Interopérabilité sémantique des données de la recherche

Utilisation d'EarthPortal, un catalogue de ressources sémantiques pour le Système Terre et l'environnement

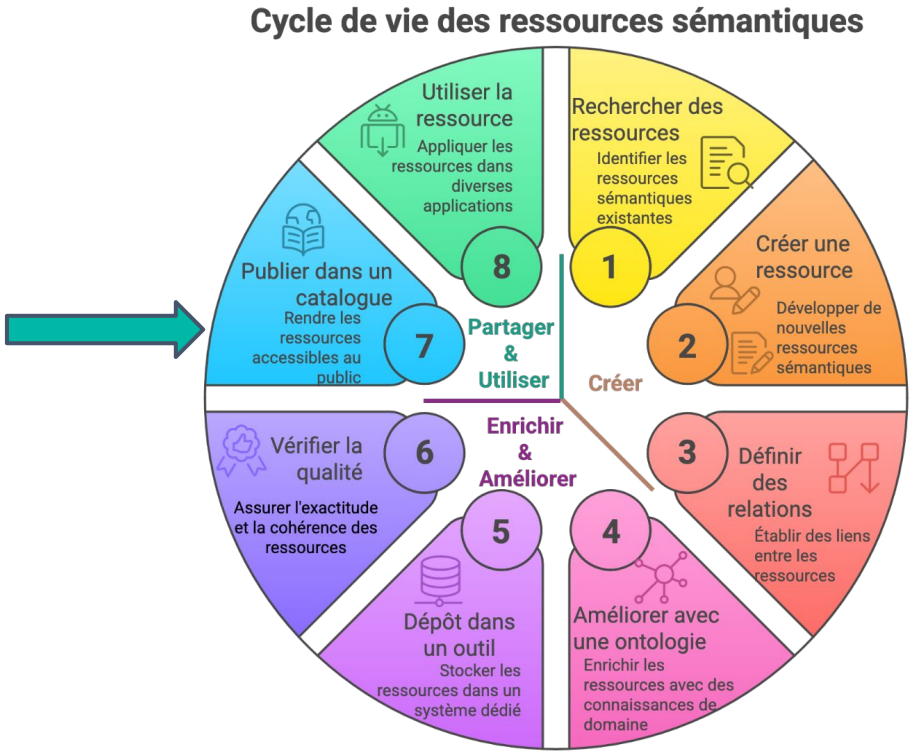
Christelle PIERKOT, Hakim Allem

Ressources Sémantiques : Cycle de vie, Pratiques & Usages

- **Différents niveaux de complexité** : Terminologie, Thésaurus, Ontologies
- **Diversité des pratiques de création**
  - Fichiers Excel, Registres, Outils, …

OLS Skosmos UKGovLD VocPrez

- **Peu ou pas de documentation**
- **Diversité des usages**
  - Annoter des (méta)données, créer des KG, extraction de la connaissances, …
- **Diversité du stockage**
  - Disque dur, Git, TripleStore, …
- **Peu ou pas de partage**



Ressources sémantiques du Système Terre : Etat des lieux

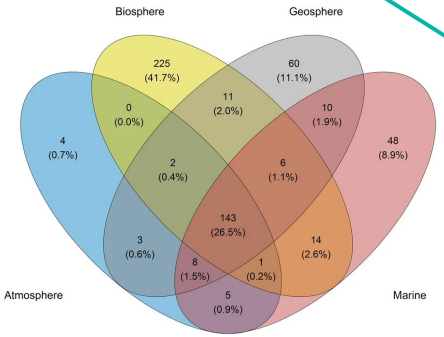
Data Terra

Pôles de données, EaSy Data & Gaia Data

SA Infrastructures Européennes

ACTRIS, EPOS, ARGO, Seadatanet, …

Communautés variées
Recouvrement



Credits : Di Muri, C., Pulieri, M., Raho, D. et al. Assessing semantic interoperability in environmental sciences: variety of approaches and semantic artefacts. Sci Data 11, 1055 (2024). https://doi.org/10.1038/s41597-024-03669-3

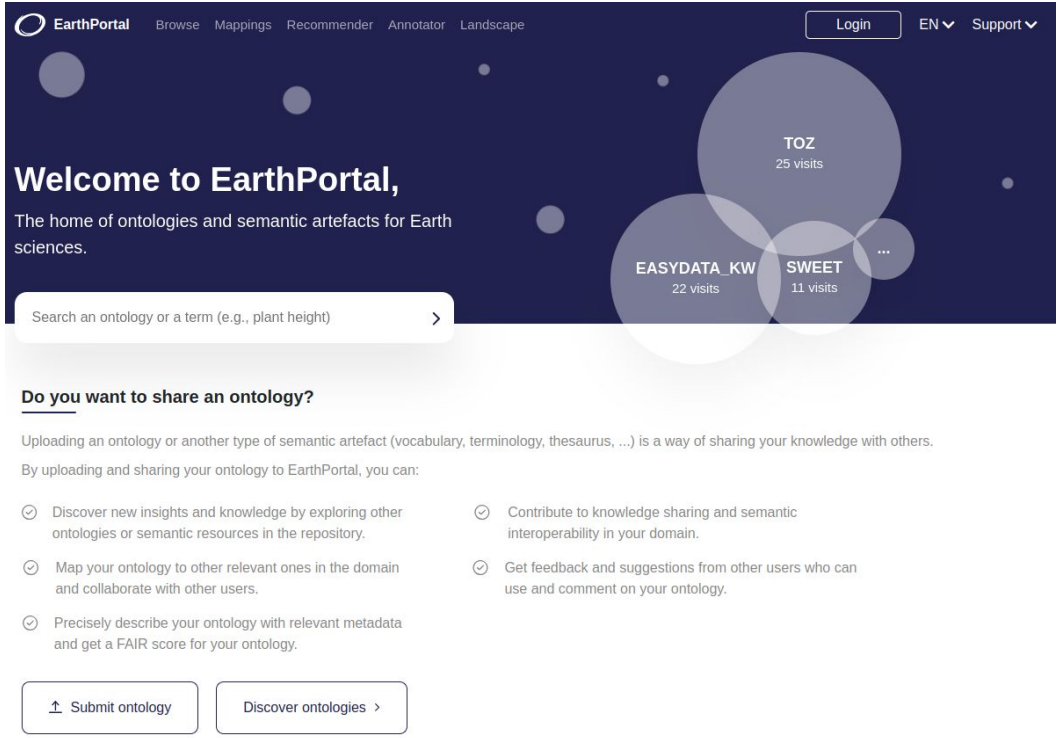
Autres SA utilisés par les communautés :

SWEET, GCMD, SOSA, OGC Rainbow, I-Adopt, …

=> Besoin d'un catalogue pour la découverte, le partage et la réutilisation

Le catalogue des ressources Sémantiques du Système Terre

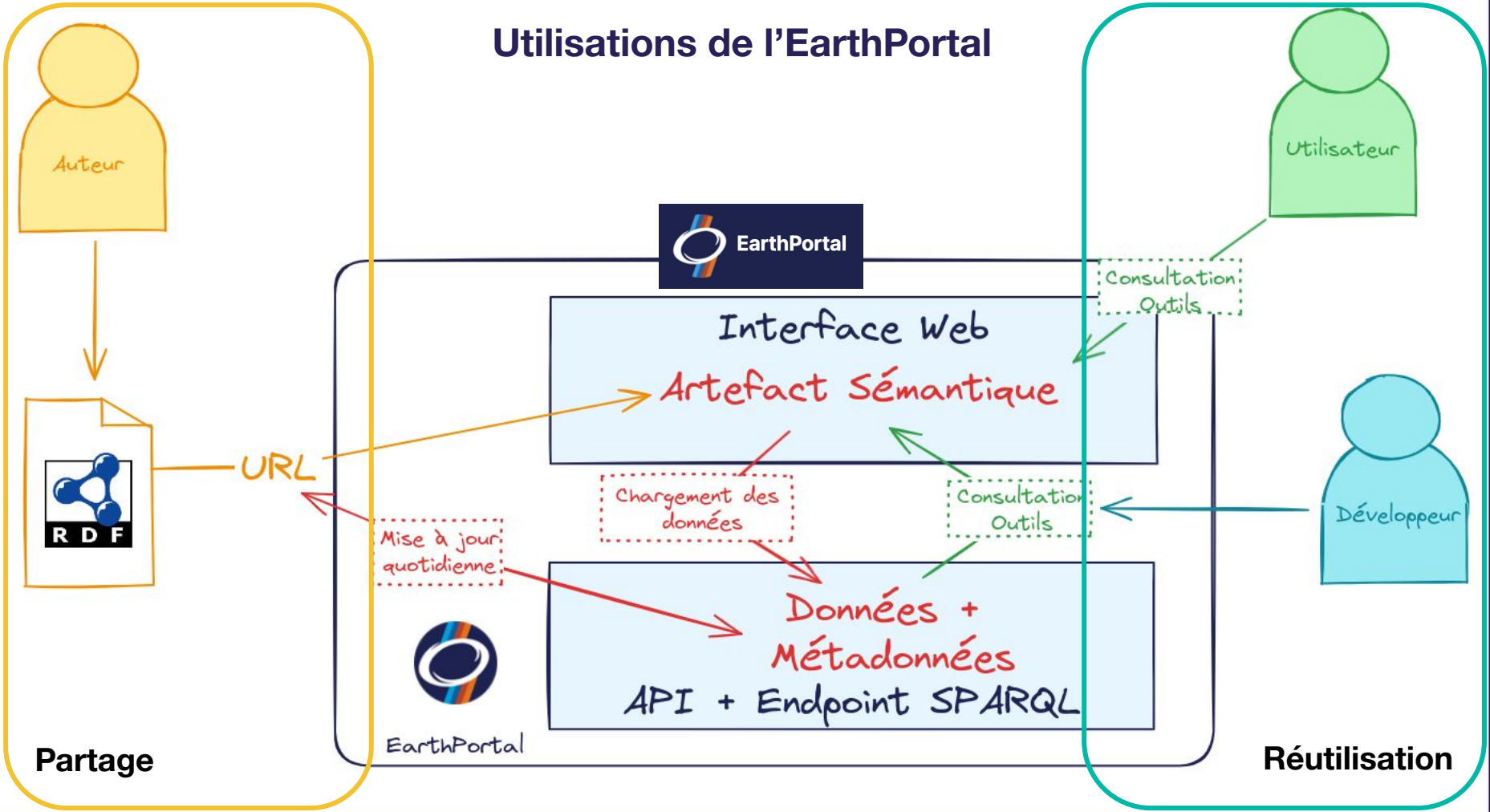
EarthPortal, le catalogue d'artefacts sémantiques du Système Terre



Interface https://earthportal.eu
REST API: https://data.earthportal.eu
SPARQL: https://sparql.earthportal.eu/test

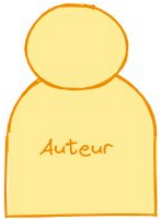
- *Publication, consultation et téléchargement des SAs*
- *Gestion de versions*
- *Annotation, recommendation*
- *Mappings*
- *Notes*
- *Projets*

Utilisations de l'EarthPortal



Partager ses ressources sémantiques dans le EarthPortal

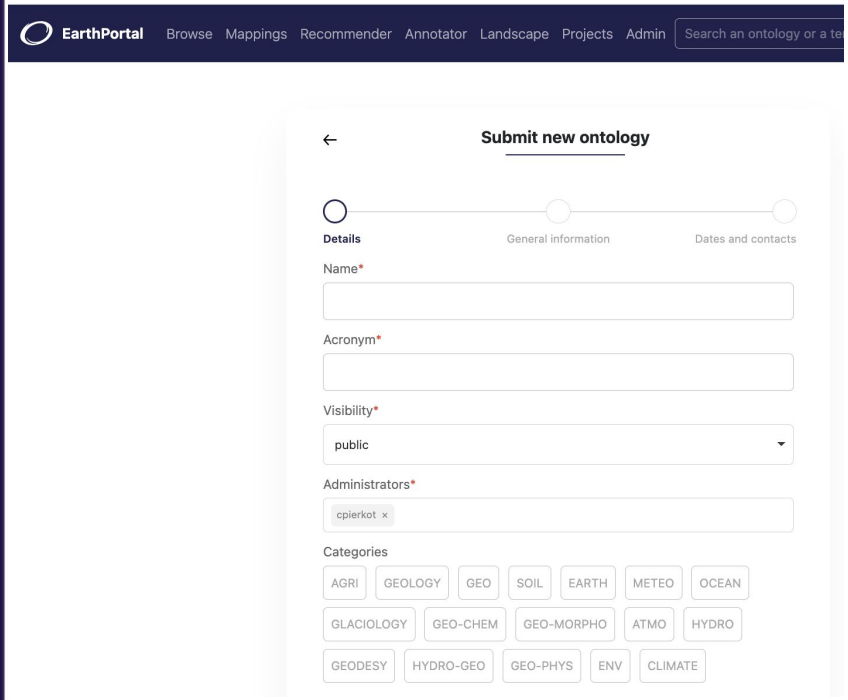
En tant qu'auteur, je souhaite partager ma ressource sémantique.

