eENVplus

LusTRE
Linked Thesaurus fRamework for the Environment

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A. Abecker (disy)

INSPIRE 2014 - Workshop
Aalborg,17 June 2014

Agenda

- LusTRE Overview
  - Objectives
  - Strategy
  - Outcomes
- State of Play
  - eENVplus activity
  - LusTRE state of play
  - LusTRE exploitation services
- Planned Next Activities and Conclusions

LusTRE Overview

Objectives

General Objective

To provide a solution to the multilingual and multicultural issues in environmental data sharing

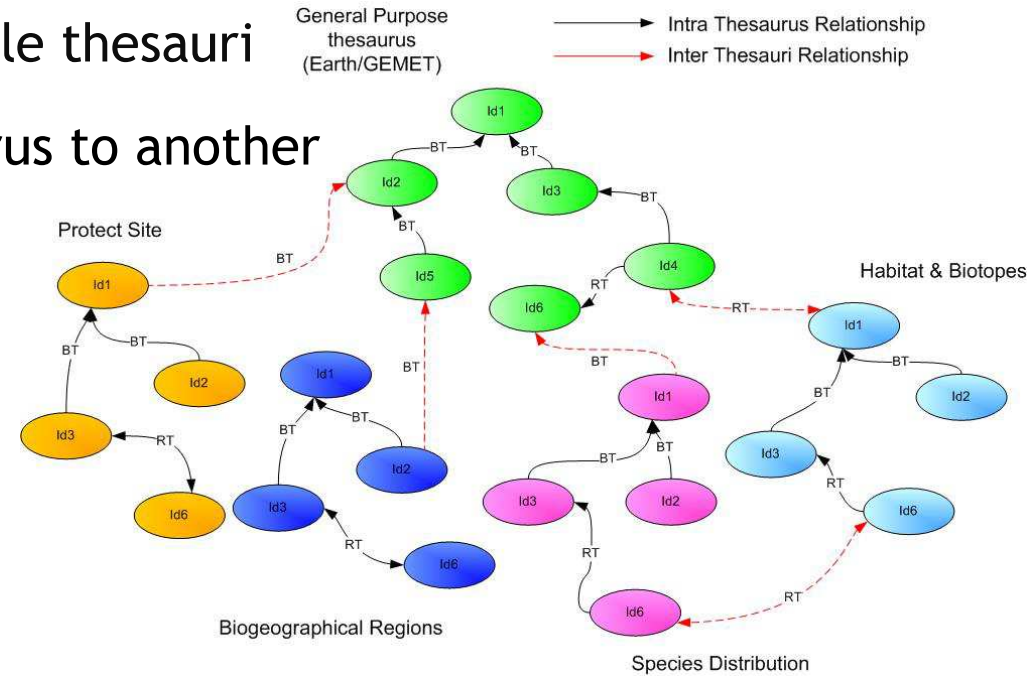
Specific Objectives

- A "common thesaurus" for the Environment
  - to provide more widely shared concepts and to reduce language barriers
  - to enable the joint exploitation of existing multilingual thesauri covering different INSPIRE data themes
- A set of software services for exploiting the "common thesaurus"
  - to promote uniformity in data description during metadata provision
  - to improve resource discovery across applications and platforms

Overview
Strategy

- Not only one thesaurus … but …
- integration of different available thesauri
- cross-walking from one thesaurus to another

Thesaurus Framework



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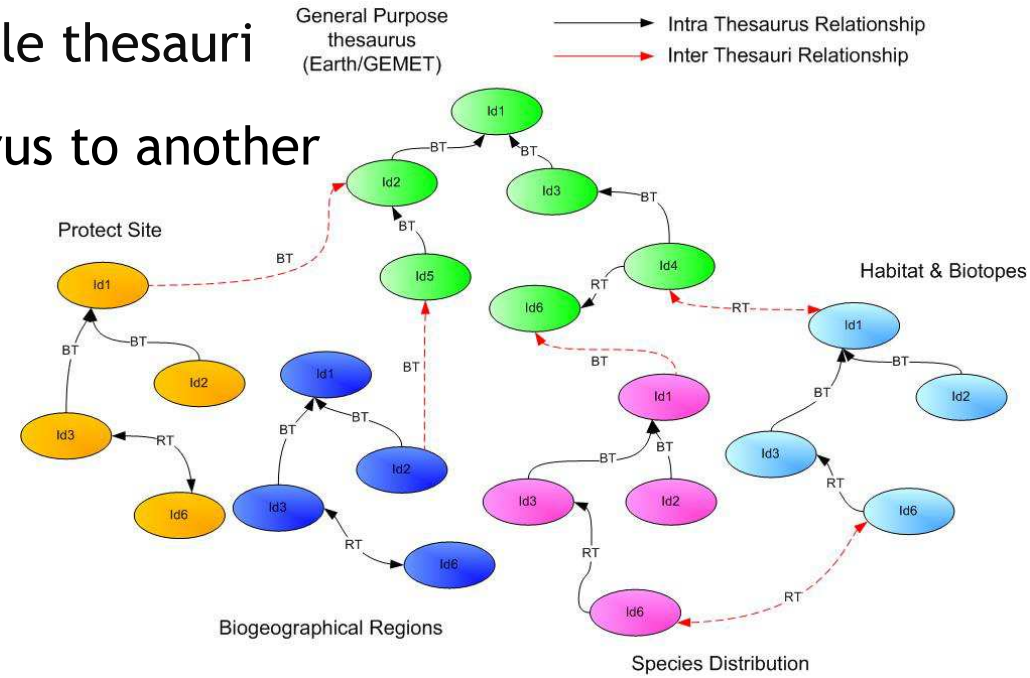

Modularity

To add new KOS as a new module plugged in the set of thesauri in the TF

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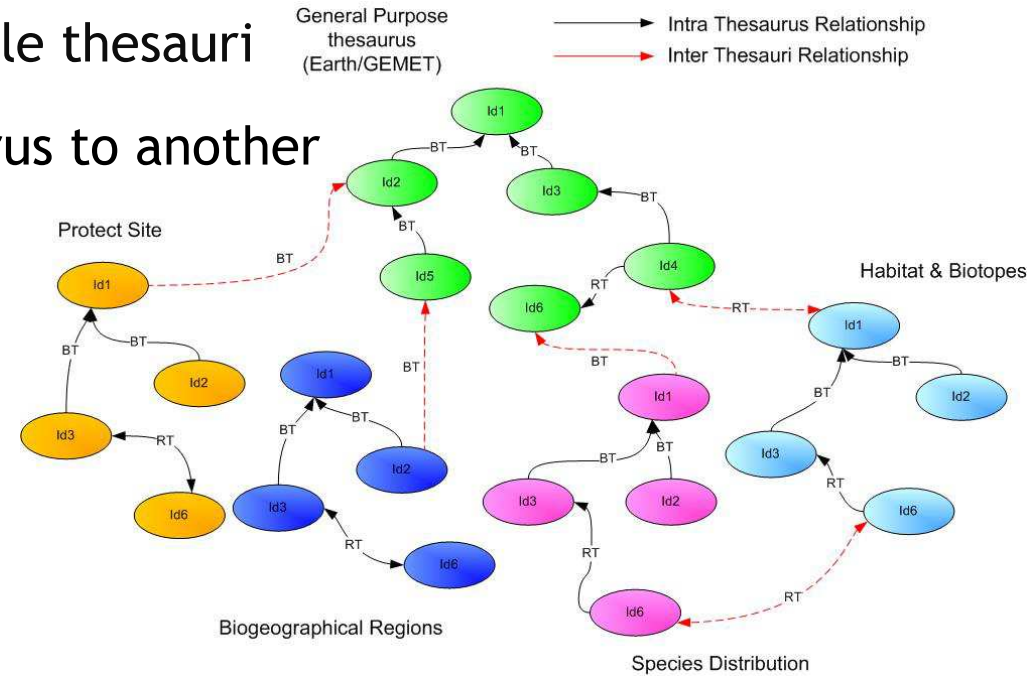

