



# Enlazando EcoLexicon con la DBpedia

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# EcoLexicon

Navigation and search controls: Home, Search, Contextual domains (No domain), Spanish, Feedback, Login.

**Definition**

**Continental plate:** rigid, independent segment of the lithosphere composed of mainly granite that floats on the viscous plastic asthenosphere and moves over the surface of the Earth. The Earth's continental plates are an average 125 kilometers thick and were formed more than 3 billion years ago.

**Terms**

- continental plate
- placa continental
- kontinentale Platte
- ηπειρωτική πλάκα

**Resources**

- Collision of a continental plate with an oceanic plate

**Conceptual categories**

A.1.3 Geological Agent

Categories hierarchy

**Phraseology**

Phraseological entry

Search results for "continental plate".

Search concordances: Limit the search, Show syntax help [?]

Term: "continental plate"

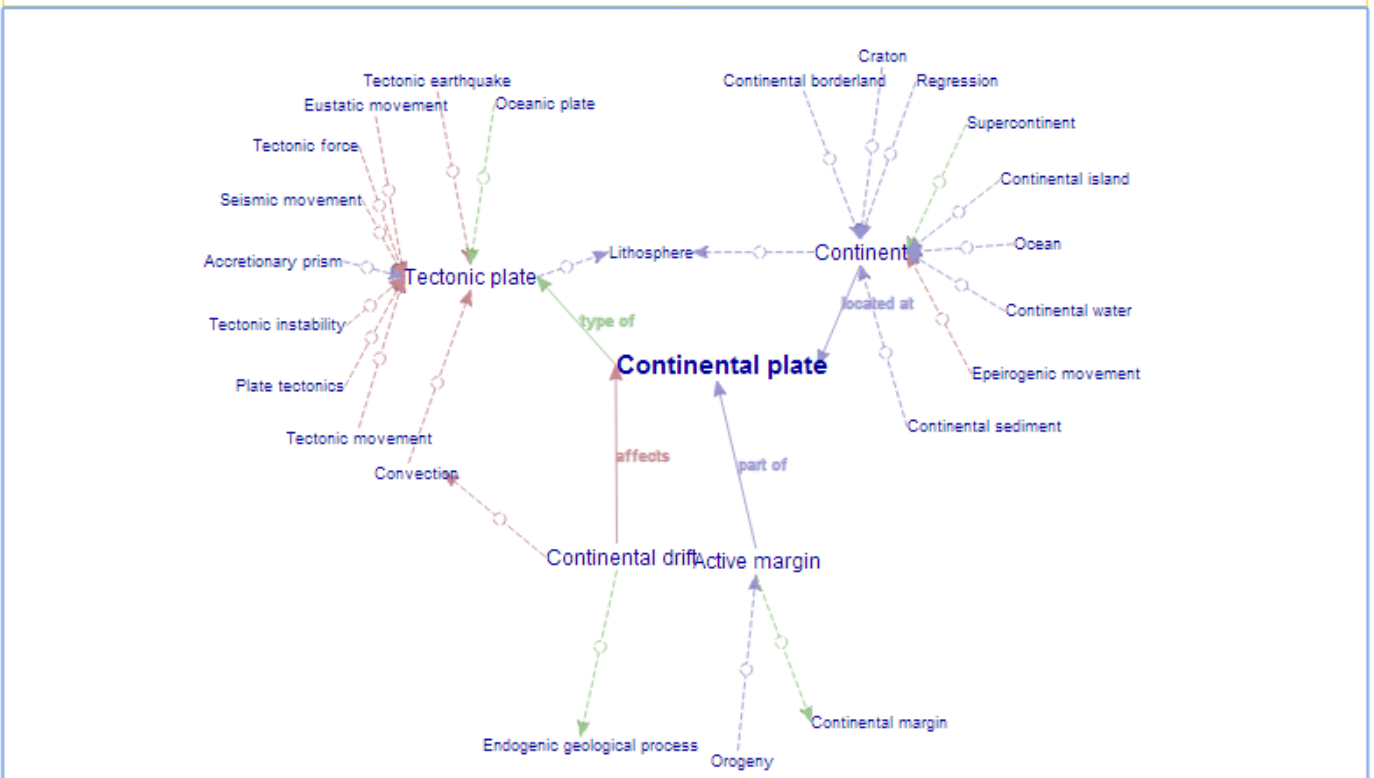
...rock formation of the Late Jurassic that was deposited in ocean waters continental separation approximately 145–155 million years ago (Fig. 2). The shale during the time of plate was restricted to the north...

