
Dataverse, an open and collaborative source research data repository software

Alina Danciu¹, Geneviève Michaud¹, Jim Myers², Baptiste Rouxel¹, Tom Villette¹

¹*Center for Socio-Political Data (CDSP)*

²*Global Dataverse Community Consortium (GDCC)*

—

“Dataverse is an open source software platform for sharing, finding, citing, and preserving research data (developed by the Data Science and Products team at the Institute for Quantitative Social Science and the Dataverse community).”

Source : <https://github.com/IQSS/dataverse>

What?

75 installations worldwide

Software installation, which then hosts multiple virtual archives called Dataverse collections. Each Dataverse collection contains datasets, and each dataset contains descriptive metadata and data files (including documentation and code that accompany the data). As an organizing method, Dataverse collections may also contain other Dataverse collections.

Why?

Dataverse is a good solution for networked institutions

- Single Sign On using institutional credentials
- Can harvest and be harvested
- General and Dataverse-level branding capabilities

Dataverse supports discoverability and persistence

- Powerful search engine and filters
- Good Google referencing
- Persistent identifiers

What for?

Nesstar => Dataverse

Harmonising metadata (institution names - in-house + ROR and ISNI, authors, keywords -ELSST...)

Implementing DDI controlled vocabularies

How?

In-house development of several scripts, some using Dataverse APIs:

- metadata harmonisation & conformity to CESSDA Metadata Model (CMM)
- migrating metadata from Nesstar to Dataverse

Installation and configuration of a Dataverse instance enabling:

- controlled vocabularies (according to the CMM, DDI CVs)
- multilingual UI (including CVs translation)
- OAI-PMH harvesting

Classification des sujets ⓘ

Terme ⓘ

Vocabulaire ⓘ

The image shows a user interface for searching or filtering data. At the top, there are three labels: 'Classification des sujets ⓘ', 'Terme ⓘ', and 'Vocabulaire ⓘ'. Below 'Terme' is a dropdown menu with a downward arrow. The menu is open, showing a list of terms. The first term is 'Santé au travail', which is highlighted with a blue background. Other terms in the list include 'Services et politiques de soins', 'Médicaments et traitements', 'Condition et activité physique', 'Santé publique', 'Santé reproductive', and 'Signes et symptômes ; conditions pathologiques'. To the right of the dropdown is an empty text input field under the 'Vocabulaire' label.

data.sciencespo repository

CDSP data bank & institutional self deposit repository released January 2020:

- 7 custom CVs
- 300+ metadata items harmonised & migrated
- EN | FR user interface
 - including CVs translations
- custom homepage and style
- harvested by:
 - [CESSDA DATA Catalogue \(select French UI\)](#)
 - french SSH portal [Isidore](#)
 - European [OpenAIRE](#) portal



Dataverse communities

- Other groups working on similar issues ([PyDataverse](#), [SuperDADA](#) etc)
- CDSP's contributions to IQSS DV codebase (pull requests)
- Opening of several issues aimed at OAI-PMH endpoints
 - harvesting by the CESSDA Data Catalogue
- Decision to sponsor a list of key issues (GDCC contract and collaboration)
 - tackling **concerns shared among users in the DDI community**

<https://github.com/orgs/IQSS/projects/12>

Institute for Quantitative Social Science

Overview Repositories Packages People **Projects**

data.sciencespo - Sciences Po institutional research data repository Updated yesterday