Modularity

T
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Openness

To easily extend each KOS keeping separated the original one

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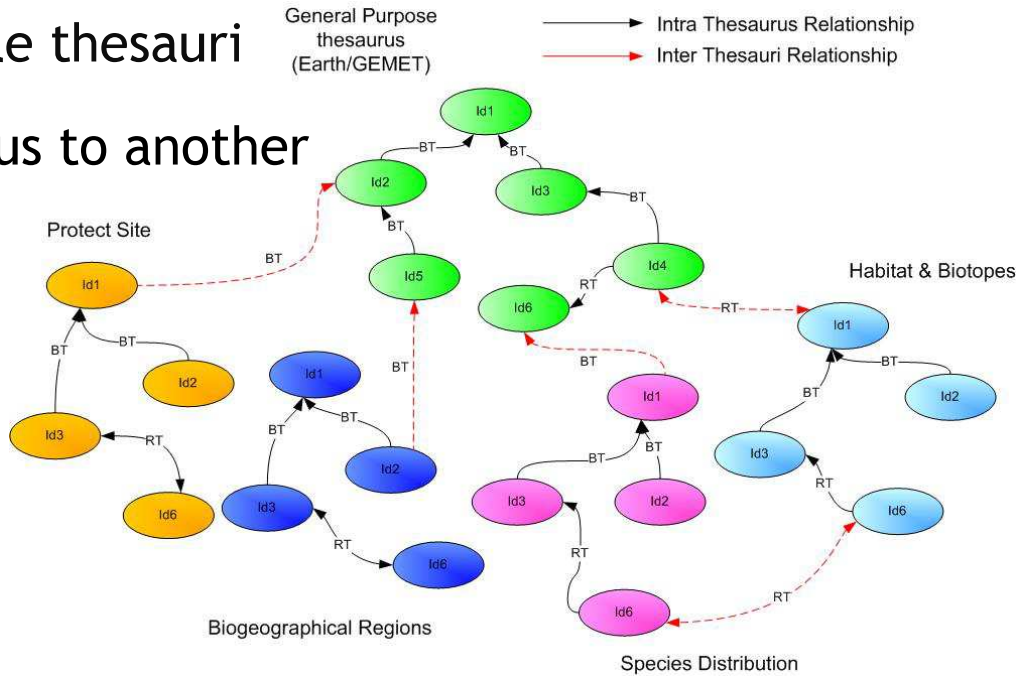
Thesaurus Framework

Modularity

Openness

Interlinking

Linking among the terms referring to the same concepts in more than one thesaurus in order to harmonize their usage



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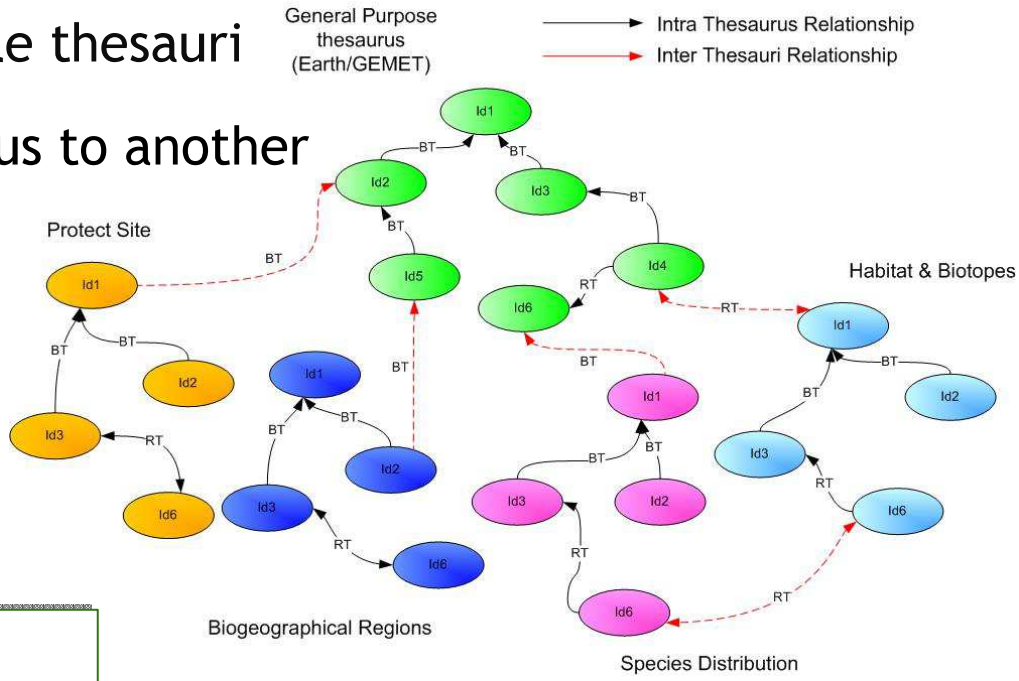

Modularity

Openness

Interlinking

Exploitability

To encode in a standard and flexible format in order to encourage the adoption and its enrichment from third-party systems

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Thesaurus Framework

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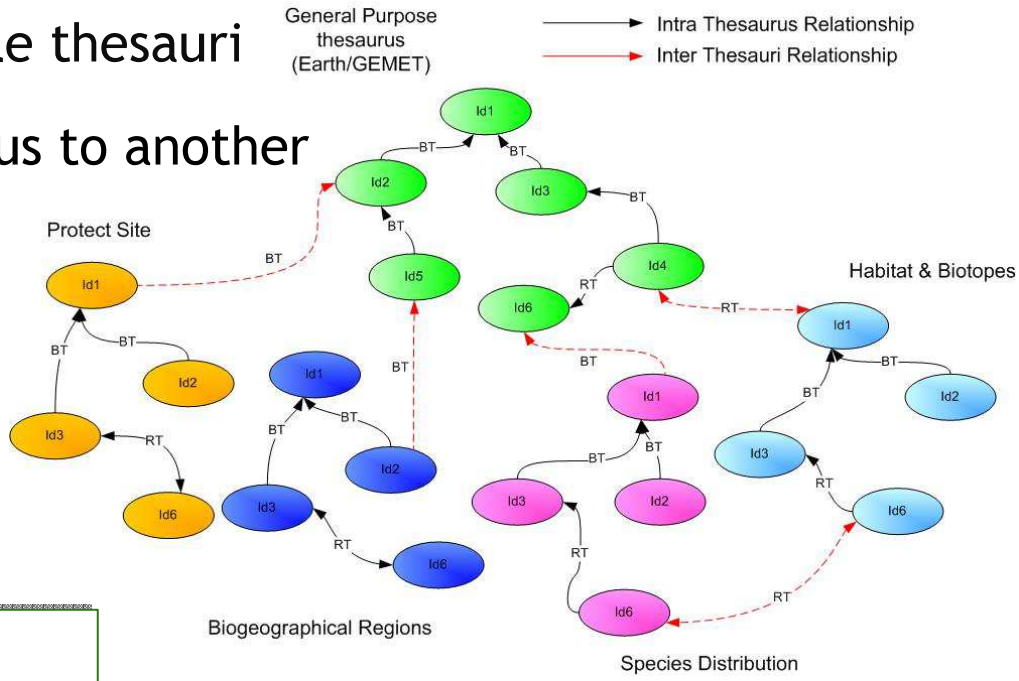