...slides beneath an adjacent plate. Subduction zones involve an continental or another oceanic plate. Submerged breakwater (reef breakwater), oceanic plate sliding beneath either a plate Breakwater...

...another. When an oceanic plate encounters a lighter continental, it responds by diving under it, in a process called subduction. Heat and pressure then melt a port... Capture rectangulaire plate pressure then melt a port...

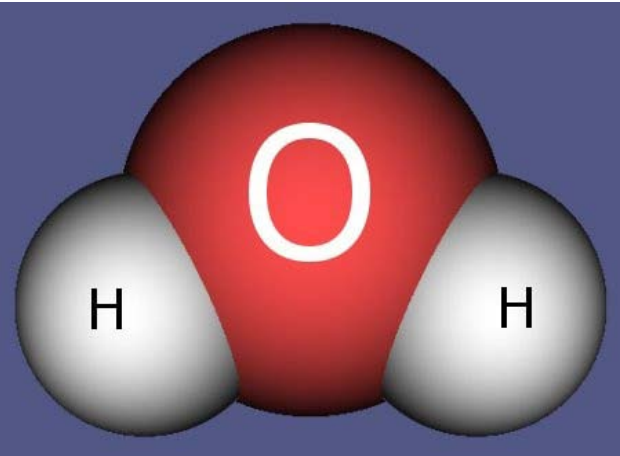
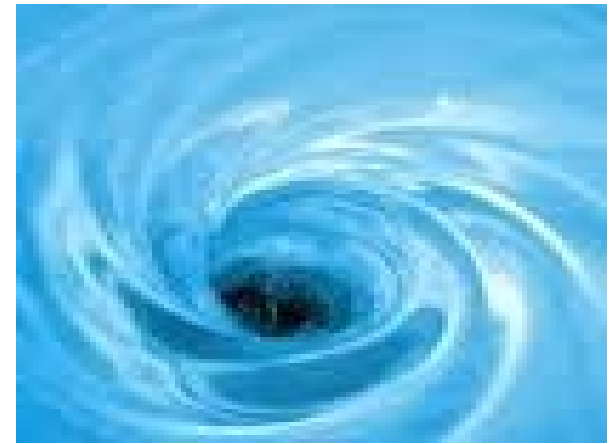
...either a continental or another oceanic plate. Submerged breakwater (reef breakwater), Breakwater, generally parallel t... plate Breakwater, generally parallel t...

...floor to form and spread. Trenches form in a subduction zone, where continental 68 RiveRs, Lakes, and Oceans range from 4 to 6.8 miles (7 to 11 km) an oceanic plate plunges under a plate deep. Along these areas, a she...





