The Dataverse Project: Managing and Sharing Your Research Data

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The Dataverse Project
Data Science
Harvard University

The Dataverse® Project

IQSS
The Institute for Quantitative Social Science

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Workshop Agenda

9:30 to 9:45: Welcome and introductions

Speakers
Attendees

Agenda

9:45am - 12:00pm: Introduction to the Dataverse Project for Data Management and Sharing
1:00pm - 1:30pm: Datacite: Datacite: Abrir, compartir y valorizar los datos de investigación con DOIs
1:30pm - 2:00pm: Borealis: Data Exporer, v2
2:15pm - 3:00pm: CIMMYT Dataverse
3:15pm - 4:30pm: Dataverse, hands-on: CSV,CONF demo dataverse

The Purpose of a Data Repository

The **purpose of a data repository** is to keep a certain population of data so that it can be mined for greater insight or business intelligence or to be used for a specific reporting need. https://en.wikipedia.org/wiki/Information_repository

The **Registry of Research Data Repositories** (**re3data.org**) is an Open Science tool that offers researchers, funding organizations, libraries and publishers an overview of existing international repositories for research data.

Data should be submitted to discipline-specific, community-recognized repositories where possible. **Where a suitable discipline-specific resource does not exist, data should be submitted to a generalist repository.**

Introduction: The Dataverse Project

The Dataverse Project

Open source research data repository software

Researchers

Enjoy full control over your data. Receive *web visibility, academic credit,* and *increased citation counts.* A personal Dataverse collection is easy to set up, allows you to display your data on your personal website, can be branded uniquely as your research program, makes your data more discoverable to the research community, and satisfies data management plans. Want to set up your personal Dataverse collection?

Journals

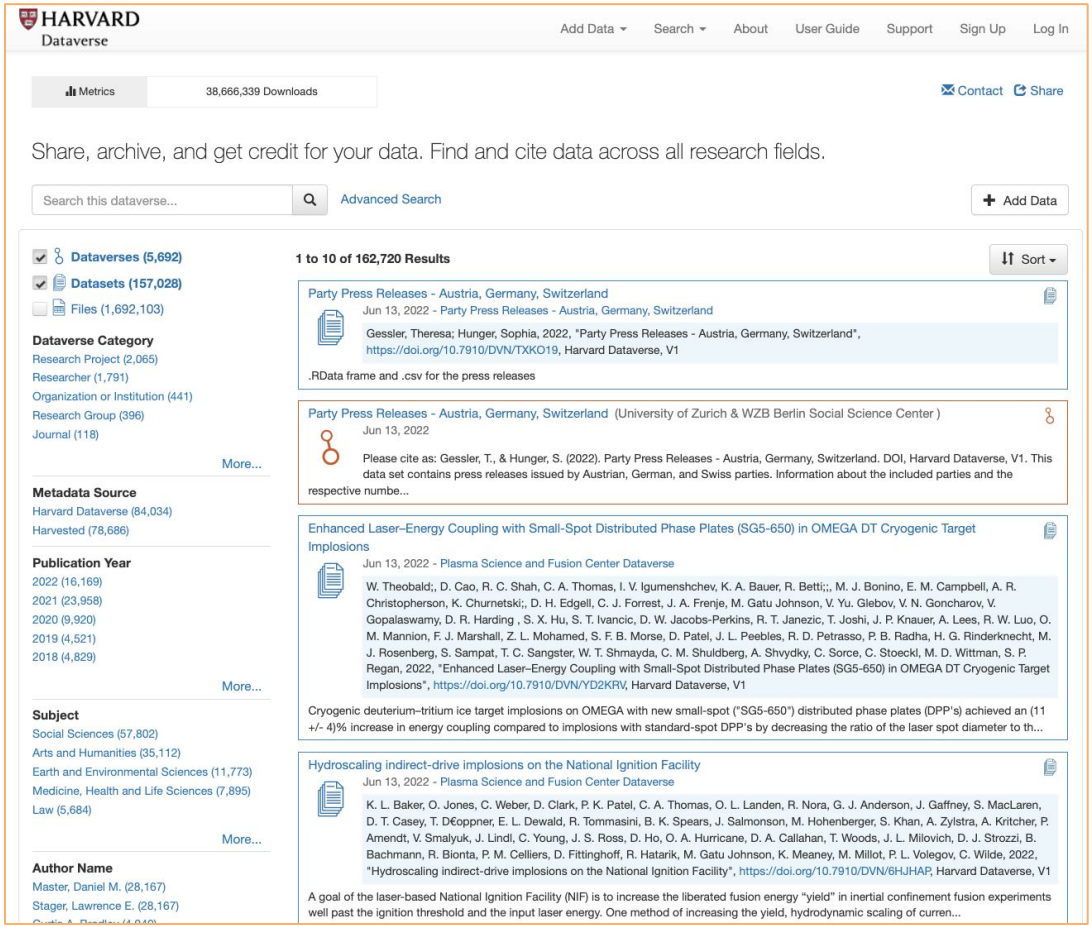
Seamlessly manage the submission, review, and publication of data associated with published articles. Establish an *unbreakable link* between *articles in your journal* and *associated data.* Participate in the open data movement by using a Dataverse collection as part of your journal data policy or list of repository recommendations. Want to find out more about journal Dataverse collections?

Institutions

Establish a research data management solution for your community. Federate with a growing list of Dataverse repositories worldwide for increased discoverability of your community's data. Participate in the drive to set norms for sharing, preserving, citing, exploring, and analyzing research data. Want to install a Dataverse repository?

Developers

Participate in a vibrant and growing community that is helping to drive the norms for sharing, preserving, citing, exploring, and analyzing research data. Contribute code extensions, documentation, testing, and/or standards. *Integrate research analysis, visualization* and *exploration tools,* or other research and data archival systems with the Dataverse Project. Want to contribute?