Design Principle

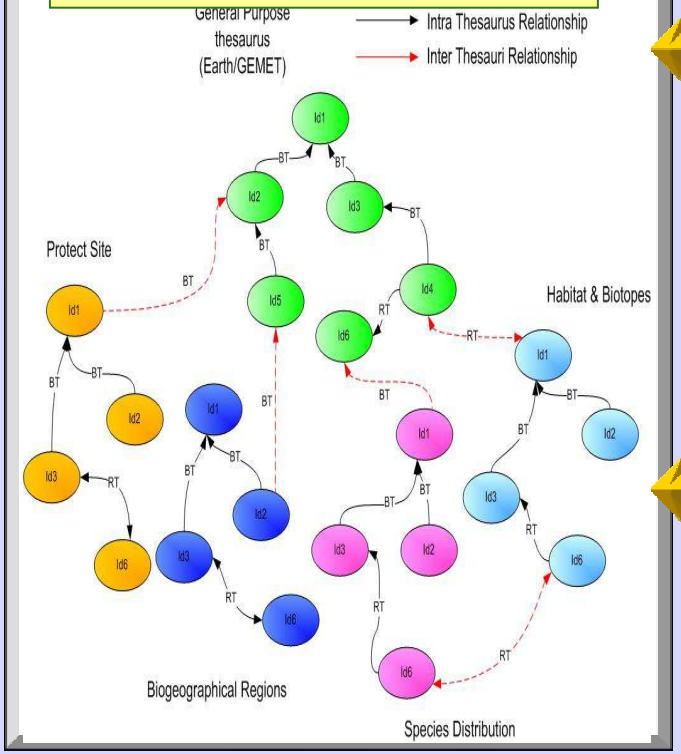
Simple Knowledge Organization System (SKOS) to encode the thesaurus content

Linked Data best practices to publish the thesaurus in machine-understandable format

Overview
LusTRE Outcomes

Vocabulary Content

SKOS
Thesauri, code list …



Vocabulary Interlinking

Linksets

Quality evaluation:
(SKOS quality, Linkset Quality …)

TF exploitation Services

Metadata Compilation

Data Discovery

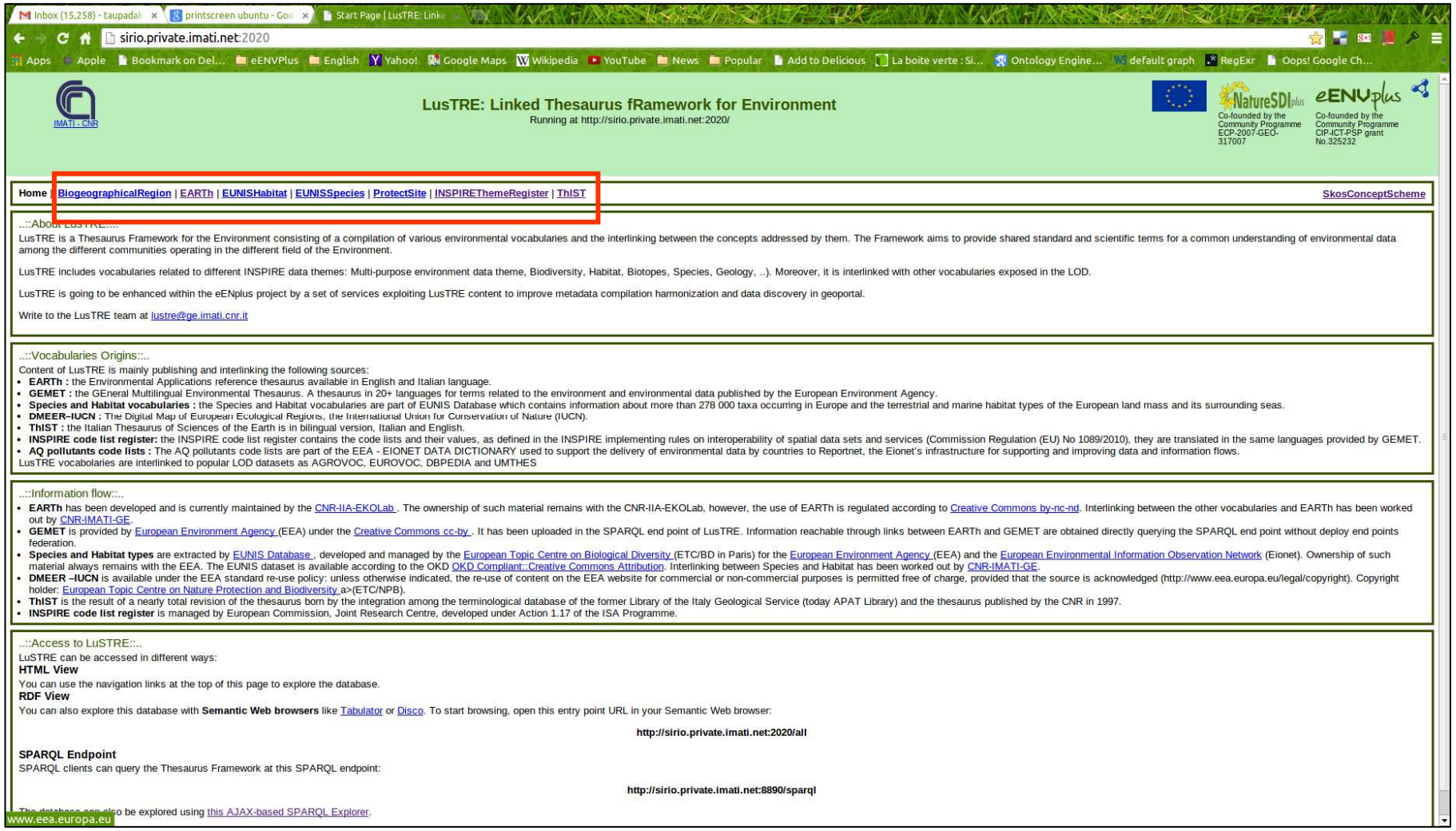
Explorative Search

CROSS-WALKING

LusTRE
State of Play

State of Play

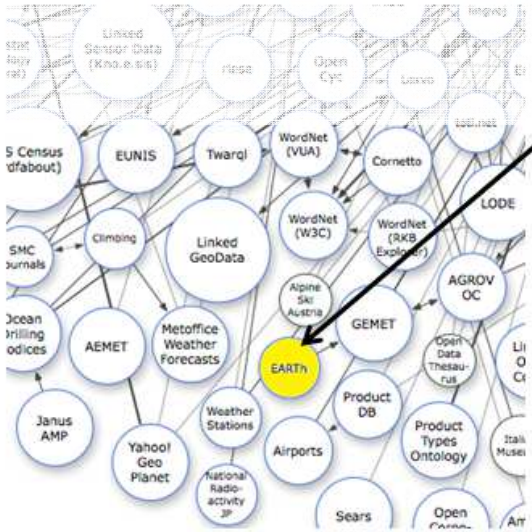
LusTRE Available Release: Content



LusTRE Available Release: LOD Interlinking

EARTh accessibility

- EARTh accessible through
  - HTTP dereferenceable URIs
  - RDF/XML Dump
  - SPARQL Endpoint
- EARTh published into the Linked Open Data Cloud:
http://datahub.io/it/dataset/environmental-applications-reference-thesaurus



