

TURNING DATA INTO KNOWLEDGE

WWW.CLIMATETAGGER.NET

EXECUTIVE SUMMARY CLIMATE TAGGER

TURNING DATA INTO KNOWLEDGE

Climate change is the greatest challenge of our time, yet the global response remains divided.

Climate Tagger is a new suite of software tools to help strengthen and unite organizations and individuals using knowledge to fight climate change, improve resiliency and further green growth across the world.

Climate Tagger works by applying automated tagging to unstructured content in databases, websites or online libraries in French, English, German, Spanish or Portuguese. The result is a streamlined knowledge system, with key concepts connected to definitions and taxonomies created and vetted by experts and linked to related content within and beyond the system at hand. Climate Tagger is based on the multilingual Climate Smart Thesaurus, a vast catalogue of specialized terminology, including mapped links to synonyms and related terms.

Climate Tagger is currently available as a direct module for the Drupal content management system or the CKAN knowledge platform, or for developers as an API (application programming interface), with more extensions planned for 2015 and 2016.

Climate Tagger is a joint tool of the Climate Knowledge Brokers Group (CKB), developed by REEEP with support from key donors, partners and expert subject matter contributors.

www.climatetagger.net

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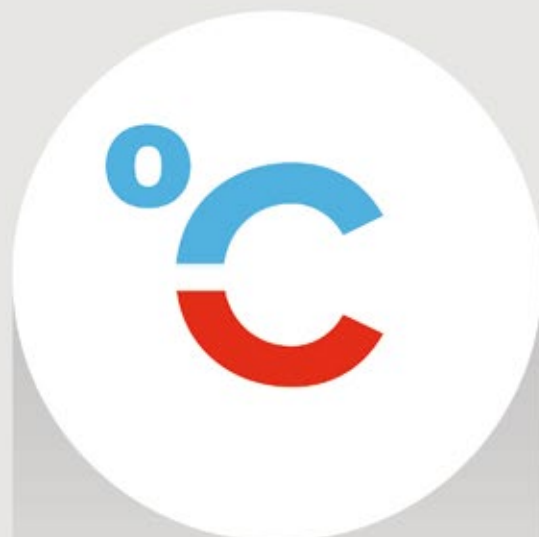


CLIMATE
CHANGE
**DOESN'T
RECOGNIZE
BORDERS.**

NEITHER SHOULD CLIMATE KNOW- LEDGE.

Climate change is the greatest challenge of our time, spanning countries and continents, societies and generations, languages, sectors and disciplines. Yet crucial data and information on climate issues are still too often amassed - diffuse - in closed silos.

Climate Tagger is a solution to scan, sort, categorise and enrich climate and development-related data, improving the efficiency and performance of knowledge ecosystems. Climate Tagger is powered by a multilingual climate smart development thesaurus and taxonomy generated and vetted by experts in their fields, and utilising Linked Open Data to automatically connect to knowledge resources worldwide.



PRODUCERS

REEEP
INVESTING IN CLEAN ENERGY INFRASTRUCTURE

CKB CLIMATE KNOWLEDGE BROKERS

SEMANTIC WEB COMPANY
linking data to knowledge

PRODUCERS

FUNDERS

CDKN Climate & Development Knowledge Network

UKaid
from the British people

Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

UNEP

CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

FUNDERS

COLLABORATORS

OpenEI
Open Energy Information

eldis

weADAPT
Collaborating on Climate Adaptation

COLLABORATORS

ABOUT CLIMATE TAGGER

Climate Tagger is a suite of tools to help knowledge-driven organizations in the climate and development arenas streamline and catalogue their data and information resources, and connect them to the wider climate knowledge community.

Climate Tagger was developed by REEEP in collaboration with the US National Renewable Energy Laboratory's Open Energy Information program, the Stockholm Environment Institute's weADAPT program and the Institute for Development Studies' Eldis program, as part of the Climate Knowledge Brokers group. Climate Tagger is made possible thanks to the generous financial support of a number of donors, including the Climate and Development Knowledge Network, the Federal Government of Germany and the Climate Technology Centre and Network of the United Nations Environment Programme.

Climate Tagger utilizes Linked Open Data, and is based on the tried-and-true reegle Tagging API - now Climate Tagger API - , first introduced by REEEP in 2011 to help its

network better catalogue and connect data, resources and knowledge. Climate Tagger is backed by the expansive REEEP Climate Smart Thesaurus, a multilingual taxonomy developed by experts in fields ranging from climate mitigation and adaptation to economy and green growth, and even niche areas such as REDD+ (Reducing Emissions from Deforestation and Forest Degradation). Read about the Climate Smart Thesaurus on page 25.

HOW CLIMATE TAGGERWORKS

Step 1

Climate Tagger is installed for use with unstructured content within databases, websites or document bundles from anywhere in the world in English, French, Spanish, Portuguese and German.



Climate Tagger automatically scans, labels, sorts and catalogues data and document collections to help knowledge-driven organizations in the climate and development arenas streamline information resources and connect to the wider climate knowledge community.

Step 2

Climate Tagger scans the unstructured information and identifies specific terms and concepts held within the sources covering multiple sectors relevant to climate compatible development.

Step 3

Climate Tagger “tags” the content based on suggestions from the expansive Climate Tagger Thesaurus, categorising and linking any resources connected to the system and making them searchable online.