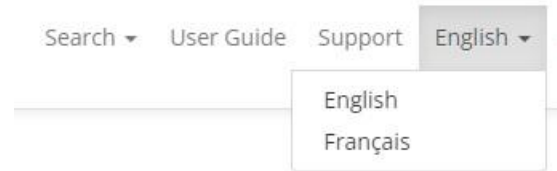
Filter cards Fullscreen Menu

- 5 Interest**
 - Allow customization of Shibboleth redirects per institution
dataverse#3911 opened by donsize
Feature: Account & User Info
User Role: Depositor
 - Bootstrap 4 Upgrade
dataverse#6045 opened by djbrooke
Large
 - As a Dataverse admin, I would like to hook up my installation to an IDMI/IAM
4 of 5 tasks
dataverse#5974 opened by polkiotherm
 - Dataverse doesn't always produce valid DDI codebook 2.5 XML
dataverse#3648 opened by jomtov
Feature: Harvesting Feature: Metadata
Type: Bug User Role: Sysadmin
 - Dataset Citation: provide flexible options for information displayed in citation metadata
dataverse#2297 opened by sbarbosadataverse
Feature: Metadata Type: Suggestion
User Role: Curator
- 1 Needed**
 - Shibboleth users who predate Shibboleth are assumed to be email-verified but aren't
dataverse#5963 opened by donsize
Small
- 10 Done**
 - Performance: Very sluggish page load when languages and all facets enabled in root dv.
dataverse#6052 opened by kcondon
Feature: Performance & Stability Medium
1 linked pull request
 - Docker for production
dataverse#4666 opened by omarsoudani
Feature: Installer Status: Still Interested?
 - The metadata tab of a dataset does not display the translated values
dataverse#6607 opened by bappun
Feature: Internationalization
1 linked pull request
 - As an admin and developer, I'd benefit from a simplified configuration mechanism
dataverse#5293 opened by polkiotherm
 - Delete user via API
dataverse#4475 opened by laertecchla
Feature: Account & User Info Large
User Role: Superuser
5.4

Internationalization in Dataverse

Viewing in multiple languages

- User Interface translations
- Translations of metadata fields with controlled vocabularies



Issues raised by Sciences Po re: Content Creation/Machine Harvesting:

- Metadata field to specify the language(s) used in data files, but
- No way to indicate the language used to enter metadata for a dataset
- Metadata exports (including the DDI export used for harvesting by CESSDA) do not indicate the language used

Specifying the Metadata Language

Admins enable/specify the allowed languages

Sub-collections are configured to indicate the metadata language allowed for new datasets

Dataset creators/editors are prompted to use the configured language

Dataset Metadata Language ?

fr (inherited from enclosing Data) ▼

English

Français

fr (inherited from enclosing Dataverse)

Metadata Fields

Please enter metadata in the **Français** language, or change the metadata language choice in the parent dataverse before proceeding.

Title ?

Test d'internationalisation

Alternative Title ?

Files Metadata Terms Versions

This dataset has been configured to use **English** as the language for all metadata entries.

Data Project Persistent ID ? doi:10.33564/FK2RS9JLQ

Publication Year ? 2021-09-16

Title ? 5.6 test

Exporting Language Information

Metadata exports include metadata language, i.e. DDI:

Overall xml:lang attribute

```
<codeBook xmlns="ddi:codebook:2_5"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="ddi:codebook:2_5
https://ddialliance.org/Specification/DDI-Codebook/2.5/XMLSchema/codebook.xsd"
version="2.5" xml:lang="fr">
```

Individual xml:lang attributes on specific fields

```
<abstract xml:lang="fr">TEST</abstract>
```

Controlled values exported in site default language and dataset's metadata language

```
<sumDscr>
  <anyUnit xml:lang="en">Family: Household family</anyUnit>
  <anyUnit xml:lang="en">Household</anyUnit>
  <anyUnit xml:lang="fr">Famille : ménage</anyUnit>
  <anyUnit xml:lang="fr">Ménage</anyUnit>
</sumDscr>
```

* Thanks for the [online CESSDA validator!](#) - used to identify where language information was needed/recommended