EARTh Interlinking

- GEMET
- AGROVOC
- UMTHES
- DBPEDIA
- EUROVOC

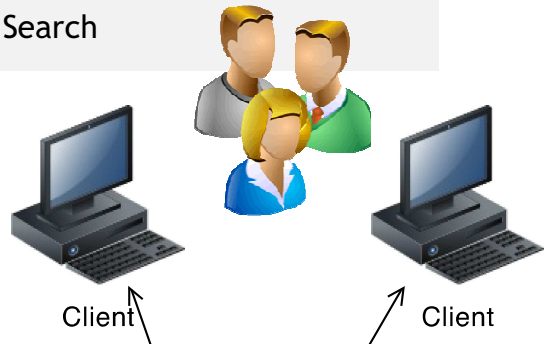
LusTRE
Exploitation Services

State of Play

Usage Scenarios for LusTRE Exploitation Services

USE CASES

- Metadata Creation / Compilation
- Data & Service Querying / Discovery
- Explorative Search



State of Play

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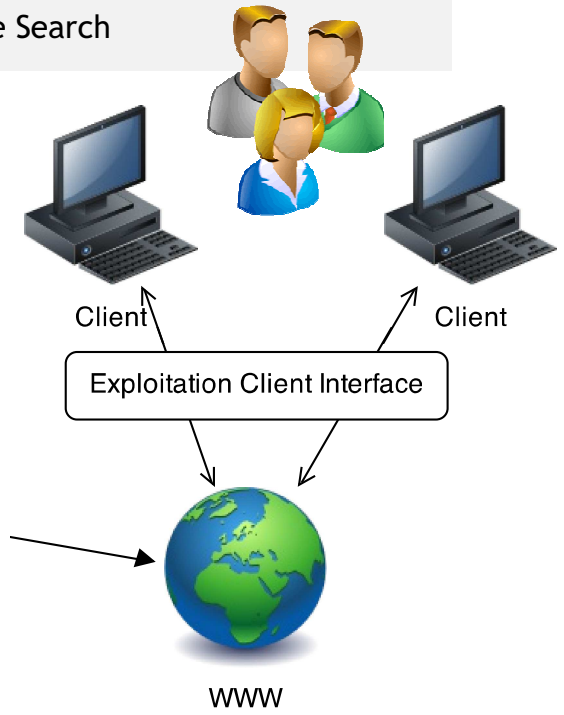

REST API

- GetCapabilities
- GetSuggestions
- GetSynonyms
- GetRelatives
- DescribeConcept
- SPARQL

State of Play

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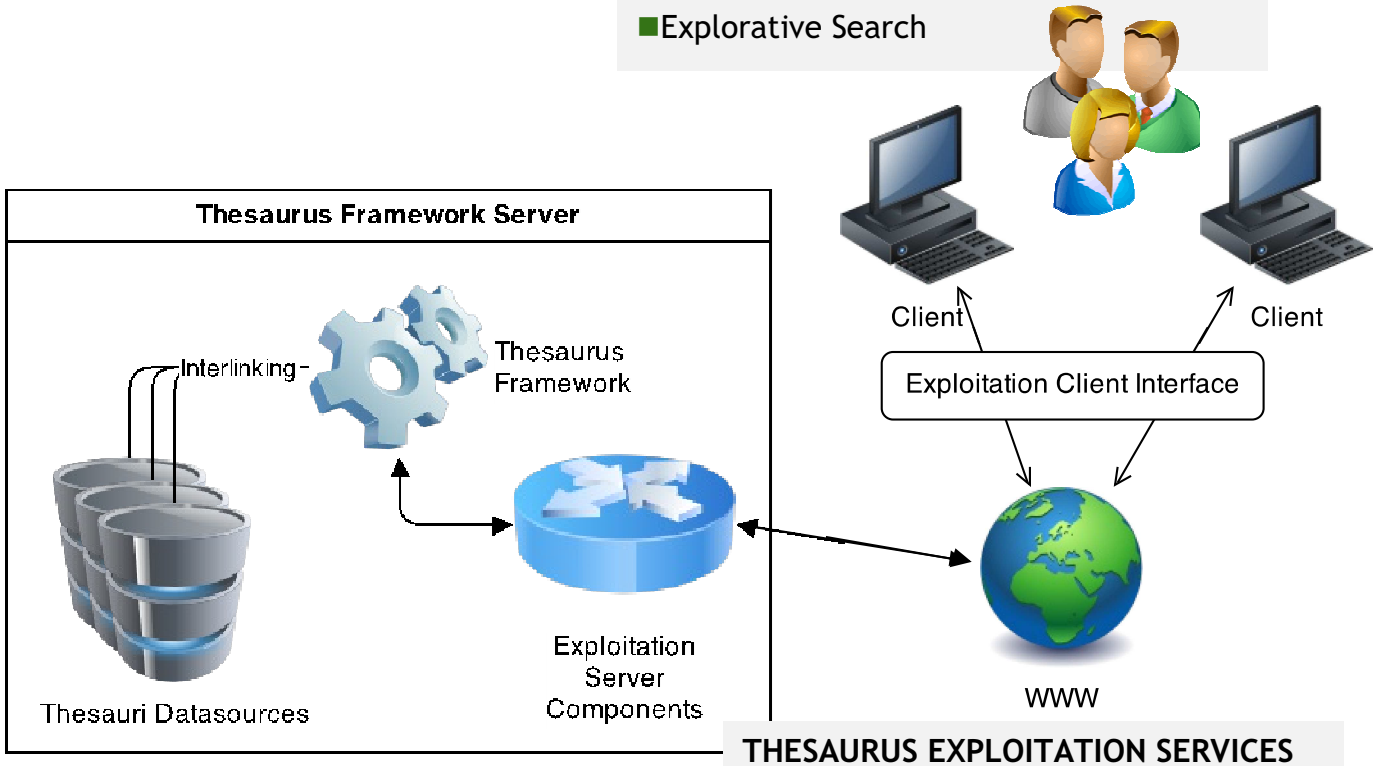

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- GetCapabilities
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THESAURUS EXPLOITATION SERVICES

- KeyordCompletion
- KeywordExplanation
- KeywordTranslation
- QueryReformulation
- Keyword Validation
- ThesaurusVisualization
- …

Simple Usage of KeywordCompletion, KeywordExplanations and QueryReformulation for Improving Metadata Data Search

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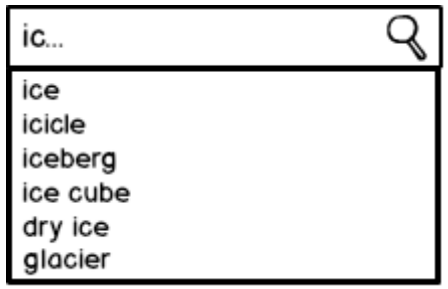