ADDED FUNCTIONALITY VIA THE ENHANCED CLIMATE TAGGER API



Geo-Tagging

With the added functionality provided by the Climate Tagger API, users can connect content and concepts with geographic locations.



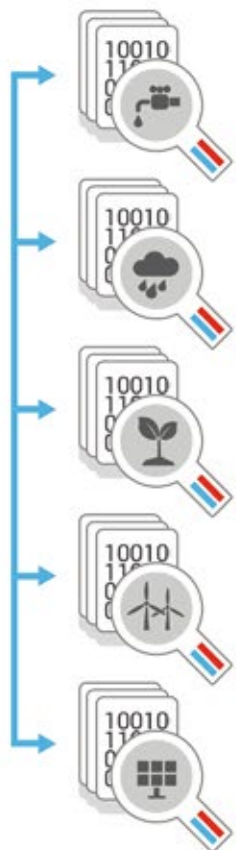
Enriching Content

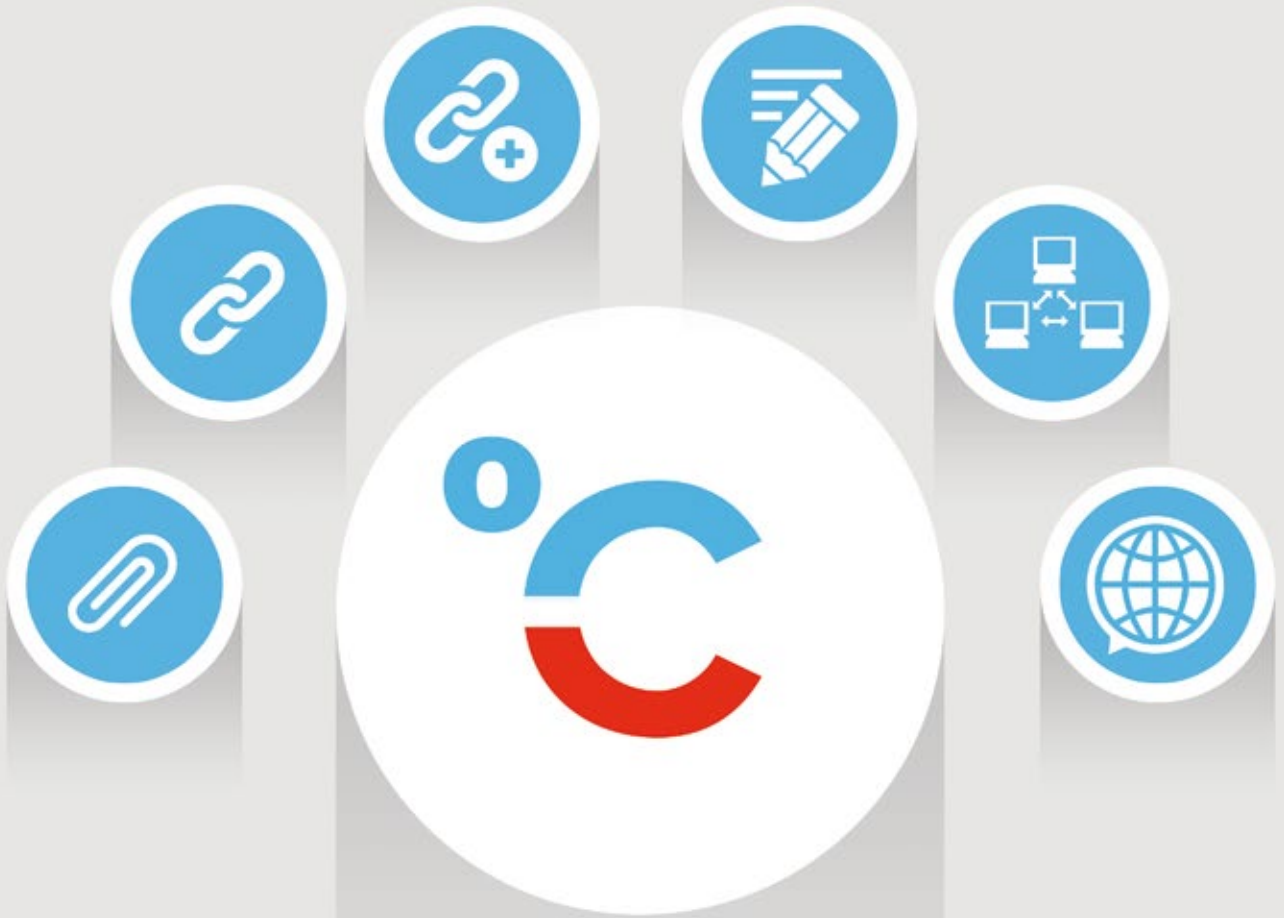
Climate Tagger can also be used to enrich content, adding related information based on the extracted concepts, including expanded definitions, translations and other linked terms.



Content Pool

Climate Tagger allows organizations to connect their data and information resources to the Climate Tagger Content Pool, helping users discover underappreciated, unknown and newly made connections between knowledge resources from multiple sources around the world.