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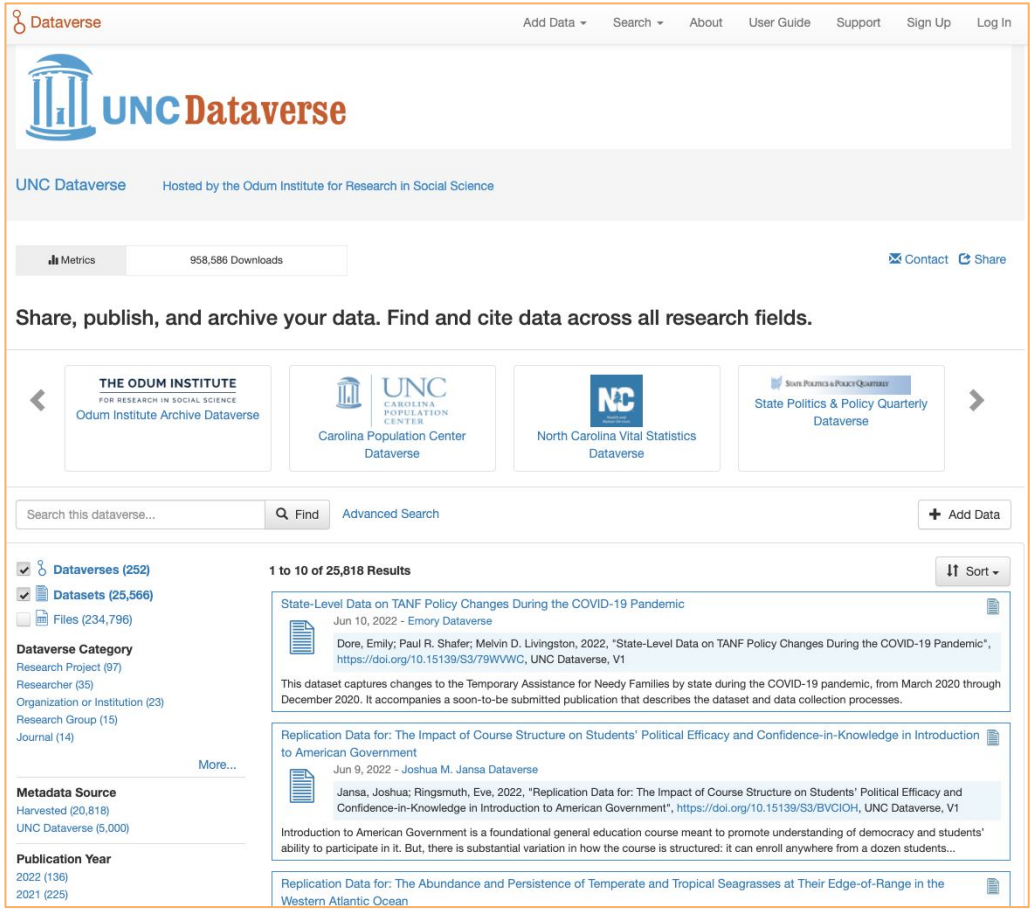
复旦大学社会科学数据平台
Fudan University Social Science Data Repository
Log In
首页
数据资源
新闻动态
分类统计
国际资源
代言系列
平台简介
相关链接
联系我们
帮助
复旦大学社会科学 Dataverse
Metrics
10,700,806 Views
data
Find
Advanced Search
Add Data
Dataverses (6)
Datasets (84)
Files (474)
Dataverse Category
Research Project (6)
Publication Date
2020 (442)
2017 (103)
2019 (14)
2018 (4)
2021 (1)
Author Name
University of Groningen (24)
University of California, Davis (23)
美国地质调查局(USGS) (16)
ESS (9)
香港保险业监督局 (4)
More...
Subject
社会科学 (35)
经济学和管理学 (31)
地球和环境科学 (18)
1 to 10 of 564 Results
Sort
« < Previous 1 2 3 4 5 Next > »
2018年ESS欧洲30个国家社会调查数据集
2020-4-27 - European Social Survey Dataverse
ESS, 2020, "2018年ESS欧洲30个国家社会调查数据集", http://hdl.handle.net/11521/AMA84F, 复旦大学社会科学 Dataverse, V1 [UNF:6:hxtSkhud7tOHA0cxNP+Vlw==]
2018年ESS欧洲30个国家社会调查数据集包含36015名用户有关前几轮调查中重复的核心主题以及欧洲的公正和公平，人生的时间安排的观点，数据集标签数为491个，时间段为2018年。数据包含一个sav文件和一个pdf文件，数据量达37.8MB。
Related Publication Citation: Citation of data ESS Round 9: European Social Survey Round 9 Data (2018). Data file edition 1.1
Notes: 数据来源:https://www.europeansocialsurvey.org/data/round-index.html
2016ESS欧洲23个国家年社会调查数据集
2020-4-27 - European Social Survey Dataverse
ESS, 2020, "2016ESS欧洲23个国家年社会调查数据集", http://hdl.handle.net/11521/VYBLO0, 复旦大学社会科学 Dataverse, V1
2016ESS欧洲23个国家年社会调查数据集包含44387名用户有关前几轮调查中重复的核心主题以及公众对气候变化、能源安全的看法、能源偏好及福利态度，数据集标签数为534个，时间段为2016年。数据包含一个sav文件和一个pdf文件，数据量达47MB。
Related Publication Citation: Citation of data ESS Round 8: European Social Survey Round 8 Data (2016). Data file edition 2.1
Notes: 数据来源:https://www.europeansocialsurvey.org/data/round-index.html
2014年ESS欧洲22个国家社会调查数据集
2020-4-27 - European Social Survey Dataverse
ESS, 2020, "2014年ESS欧洲22个国家社会调查数据集", http://hdl.handle.net/11521/WTRUQH, 复旦大学社会科学 Dataverse, V1
2014年ESS欧洲22个国家社会调查数据集包含40185名用户有关前几轮调查中重复的核心主题以及健康方面的社会不平等及其决定因素和对移民及其前因的态度。数据集标签数为601个，时间段为2014年。数据包含一个sav文件和一个pdf文件，数据量达47.5MB



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The Dataverse Project

Community

- Community Meetings
- Community Calls
- Global Dataverse Community Consortium

Best Practices

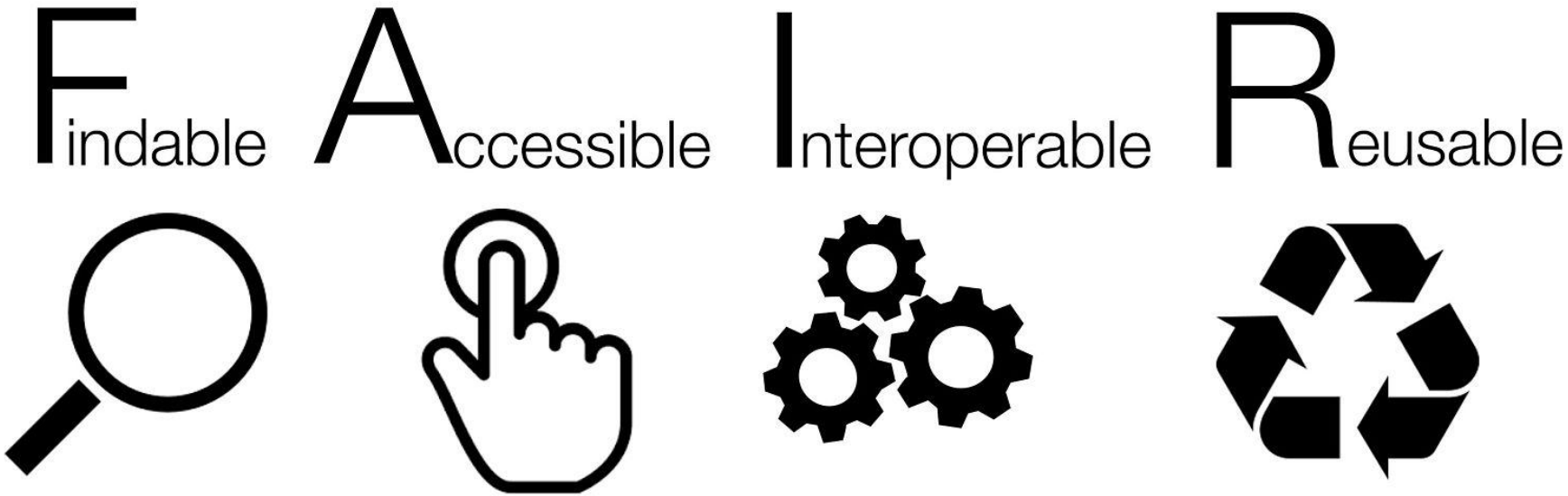
- Academic Credit
- Data Citation
- Dataverse Community Norms
- Data Management
- Replication Dataset Guidelines

Software

- Goals, Roadmap, and Releases
- Collaborations
- Integrations
- Features
- Source Code
- Guides

The DV project and FAIR

FAIR principles and Dataverse



https://en.wikipedia.org/wiki/File:FAIR_data_principles.jpg

How Dataverse Supports FAIR

- FINDABLE: Persistent Identifiers (DOIs, Handles) for datasets (and files), and enabling metadata indexing by search engines
-
- ACCESSIBLE: Open access to (metada)data and ensures data can be downloaded in machine-readable formats
-
- INTEROPERABLE: Provides standardised metadata schemas and enabling the integration of of data with research tools and platforms
-
- REUSABLE: Licenses that clearly state how data can be used and ensuring that data are well documented and preserved for long term use

Dataverse for Data Management and Sharing

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Dataverse for Data Management and Sharing

- Ease of data deposits
- Data citation
- Data access control
- Metadata standards
- Data sharing policies
- Data discovery

Metadata References

Supported Metadata

Detailed below are what metadata schemas we support for Citation and Domain Specific Metadata in the Dataverse Project:

- Citation Metadata (see .tsv version): compliant with DDI Lite, DDI 2.5 Codebook, DataCite 3.1, and Dublin Core's DCMI Metadata Terms . Language field uses ISO 639-1 controlled vocabulary.
- Geospatial Metadata (see .tsv version): compliant with DDI Lite, DDI 2.5 Codebook, DataCite, and Dublin Core. Country / Nation field uses ISO 3166-1 controlled vocabulary.
- Social Science & Humanities Metadata (see .tsv version): compliant with DDI Lite, DDI 2.5 Codebook, and Dublin Core.
- Astronomy and Astrophysics Metadata (see .tsv version): These metadata elements can be mapped/exported to the International Virtual Observatory Alliance's (IVOA) VOResource Schema format and is based on Virtual Observatory (VO) Discovery and Provenance Metadata (see .tsv version).
- Life Sciences Metadata (see .tsv version): based on ISA-Tab Specification, along with controlled vocabulary from subsets of the OBI Ontology and the NCBI Taxonomy for Organisms.
- Journal Metadata (see .tsv version): based on the Journal Archiving and Interchange Tag Set, version 1.2.

