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**"Environmental thesauri :  
comparisons and alignments.  
Project for the constitution of a  
thesaurus of Biodiversity  
serving research data"**

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## Abstract

Researchers and computer scientists from the CEFÉ, the CESAB and the IMBE have been working together in the framework of the CNRS databases network (rBDD) in the 'Interoperability' group and have organized several workshops with information specialists from the INIST since 2014 around a common project : "Towards a thesaurus of biodiversity".

Biodiversity data are characterized by their interdisciplinarity and semantic heterogeneity. They are disseminated in many databases without concerted harmonization of their metadata.

There have been various initiatives aimed at creating dedicated environmental thesauri, particularly at European level. Most comply with the formats and standards of the semantic web/web of data, but none focus on the theme of "biodiversity".

As a first step, we conducted a survey of the existing thesauri in the field of the Environment which are semantically interoperable (SKOS/RDF) and have set up alignments between themselves in the Linked Open Data (LOD) through permanently identified concepts (URI).

We selected some European or freely accessible multilingual thesauri which are already in a phase of linking together (European programme LusTRE, collaborative project GACS) or already comply with the themes of the INSPIRE Directive.

The following steps of our work will be to :

- ▶ Refocus the topic based on top-concepts directly related to biodiversity by using these international thesauri and highlighting their complementarities
- ▶ Use the multilingual terminological reservoir employed to index the CNRS Pascal database (rich in synonyms and variants which are exploitable for data mining purposes)
- ▶ Redefine more accurate concepts, in a perspective of metadata enrichment and optimize their semantic relationships (hierarchies, associations, synonymies, equivalences)
- ▶ Propose a draft bilingual thesaurus (approx. 500 concepts) in an interoperable SKOS format with definitions submitted to researchers
- ▶ Make the link between this top-down approach (starting from the more generic concepts) and the bottom-up approach which starts from the more specialized vocabularies of research data bases
- ▶ Operate alignments between the concepts of the Biodiversity thesaurus and the main thesauri which could serve as bridges towards other terminological resources.

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