USE CASES FOR CLIMATE TAGGER



Organise a previously unsearchable document database



Cross-link your own resources



Cross-link your resources with external documents (API functionality)



Offers definitions, synonyms and links



Increase your reach by publishing on the Climate Tagger Content Pool (API functionality)



Multiple language tagging

CASE 1

Organise a previously unsearchable document database



Your organisation has amassed a vast, valuable storehouse of electronic documents. Unfortunately, they are not particularly well-ordered or categorised. They also lack tagging for online searchability, so visitors to your own website have no effective way of finding and accessing the wealth of information that is already there.

One possible way to deal with the problem might be to hire a couple of interns to sift through every individual document and tag each of them manually. But each person uses their own personal vocabulary in describing concepts, so you will likely end up with a wildly inconsistent set of terms. And the human factor also means that they might read superficially and miss some terms completely.

But now, there is a faster, easier and more reliable way of making your storehouse of documents searchable – and findable! Climate Tagger can tag all of your web pages, reports, articles and scientific papers instantly. Since the system relies on a thesaurus with clearly defined terms and interrelationships, it will automatically use a consistent set of keywords to describe content. This means you can place documents in useful clusters, make them all accessible to others and increase the impact of your work.

Several organisations in the climate and clean energy fields are already using Climate Tagger to improve document tagging and more are looking at the best way to integrate it into their systems at the moment.

CASE 2

To cross-link your own resources



Your web portal offers a vast amount of online resources. They're actually organised and categorised quite well, but no two documents are cross-linked with each other.

Climate Tagger will instantly index all of your resources and can create a simple application to automatically suggest related content from your own pool of documents.

For example, OpenEI has already built a widget to suggest related articles to their readers, helping them to find what they're looking for.

CASE 3

To cross-link your resources with external documents (API functionality)



As in the scenario above, your portal already offers a wealth of resources. But you're also aware that there are many external resources available on sites; ones that could hugely increase value and understanding for your own users.

Climate Tagger can offer suggestions for further reading from 3rd parties who have already used the system to tag their own resources. This content pool of indexed resources is growing daily, and with it, the ability to offer your users further reading suggestions that match their interests.

CASE 4

To offer definitions, synonyms and links (API functionality)



You work hard to offer your users up-to-date relevant information – but at the same time you know that misunderstandings are not unusual when trying to describe a complex topic.

By integrating Climate Tagger into your publishing environment, you can offer your users a simple system that extracts particular topics from your articles and offers definitions, synonyms and links to open resources such as Wikipedia.

For instance, the Eldis development knowledge platform is using this system to offer their users a “what do we mean by” info box that includes definitions and synonyms retrieved from Climate Tagger.



CASE 5

Increase your reach by publishing on the Climate Tagger Content Pool (API functionality)

Besides pulling information and context from the rapidly-growing Climate Tagger Content Pool to add depth to your knowledge resources, you can also expand the reach of your own publications and resources by „pushing“ content to the Content Pool, where it can be utilized to complement and enrich information hosted by other organizations and portals in the climate smart development arena.

CASE 6

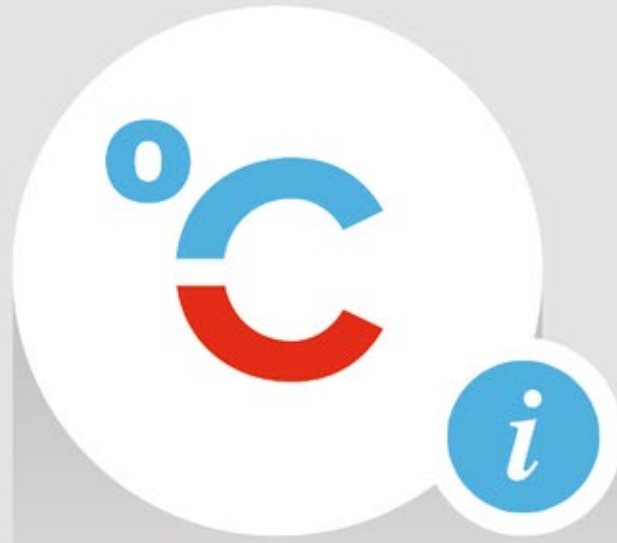
Multiple language tagging (API functionality)



Your website is offered in multiple languages. To accurately tag your resources, you would need to hire multiple native-speakers with expertise in clean energy or climate change topics – a time-consuming and costly undertaking!

Climate Tagger can automatically extract quality-assured keywords from original documents in five languages: English, Spanish, French, Portuguese and German.