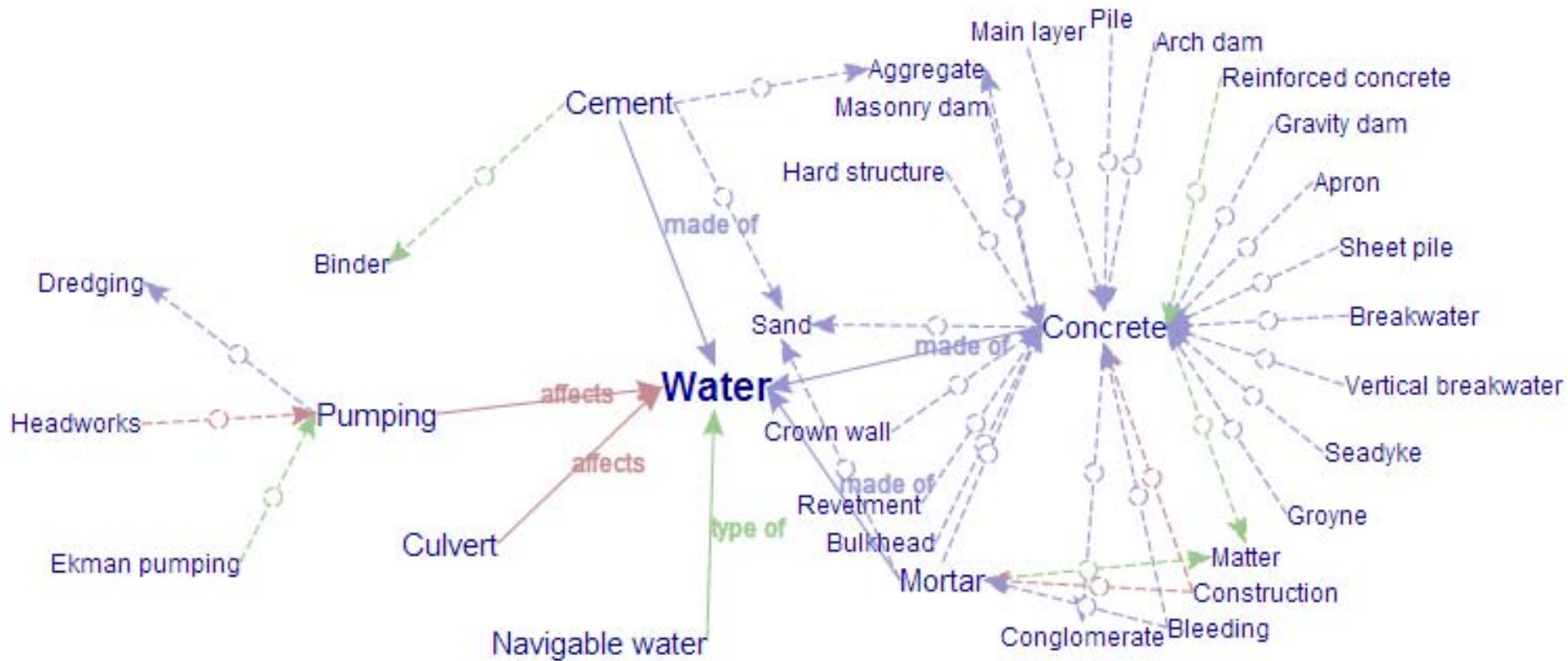
# El contexto y la incompatibilidad de facetas