Suggested keyword completions when typing

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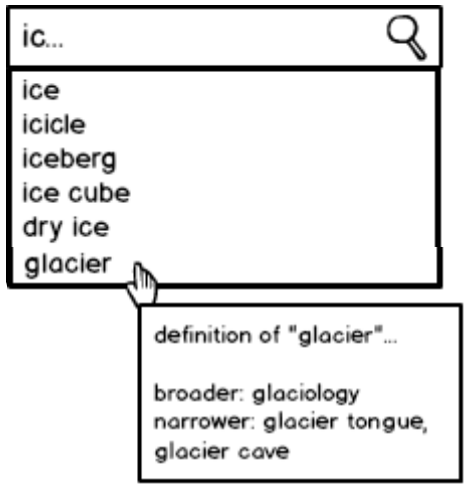

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Further background information on demand

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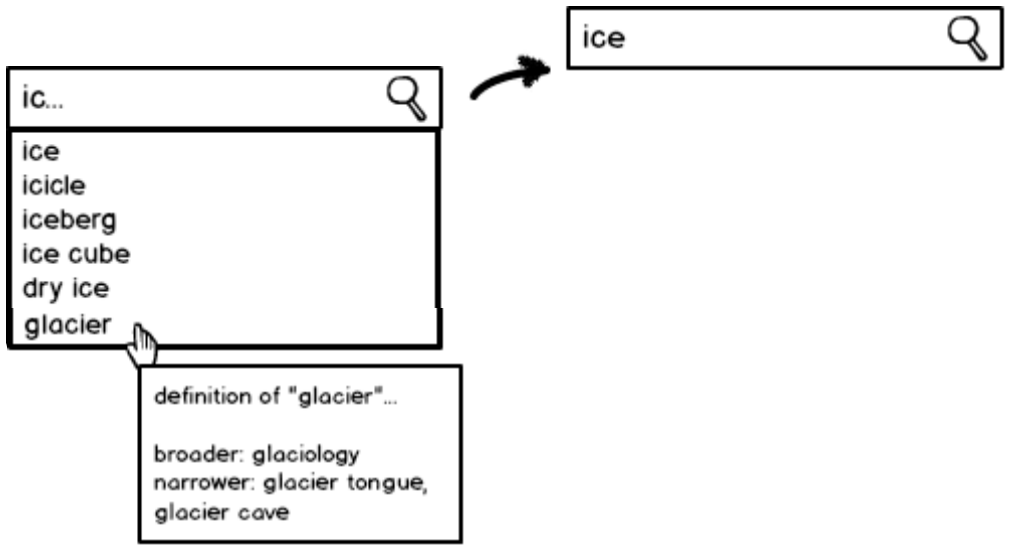

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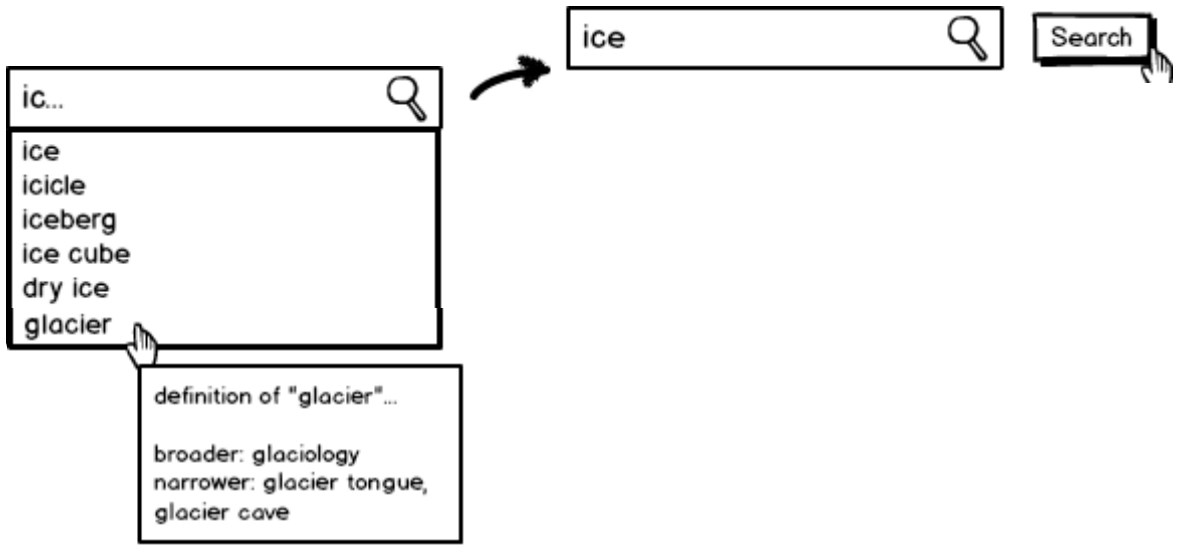

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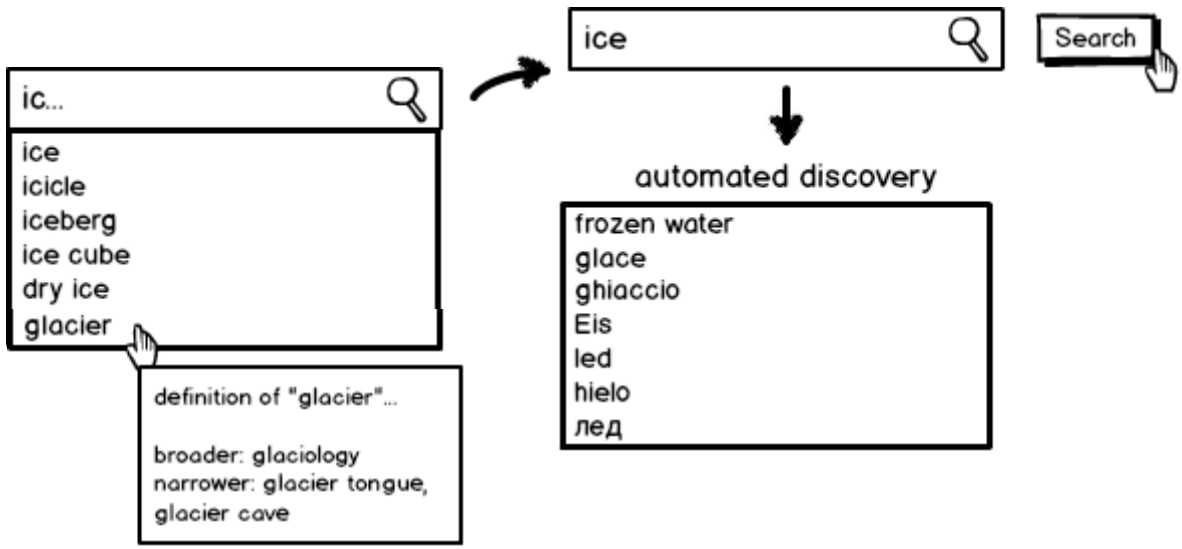

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Search terms automatically extended by synonyms, translations, identical concepts from other thesauri, …