Experimental Metadata

Unlike supported metadata, experimental metadata is not enabled by default in a new Dataverse installation. Feedback via any channel is welcome!

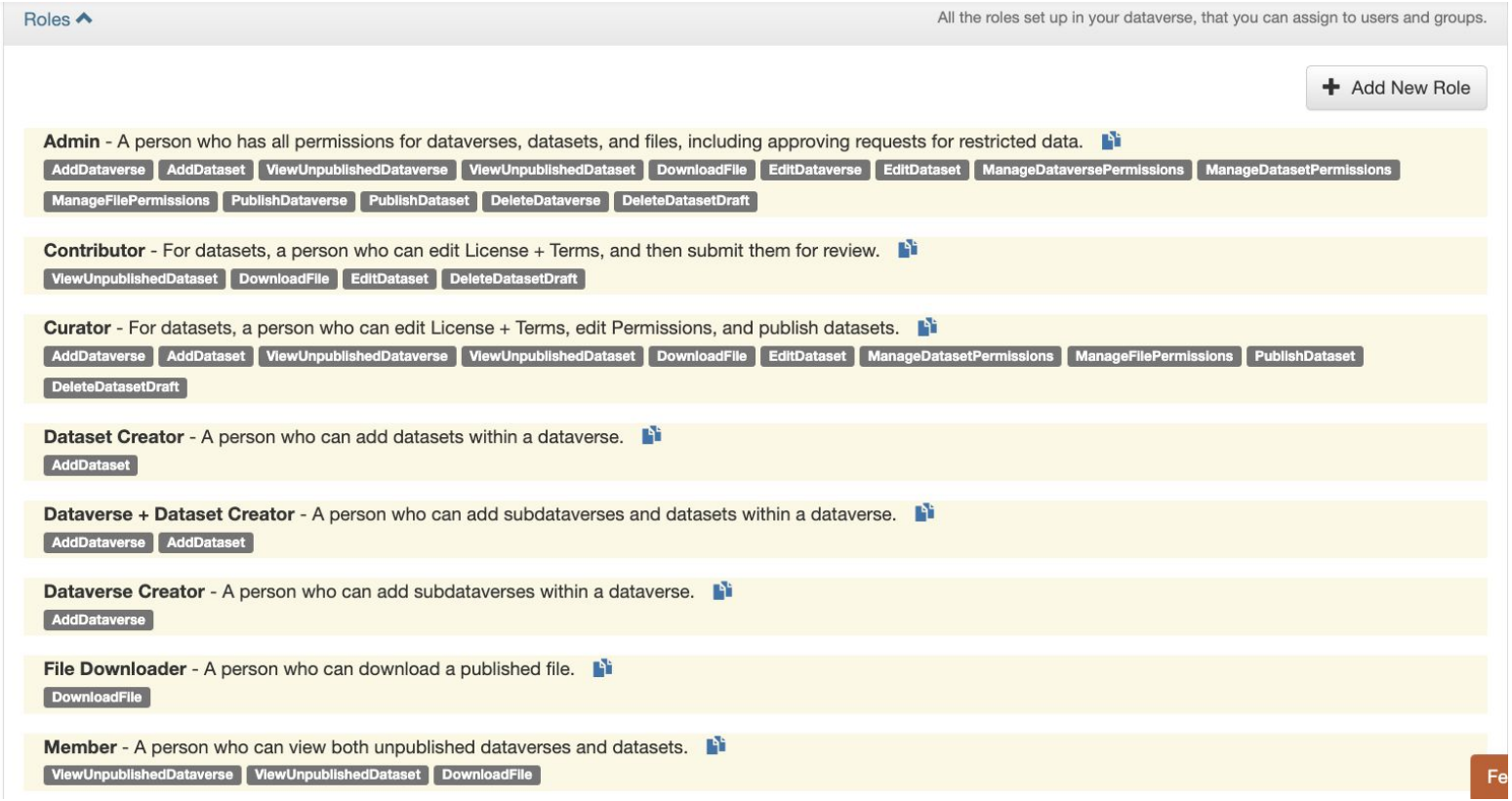
- CodeMeta Software Metadata: based on the CodeMeta Software Metadata Schema, version 2.0 (see .tsv version)
- Computational Workflow Metadata (see .tsv version): adapted from Bioschemas Computational Workflow Profile, version 1.0 and Codemeta.

Custom Metadata Blocks*

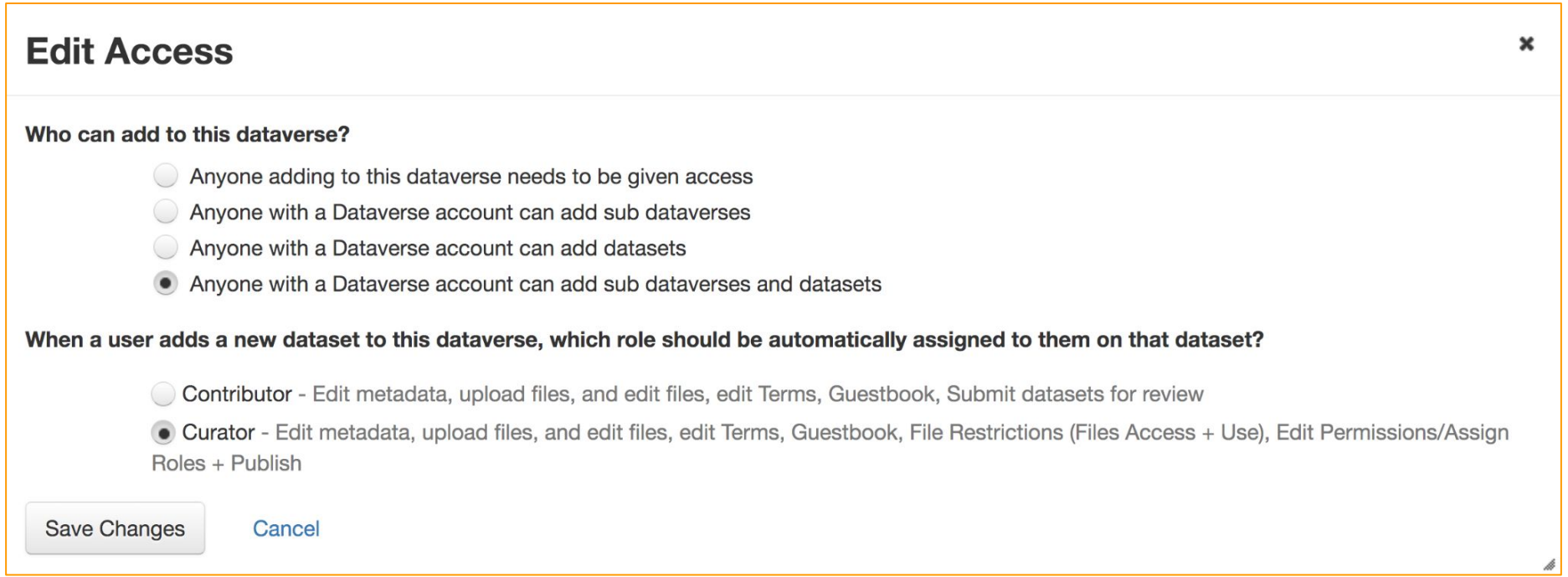
- Support for FAIR Data Principles
- Data citation for datasets and files
- OAI-PMH (Harvesting)
- APIs for interoperability and custom integrations
- API client libraries
- DataCite integration
- Login via Shibboleth
- Login via ORCID, Google, GitHub, or Microsoft
- Login via OpenID Connect (OIDC)
- Internationalization
- Versioning
- Restricted files
- Embargo
- Custom licenses
- Custom terms of use
- Publishing workflow support
- File hierarchy
- File previews
- Preview and analysis of tabular files
- Usage statistics and metrics
- Guestbook
- Fixity checks for files
- File download in R and TSV format
- Faceted search
- Customization of collections
- Private URL
- Widgets
- Notifications
- Schema.org JSON-LD
- External tools
- External vocabulary
- Dropbox integration
- GitHub integration
- Integration with Jupyter notebooks
- User management
- Curation status labels
- Branding
- Backend storage on S3 or Swift
- Direct upload and download for S3
- Export data in BagIt format
- Post-publication automation (workflows)
- Pull header metadata from Astronomy (FITS) files
- Provenance
- Support for rsync
- Auxiliary files for data files

