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## Semantics of Biodiversity: from Thesaurus to Linked Open Data (LOD)

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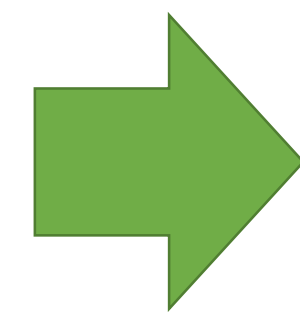
# Semantics of Biodiversity from Thesaurus to Linked Open Data (LOD)

<https://www.inist.fr> - <https://www.semandiv.cnrs.fr>

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## Observations

Interdisciplinarity and semantic heterogeneity of Biodiversity data disseminated among many databases



## Research requirements

Harmonized and structured terminological resources to retrieve and share data  
Controlled vocabulary & semantic standards

## Objectives

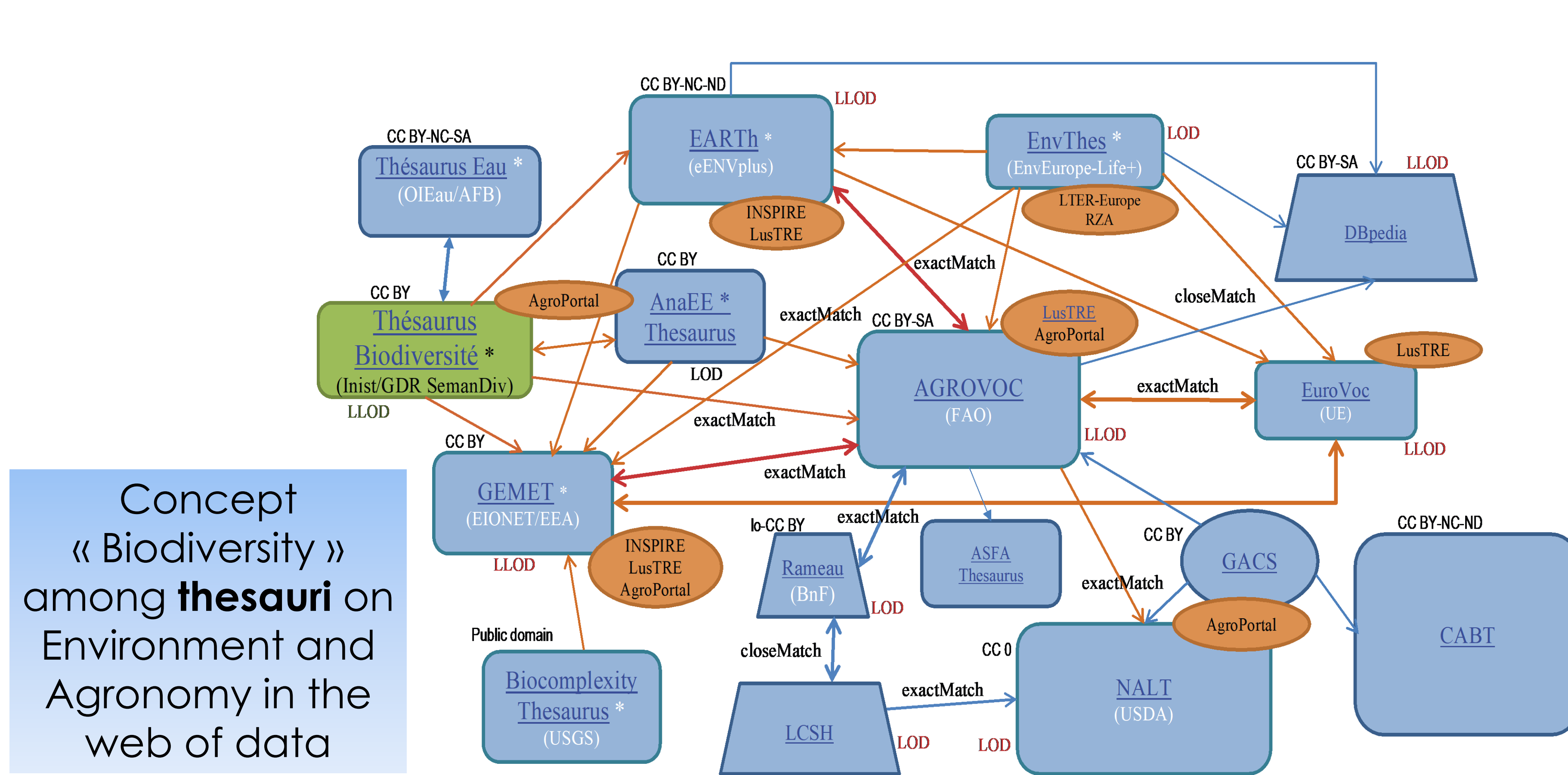
Interoperability of databases in ecology/biodiversity using :

- thesauri & domain ontologies
- metadata enriched with semantic relationships to describe and connect concepts and perform reasoning on data



## The steps of the project

Partnership initiated in 2014 between INIST-CNRS and various research organizations on the interoperability of data in ecology (CNRS/CEFE, INRA/AnaEE, FRB/CESAB)



Concept « Biodiversity » among thesauri on Environment and Agronomy in the web of data



### 3rd STEP

Creation of a research group on biodiversity semantics – GDR SemanDiv –

38 participants from 17 French and international research structures (CNRS, INRA, IRD, IRSTEA, MNHN, GBIF) conceptual basis to stimulate research in ecoinformatics

reviewing of definitions; ontologization of thesaurus; mappings to achieve data integration & reusability

### 1st STEP

Comprehensive survey of thesauri in Environmental Sciences including European infrastructures  
Complementarity and alignments in the LOD cloud  
→ lack of thesaurus dedicated to Biodiversity

### 2nd STEP

Development of the Biodiversity Thesaurus  
- bilingual and polyhierarchical  
615 concepts  
- compliant with semantic web (SKOS/RDF) and ISO standards  
- aligned & open-access (Loterre, AgroPortal)

2014

2015-2016

2017-2020