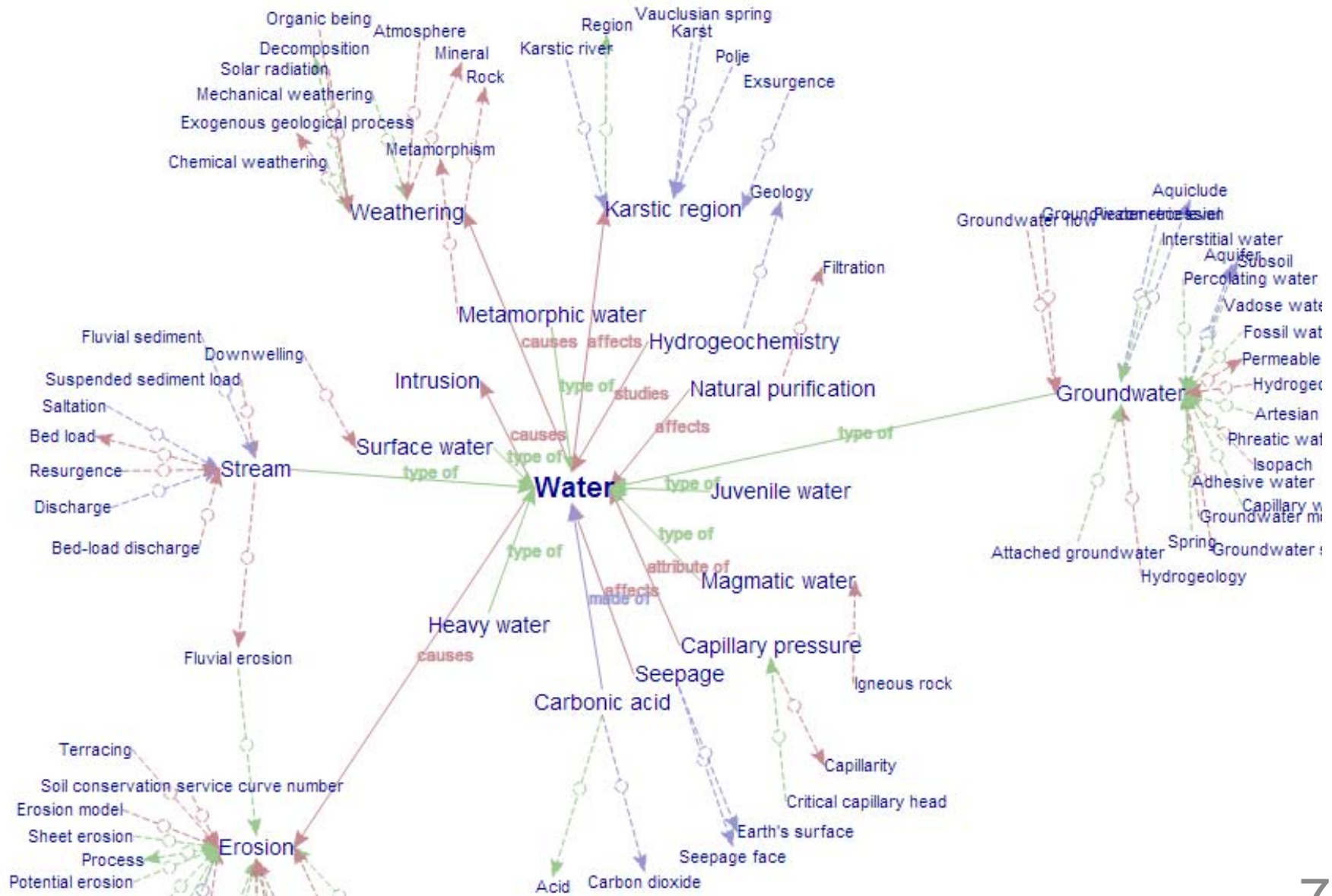
*water causes erosion*  
*water part\_of concrete*



# WATER in Civil Engineering



# WATER in Geology



# Compartir y enlazar el conocimiento medioambiental

## QUÉ

Integrar EcoLexicon en la web de datos

## POR QUÉ

Incrementar la interoperabilidad entre recursos similares (terminológicos, medio ambiente...)

## CÓMO

Tecnologías de la web semántica (conversión de EcoLexicon a RDF)