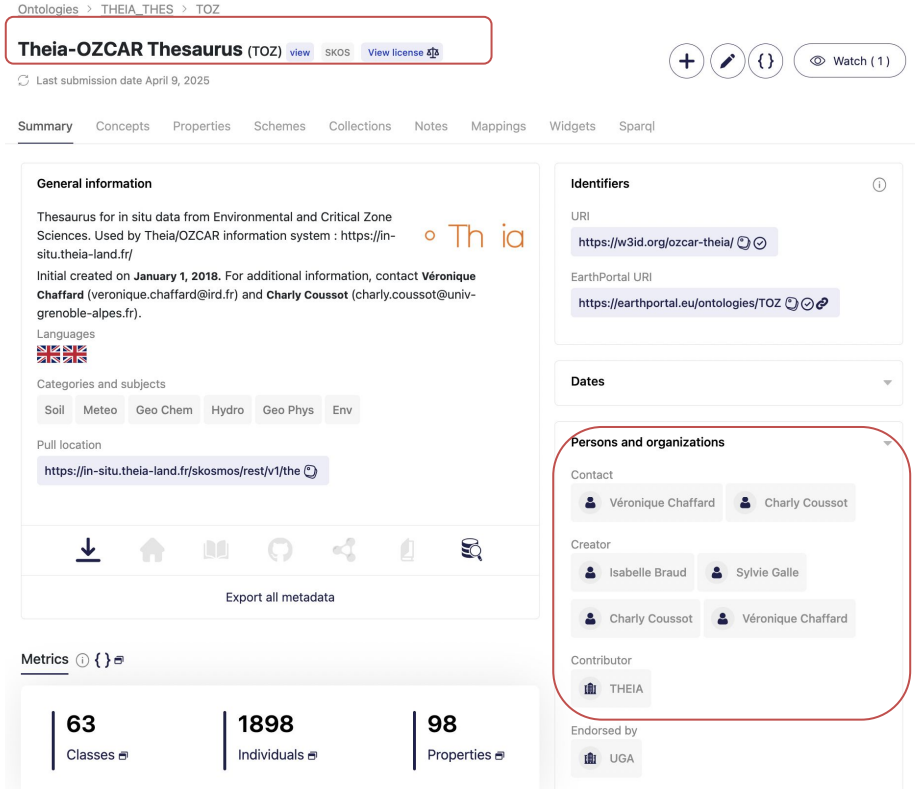


Publier dans un catalogue
Rendre les ressources accessibles au public
7

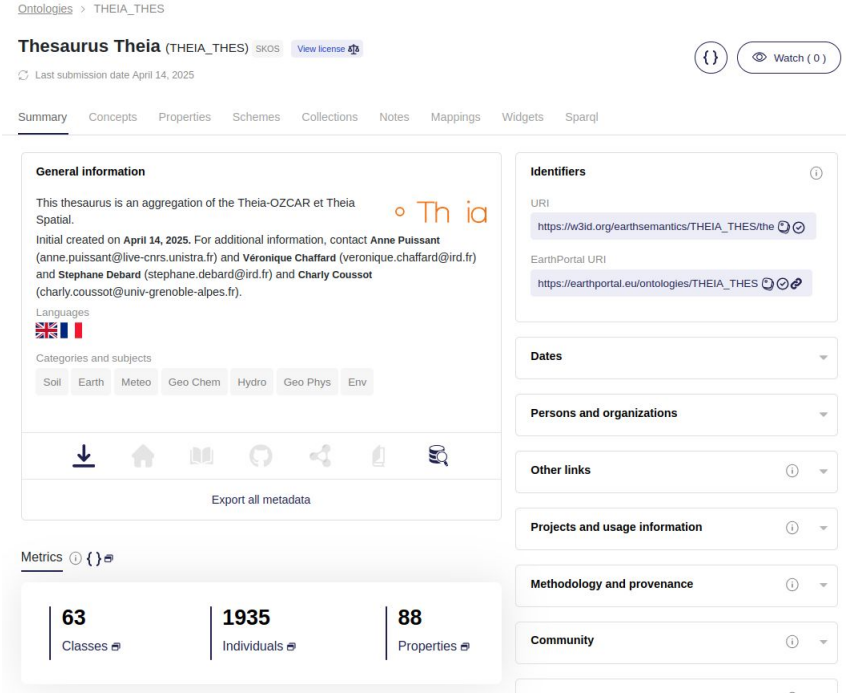
Formulaire de soumission et exemple de résultat du thésaurus Theia-Ozcar

Auteur



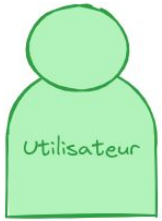


Regroupement fonctionnel des thésaurus, pour une meilleure visibilité



Interface Web EarthPortal

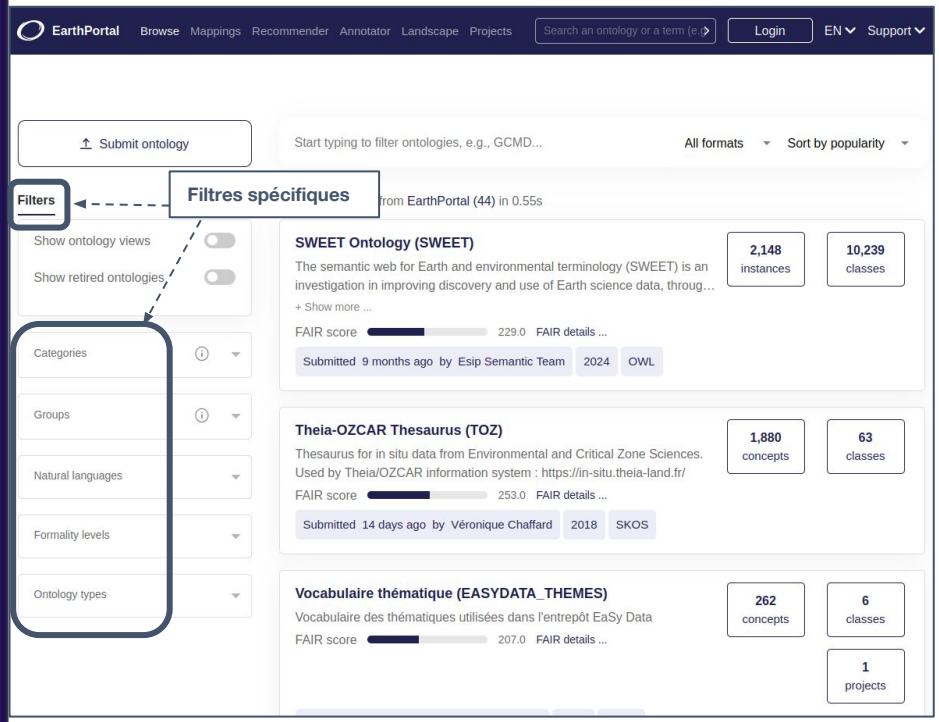
En tant qu'utilisateur, je souhaite trouver et utiliser des ressources sémantiques