https://dataverse.org/software-features

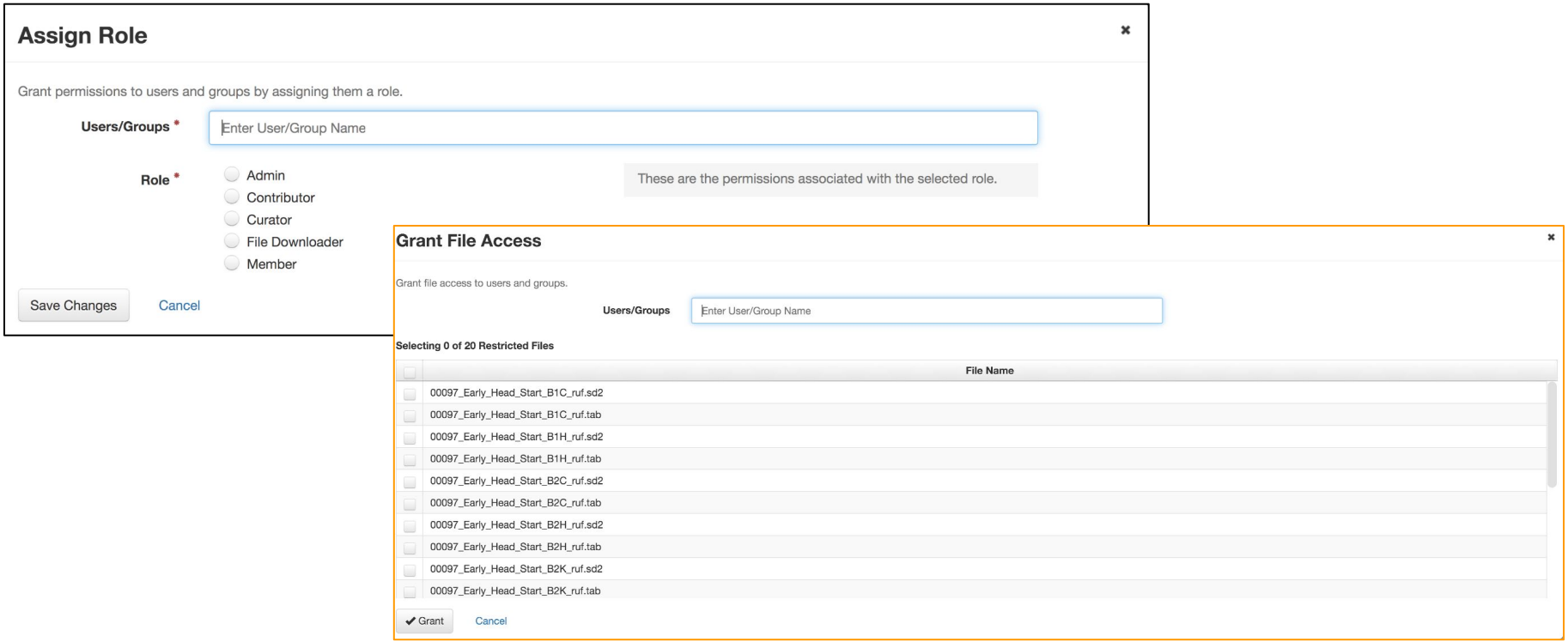
Permissions, Workflows and Roles



Permissions, Workflows and Roles



Permissions, Workflows and Roles



Data, Tools, Discoverability and Preservation

Getting Data Into a Dataverse Repository

- GitHub
- Dropbox
- OSF
- RSpace
- OJS
- Renku
- Amnesia
- SampleDB

Analysis and Computation

- Data Explorer
- Compute Button
- Whole Tale
- Binder
- Renku
- Avgidea Data Search

Discoverability

- OAI-PMH (Harvesting)
- SHARE
- Geodisy

Preservation

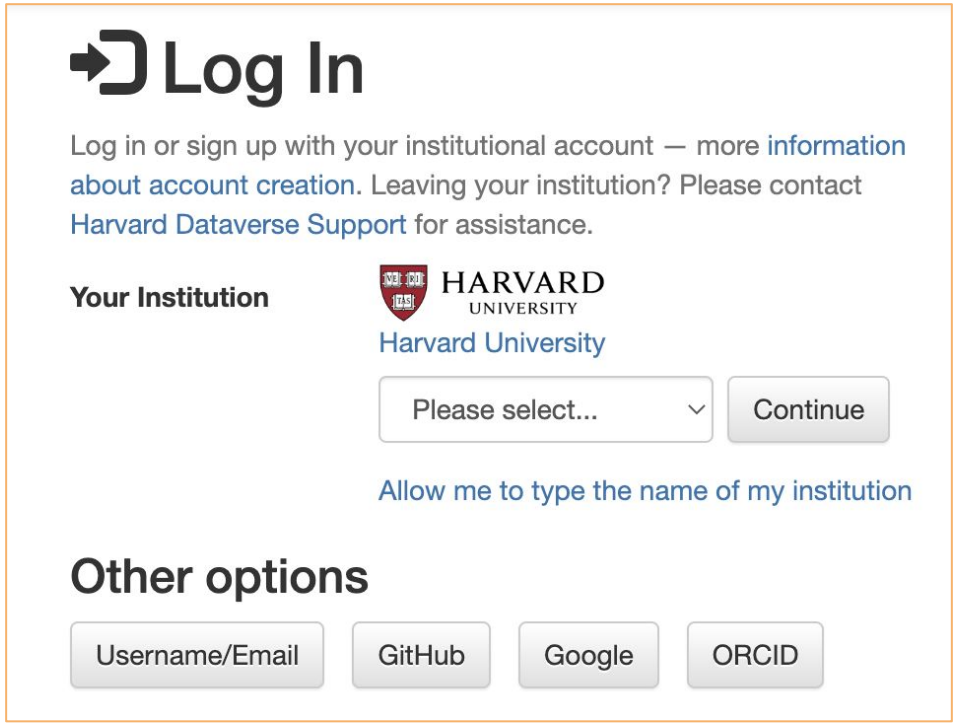
- Archivematica
- RDA BagIt Archiving
- Future Integrations*

Getting started with the DV Project

Create Collections and Datasets

- Data Formatting
- Quality Control
- Metadata Creation
- Version Control
- Documentation
- Access Control
- Preservation