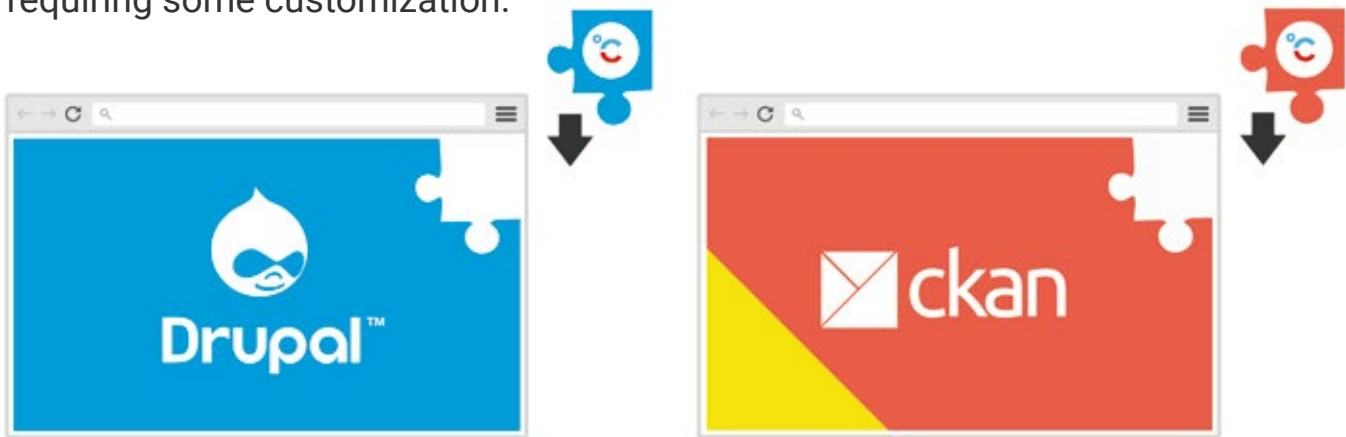
You can connect related resources within and across languages, and offer your users an intuitive structure for retrieving documents. Climate Tagger helps you by semantically scanning your resources and extracting the most relevant keywords and geographic location.



HOW DO I USE CLIMATE- TAGGER?

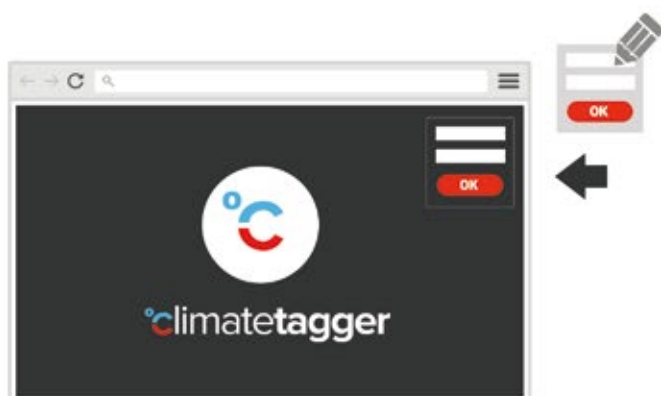
THERE ARE TWO WAYS

There are two ways to use Climate Tagger, one that makes use of our two new easy-to-install modules, and another for those requiring some customization.



OPTION 1

For users working with the Drupal content management system or the CKAN knowledge management system (KMS), Climate Tagger offers a free module for easy and quick integration into your existing system.



OPTION 2

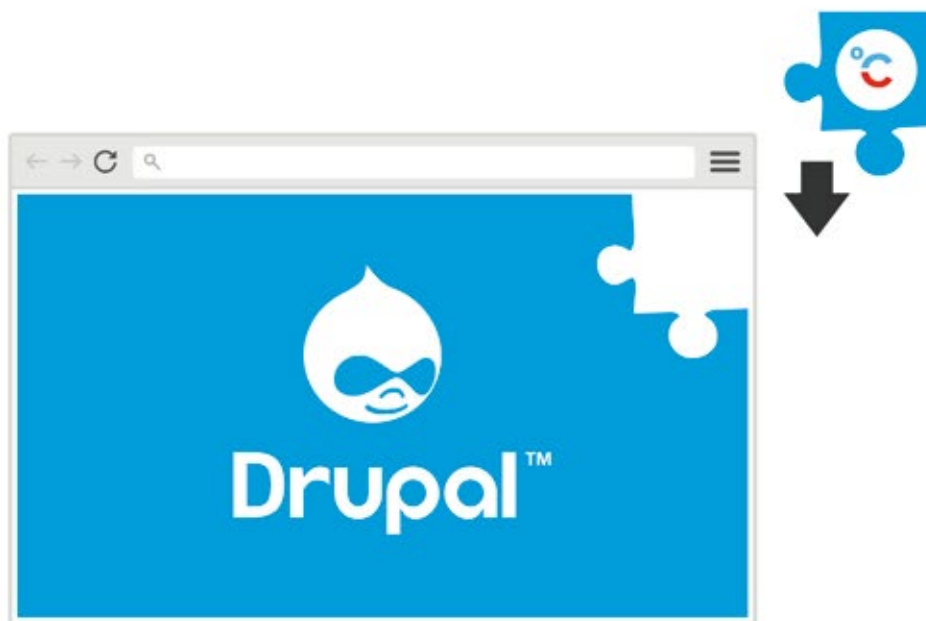
If you are using Wordpress, Joomla!, or another content management system that is not yet directly supported by a Climate Tagger module, don't worry! We also provide a Climate Tagger API (Application Programming Interface) that you can install and customize with the help of your web developer.

CLIMATE TAGGER **FOR** **DRUPAL**

The Climate Tagger Drupal Module is a simple, free and easy-to-use way to integrate Climate Tagger into any web site based on the Drupal Content Management System.

With the Climate Tagger Drupal Module, webmasters can easily install Climate Tagger functionality on their Drupal-based websites without bothering their development team. In no time flat, you can be taking advantage of our expert-vetted, multilingual Climate Smart Thesaurus across your entire platform.