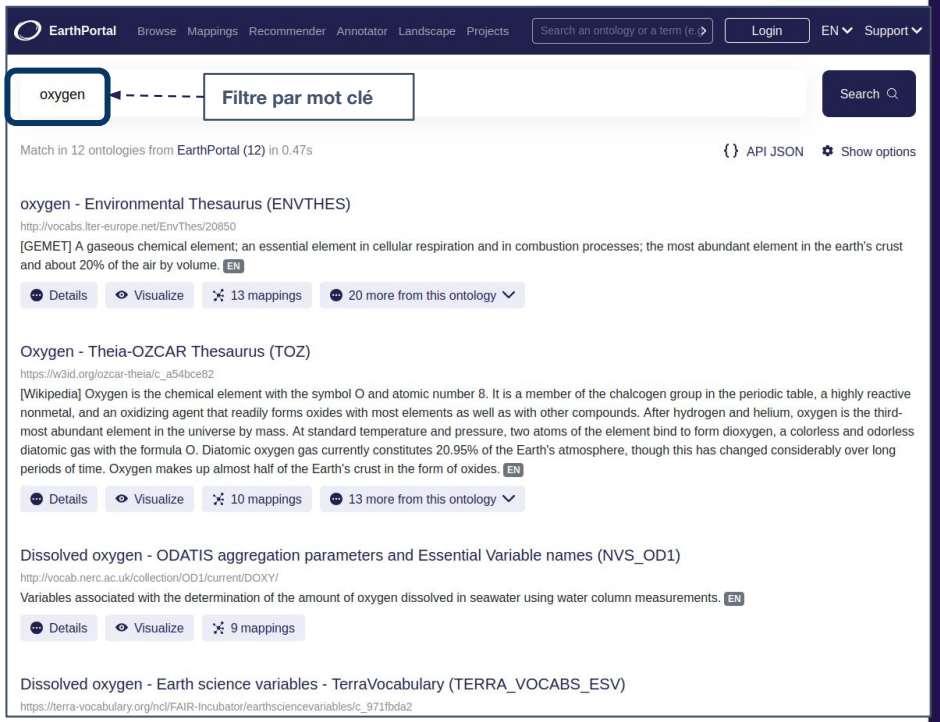


Interface de Recherche

Rechercher des ressources
Identifier les ressources sémantiques existantes
1

Utilisateur

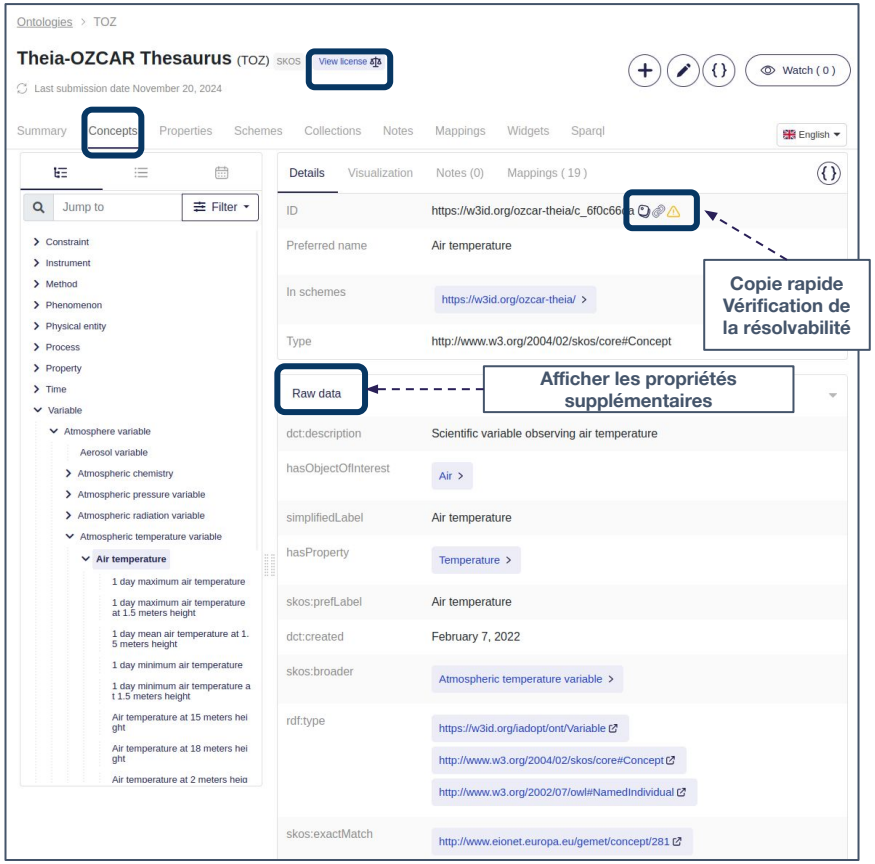


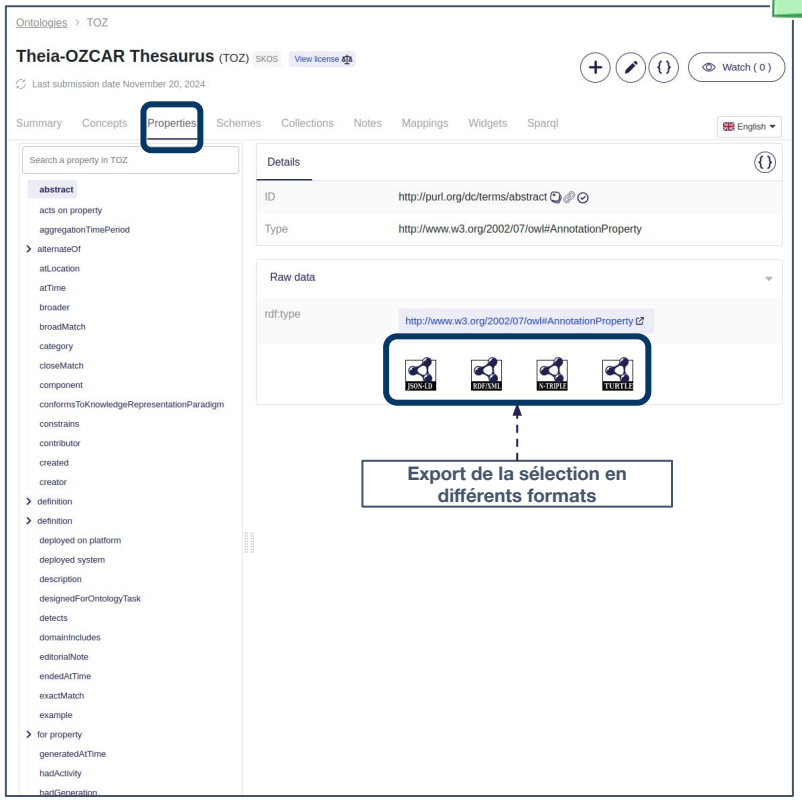


Rechercher des ressources
Identifier les ressources sémantiques existantes
1

Consultation du contenu de l'artefact sémantique

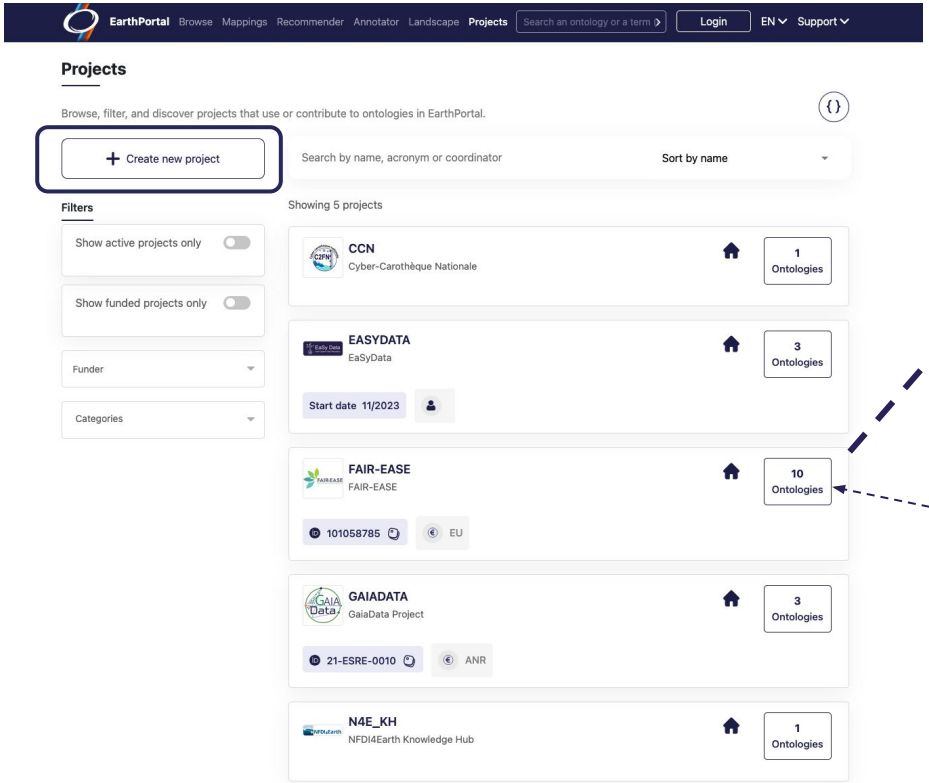
Utilisateur

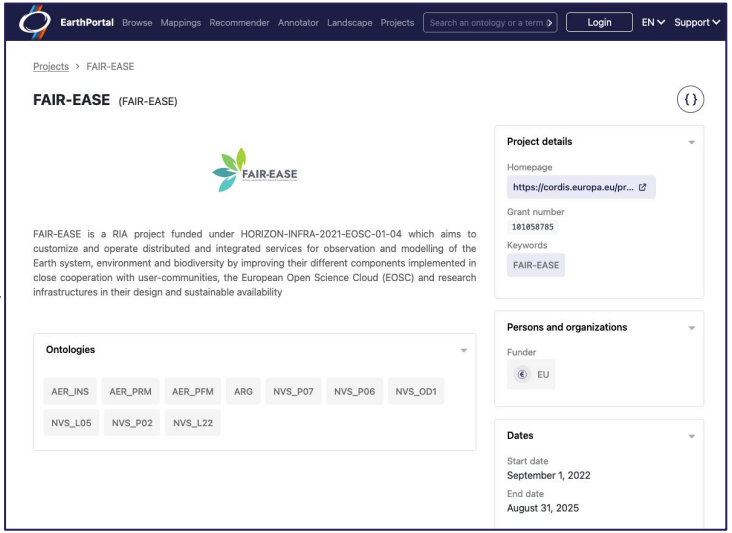


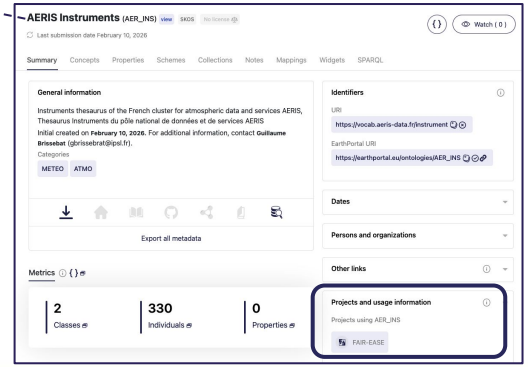


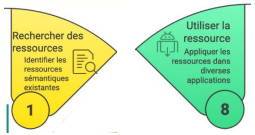
Rechercher des ressources
Identifier les ressources sémantiques existantes
1

Identifier les projets qui utilisent les ressources sémantiques









Consultation, Téléchargement, Gestion de versions

Ontologies › TOZ

Theia-OZCAR Thesaurus (TOZ) SKOS View license

Last submission date November 20, 2024

Watch (0)

Métadonnées descriptives

Summary | Concepts | Properties | Schemes | Collections | Notes | Mappings | Widgets | Sparql

General information

Thesaurus for in situ data from Environmental and Critical Zone Sciences. Used by Theia/OZCAR information system : https://in-situ.theia-land.fr/

Initial created on **January 1, 2018.** For additional information, contact **Véronique Chaffard** (veronique.chaffard@ird.fr) and **Charly Coussot** (charly.coussot@univ-grenoble-alpes.fr).

Languages

Categories and subjects: Soil | Meteo | Geo Chem | Hydro | Geo Phys | Env

Pull location: https://in-situ.theia-land.fr/skosmos/rest/v1/theia_

Export all metadata

Identifiers

URI: https://w3id.org/ozcar-theia/

EarthPortal URI: https://earthportal.eu/ontologies/TOZ

Dates

Persons and organizations

Other links

Projects and usage information

Methodology and provenance

Community

Content

Metrics

63	1880	98
Classes	Individuals	Properties

Submissions

Dernière version

ID	Version	Modified	Submitted	Actions
8	unknown	January 22, 2024	November 20, 2024	Download
7	unknown	January 22, 2024	June 25, 2024	Download
6	unknown	January 22, 2024	June 22, 2024	Download
5	unknown		June 21, 2024	Download
4	unknown		June 12, 2024	Download

more...

Recommandeur & Annotateur

Recommender

Get recommendations for the most relevant ontologies from an excerpt of text or a list of keywords

As the access to Solid Earth data is not facilitated for now, current activities are focused on the development of a new portal/service to evaluate automatically SO2 flux emissions by volcanoes by analysis of satellite observations from the Sentinel-5P/TROPOMI sensor together with ECMWF wind fields. Several publications are also in preparation for 1- the presentation of the new **service** (SO2 flux calculator) and its theoretical **framework**, 2- the scientific applications of these new services, in particular the analysis of specific eruptions and their impacts on the atmosphere (air quality, climate) using the VOLCPLUME webportal (under further development).

Options

Input: (•) Text ( ) Keywords

Output: (•) Ontologies ( ) Ontology sets

⚙ Show advanced options

✎ Edit

Recommended ontologies

Ontology	Final score	Coverage score	Acceptance score	Detail score	Specialization score	Annotations
SWEET	56.0%	74.5%	0.0%	0.0%	100.0%	19 annotations
GEMET	26.3%	35.7%	0.0%	0.0%	44.3%	9 annotations
FMT	25.4%	29.9%	0.0%	0.0%	59.9%	5 annotations
EASY_DATA_VOCAB	23.8%	29.9%	0.0%	0.0%	48.8%	5 annotations
GCMD	23.8%	26.8%	0.0%	0.0%	57.0%	4 annotations
ENVTHES	22.1%	26.1%	0.0%	0.0%	51.5%	6 annotations
EASYDATA_KW	16.2%	19.9%	0.0%	0.0%	28.8%	4 annotations
TOZ	16.2%	19.9%	0.0%	0.0%	24.1%	6 annotations
TERRA_VOCAB	9.5%	16.6%	0.0%	0.0%	29.1%	3 annotations
TERRA_VOCABS_EF	9.5%	16.6%	0.0%	0.0%	29.1%	3 annotations

Annotator

Obtenez des annotations pour le texte avec des classes d'ontologie

Within the study of the urban heat island UHI in Echirolles and Grenoble France two temperature measurement networks have been deployed The aim is to measure the temperature gradients associated with the UHI in summer The ADEMEfunded CASSANDRE research program analyzes and processes these observations to study the vulnerability of inhabitants to heat waves and more generally to summer heat stress

Insérer un texte d'exemple

Options

✓ Mot entier seulement | Correspondance uniquement avec le plus long | ✓ Inclure les mappings | Exclure les chiffres | Exclure les synonymes

Select ontologies

Effacer la sélection | Sélection avancée des ontologies

⚙ Afficher les options avancées

Obtenir des annotations

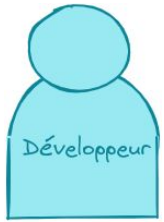
Annotations

Résultats totaux 31 (direct: 31 / parents: 0)

Classe	Ontologie	Contexte
ontologies/AER_PRM/classes/htt...	AERIS Parameters	... the urban **heat** island UHI in ... ... inhabitants to **heat** waves and more ... ... to summer **heat** stress ...
ontologies/GEMET/classes/http...	General Multilingual Environmental Thesaurus	... urban heat **island** UHI in Echirolles ...
ontologies/SWEET/classes/http...	SWEET Ontology	... urban heat **island** UHI in Echirolles ...
ontologies/ACTRIS_VOCAB/class...	ACTRIS Vocabulary	... France two **temperature** measurement networks have ... ... measure the **temperature** gradients associated with ...
ontologies/GEMET/classes/http...	General Multilingual Environmental Thesaurus	... France two **temperature** measurement networks have ... ... measure the **temperature** gradients associated with ...

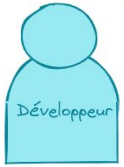
API EarthPortal

En tant que développeur, je souhaite intégrer EarthPortal dans des applications tierces pour pouvoir utiliser les ressources sémantiques



Utiliser la ressource
Appliquer les ressources dans diverses applications
8

API { }




```
{
   acronym: "earthportal",
   title: "",
   color: "",
   description: "",
   logo: "",
   numberOfArtefacts: 45,
   federated_portals: { },
   fundedBy: { },
   @id: https://data.earthportal.eu/,
   @type: http://www.isibang.ac.in/ns/mod#Semanticartefactcatalogue,
 - links: {
      agents: https://data.earthportal.eu/agents,
      annotator: https://data.earthportal.eu/annotator,
      categories: https://data.earthportal.eu/categories,
      groups: https://data.earthportal.eu/groups,
      documentation: https://data.earthportal.eu/documentation,
      mappings: https://data.earthportal.eu/mappings,
      metrics: https://data.earthportal.eu/metrics,
      notes: https://data.earthportal.eu/notes,
      ontologies: https://data.earthportal.eu/ontologies,
      ontologies_full: https://data.earthportal.eu/ontologies_full,
      analytics: https://data.earthportal.eu/analytics,
      submissions: https://data.earthportal.eu/submissions,
      projects: https://data.earthportal.eu/projects,
      property_search: https://data.earthportal.eu/property_search,
      provisional_classes: https://data.earthportal.eu/provisional_classes,
      provisional_relations: https://data.earthportal.eu/provisional_relations,
      recommender: https://data.earthportal.eu/recommender,
      recommender_v1: https://data.earthportal.eu/recommender_v1,
      replies: https://data.earthportal.eu/replies,
      reviews: https://data.earthportal.eu/reviews,
      search: https://data.earthportal.eu/search,
      slices: https://data.earthportal.eu/slices,
      submission_metadata: https://data.earthportal.eu/submission_metadata,
      ontology_metadata: https://data.earthportal.eu/ontology_metadata,
      users: https://data.earthportal.eu/users,
    - @context: {
         agents: http://xmlns.com/foaf/0.1/Agent,
         annotator: "",
         categories: http://data.bioontology.org/metadata/Category,
         groups: http://data.bioontology.org/metadata/Group,
         documentation: "",
         mappings: http://data.bioontology.org/metadata/Mapping,
         metrics: http://data.bioontology.org/metadata/Metrics,
         notes: http://data.bioontology.org/metadata/Note,
         ontologies: http://data.bioontology.org/metadata/Ontology,
         ontologies_full: http://data.bioontology.org/metadata/Ontology,
         analytics: "",
         submissions: http://data.bioontology.org/metadata/OntologySubmission,
         projects: http://data.bioontology.org/metadata/Project,
         property_search: "",
         provisional_classes: http://data.bioontology.org/metadata/ProvisionalClass,
```


API Documentation

General Usage

This API is comprised of a set of resources (Ontologies, Classes, etc) and related endpoints (Search, Annotator, Recommender) that are connected together via links, much like webpages. We recommend that you try browsing the API using a web browser (Chrome and Firefox work very well while IE does not) before you start writing code. For more information, please see the documentation on Media Types and Hypermedia Links or view our sample code , available in Java, Python, Ruby and other languages (please email support@bioontology.org if you would like examples in another language).