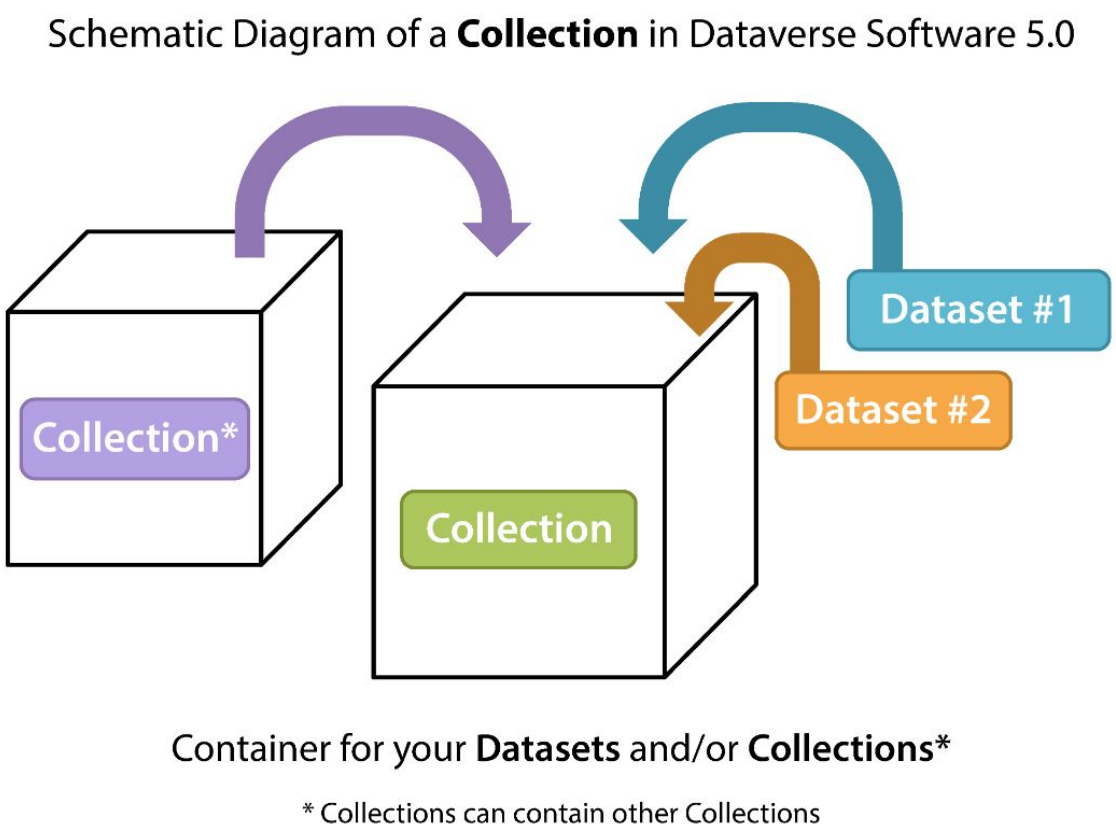
Account Creation



Create a Dataverse "Collection"

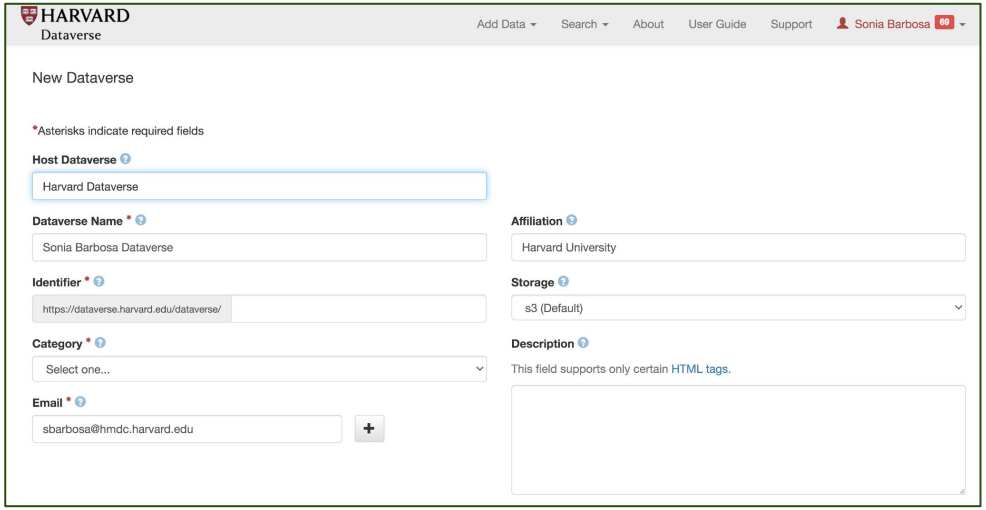
- Edit Dataverse Collection
  - General Information
  - Theme
  - Widgets
    - Dataverse Collection Search Box Widget
    - Dataverse Collection Listing Widget
    - Adding Widgets to an OpenScholar Website
  - Roles & Permissions
    - Setting Access Configurations
    - Assigning Roles to Users and Groups
  - Dataset Templates
  - Dataset Guestbooks
  - Featured Dataverse Collection
- Dataset Linking
- Dataverse Collection Linking
- Publish Your Dataverse Collection

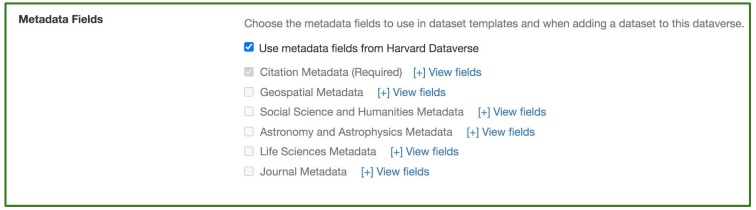
A Dataverse collection is a container for datasets (research data, code, documentation, and metadata) and other Dataverse collections, which can be setup for individual researchers, departments, journals and organizations.

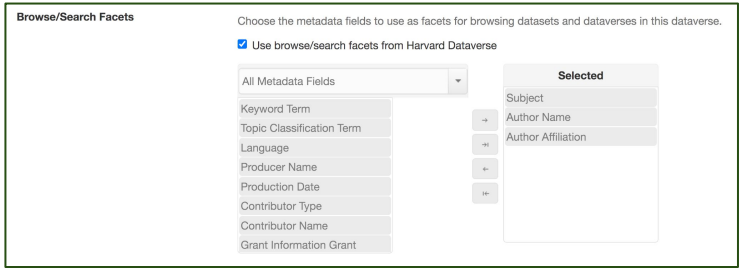


- Metadata
- Searchable facets
- Holds datasets

Customizable with descriptions, logos, collection space URLs, affiliation, contact emails, permissions, metadata and searchable facets. **Dataverse collections hold datasets.**







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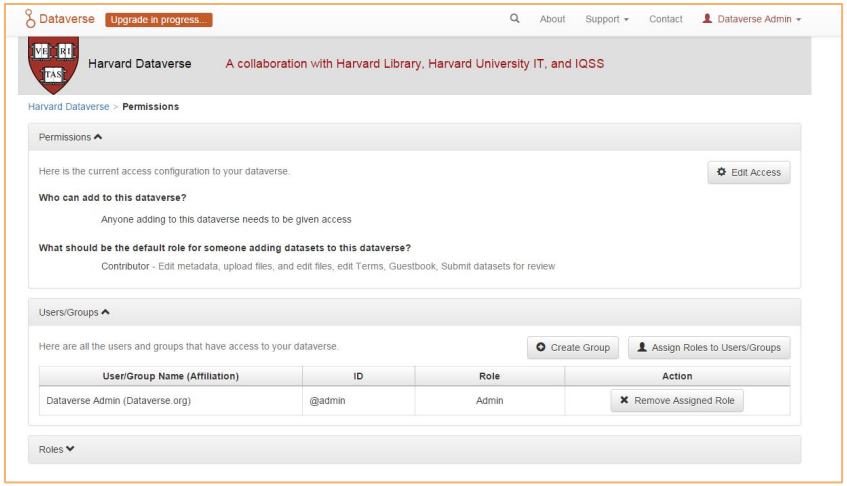