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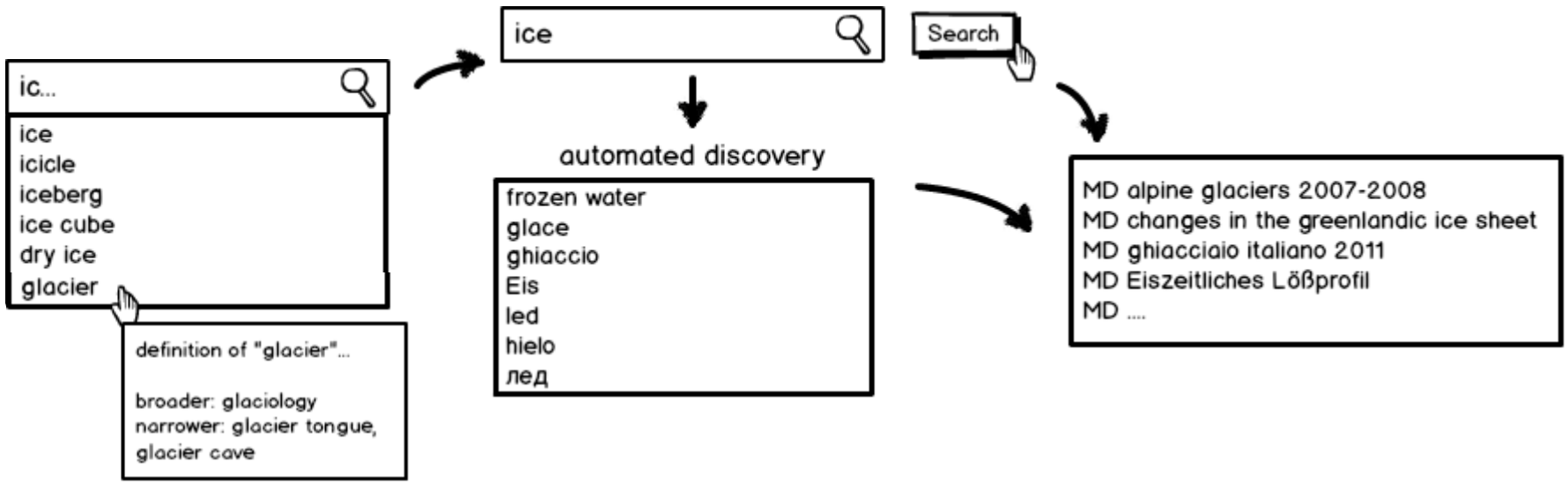

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Search results from different multilingual, cross-domain sources

Mock-Up: LusTRE Exploitation Services for Browsing Conceptual Spaces

Semantic explorative search:

- during metadata compilation or during manual data discovery
- browse through a visualization-based of interlinked thesaurus structures
- keyword translations by cross-walking

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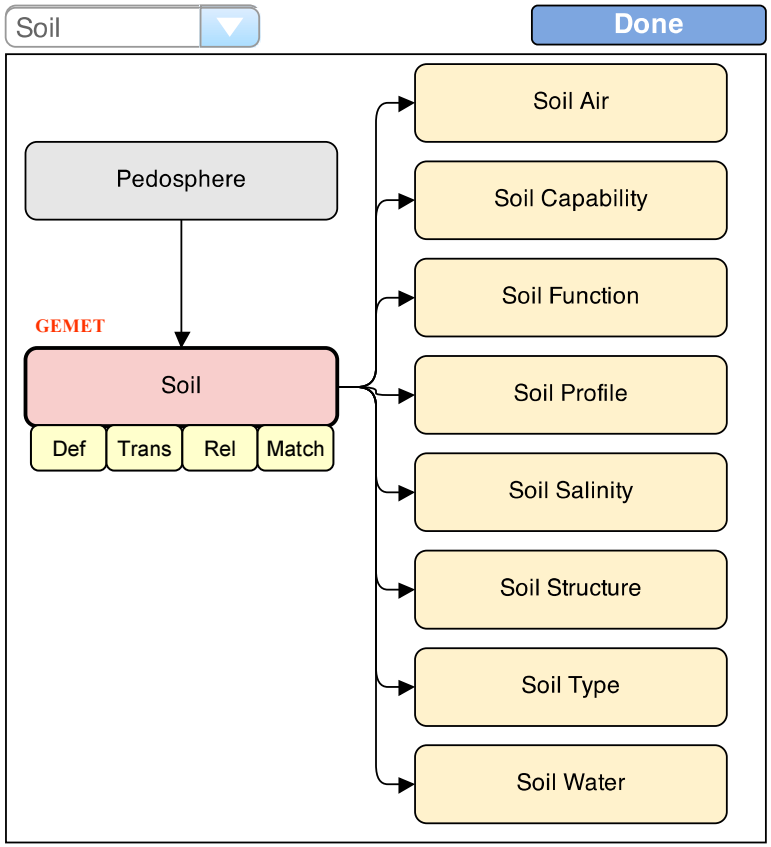

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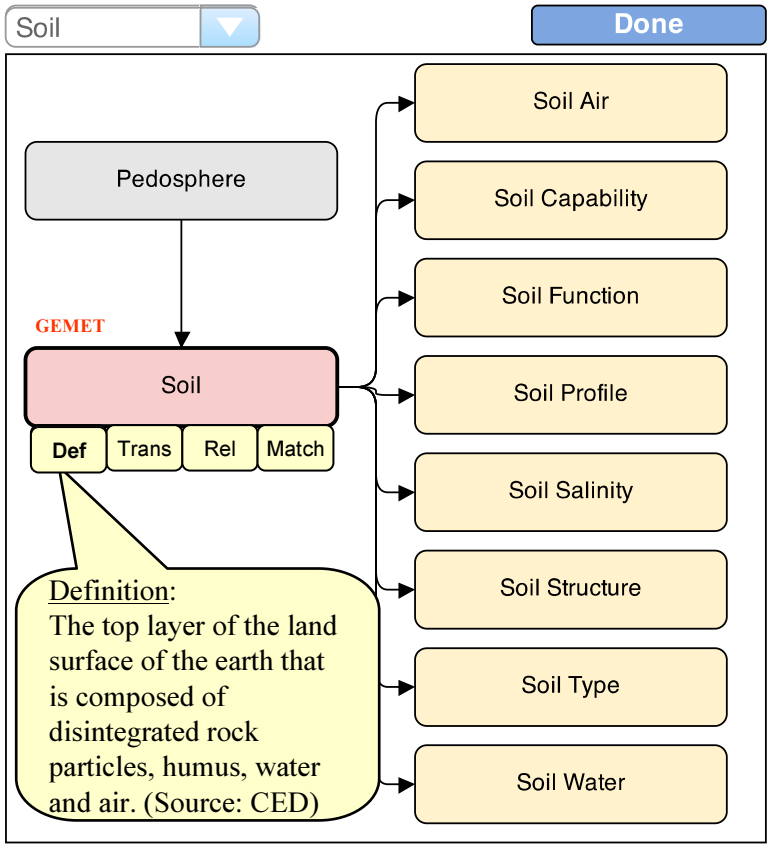