Common Parameters

Parameter	Possible Values	Description
apikey	{your api key}	An API Key is required to access any API call. It can be provided in three ways: 1. Using the `apikey` query string parameter 2. Providing an `Authorization` header: `Authorization: apikey token=your_apikey` (replace `your_apikey` with your actual key) 3. When using a web browser to explore the API, if you provide your API Key once using method 1, it will be stored in a cookie for subsequent requests. You can override this by providing a different API Key in a new call.
include	all {comma-separated list of attributes, EX: attr1,attr2}	By default, the API will show a subset of the available attributes for a given media type. This behavior can be overridden by providing `include=all` to show all attributes or `include=attribute1,attribute2` to include a specific list. The API is optimized to return the default values, so overriding this can impact the performance of your request. The `include=all` option is most useful for testing in the browser. Use it to identify the set of attributes required and use only those by passing them as a comma separated list, e.g. `include=prefLabel,cui` . The `include` parameter is currently unsupported on Annotator and Recommender endpoints.
format	json jsonp xml	The API returns JSON as the default content type. This can be overridden by using the `format` query string parameter. The API also respects `Accept` header entries, with precedence given to the `format` parameter.

EarthPortal

Exemple d'utilisation

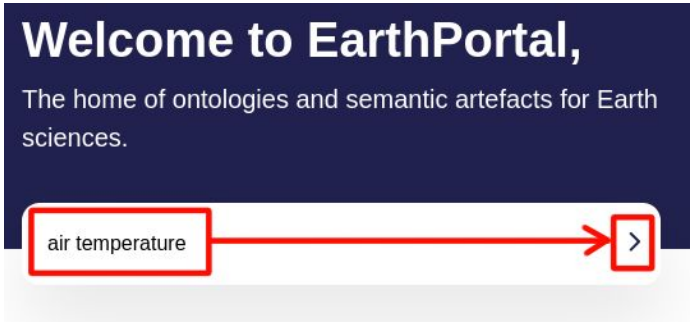
DATA TERRA

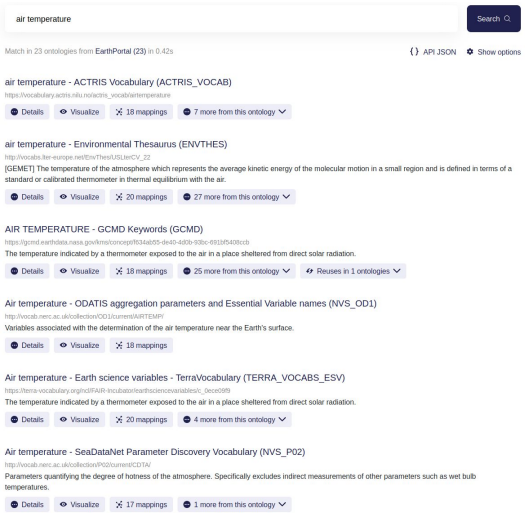
Exemple appliqué

Postulat: J'ai une base de données centralisant les données d'un capteur **multi-paramètres** (salinité, température eau, température air, oxygène, turbidité...). Je veux y associer une **sémantique** à chaque **variable**, comment faire?

Exemple N°1: rechercher la variable Température de l'air

UI





API

https://data.earthportal.eu/search?q=air%20temperature&apikey=my_api_key


```
{
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  pageCount: 13,
  totalCount: 635,
  prevPage: null,
  nextPage: 2,
  links: {
    nextPage: https://data.earthportal.eu/search?q=air+temperature&apikey=c9147279-954f-41bd-b068-da9b0c441288&page=2,
    prevPage: null
  },
  collection: [
    {
      prefLabel: "air temperature",
      obsolete: false,
      matchType: "prefLabel",
      ontologyType: "ONTOLOGY",
      @id: https://vocabulary.actris.nilu.no/actris_vocab/airtemperature,
      @type: http://www.w3.org/2002/07/owl#Class,
      links: {
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        ontology: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB,
        children: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/children,
        parents: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/parents,
        descendants: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/descendants,
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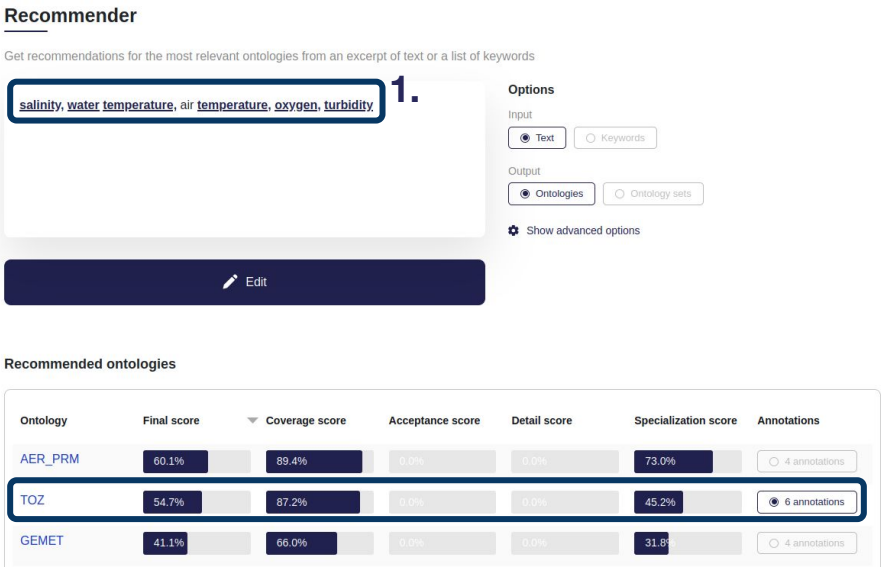
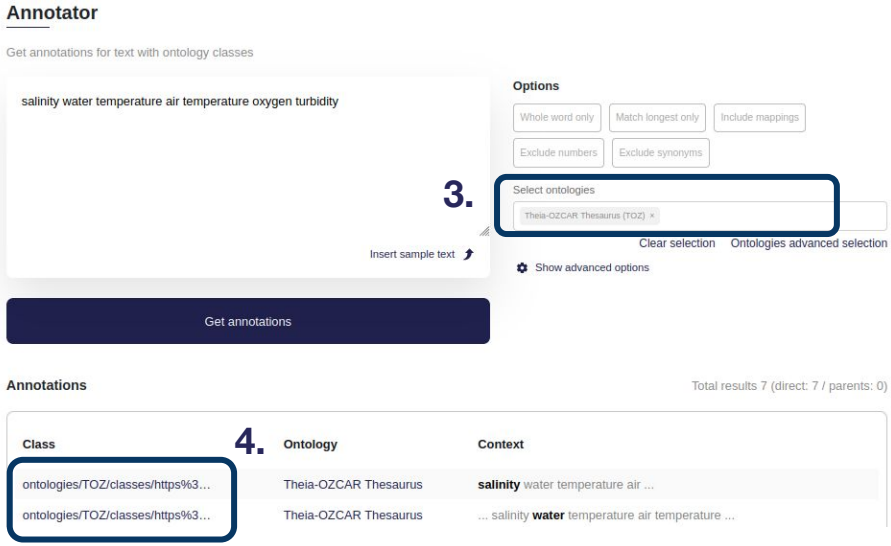
        instances: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/instances,
        tree: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/tree,
        notes: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/notes,
        mappings: https://data.earthportal.eu/ontologies/ACTRIS_VOCAB/classes/https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature/mappings,
        ui: http://earthportal.eu/ontologies/ACTRIS_VOCAB?o=classes&conceptid=https%3A%2F%2Fvocabulary.actris.nilu.no%2Factris_vocab%2Fairtemperature,
        @context: {
          self: http://www.w3.org/2002/07/owl#Class,
          ontology: http://data.bioontology.org/metadata/Ontology,
          children: http://www.w3.org/2002/07/owl#Class,
          parents: http://www.w3.org/2002/07/owl#Class,
          descendants: http://www.w3.org/2002/07/owl#Class,
          ancestors: http://www.w3.org/2002/07/owl#Class,
          instances: http://data.bioontology.org/metadata/Instance,
          tree: http://www.w3.org/2002/07/owl#Class,
          notes: http://data.bioontology.org/metadata/Note,
          mappings: http://data.bioontology.org/metadata/Mapping,
          ui: http://www.w3.org/2002/07/owl#Class
        }
      },
      @context: {
        @vocab: http://data.bioontology.org/metadata/,
        prefLabel: http://www.w3.org/2004/02/skos/core#prefLabel,
        obsolete: http://www.w3.org/2002/07/owl#deprecated,
        @language: "en"
      }
    },
    {
      prefLabel: "air temperature",
      definition: [
        "[GEMET] The temperature of the atmosphere which represents the average kinetic energy of the molecular motion in a small region and is defined in terms of a standard or calibrated thermometer in thermal equilibrium with the air."
      ],
      obsolete: false,
      matchType: "prefLabel",
      ontologyType: "ONTOLOGY",
      @id: http://vocabs.lter-europe.net/EnvThes/USLterCV_22,
      @type: http://www.w3.org/2002/07/owl#Class,
      links: {
        self: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22,
        ontology: https://data.earthportal.eu/ontologies/ENVTHES,
        children: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/children,
        parents: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/parents,
        descendants: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/descendants,
        ancestors: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/ancestors,
        instances: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/instances,
        tree: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/tree,
        notes: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/notes,
        mappings: https://data.earthportal.eu/ontologies/ENVTHES/classes/http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22/mappings,
        ui: http://earthportal.eu/ontologies/ENVTHES?conclasses&conceptid=http%3A%2F%2Fvocabs.lter-europe.net%2FEnvThes%2FUSLterCV_22,
        @context: {
```

Exemple N°2: rechercher un ensemble de variables

- **Comment choisir la ressource la plus adaptée ?**
  - ➔ Je cherche une ressource sémantique qui décrit le plus grand nombre possible de ces variables
    1. J'utilise le Recommandeur pour avoir un aperçu
    2. Je sélectionne quelles ressources sémantiques m'intéressent
    3. J'utilise l'Annotateur pour rechercher plus en profondeur le contenu de ces ressources
    4. En fonction des résultats et de leur pertinence avec ma thématique, j'en déduis qu'elle ressource est la plus appropriée





Exemple N°3: annoter les données sémantiquement

- **Comment importer techniquement une ressource sémantique dans une base de données?**
  - ➔ Les variables vont être décrites avec les concepts que nous avons récupéré
    - ◆ Exemple avec un fichier csv:

<https://w3id.org/ozcar-theia/c_6f0c66da>

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Ref										https://w3id.org/ozcar-theia/c_6f0c66da		
2	Date	Wind Speed	m/s	c39	Gust Speed	m/s	c39	Wind Direction	*	c39	Air temperature	*C	c39
3	26/11/24 22:00:00	0.7	2.0	246	7.24	93.50	6.27	1					
4	26/11/24 23:00:00	1.0	2.7	211	7.57	92.20	6.39	1					
5	27/11/24 00:00:00	0.7	2.0	224	7.82	91.30	6.50	1					

Exemple N°3: annoter les données sémantiquement

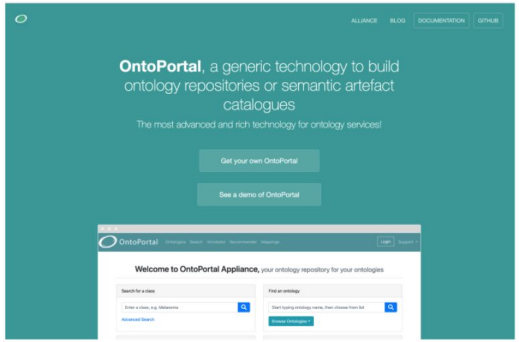
- **Comment importer techniquement un artefact sémantique dans une base de données?**
  - ➔ Les variables vont être décrites avec les concepts que nous avons récupéré
    - ◆ Exemple avec un fichier netCDF:

```
netcdf example {
dimensions:
    time = UNLIMITED;
    latitude = 180;
    longitude = 360;
variables:
    float air_temperature(time, latitude, longitude);
        air_temperature:standard_name = "air_temperature";
        air_temperature:long_name = "Air Temperature";
        air_temperature:external_reference = "https://w3id.org/ozcar-theia/c_6f0c66da";
        air_temperature:missing_value = -9999.0;
data:
    // Données
}
```

Fédération des portails de l'Ontoportal Alliance

Ontoportal Alliance

Web site and documentation:
https://ontoportal.org



OntoPortal Alliance

AgroPortal
Agri-food
INRAE, University of Montpellier

EcoPortal
Ecology & Biodiversity
LifeWatch ERIC

MedPortal
Biomedicine (chinise)
Peking Union Medical College

BiodivPortal
Biodiversity
InfAI, Leipzig University

BioPortal
Biomedicine
Stanford University

EarthPortal
Earth sciences
CNRS, Data Terra

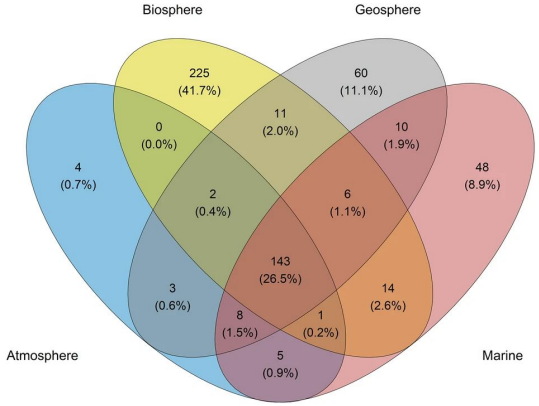
SifrBioportal
Biomedicine (French)
CNRS, University of Montpellier