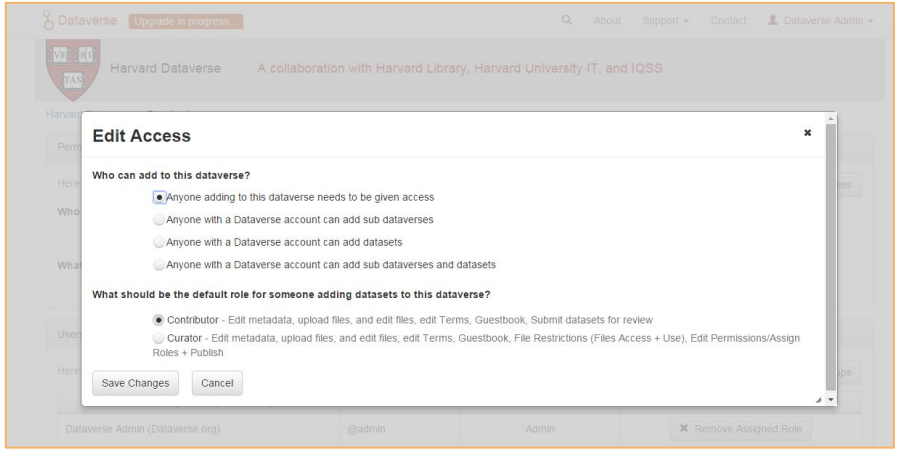

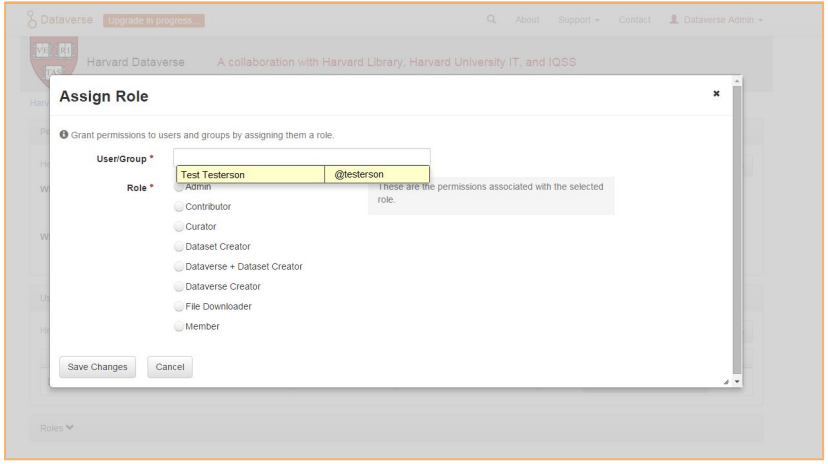

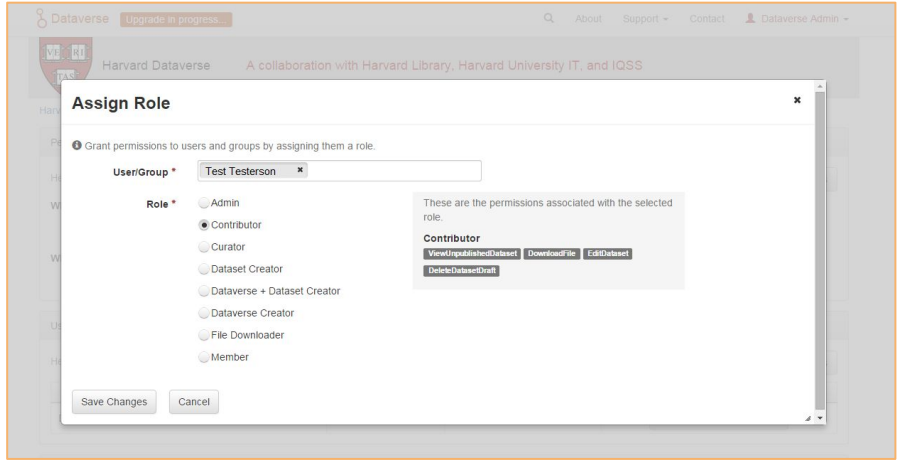

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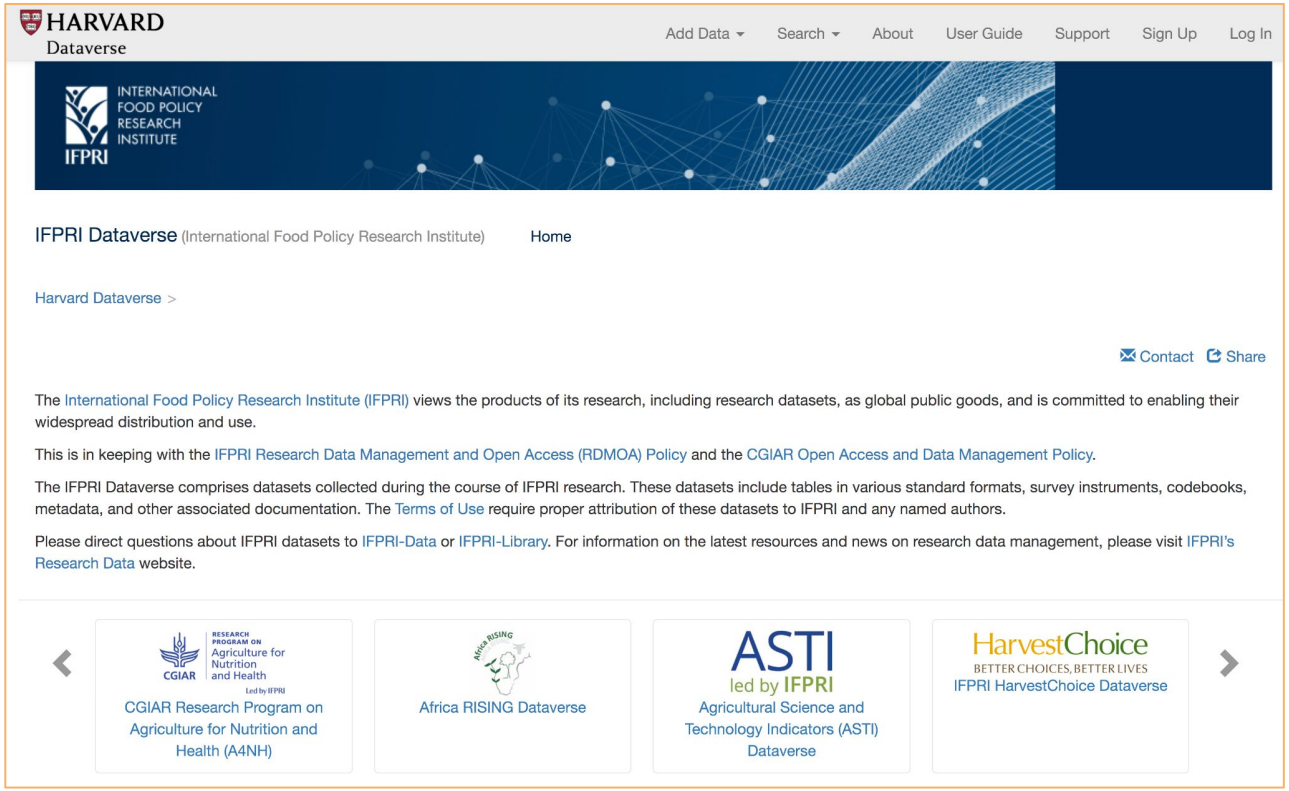

