# EDF2015 Submission:
# Climate Tagger - Turning Data into Knowledge

## Contributor names and short CVs:
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**Florian Bauer** is "Operations & IT Director" at REEEP and oversees its day-to-day operations as well as REEEP's Open Knowledge Programme. This includes the management of the "Climate Knowledge Brokers Group" (a group of more than 150 leading knowledge brokers in the international climate sector) and REEEP's knowledge tools such as reegle.info (a leading linked open data clean energy information portal) and the Climate Tagger (a tool to automatically tag unstructured content and connect it with similar content on other websites). Florian co-authored the book "Linked Open Data: The Essentials". Prior to joining REEEP, Florian worked as a project manager and consultant for Siemens Austria, where he managed intercultural projects, and he also founded a web design firm in 2003. Florian Bauer holds a Master's Degree in IT Management and a Bachelor's Degree in Software Engineering from the Vienna University of Technology.

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## Type of the presentation proposed:

Impact contribution

## Title of the presentation:

Climate Tagger - Turning Data into Knowledge

## Summary of the presentation

In this presentation, we will explain, demo and discuss the **Climate Tagger** (http://www.climatetagger.net) - a free 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. We will briefly explain the underlying technology, show how easy Climate Tagger can be used (e.g. via plugins for Drupal & CKAN, or directly via API) and finally we will provide real-world scenarios where Climate Tagger is successfully in use e.g. at CTCN (UNEP), the World Bank, the weAdapt.org portal or the US National Renewable Energy Lab (NREL).

## Extended abstract of the presentation

**Climate change** is the greatest challenge of our time, spanning countries and continents, societies and generations, sectors and disciplines. Yet crucial data and information on climate issues are still too often amassed - diffuse - in closed silos. Climate Tagger utilizes Linked Open Data to scan, sort, categorize and enrich climate and development-related data, improving efficiency and performance of knowledge management systems.

**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*, first introduced by REEEP in 2011 to help its network better catalogue and connect data, and backed by the expansive Climate Compatible Development Thesaurus, developed by experts in fields ranging from climate mitigation and adaptation to economy and green growth, and even specific areas such as REDD+ (Reducing Emissions from Deforestation and Forest Degradation).

**The core technology** behind Climate Tagger is SWCs software product: PoolParty Semantic Suite that provides A) comprehensive knowledge modelling facility (in the form of multilingual SKOS Thesauri), B) a powerful text analysis and entity extraction functionality and also C) the whole semantic indexing and semantic search & matchmaking / recommender services on top of the REEEP Climate Tagger Knowledge Graph.

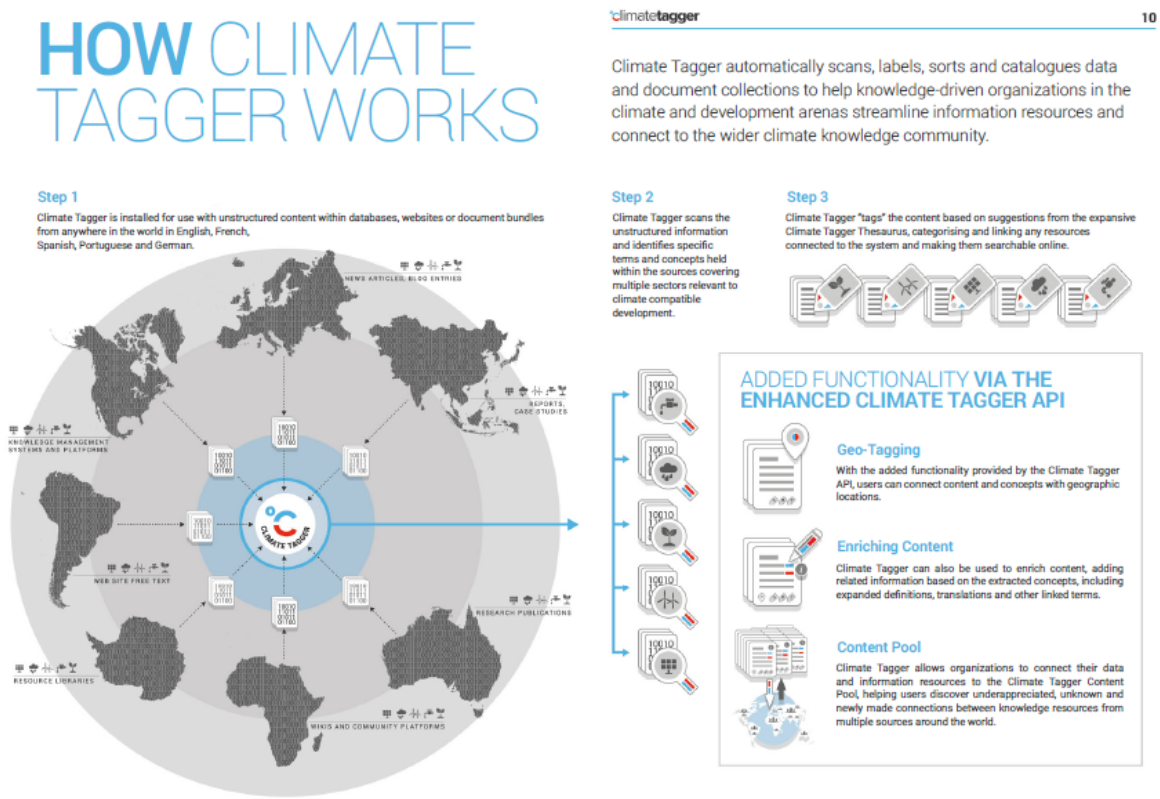


*Fig.: How Climate Tagger Works*

## 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
**Mulitple 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.

*Fig.: Use Cases Climate Tagger*