TechnoPortal
Technology sciences
OST Eastern Switzerland University of Applied Sciences / HES-SO Valais-Wallis

MatPortal
Material science
Fraunhofer Materials / BAM

IndustryPortal
Industry
ENIT / OntoCommons

Fédération des OntoPortal de la thématique environnement



Recouvrement

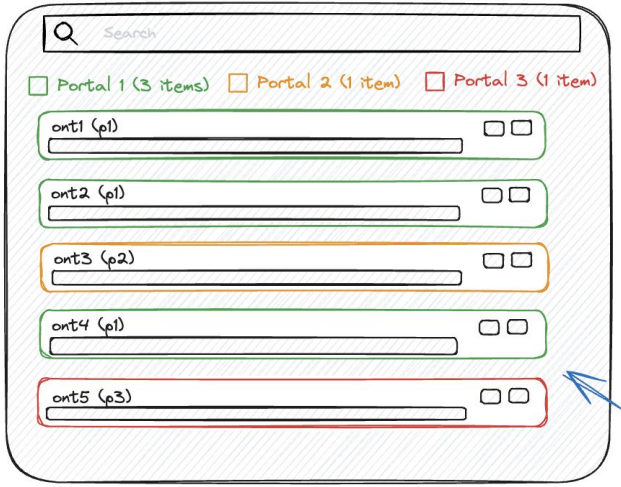
AgroPortal

EcoPortal

EarthPortal

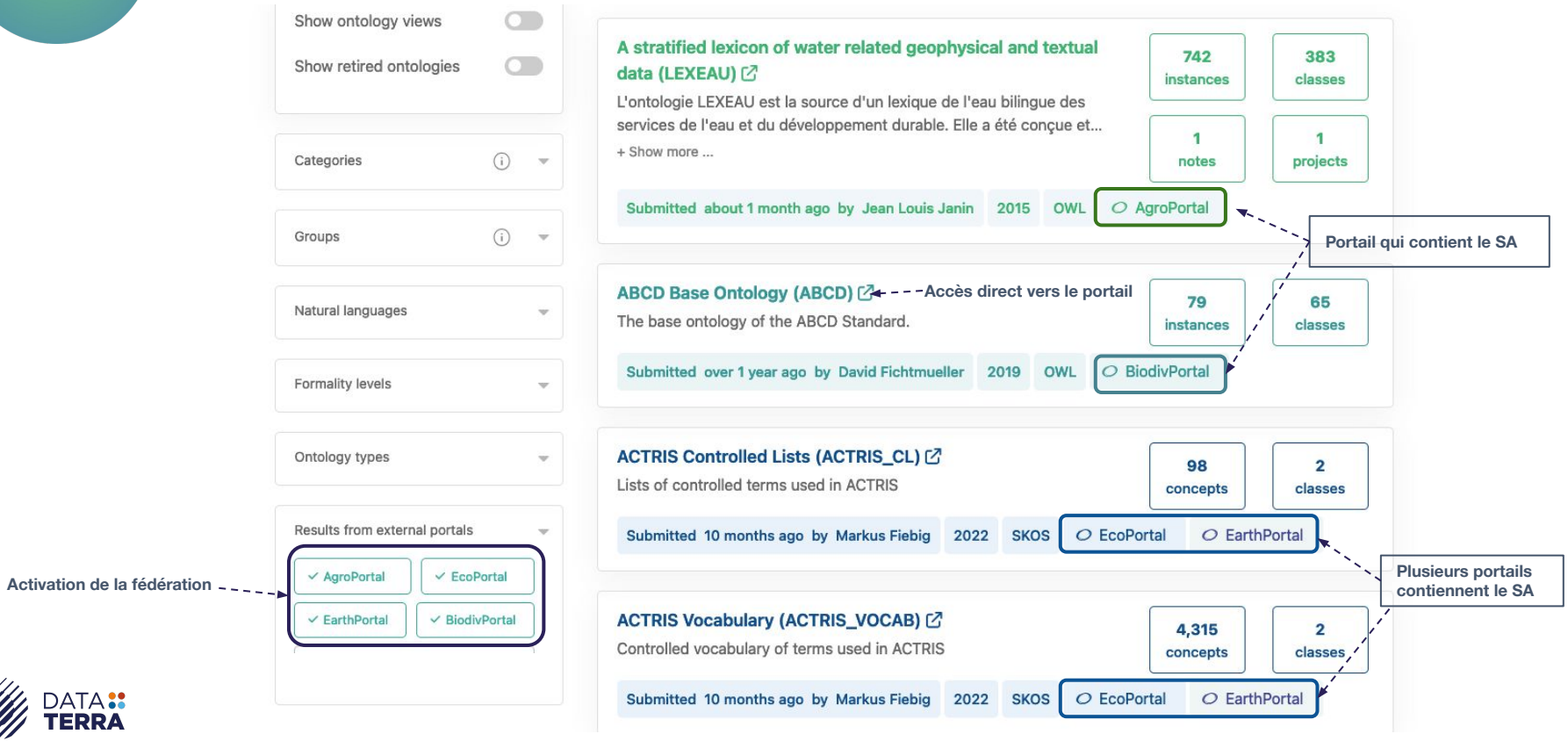
BiodivPortal

Federated Search page (Content)



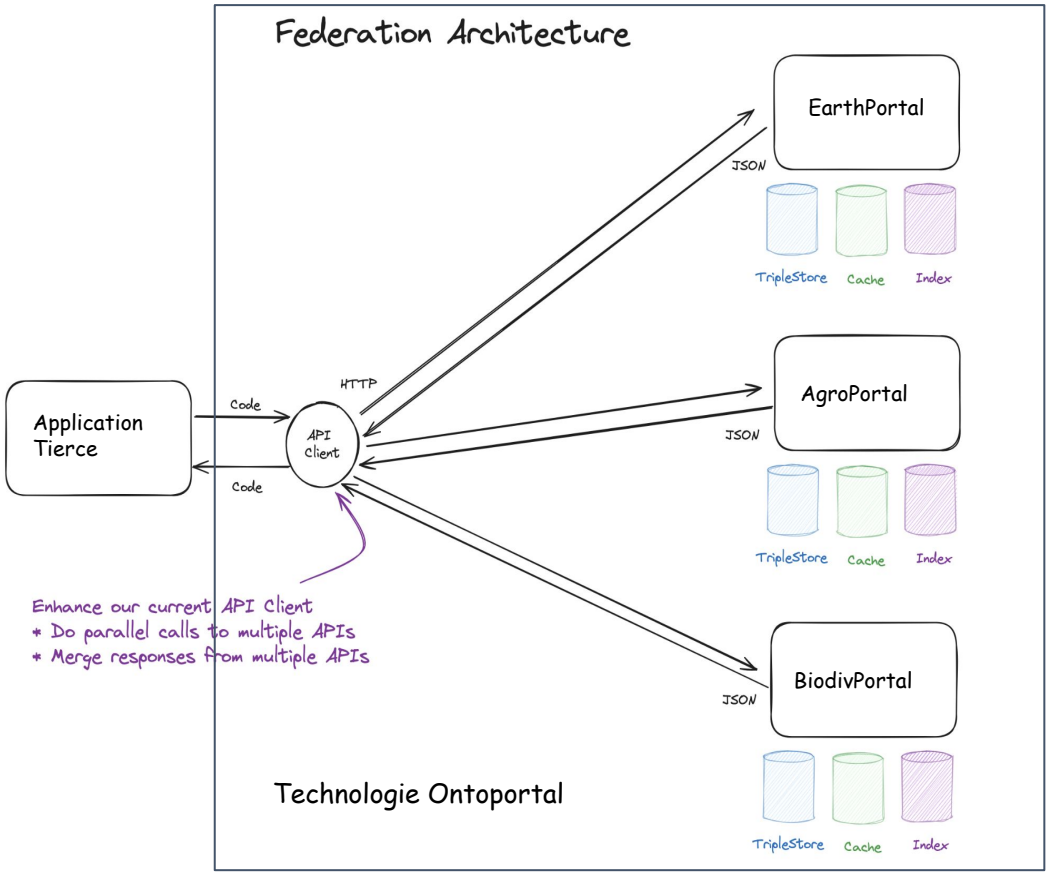
Are displayed only: Canonical or Local to the portals

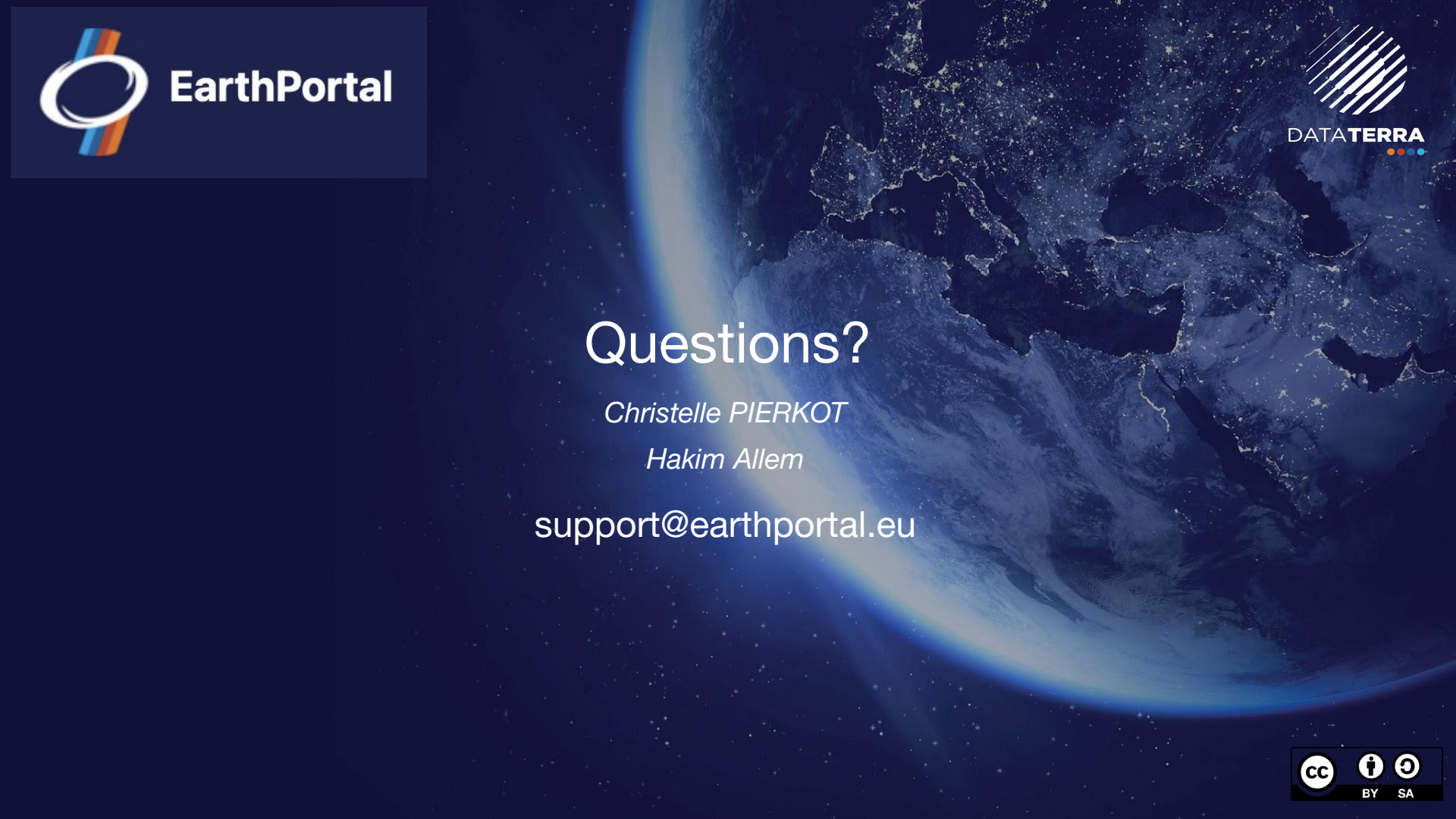
Fédération des portails : Interface - Recherche mutualisée



Fédération des portails : API gateway pour connexion d'une application tierce

Stage en cours




EarthPortal
DATATERRA
Questions?
Christelle PIERKOT
Hakim Allem
support@earthportal.eu
BY SA