Community Processes



Open Source on GitHub

Community-contributed issues and code contributions

Community contributions to language translations



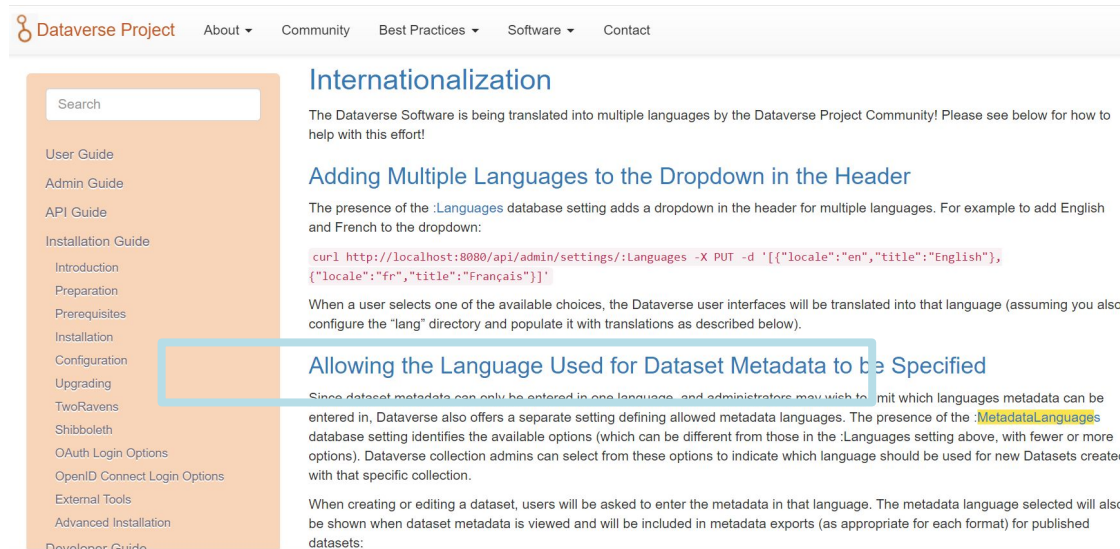
GDCC - Global Dataverse Community Consortium

Prioritizing work of interest across the community

Contracting to enable members to engage experienced developers/admins on their priorities

Dataverse 5.7+

New functionality for describing datasets/supporting harvesting by CESSDA in multiple languages thanks to Sciences Po!



The screenshot shows the Dataverse Project website with a navigation menu at the top and a sidebar on the left. The main content area features three articles related to internationalization. The first article, 'Internationalization', explains that the software is being translated into multiple languages and provides a code snippet for adding languages to the header dropdown. The second article, 'Adding Multiple Languages to the Dropdown in the Header', details how the .Languages database setting is used to add languages like English and French. The third article, 'Allowing the Language Used for Dataset Metadata to be Specified', discusses how dataset metadata can be entered in different languages and how administrators can specify the language for new datasets. A red box highlights the title of the third article.

[Dataverse Project](#) About ▾ Community Best Practices ▾ Software ▾ Contact

Search

- User Guide
- Admin Guide
- API Guide
- Installation Guide
 - Introduction
 - Preparation
 - Prerequisites
 - Installation
 - Configuration
 - Upgrading
 - TwoRavens
 - Shibboleth
 - OAuth Login Options
 - OpenID Connect Login Options
 - External Tools
 - Advanced Installation
 - Developer Guide

Internationalization

The Dataverse Software is being translated into multiple languages by the Dataverse Project Community! Please see below for how to help with this effort!

Adding Multiple Languages to the Dropdown in the Header

The presence of the `.Languages` database setting adds a dropdown in the header for multiple languages. For example to add English and French to the dropdown:

```
curl http://localhost:8080/api/admin/settings/:Languages -X PUT -d '{"locale":"en","title":"English"}, {"locale":"fr","title":"Français"}'
```

When a user selects one of the available choices, the Dataverse user interfaces will be translated into that language (assuming you also configure the `"lang"` directory and populate it with translations as described below).

Allowing the Language Used for Dataset Metadata to be Specified

Since dataset metadata can only be entered in one language, and administrators may wish to limit which languages metadata can be entered in, Dataverse also offers a separate setting defining allowed metadata languages. The presence of the `.MetadataLanguages` database setting identifies the available options (which can be different from those in the `.Languages` setting above, with fewer or more options). Dataverse collection admins can select from these options to indicate which language should be used for new Datasets created with that specific collection.

When creating or editing a dataset, users will be asked to enter the metadata in that language. The metadata language selected will also be shown when dataset metadata is viewed and will be included in metadata exports (as appropriate for each format) for published datasets:

QUESTIONS ?

CONTACT US:

INFO.CDSP@SCIENCESPO.FR