Open Data

Linked Data

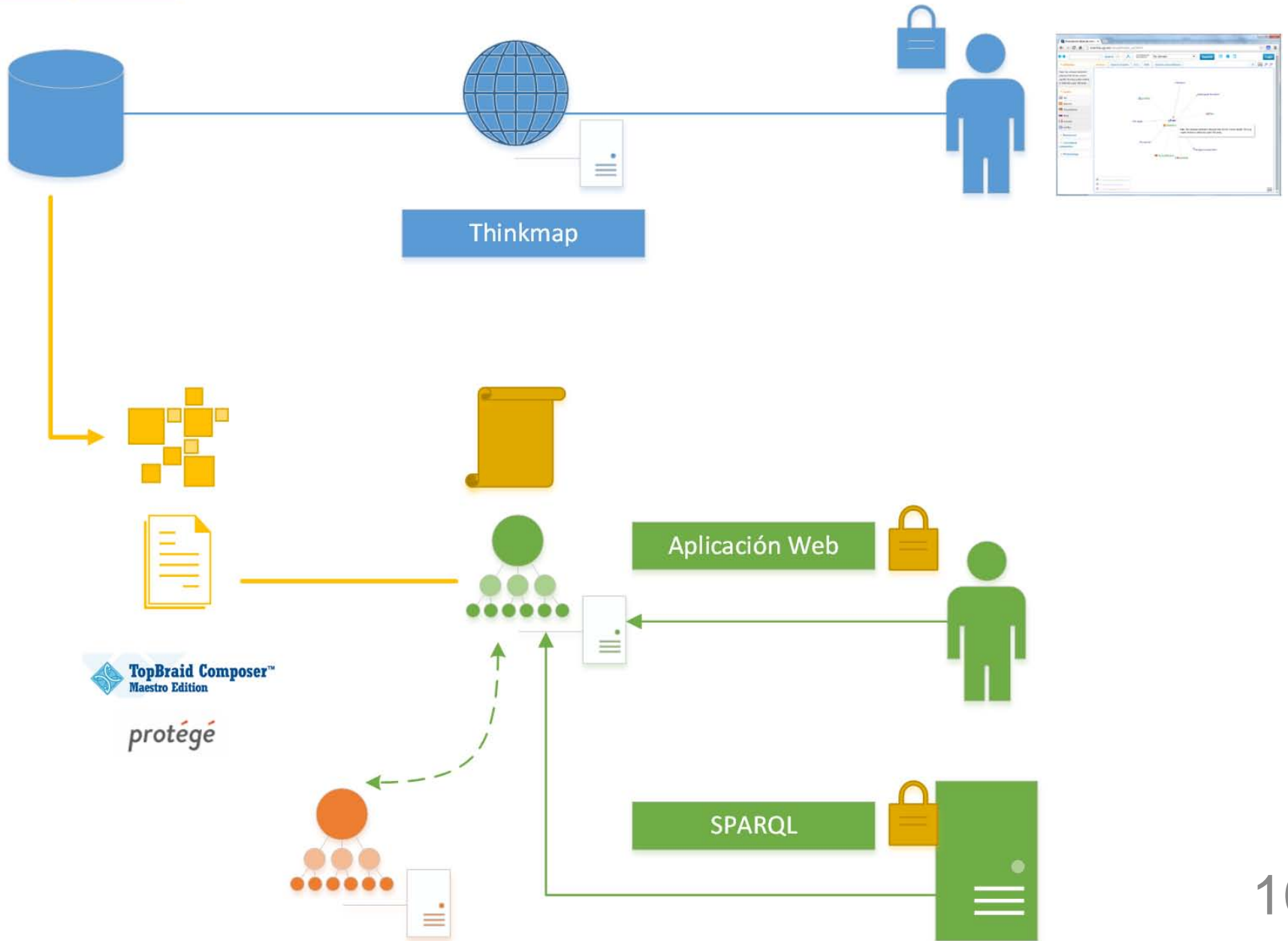
## DÓNDE

Linguistic linked open data cloud





CONCEPTOS		
id	concepto	definición
32	Acreción	...



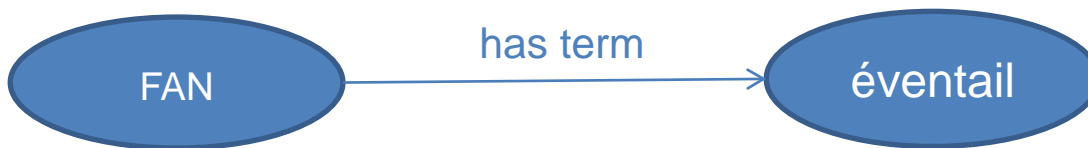
# Conversión a RDF



```
http://manila.ugr.es/r/ecolexicon#ABANICO
```

```
http://manila.ugr.es/r/ecolexicon#madeOf
```

```
http://manila.ugr.es/r/ecolexicon#SEDIMENTO_DETRITICO .
```