Exemples d'utilisation avec des applications tierces

EarthPortal

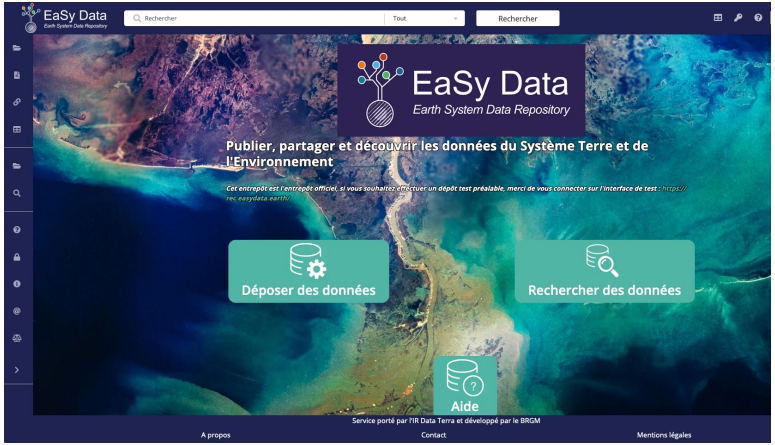
DATA TERRA

Utilisation de l'EarthPortal avec EaSy Data

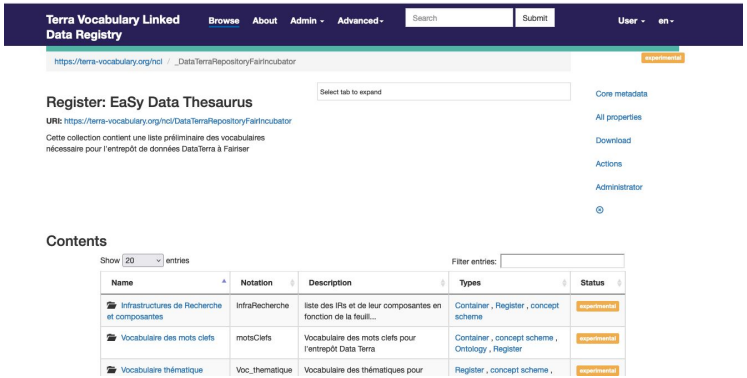
EaSy Data
Earth System Data Repository

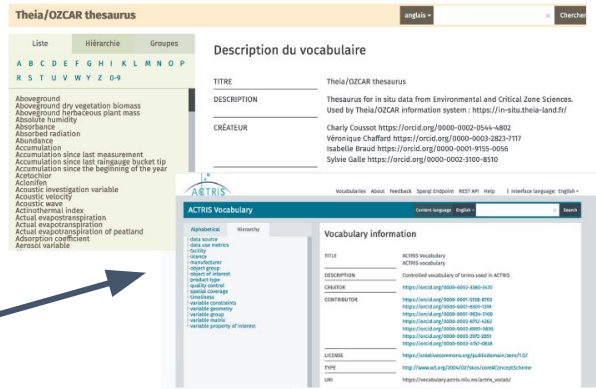
EaSy Data : Entrepôt national des données de longues traines

- Geonetwork to stocker les métadonnées(catalogue) + application ad-hoc (dépôt, recherche)
- basé sur ISO 19115



- Vocabulaires contrôlés communautaires utilisés pour remplir certains éléments de métadonnées
  - 3 vocabulaires internes définis pour les données EaSy
  - Quelques vocabulaires externes : licences, ROR, Geonames, ...



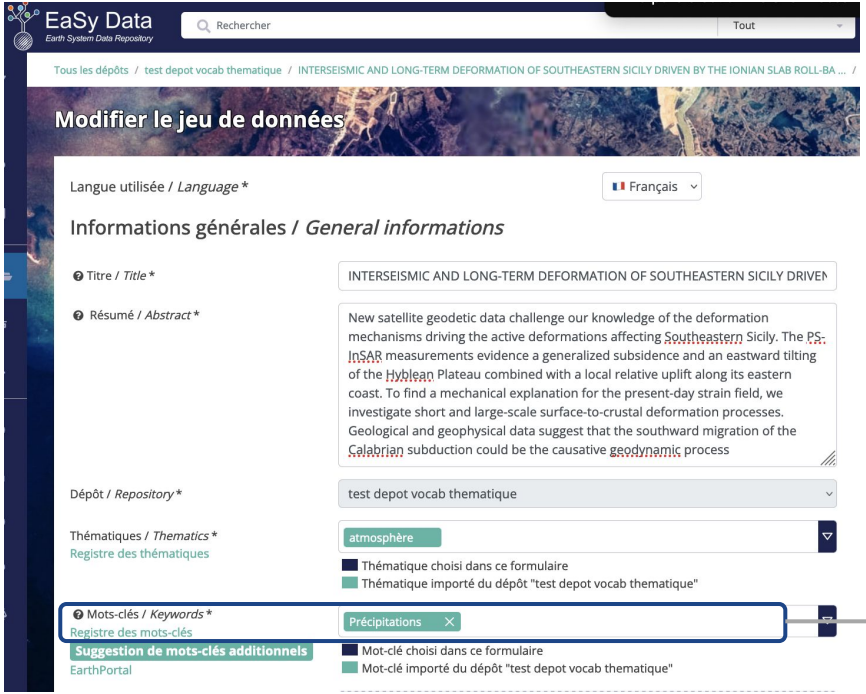


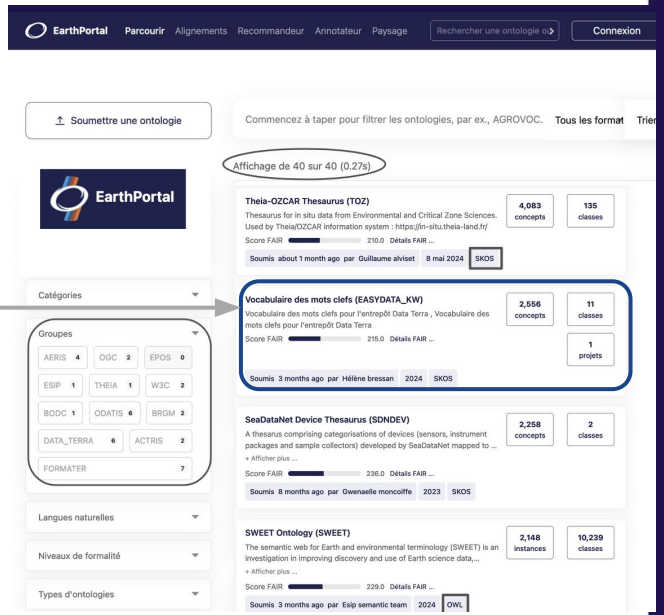
Vocabulaires incomplets qui ne reflètent pas la diversité complexe des données déposées dans EaSy Data

=> Nécessité d'utiliser d'autres vocabulaires : Theia/Ozcar, Actris, ...

Connecter EarthPortal & EaSy Data Earth System Data Repository

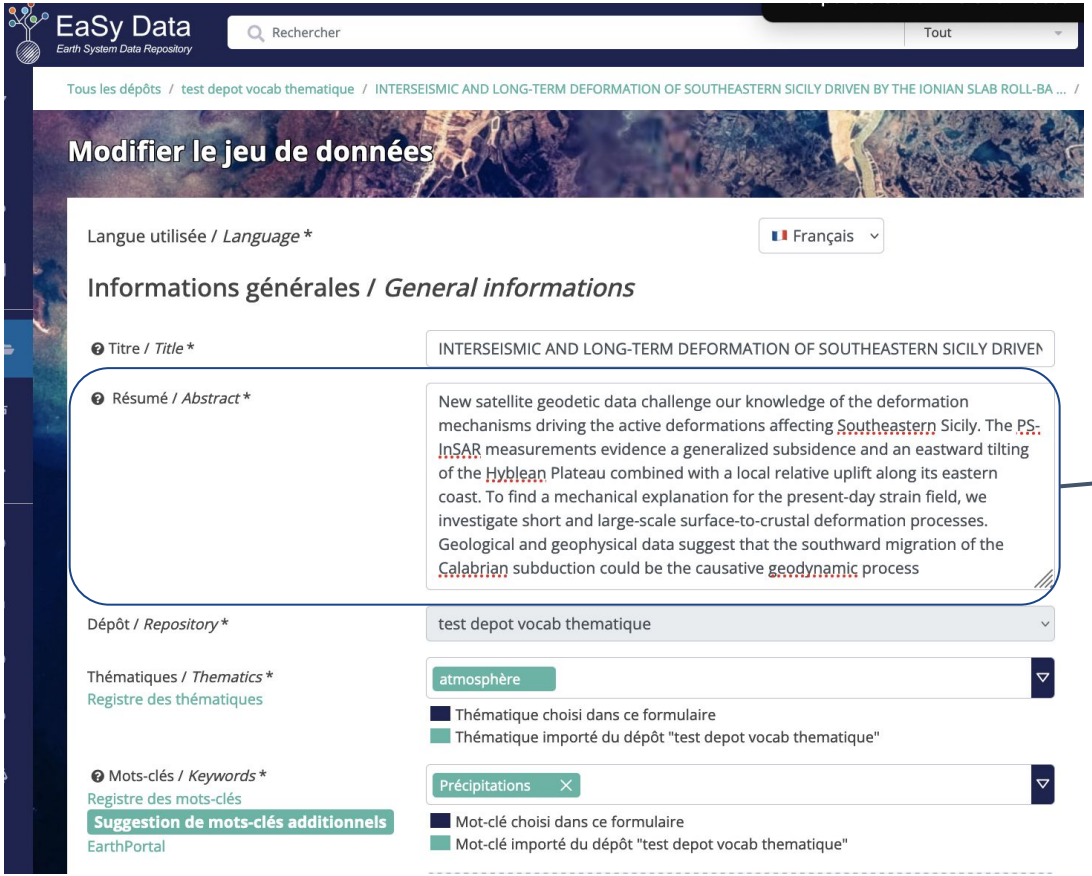
Cas d'utilisation dépôt : utiliser les ressources de l'EarthPortal pour améliorer la qualité du dépôt