Climate Tagger is backed by the expansive Climate Smart Thesaurus, developed by experts in multiple fields and continuously updated to remain current.



<http://www.climatetagger.net/climate-tagger-drupal-module>



USE CASES

- | | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------|
| + 1 | Automatically tag all content, or specific types of content, on a web site, portal or any other Drupal-based online presence |
| + 2 | Automatically generate tags from the expert vetted Climate Smart Thesaurus based on standard taxonomy and relevant terms in the field |
| + 3 | Guide your users to content within your web site that shares tags or related content in a list view that shows similarly tagged pages or documents |
| + 4 | Automatically tag content published in English, French, Spanish, German or Portuguese |

MODULE FEATURES



- ▶ FREE – the Climate Tagger Module is free to install and use; updates are also free and automatic once you have implemented the Climate Tagger Module
- ▶ The plug-in easily allows whoever is managing the web site to determine which content types will be automatically tagged
- ▶ The webmaster can also set up “batch jobs” for automatic updating, and tailor settings for certain content types
- ▶ Tagging options include: automatically generating tags only after they have appeared with a preset frequency in the content being tagged; automatically limiting tags to only the most frequent terms, based on scoring thresholds you choose
- ▶ The Climate Tagger user interface allows whoever is updating a page to add and remove suggested tags as needed. Authors can also add their own tags, even those that do not appear in the Thesaurus
- ▶ The Thesaurus behind the Climate Tagger includes standard taxonomy from the climate and development sectors, including energy efficiency, renewable energy, green growth, REDD+ (Reducing Emissions from Deforestation and Forest Degradation), monitoring and evaluation, greenhouse gas emissions in industry, and the economics of adaptation, and is continuously being updated and expanded to new sectors
- ▶ Any extensions of the Thesaurus are automatically integrated into any site with the Climate Tagger Drupal Module
- ▶ The Climate Tagger can be implemented in English, French, Spanish, Portuguese and German

CLIMATE TAGGER AND THE SMART GLOSSARY FOR DRUPAL



Climate Tagger also offers a Smart Glossary for Drupal. This module enables you to present and visualize the Climate Smart Thesaurus and implement it as a glossary into your site. It provides the glossary for alphabetic browsing, for search including auto-complete, and to be explored via a visual relation browser including concepts, synonyms, relations and linked open data (LOD).

The Climate Tagger – Smart Glossary Plugin can be downloaded at:
<http://www.climatetagger.net/climate-tagger-smart-glossary-plugin-for-drupal>

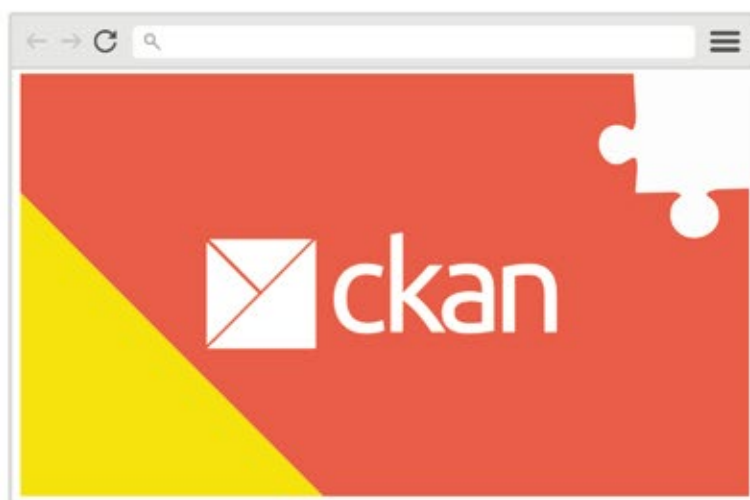
This module is provided and maintained by Semantic Web Company.

CLIMATE TAGGER FOR CKAN

CKAN is the world's leading open-source data portal platform. The Climate Tagger CKAN Extension is a simple, free and easy-to-use way to integrate Climate Tagger into any data portal based on CKAN.

CKAN is a powerful data management system often used by governments or other large purveyors of open data. Climate Tagger for CKAN enables governments, companies and organizations using CKAN to easily install Climate Tagger and sort, categorize and streamline data and information.

This module was developed with the help of the US Department of Energy's National Renewable Energy Laboratory (NREL).



<http://www.climatetagger.net/climate-tagger-for-ckan>



FEATURES

Climate Tagger tags available in English, French, Spanish, Portuguese and German

Connects open government data to climate relevant portals

Ability to configure relevance threshold for Climate Tagger tags

Clean separation from existing tags fields allows users to manually input their own tags

CLIMATE TAGGER API

If you use Wordpress, Joomla!, or another content management system not yet supported by a Climate Tagger module, or if you are looking for more flexibility and added functionality, then the Climate Tagger API is the right tool for you.

To register for a free API key visit api.climatetagger.net.