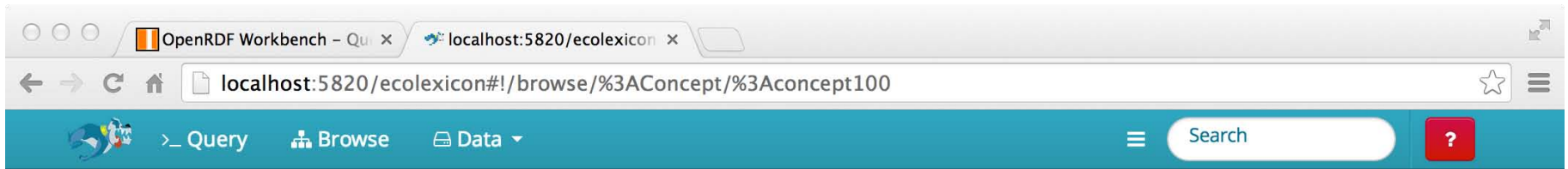


```
http://manila.ugr.es/r/ecolexicon#ABANICO
```

```
http://manila.ugr.es/r/ecolexicon#hasAssociatedTerm
```

```
http://manila.ugr.es/r/ecolexicon#fan .
```

# Triplestore



## oscillatory wave

**Concept** **NamedIndividual**

### label

oscillatory wave **en**  
ONDA OSCILATORIA **es**

### has definition

wave composed of individual particles, each of which oscillates about a point with little, if any, permanent change in position. en

onda en la que cada partícula individual oscila alrededor de un punto, con un desplazamiento en la dirección de traslación de la onda muy pequeño o no permanente. es