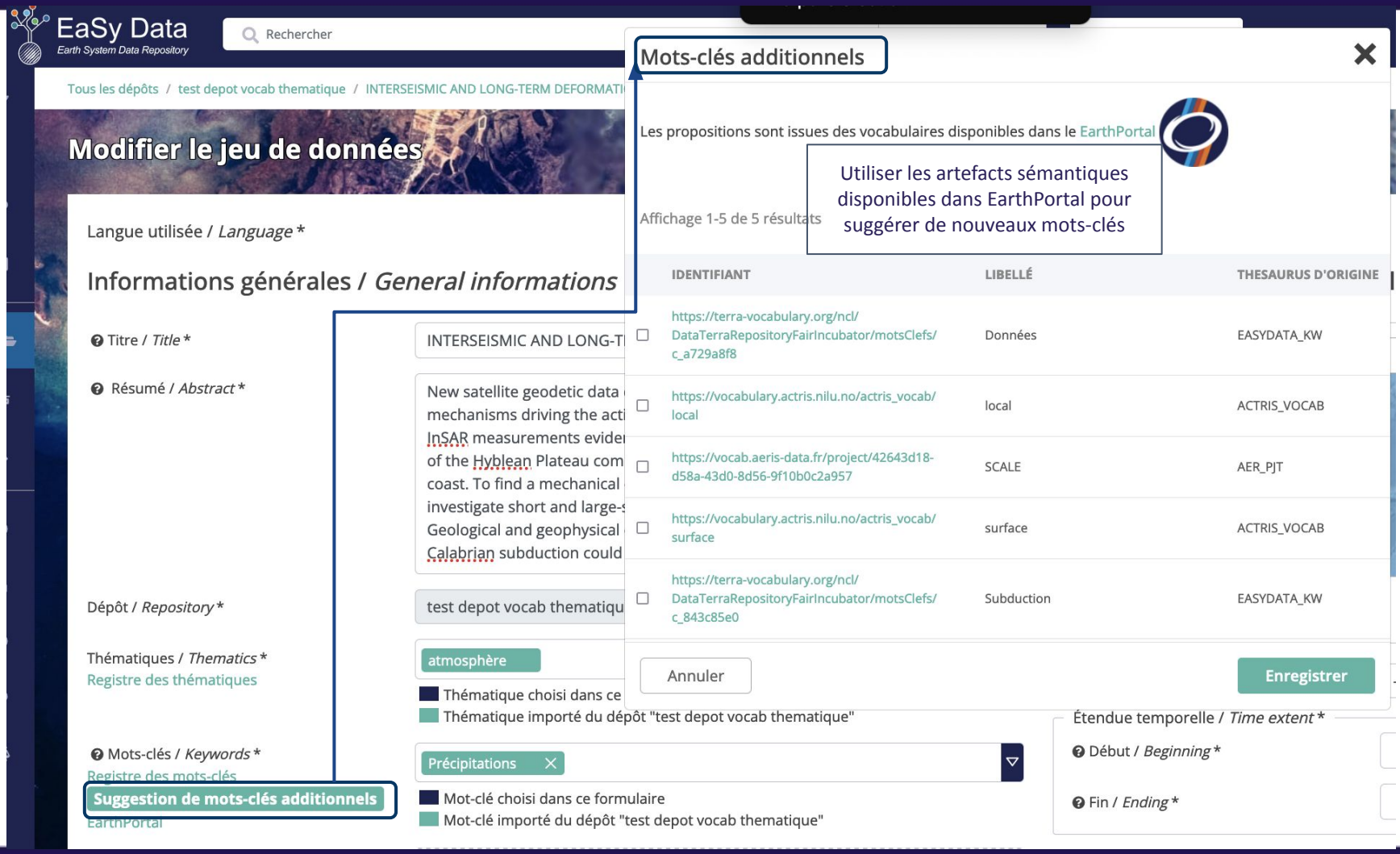


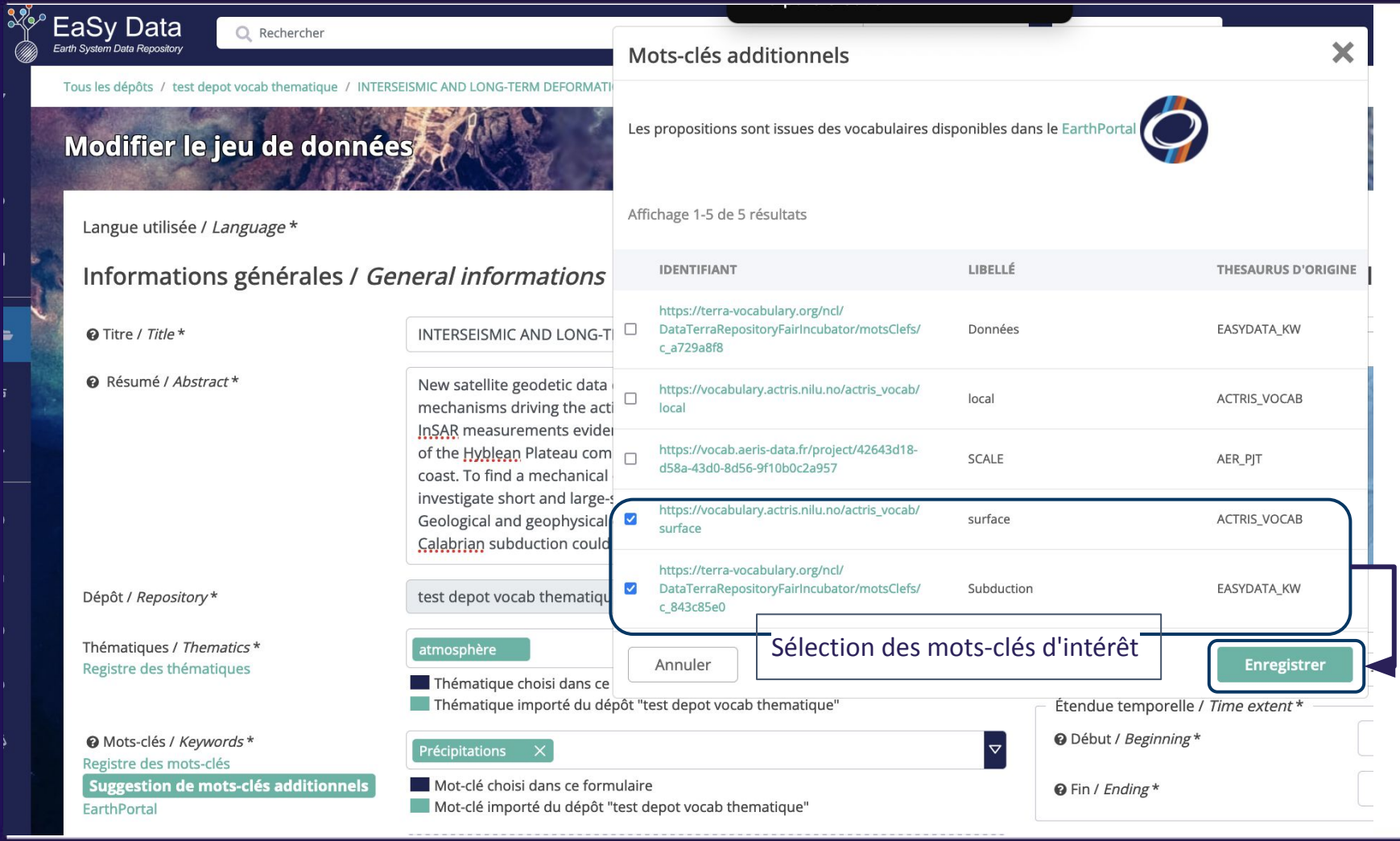
DATA TERRA

UC2 : utilisation des services de l'EarthPortal dans EaSy Data : Ex Dépôt



Utiliser le service d'annotation de l'EarthPortal


EaSy Data
Earth System Data Repository
Rechercher
Tous les dépôts / test depot vocab thematique / INTERSEISMIC AND LONG-TERM DEFORMATI
Modifier le jeu de données
Langue utilisée / Language *
Informations générales / General informations
Titre / Title *
INTERSEISMIC AND LONG-T
Résumé / Abstract *
New satellite geodetic data
mechanisms driving the acti
InSAR measurements evide
of the Hyblean Plateau com
coast. To find a mechanical
investigate short and large-
Geological and geophysical
Calabrian subduction could
Dépôt / Repository *
test depot vocab thematiqu
Thématiques / Thematics *
Registre des thématiques
atmosphère
Thématique choisi dans ce
Thématique importé du dépôt "test depot vocab thematique"
Mots-clés / Keywords *
Registre des mots-clés
Précipitations
Suggestion de mots-clés additionnels
EarthPortal
Mot-clé choisi dans ce formulaire
Mot-clé importé du dépôt "test depot vocab thematique"
Étendue temporelle / Time extent *
Début / Beginning *
Fin / Ending *
Mots-clés additionnels
Les propositions sont issues des vocabulaires disponibles dans le EarthPortal
Utiliser les artefacts sémantiques disponibles dans EarthPortal pour suggérer de nouveaux mots-clés
Affichage 1-5 de 5 résultats
IDENTIFIANT
LIBELLÉ
THESAURUS D'ORIGINE
https://terra-vocabulary.org/ncl/DataTerraRepositoryFairIncubator/motsClefs/c_a729a8f8
Données
EASYDATA_KW
https://vocabulary.actris.nilu.no/actris_vocab/local
local
ACTRIS_VOCAB
https://vocab.aeris-data.fr/project/42643d18-d58a-43d0-8d56-9f10b0c2a957
SCALE
AER_PJT
https://vocabulary.actris.nilu.no/actris_vocab/surface
surface
ACTRIS_VOCAB
https://terra-vocabulary.org/ncl/DataTerraRepositoryFairIncubator/motsClefs/c_843c85e0
Subduction
EASYDATA_KW
Annuler
Enregistrer


EaSy Data
Earth System Data Repository
Rechercher
Tous les dépôts / test depot vocab thematique / INTERSEISMIC AND LONG-TERM DEFORMATI
Modifier le jeu de données
Langue utilisée / Language *
Informations générales / General informations
Titre / Title *
INTERSEISMIC AND LONG-T
Résumé / Abstract *
New satellite geodetic data
mechanisms driving the acti
InSAR measurements evide
of the Hyblean Plateau com
coast. To find a mechanical
investigate short and large-
Geological and geophysical
Calabrian subduction could
Dépôt / Repository *
test depot vocab thematiqu
Thématiques / Thematics *
Registre des thématiques
atmosphère
Thématique choisi dans ce
Thématique importé du dépôt "test depot vocab thematique"
Mots-clés / Keywords *
Registre des mots-clés
Suggestion de mots-clés additionnels
EarthPortal
Précipitations
Mot-clé choisi dans ce formulaire
Mot-clé importé du dépôt "test depot vocab thematique"
Étendue temporelle / Time extent *
Début / Beginning *
Fin / Ending *
Mots-clés additionnels
Les propositions sont issues des vocabulaires disponibles dans le EarthPortal
Affichage 1-5 de 5 résultats
IDENTIFIANT
LIBELLÉ
THESAURUS D'ORIGINE
https://terra-vocabulary.org/ncl/DataTerraRepositoryFairIncubator/motsClefs/c_a729a8f8
Données
EASYDATA_KW
https://vocabulary.actris.nilu.no/actris_vocab/local
local
ACTRIS_VOCAB
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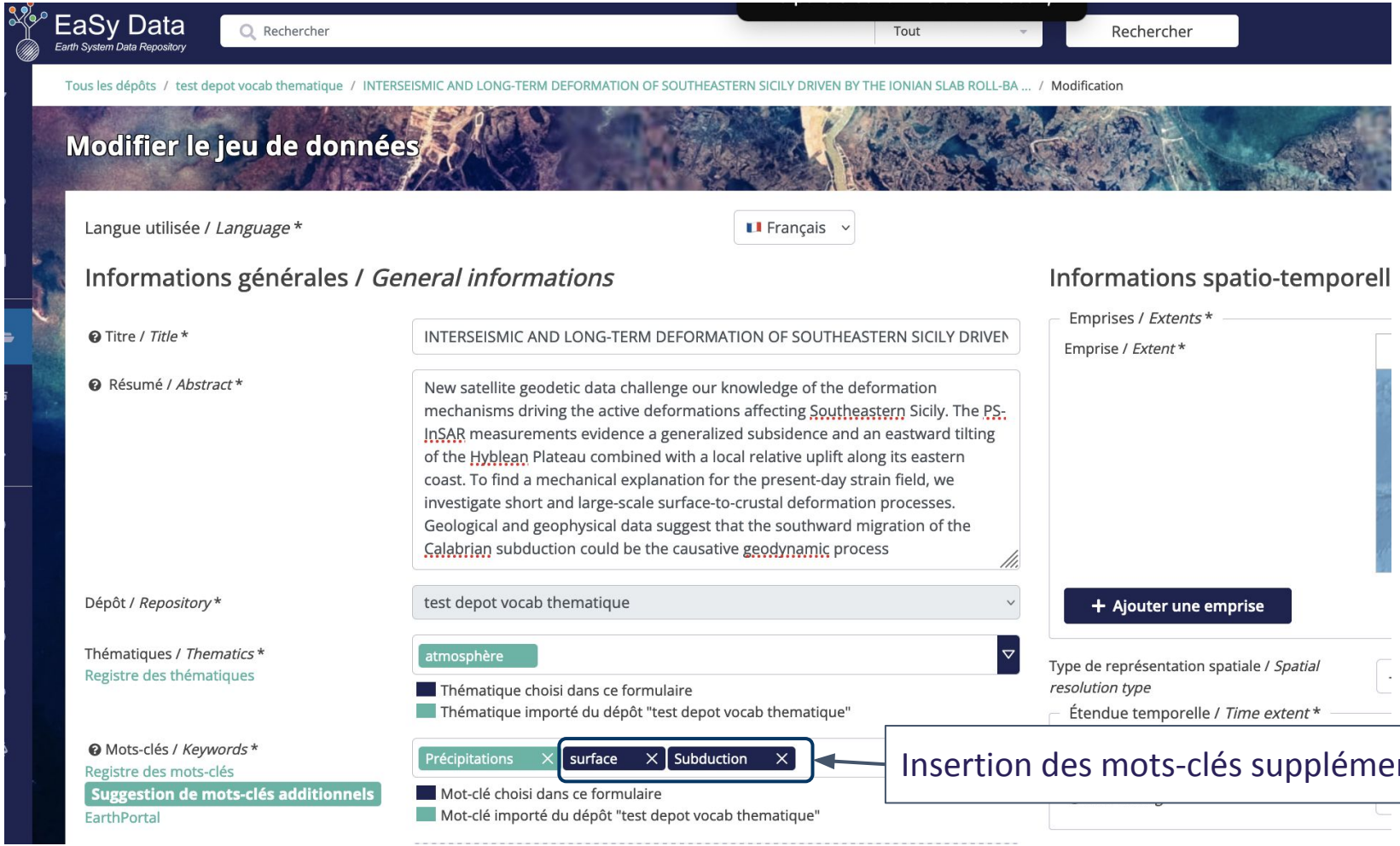
SCALE
AER_PJT
https://vocabulary.actris.nilu.no/actris_vocab/surface
surface
ACTRIS_VOCAB
https://terra-vocabulary.org/ncl/DataTerraRepositoryFairIncubator/motsClefs/c_843c85e0
Subduction
EASYDATA_KW
Annuler
Sélection des mots-clés d'intérêt
Enregistrer