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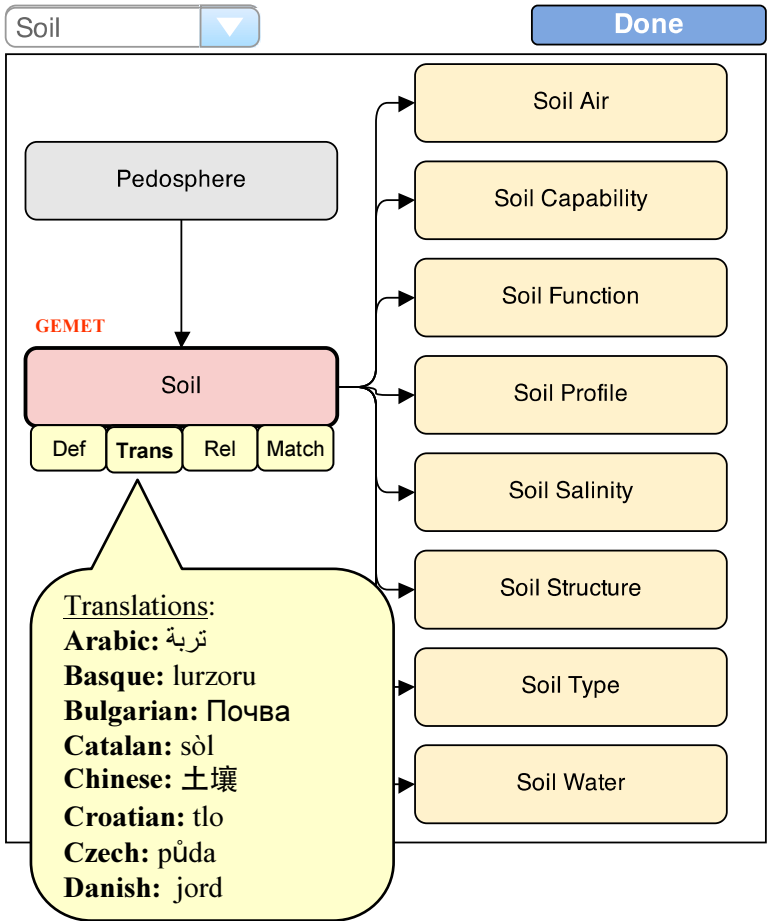

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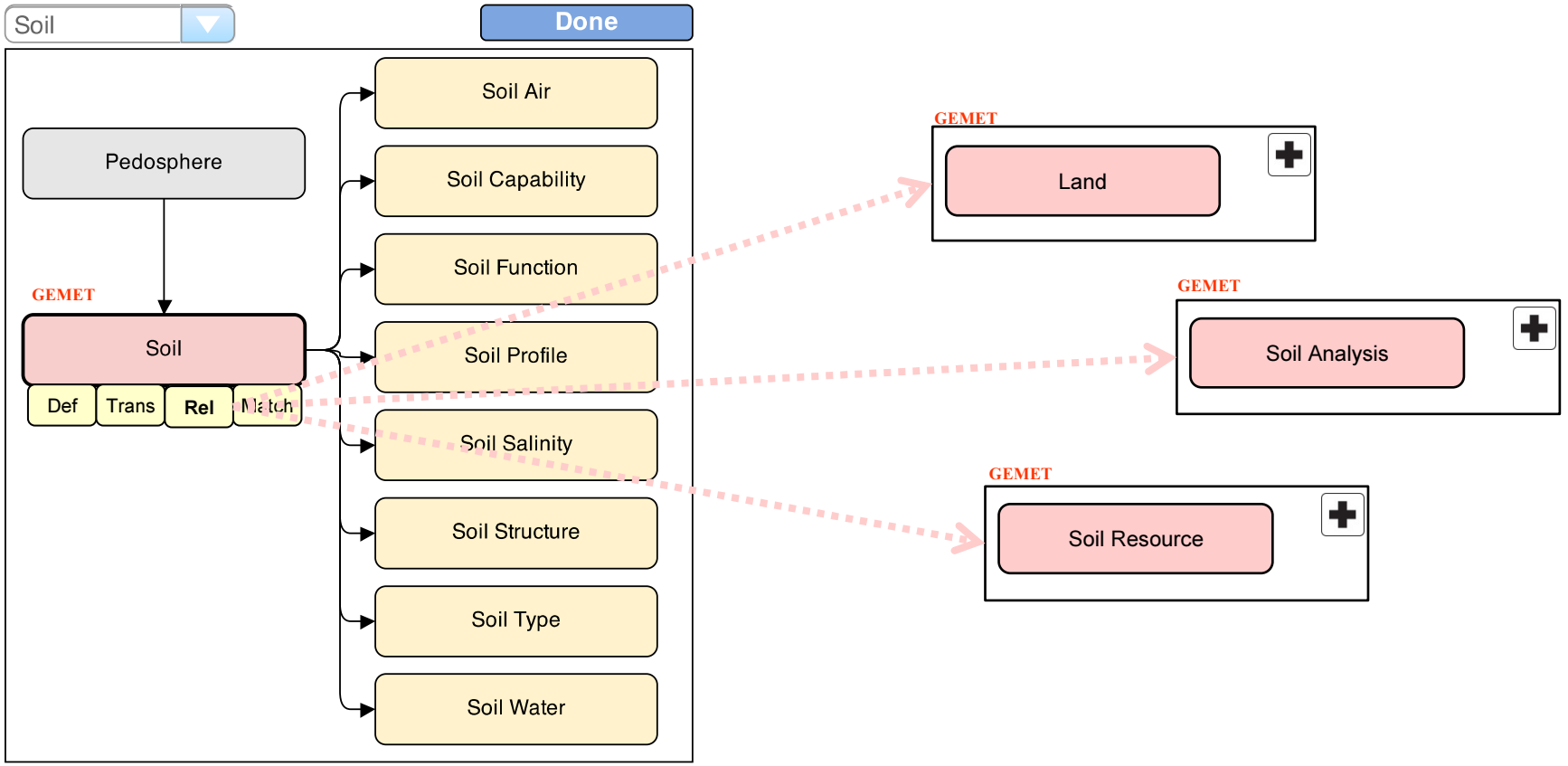