### has conceptual category

Physical Agent  
Movement

### has associated resource

Onda Oscilatoria

### has main term

oszillierende Welle  
κύμα ταλάντωσης  
onda oscilatoria  
oscillatory wave

Edit

Delete

Tree Browser

### type of

wave

# Enlazado de EcoLexicon con otros recursos



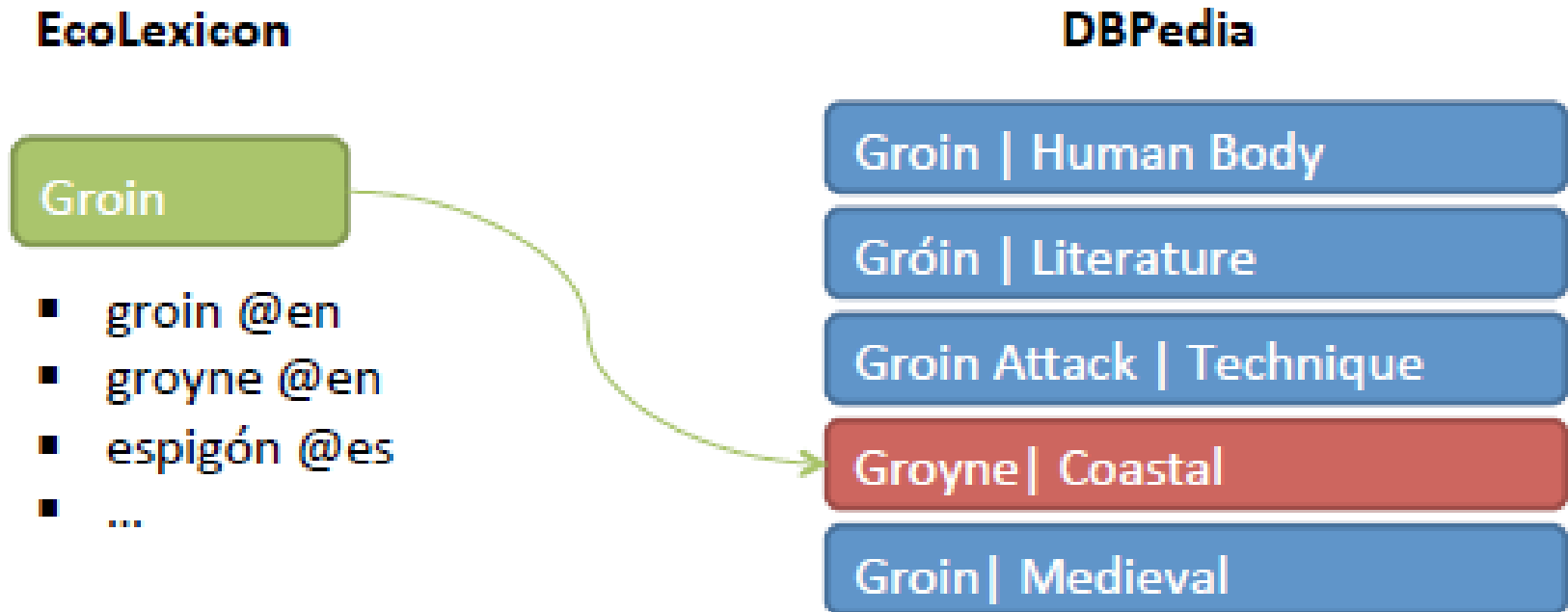
<http://manila.ugr.es/r/ecolexicon#FAN>

<http://www.w3.org/2004/02/skos/core#narrowMatch>

[http://en.dbpedia.org/resource/Alluvial\\_fan.](http://en.dbpedia.org/resource/Alluvial_fan)

## Procedimiento manual vs semiautomático

# Polisemia y desambiguación



## Explotar la información contenida en EcoLexicon:

- Variantes terminológicas
- Equivalencias interlingüísticas
- Información conceptual/contextual

# Polisemia interlingüística: contexto y propiedades textuales de la DBpedia

## Accretion\_(atmosphere)

dcterms:subject

- category:Snow\_or\_ice\_weather\_phenomena
- category:Water\_ice

rdfs:comment

- Accretion is an atmospheric science term for when an ice crystal or snowflake hits a supercooled liquid droplet, which then freeze together. This increases the size of the water particle. A common example of this that is visible to people is graupel.

## Accretion\_(geology)

dcterms:subject

- category:Plate\_tectonics

rdfs:comment

- Accretion is a process by which material is added to a tectonic plate or a landmass. This material may be sediment, volcanic arcs, seamounts or other igneous features.

## Accretion\_(coastal management)

dbpedia-owl:abstract

- Accretion is the process of coastal sediment returning to the visible portion of a beach or foreshore following a submersion event. A sustainable beach or foreshore often goes through a cycle of submersion during rough weather, then accretion during calmer periods. If a coastline is not in a healthy sustainable state, then erosion can be more serious and accretion does not fully restore the original volume of the visible beach or foreshore leading to permanent beach.

dcterms:subject

- category:Geological\_processes
- category:Coastal\_geography
- category:Physical\_oceanography