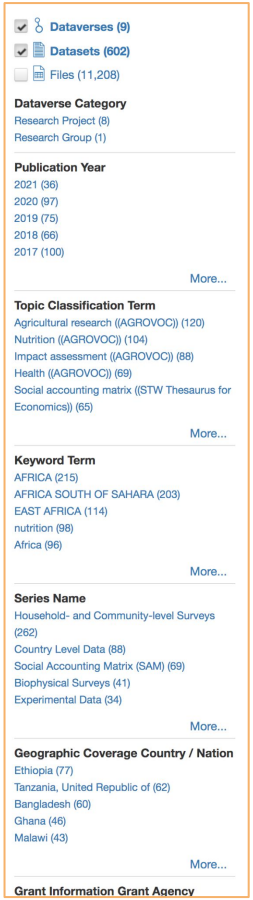

https://dataverse.harvard.edu/dataverse/IFPRI/

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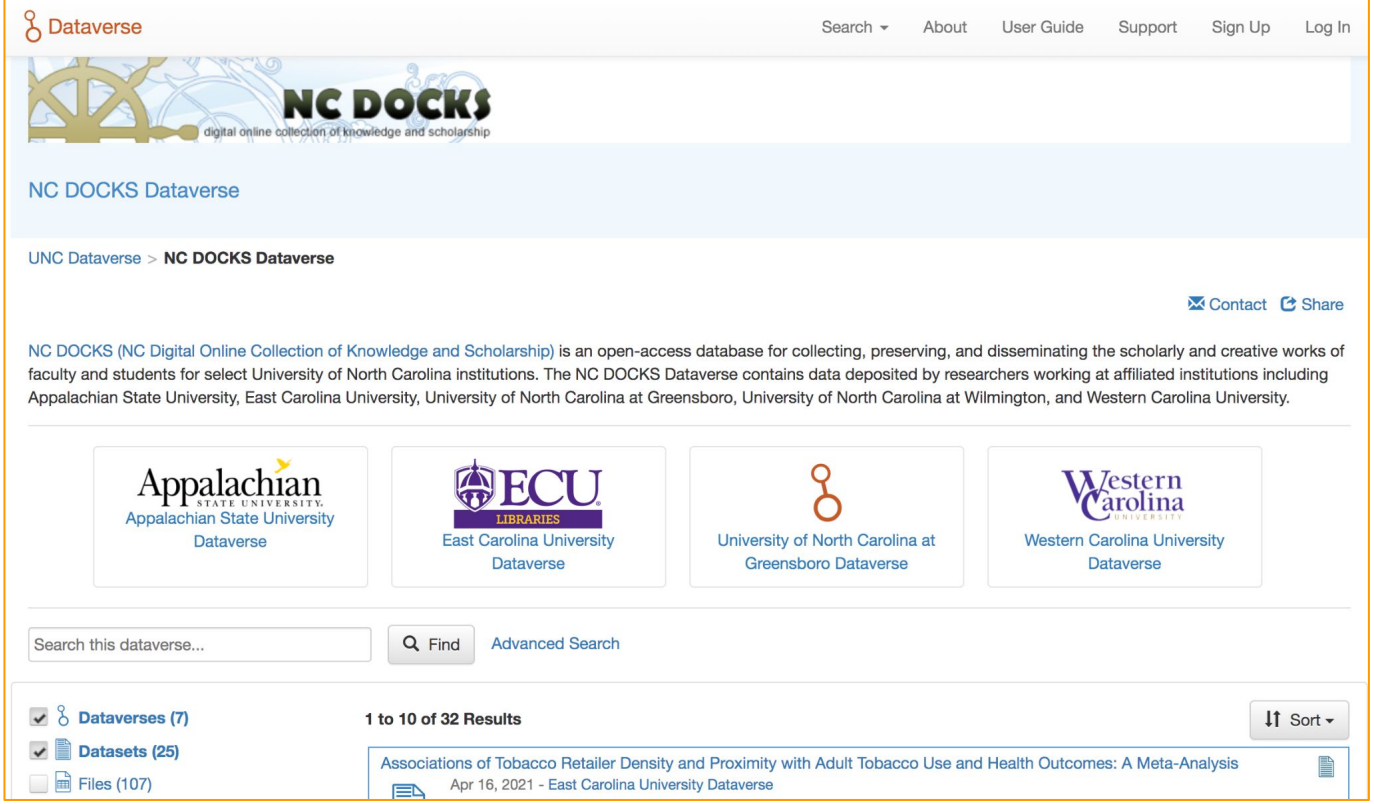

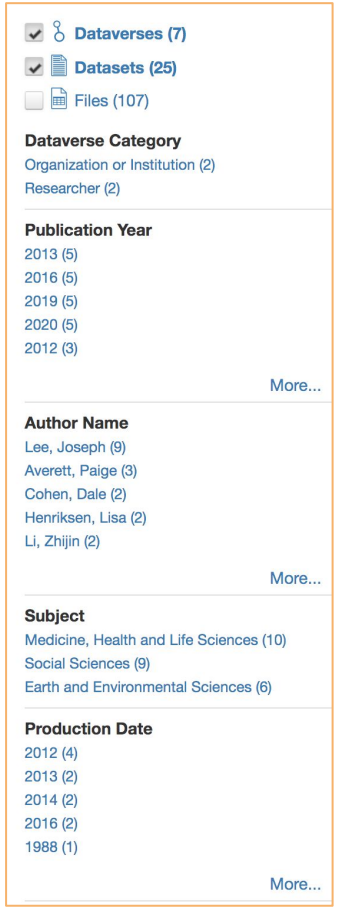

https://dataverse.unc.edu/dataverse/ncdocks

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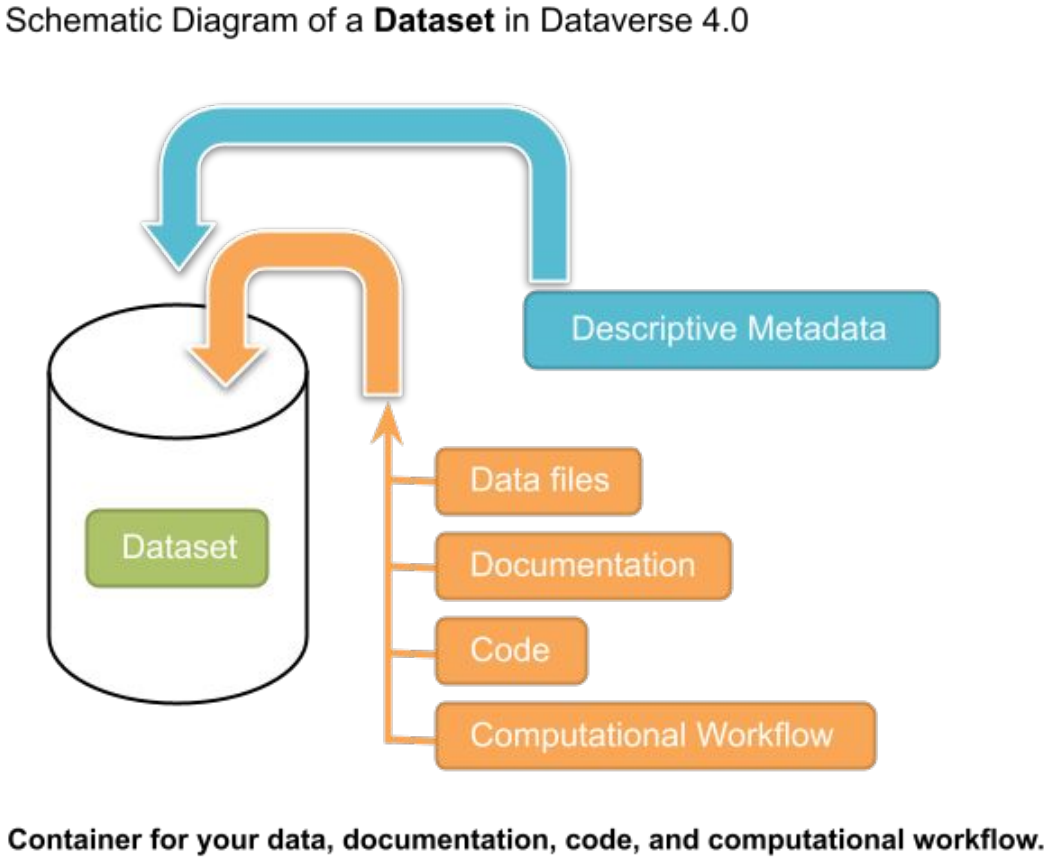
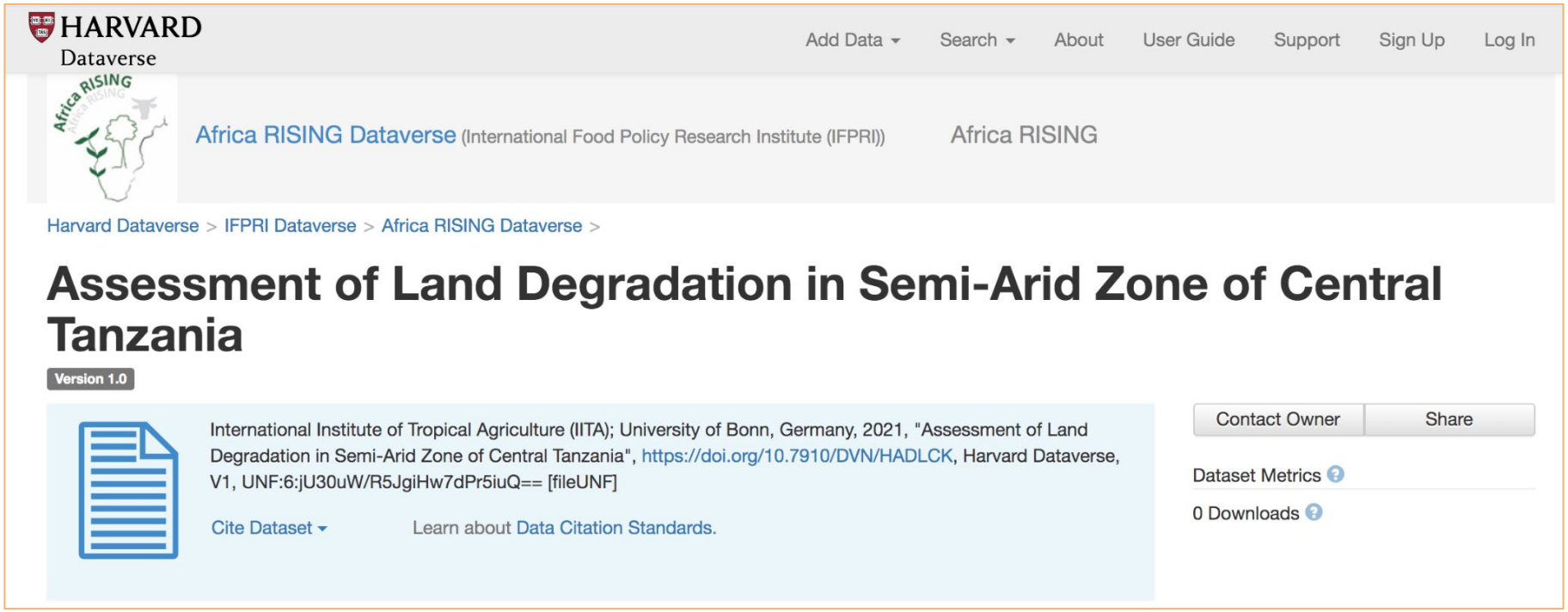
Deposit a Dataset

