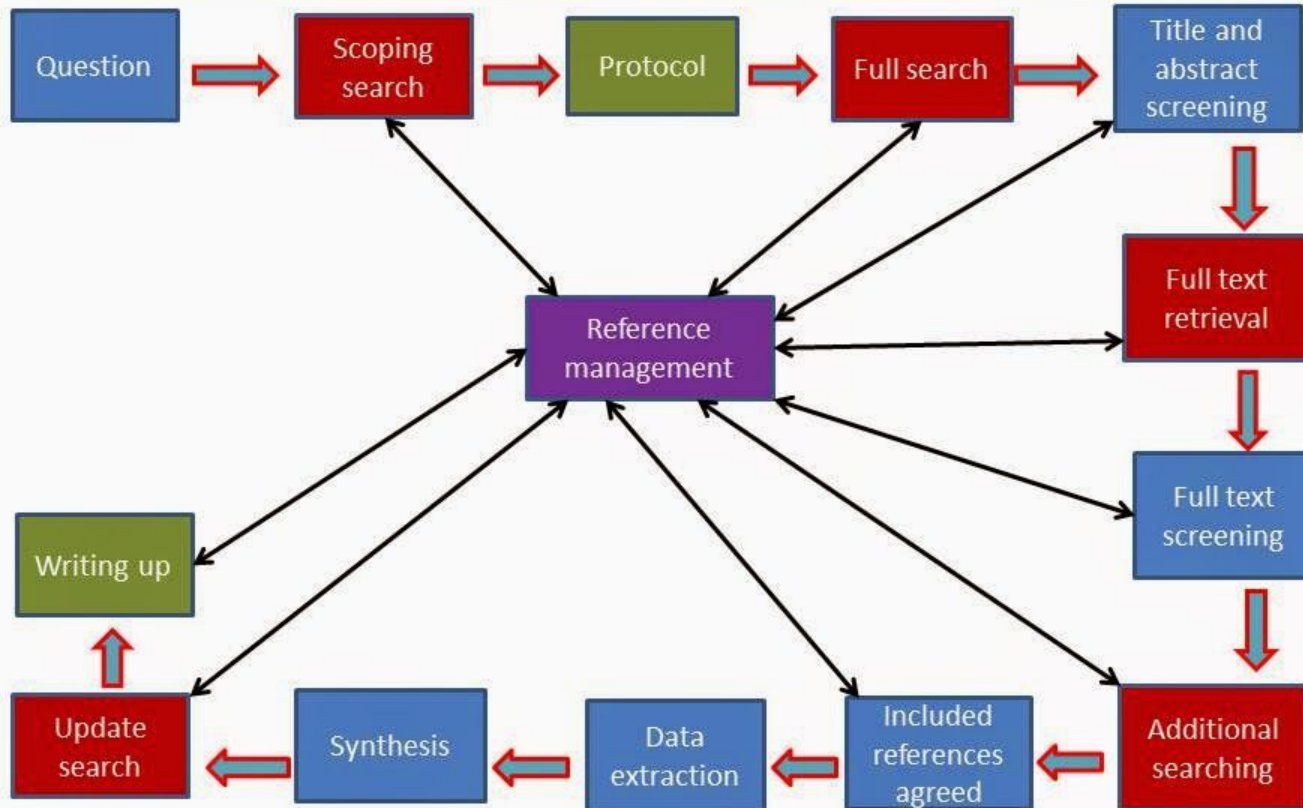
https://www.researchprotocols.org/2014/37/evaluation-improvement-A_Sys



Systematic Review Flow chart

<https://e-hel>

[an-w](#)



<https://guides.l>

[887811](https://guides.l)