# Algoritmo de enlazado

**Algorithm:** Link concepts in ECOLEXICON with DBPEDIA entities


1. Get all ECOLEXICON concepts  $C = \{c_1, \dots, c_i, \dots, c_n\}$
2. For each  $c_i$  in  $C$ 
  - 2.1. Search in DBPEDIA resources  $D = \{d_1, \dots, d_j, \dots, d_m\}$  such that  $c_i.rdfs:label == d_j.rdfs:label$  (exact match @en)
  - 2.2. if  $|D| == 0$   
# No match, end procedure
  - 2.3. if  $|D| == 1$   
# Match  
 $R = \{d_1\}$
  - 2.4. if  $|D| > 1$   
# Disambiguation required
    - 2.4.1. Search in ECOLEXICON  $T^{c_i} = \{t_1, \dots, t_k, \dots, t_p\}$  such that  $t_k$  is a term of  $c_i$  (any language)
    - 2.4.2. For each  $d_j$  in  $D$ 
      - 2.4.2.1. Search in DBPEDIA  $L^{d_j} = \{l_1^{d_j}, \dots, l_i^{d_j}, \dots, l_q^{d_j}\}$  such that  $l_i^{d_j} == d_j.owl:sameAs$  (any language)
    - 2.4.3. Select  $D^{\max} = \{d_j\}$  such that  $\max(|T^{c_i} \text{ intersection } L_{d_j}|)$
    - 2.4.4. if  $|D^{\max}| == 1$   
# Match  
 $R = \{d_j\}$
    - 2.4.5. if  $|D^{\max}| > 0$   
# Disambiguation required
      - 2.4.5.1.  $T_{c_i} = T_{c_i} \cup T_{c_i}^*$  such that  $c_i^*$  is associated to  $c_i$  in ECOLEXICON and lemmatized
      - 2.4.5.2. For each  $d_j$  in  $D^{\max}$ 
        - 2.4.5.2.1.  $X^{d_j} = \{x_1, \dots, x_s, \dots, x_t\}$  such that  $(x_s == d_j'.rdfs:comment \parallel x_s == d_j'.dbpedia-owl:abstract)$  and lemmatized
      - 2.4.5.3. Select  $D^{\max\_text} = \{d_j\}$  such that  $\max(|T_i \text{ intersection } X^{d_j}|)$
      - 2.4.5.4.  $R = D^{\max\_text}$



# EcoLexicon-LD










Ecolexicon-LD navigator :: ABANICO

< > ↻ 🏠  🔍

<Options> 

## ABANICO

🔍 Search < >

rdfs:label	<a href="#">ABANICO</a>  <a href="#">Fan</a> 	rdf:typeOf	<a href="#">Concepto</a>
:definition	fan-shaped sediment deposit that forms where rapidly flowing water enters a relatively open flat area.  formación geológica de forma triangular o en abanico constituida por el material detrítico sedimentado que transporta un río. 		
skos:narrower	<a href="#">ABANICO FLUVIAL</a>		
skos:broader	<a href="#">FORMACIÓN GEOLÓGICA ENTIDAD</a>		
:terms	<a href="#">abanico</a>  <a href="#">fan</a>  <a href="#">Schuttfächer</a>  <a href="#">éventail</a> 	:resources	<a href="#">Badwater alluvial fan</a> <a href="#">Abanico aluvial de un torrente en Fuente Dé</a>
rdfs:seeAlso	<a href="#">dbpedia:Alluvial_fan</a>  An alluvial fan is a fan- or cone-shaped deposit of <a href="#">sediment</a> crossed and built up by <a href="#">streams</a> . If a fan is built up by debris flows it is properly called a debris cone or <a href="#">colluvial fan</a> . These flows come from a single point source at the apex of the fan, and over time move to occupy many positions on the fan surface. Fans are typically found where a <a href="#">canyon</a> draining from mountainous terrain emerges out onto a flatter plain, and especially along fault-bounded mountain fronts.		

# Validación manual

Concept

## fan

<http://manila.ugr.es/r/ecolexicon#concept907>

### linked to

<http://dbpedia.org/page/Fan> 62.5

samaAs DBPEDIA Created by Test User Test on Fri 05 Dec 2014, 02:08 PM

0 2

<http://dbpedia.org/page/Fan>

[http://dbpedia.org/resource/Alluvial\\_fan](http://dbpedia.org/resource/Alluvial_fan) 70.0

<http://www.freebase.com/m/01klqw> 95.0

<http://www.merriam-webster.com/dictionary/alluvial%20fan> 50.0

0 0

6 2

1 1

0 1

Add link

# Evaluación y confianza

<http://manila.ugr.es/r/ecolexicon#concept907>

<http://www.w3.org/2000/01/rdf-schema#seeAlso>

<http://manila.ugr.es/r/ecolexicon#concept907>

## evaluations

70.0



**Juan Gómez Romero** assessment was **80.0**

Sat 22 Nov 2014, 01:41 PM



**Test User Test** assessment was **60.0**

Fri 05 Dec 2014, 11:11 AM



Set confidence to:

50.0

Cancel

Send

Gracias por vuestra atención