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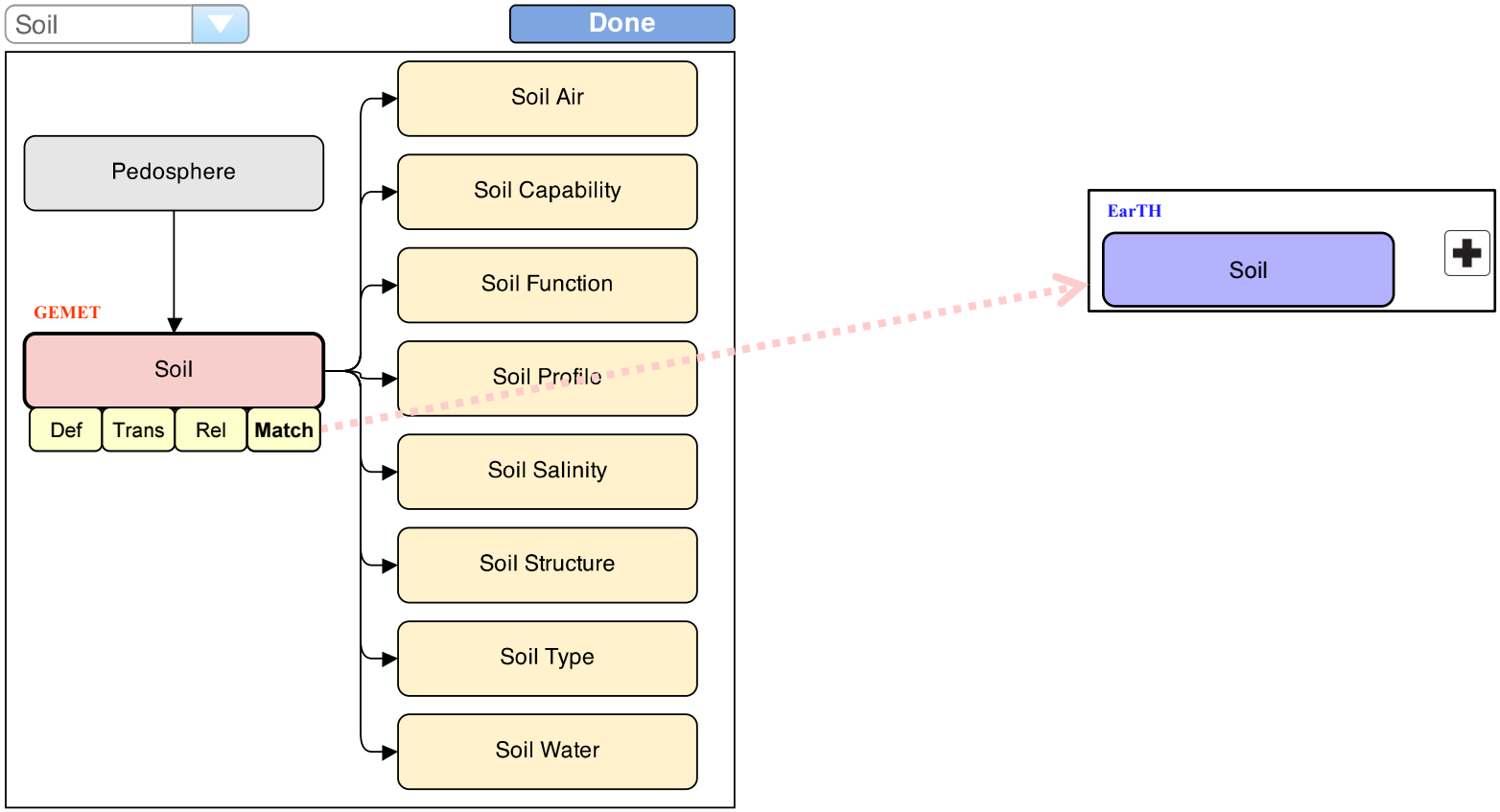

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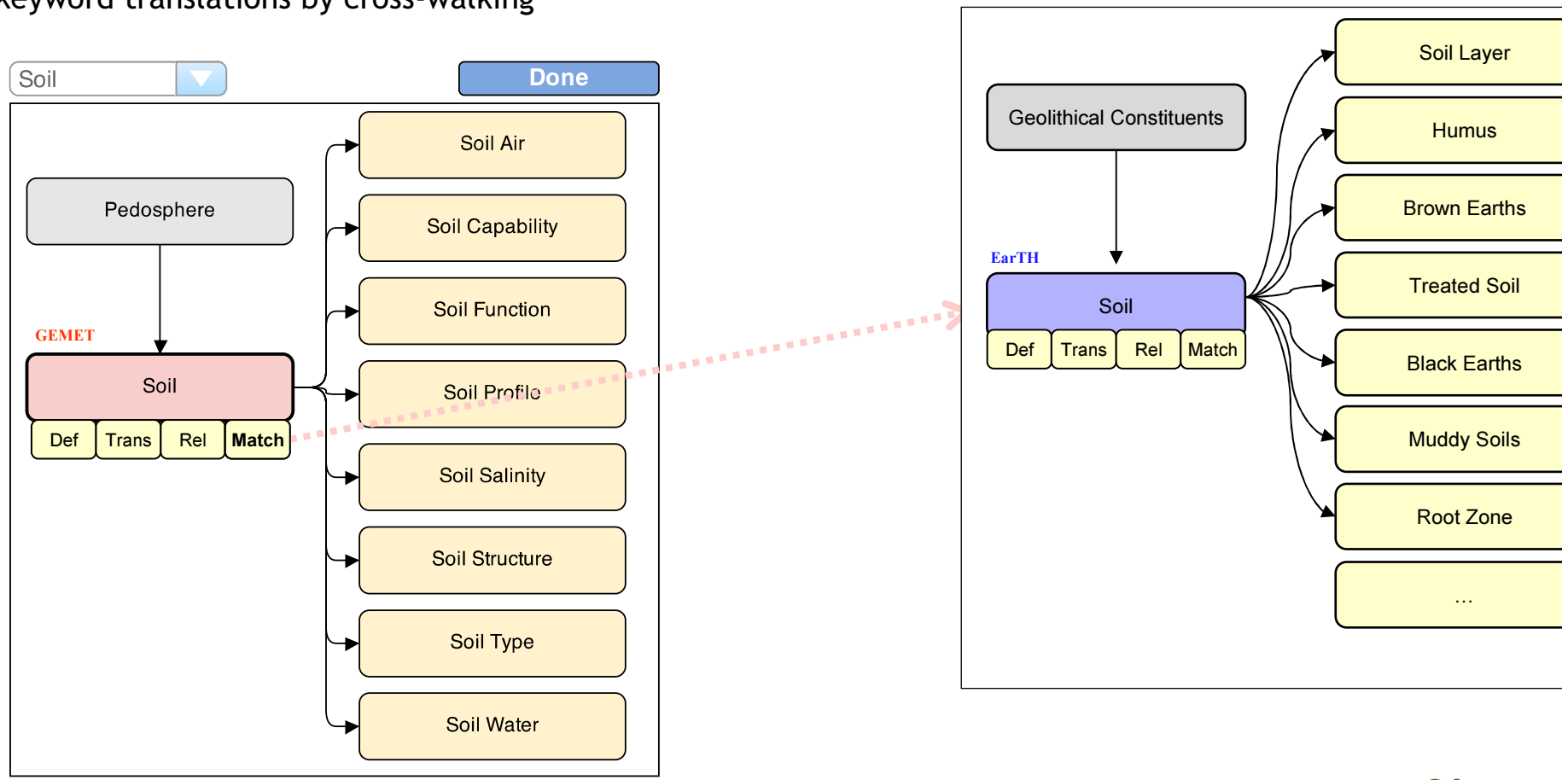

Conclusions

Planned Next Activities

- LusTRE new release available at the end of 2014
  - New content, new interlinking
  - Exploitation services implemented
- Exploitation of LusTRE within
  - INSPIRE Geoportal
  - INSPIRE Metadata Editor
  - eENVplus pilot
- More technical information at this conference
  - Whenever you meet us
  - Two more talks on Thursday – Room 5 – 11.40h and 12.00h

Conclusions
We invite you…

… Waiting for eENVplus - LusTRE outcomes … We invite you:

- ☐To take a look at the Thesaurus Framework at:
  http://linkeddata.ge.imati.cnr.it:2020
- ☐To check if a term is contained in TF at:
  http://linkeddata.ge.imati.cnr.it:8890/fct/
- ☐To access the SPARQL ENDPOINT at:
  http://linkeddata.ge.imati.cnr.it:8890/sparql
  - ☐ To querying thesaurus concepts, relationships thesaurus
  - ☐ To mappings between EARTh to GEMET, AGROVOC, UMTHES…
  - ☐ To build your own services/application on the TF
- ☐To interlink your vocabularies/thesauri with the LusTRE thesauri

… Thank you !

Contact persons
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