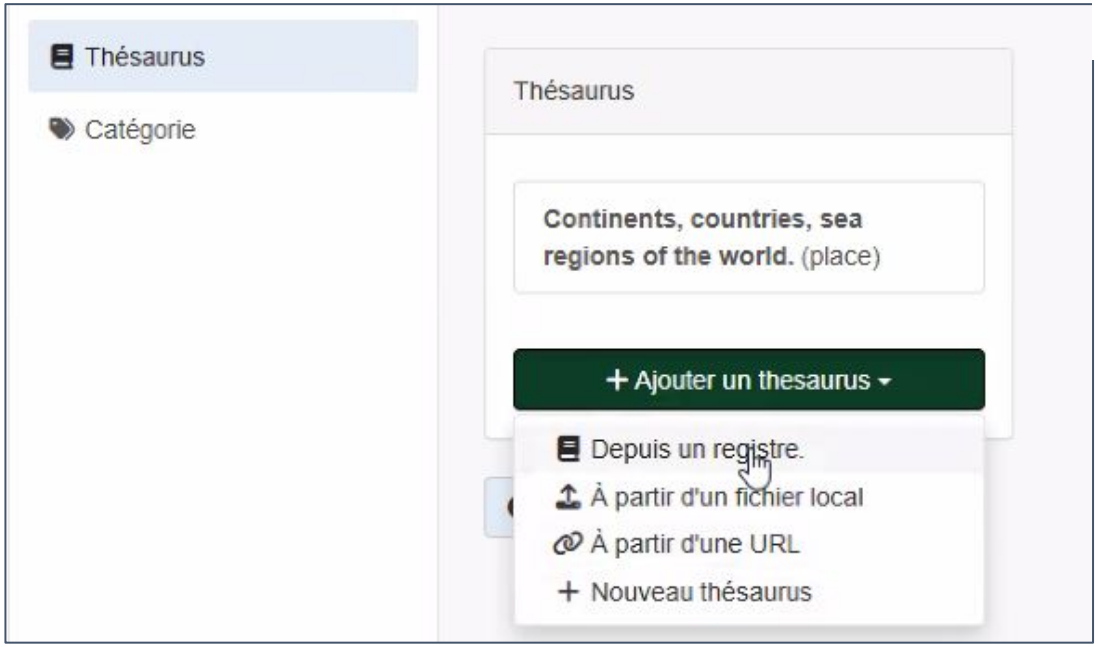

EaSy Data
Earth System Data Repository
Rechercher
Tout
Rechercher
Tous les dépôts / test depot vocab thematique / INTERSEISMIC AND LONG-TERM DEFORMATION OF SOUTHEASTERN SICILY DRIVEN BY THE IONIAN SLAB ROLL-BA ... / Modification
Modifier le jeu de données
Langue utilisée / Language *
Français
Informations générales / General informations
Titre / Title *
INTERSEISMIC AND LONG-TERM DEFORMATION OF SOUTHEASTERN SICILY DRIVEN
Résumé / Abstract *
New satellite geodetic data challenge our knowledge of the deformation mechanisms driving the active deformations affecting Southeastern Sicily. The PS-InSAR measurements evidence a generalized subsidence and an eastward tilting of the Hyblean Plateau combined with a local relative uplift along its eastern coast. To find a mechanical explanation for the present-day strain field, we investigate short and large-scale surface-to-crustal deformation processes. Geological and geophysical data suggest that the southward migration of the Calabrian subduction could be the causative geodynamic process
Dépôt / Repository *
test depot vocab thematique
Thématiques / Thematics *
Registre des thématiques
atmosphère
Thématique choisi dans ce formulaire
Thématique importé du dépôt "test depot vocab thematique"
Mots-clés / Keywords *
Registre des mots-clés
Suggestion de mots-clés additionnels
EarthPortal
Précipitations
surface
Subduction
Mot-clé choisi dans ce formulaire
Mot-clé importé du dépôt "test depot vocab thematique"
Informations spatio-temporell
Emprises / Extents *
Emprise / Extent *
+ Ajouter une emprise
Type de représentation spatiale / Spatial resolution type
Étendue temporelle / Time extent *
Insertion des mots-clés supplémentaires

EarthPortal

Utilisation de l'EarthPortal avec Geonetwork

DATA TERRA

Connecter EarthPortal & GeoNetwork



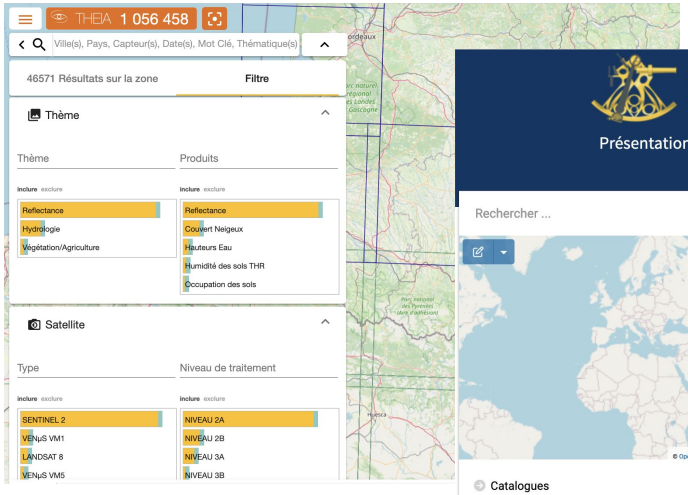
Connecteur générique

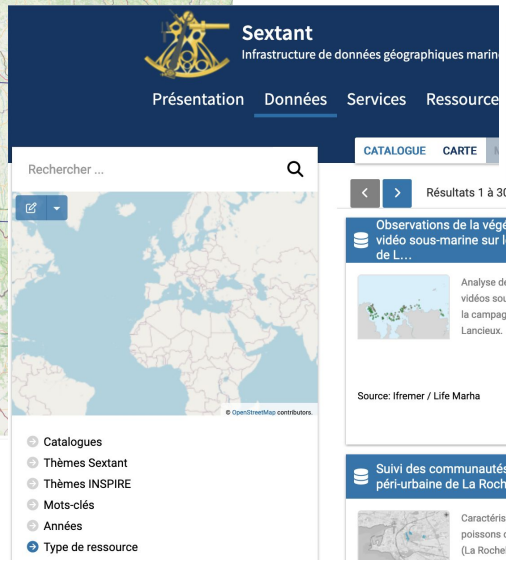
DATA TERRA

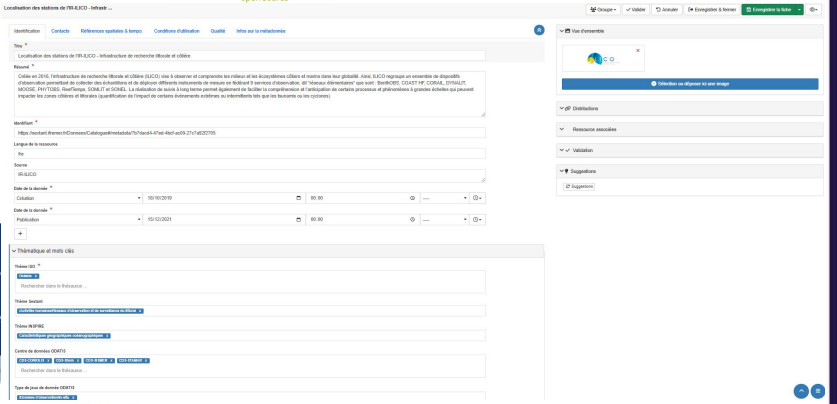
Connecter EarthPortal & GeoNetwork

Utiliser l'EarthPortal dans les catalogues des pôles de données pour :

- Améliorer la saisie des fiches de métadonnées
- Améliorer le moissonnage des autres catalogues
- Améliorer la recherche des utilisateurs







DATA TERRA

Moissonnage : Annoter les éléments de métadonnées en texte libre des catalogues moissonnés avec des URI de vocabulaires

SEANOE SEA SCIENTIFIC OPEN DATA PUBLICATION

Harvest

EaSy Data Earth System Data Repository

Request

EarthPortal

Dataset | Bookmarks

DOI 10.17882/99669

Carbon and nitrogen stocks and accumulation rates in seagrass meadows (Posidonia oceanica) of the Eastern Mediterranean Sea

DATE 2024

AUTHORS Apostolaki Eugenia t.[1], Lavery Paul s.[2,3], Litsi-Mizan Victoria[1], Serrano Eduard[3,4], Inostroza Karina[4], Gerakaris Vasilis[5], Dailianis Thanos[6], Glampedakis Julius[6], Holitzki Tara[7], Johnson Erik[7], Mateo Miguel a.[2,3], Serrano Oscar[2,3]

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2. Edith Cowan University, School of Science & Centre for Marine Ecosystems Research, Joondalup, WA 6027, Australia
3. Centre of Advanced Studies of Blanes (CEAB-CSIC), Cala Sant Francesc 14. 17300, Blanes, Spain
4. BIOSFERA Environmental Education, Research & Conservation, c/ Anselm Clavé 1. 08902 L'Hospitalet de Llobregat, Spain
5. Hellenic Center for Marine Research, Institute of Oceanography, PO Box 712, 19013, Anavyssos, Attiki, Greece
6. Hellenic Centre for Marine Research, Institute of Marine Biology, Biotechnology and Aquaculture, PO Box 2214, GR-71003, Heraklion, Crete, Greece
7. University of Hawai'i at Hilo Analytical Laboratory, Hilo 96720, Hawaii, USA

DOI 10.17882/99669

PUBLISHER SEANOE

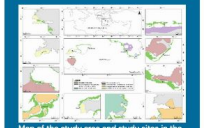
The dataset contains Posidonia oceanica sediment core characteristics (core length, compression during coring and age), sediment variables (granulometry, dry bulk density, organic carbon and nitrogen content) and elemental stocks and accumulaion rates (organic carbon, nitrogen and carbonate). The cores were collected in 15 study sites along the South Aegean Sea (Eastern Mediterranean Sea, Greece).

Free text keywords

KEYWORDS blue carbon, seagrass, macrophytes, sediment cores, nutrients, carbon sink, carbon sequestration

LOCATION 38.2N, 35.2S, 23E, 26.8W

DOWNLOAD DATA



Map of the study area and study sites in the South Aegean Sea (Eastern Mediterranean, Greece).

Download metadata

TXT RIS XLS RTF BIBTEX

```
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 <gmd:MD_Keywords>
  <gmd:keyword>
   <gco:CharacterString>blue carbon</gco:CharacterString>
  </gmd:keyword>
  <gmd:keyword>
   <gco:CharacterString>seagrass</gco:CharacterString>
  </gmd:keyword>
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  </gmd:keyword>
```

ISO 19115 XML files after harvesting

5 results in EarthPortal

ontologies/GCMD/classes/https...	GCMD Keywords	... blue carbon **seagrass** macrophytes sediment cores ...
ontologies/GCMD/classes/https...	GCMD Keywords	... carbon seagrass **macrophytes** sediment cores nutrients ...
ontologies/GEMET/classes/http...	General Multilingual Environmental Thesaurus	... carbon sink **carbon sequestration**
ontologies/GEMET/classes/http...	General Multilingual Environmental Thesaurus	**blue carbon** seagrass macrophytes sediment ...
ontologies/GCMD/classes/https...	GCMD Keywords	... sediment cores **nutrients** carbon sink carbon ...

Annotate

EaSy Data Earth System Data Repository

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 <gmd:MD_Keywords>
  <gmd:keyword>
   <gmx:Anchor xlink:href="https://www.eionet.europa.eu/gemet/en/concept/15083">blue carbon</gmx:Anchor>
  </gmd:keyword>
  <gmd:keyword>
   <gmx:Anchor xlink:href="http://www.eionet.europa.eu/gemet/concept/15285">seagrass</gmx:Anchor>
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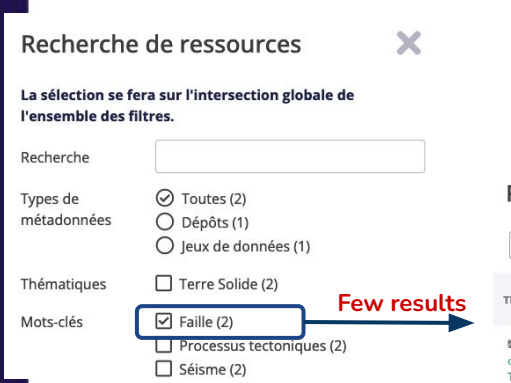
   <gmx:Anchor xlink:href="https://gcmd.earthdata.nasa.gov/kms/concept/bf0ddf9c-39ba-4b2d-91ac-63021d644276">macrophytes</gmx:Anchor>
  </gmd:keyword>
  <gmd:keyword>
   <gco:CharacterString>sediment cores</gco:CharacterString>
  </gmd:keyword>
  <gmd:keyword>
   <gmx:Anchor xlink:href="https://gcmd.earthdata.nasa.gov/kms/concept/9bcb805c-718e-42c3-913d-174bdf06d4c1">nutrients</gmx:Anchor>
  </gmd:keyword>
  <gmd:keyword>
   <gco:CharacterString>carbon sink</gco:CharacterString>
  </gmd:keyword>
  <gmd:keyword>
   <gmx:Anchor xlink:href="http://www.eionet.europa.eu/gemet/concept/15091">carbon sequestration</gco:CharacterString>
  </gmd:keyword>
```

ISO 19115 XML files after annotation

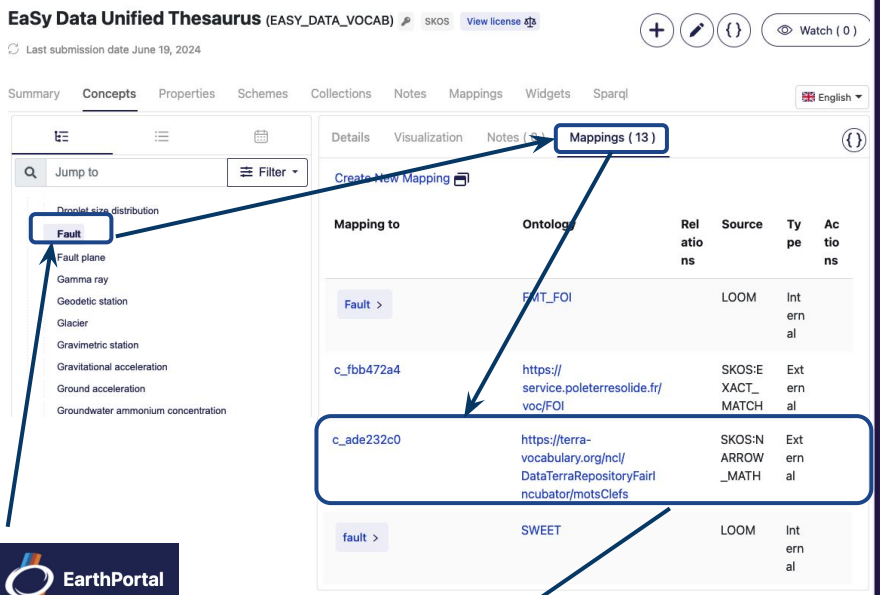
Recherche :

Utiliser les correspondances trouvées dans le EarthPortal pour proposer une recherche améliorée



Few results

Find more results?



2 more results