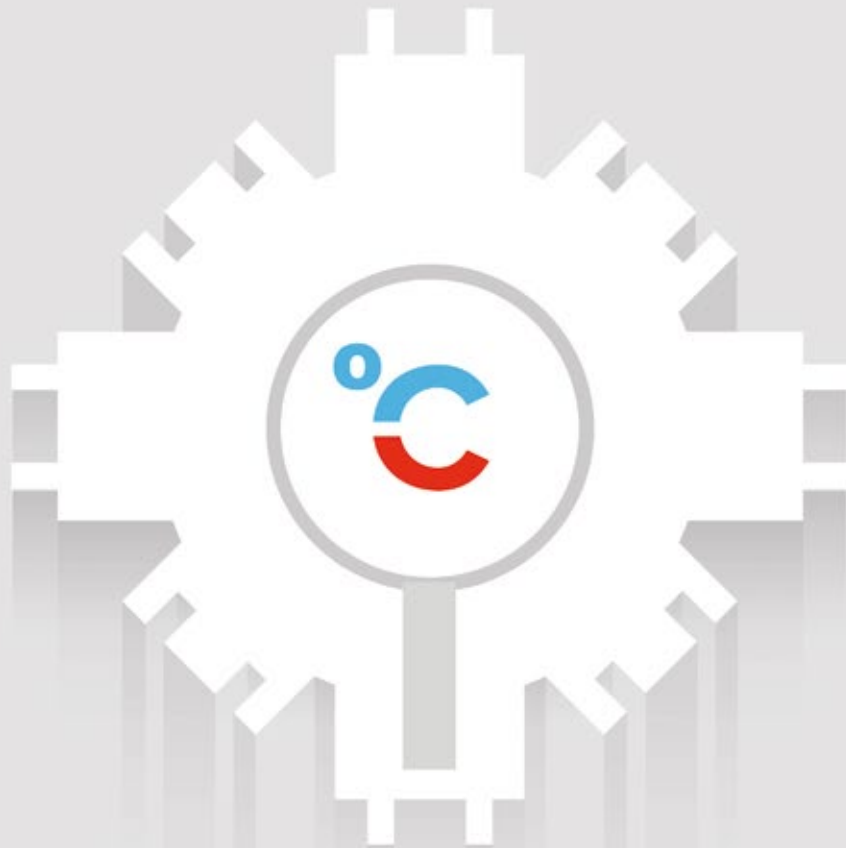
Climate Tagger API can be used with any content management system or knowledge management system, and offers additional functionality compared to the Drupal and CKAN modules.

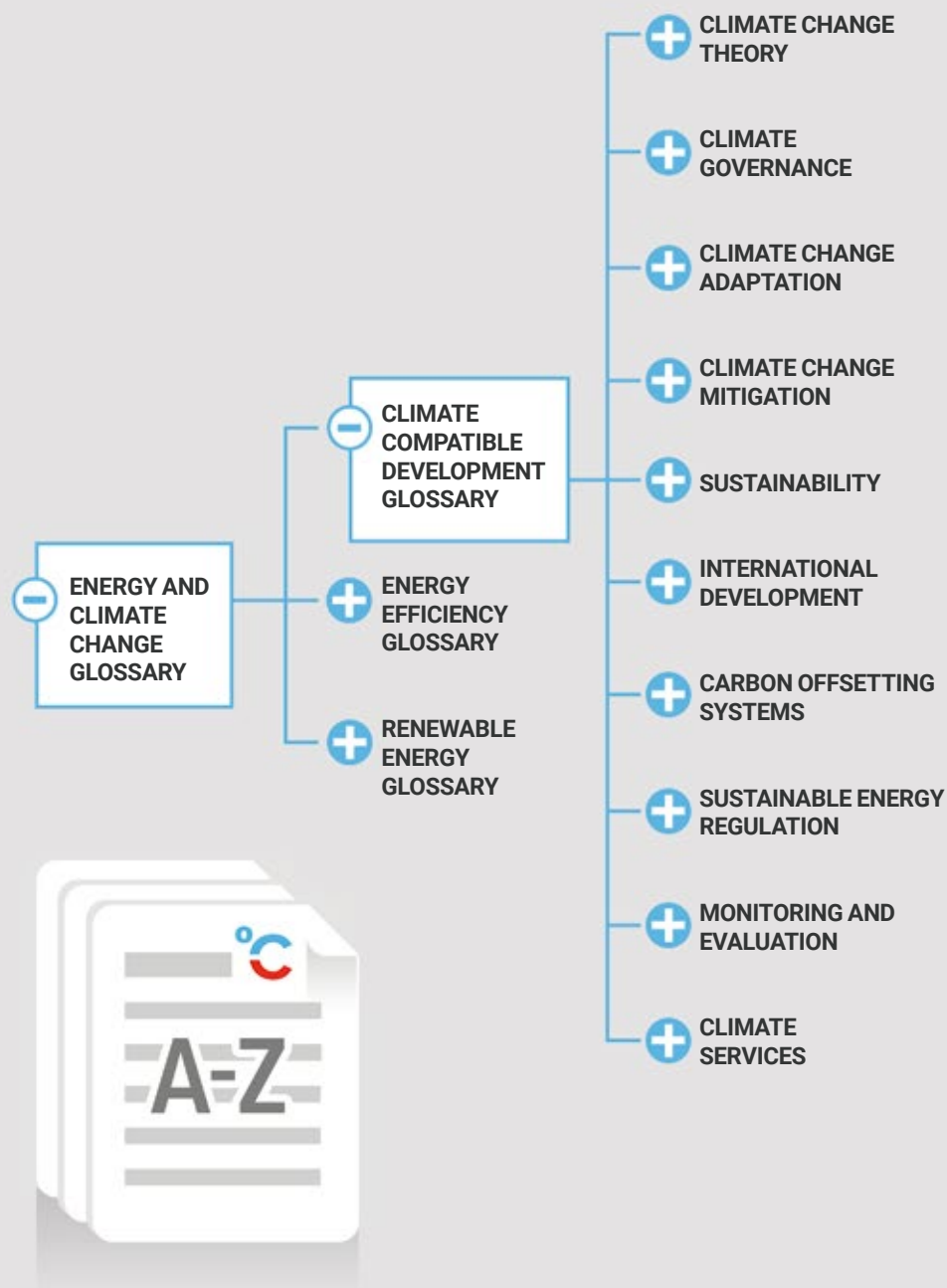
The Climate Tagger API offers organizations publishing online resources about climate and clean energy two core services, as well as additional language functionality and enhanced flexibility:

- **Automated tagging of documents covering climate relevant subjects**
(in addition to expert vetted tags the API also provides locations and is able to enrich documents with additional information such as definitions, etc).
- **Suggestion of related documents from the rapidly growing Climate Tagger Content Pool of already indexed articles.**

Consistent tagging helps the end-user find the resources he or she is looking for; the suggestion of related documents helps to cover more angles of a given topic. The Climate Tagger API can be used to tag documents in five different languages: English, French, Spanish, Portuguese and German.

Use of the Climate Tagger API is free of charge. To find out how the service works, watch our introductory video or try the demo directly at api.climatetagger.net. To help you consider how to incorporate the Tagging API into your information services see the examples given as use cases at api.climatetagger.net/usecases.





The REEEP Climate Smart Thesaurus is available in Linked Open Data formats here: <http://www.climatetagger.net/climate-thesaurus>

CLIMATE TAGGER THESAURUS

The Climate Tagger is backed by the expansive Climate Smart Thesaurus, a vast catalogue of specialized terminology, including mapped links to synonyms and related terms, in five languages and across a range of sectors relevant for climate compatible development.

REEEP began compiling the Climate Smart Thesaurus in 2011 with the help of leading experts from respective fields, and it now includes specialized language from the following sectors:

- Renewable energy
- Energy efficiency
- Green growth
- REDD+ (Reducing Emissions from Deforestation and Forest Degradation)
- Monitoring and evaluation
- Greenhouse gas emissions in industry
- Economics of adaptation

The Climate Smart Thesaurus is currently available in the following languages:

English | French | Spanish | Portuguese | German

The Climate Smart Thesaurus is regularly updated and expanded to additional areas and languages, and can be targeted to incorporate specific sectors on an as-needed basis.

Updates to the Climate Smart Thesaurus are automatically integrated into systems using Climate Tagger.

USER FEED- BACK

Who is using Climate Tagger, and what are they saying about it?



“Climate Tagger and REEEP’s outstanding support have been instrumental to the CTCN as we strive to promote the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development and improve access to climate technology-related information from sources around the world. The Climate Tagger and Thesaurus help the CTCN to provide users with the most relevant technology solutions, capacity building and policy advice on climate adaptation and mitigation in both a coordinated and efficient way.

René Freytag

Climate Technology Centre and Network

“The main benefit of using the Climate Tagger is that it allows us to efficiently tag, categorize, and organize the growing body of green growth data and knowledge. After investigating various options and seeking advice and recommendations, the GGKP deemed the Climate Tagger to be the most advanced and widely adopted of such efforts and hence made the decision to partner with REEEP and integrate the tagging tool into the new web platform... By serving as the central “regulator” of this tagging process, Climate Tagger has the potential to facilitate development of a common language for green growth research and projects. The GGKP fully supports the Climate Tagger and would actively encourage other portals to use it going forwards.

Benjamin Simmons

Green Growth Knowledge Platform

“ The Climate Tagger and Thesaurus are critical elements to the design of our extended Climate-smart Planning Platform. We have received excellent and timely support from REEEP in all stages of planning and programming the Climate-smart Planning Platform. They could not have been more helpful. We are definitely planning on continuing to use the Climate Tagger and Thesaurus and would recommend other portals in the climate adaptation, resilience and low carbon development space to do so as well, since this allows search results across different portals to be combined intelligently. Users will benefit most from knowledge brokers combining and sharing resources, and the Climate Tagger and Thesaurus is one element that allows this.

John Rogers

The World Bank

“ By investing in the extension of the Thesaurus we hope to further increase the benefit to the users of the Climate Tagger in finding relevant information more quickly and easily. We have enjoyed working with the dedicated staff from REEEP throughout the process and could witness the improvement of the search findings and their relevance over time. We hope that REEEP will continue its successful work on the Climate Tagger and explore new features such as an enhanced visualization of the Thesaurus content.

Timo Leiter

GIZ

“ The OpenEI team was involved in the early testing of the Climate Tagger and has been using it ever since... I have on various occasions recommended it to developers of other portals, as well as to developers at renewable energy themed hackathons and those simply looking to better categorize their content or data. The example queries on the site make it incredibly easy to showcase, and the consensus among those I show it to is that it is well documented and easy to get started with. In fact, I've even shown the Climate Tagger API demo page to developers tasked with API development as an example of how an API should be documented online.

Jon Weers

National Renewable Energy Laboratory

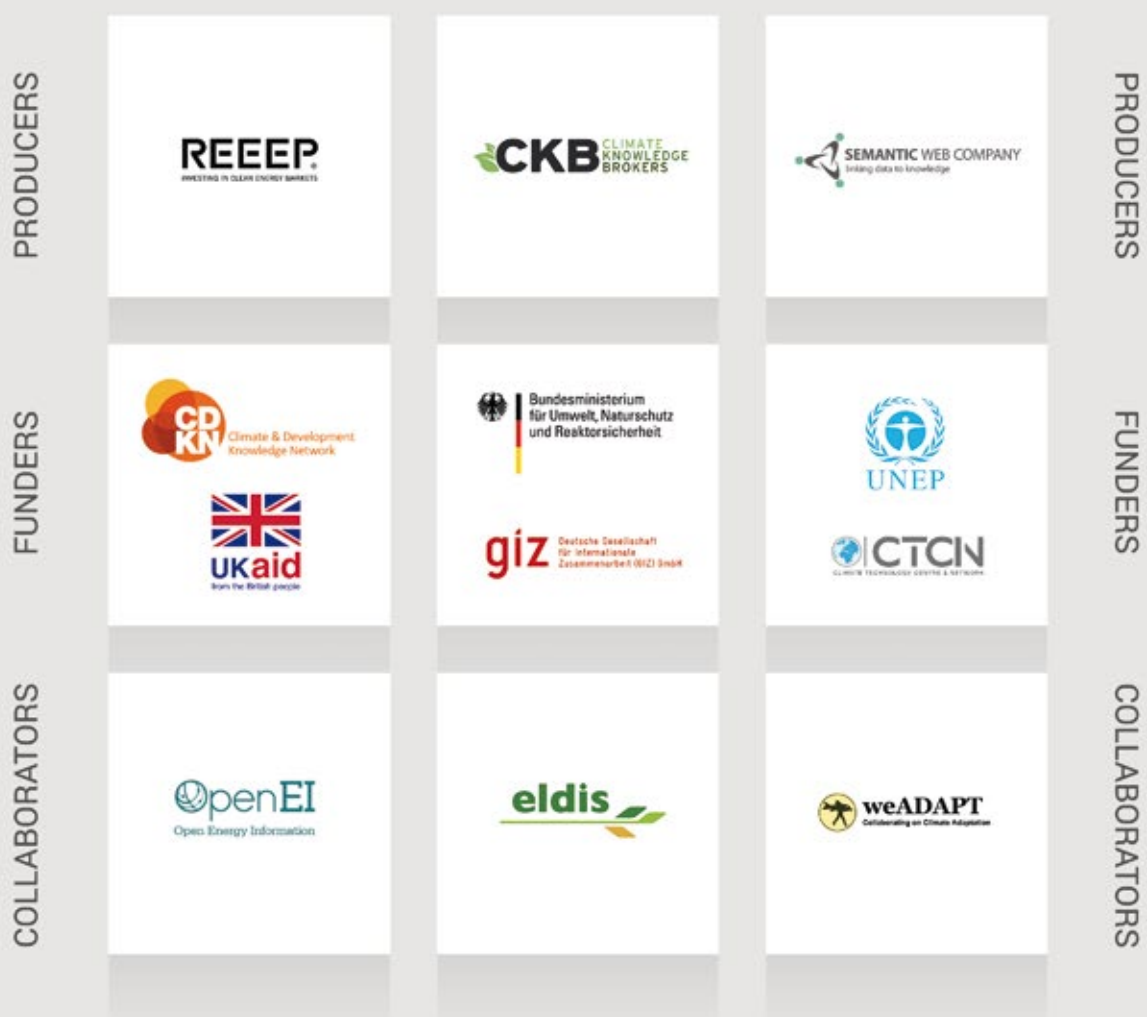
“ Climate Tagger has the potential to provide much needed structure and systematisation to the field of climate adaptation research and practice at a time when information is vast but knowledge is fragmented, and lessons learnt difficult to analyse methodically. And we are still only scratching the surface of possibilities, such as deep meta-analysis of content based on location and organization-related data provided by Climate Tagger, or innovative visualization methods made possible by tags – something we at weADAPT are exploring. We also look forward to helping Climate Tagger itself adapt, by learning new terms and structured frameworks as they emerge in the climate adaptation field.

Sukaina Bharwani

Stockholm Environment Institute

SUPPORTERS & CONTRIBUTORS

Climate Tagger is a joint tool of the Climate Knowledge Brokers group (www.climateknowledgebrokers.net), developed by REEEP with support from key donors, partners and expert contributors.



DONORS:

- Climate and Development Knowledge Network (CDKN)
- Federal Government of Germany
- Climate Technology Centre and Network (CTCN) hosted by the United Nations Environment Programme (UNEP)
- GIZ

PARTNERS:

- US National Renewable Energy Laboratory (NREL) – OpenEI (en.openei.org)
- Stockholm Environment Institute (SEI) – (www.weADAPT.org)
- Institute for Development Studies (IDS) – Eldis (www.eldis.org)
- Climate Knowledge Brokers Group (CKB) – (www.climateknowledgebrokers.net)

IMPLEMENTATION PARTNER:

- Semantic Web Company (SWC) – (www.semantic-web.at)

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