- Supported Metadata
- Adding a New Dataset
- File Upload
- File Handling
- Restricted Files
- Edit Files
- Replace Files
- Terms
- Roles & Permissions
- Data Provenance
- Thumbnails + Widgets
- Publish Dataset
- Submit for Review
- Private URL to Review Unpublished Dataset
- Embargoes
- Dataset Versions
  - Version Details
- Dataset Metrics and Make Data Count
- Cloud Storage + Computing
  - Cloud Computing
  - Cloud Storage Access
- Dataset Deaccession



Datasets - Citations

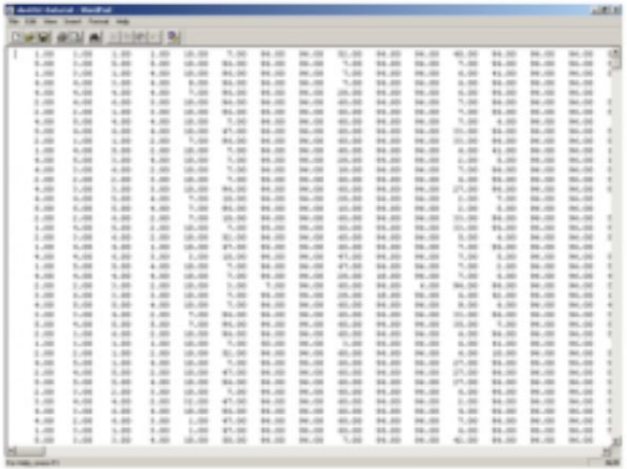


Data - Citations

Your Publication

Formal Data Citation

Your Data



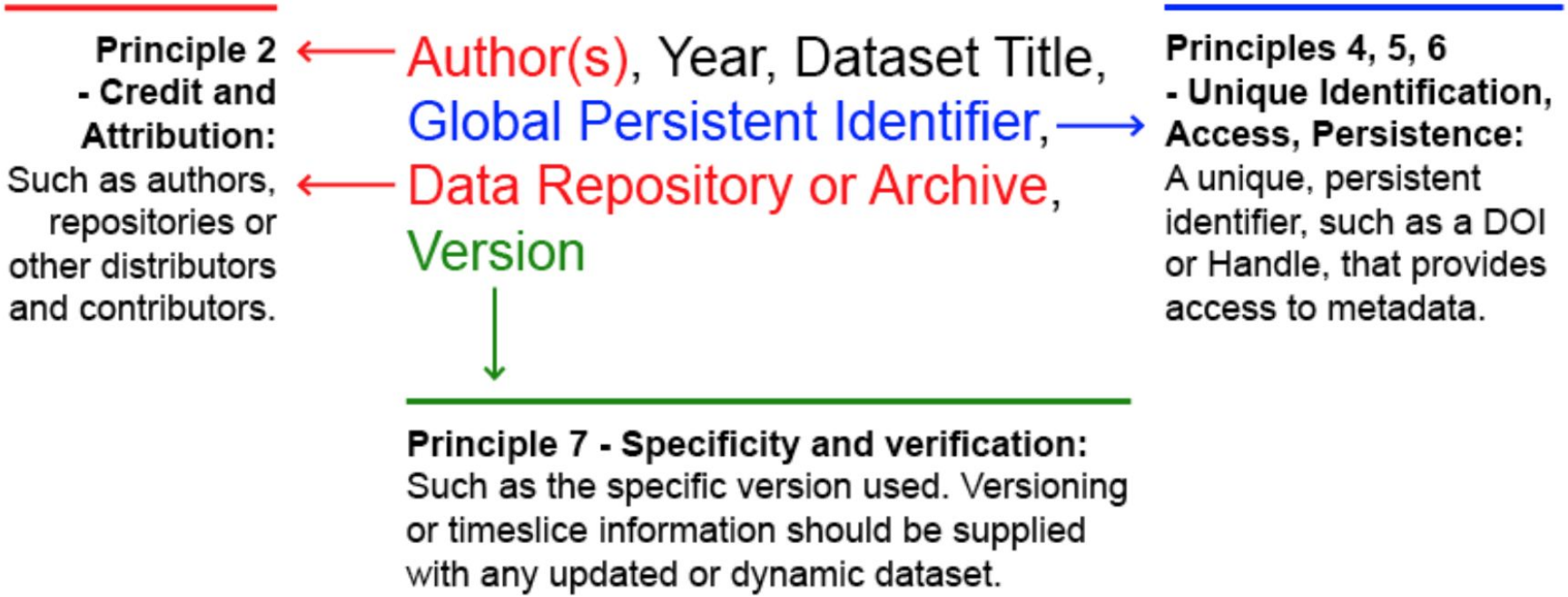
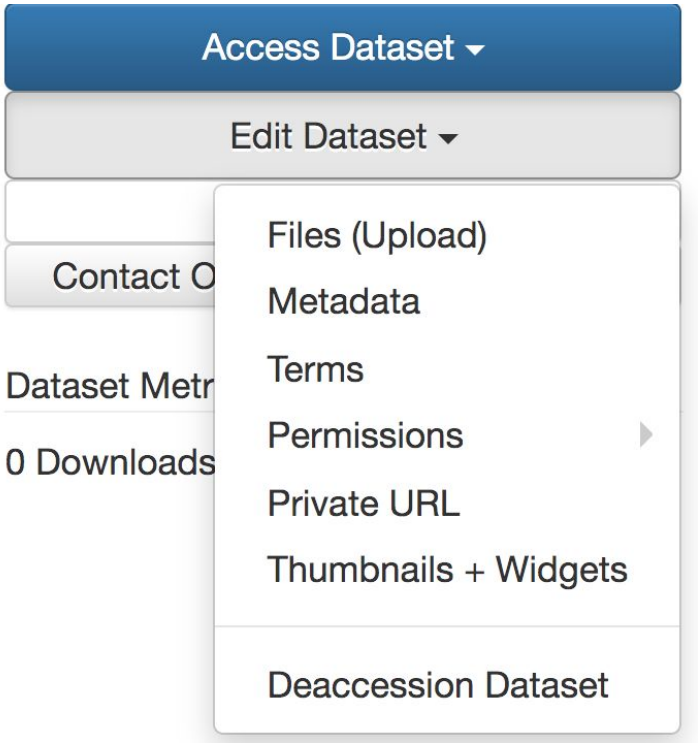
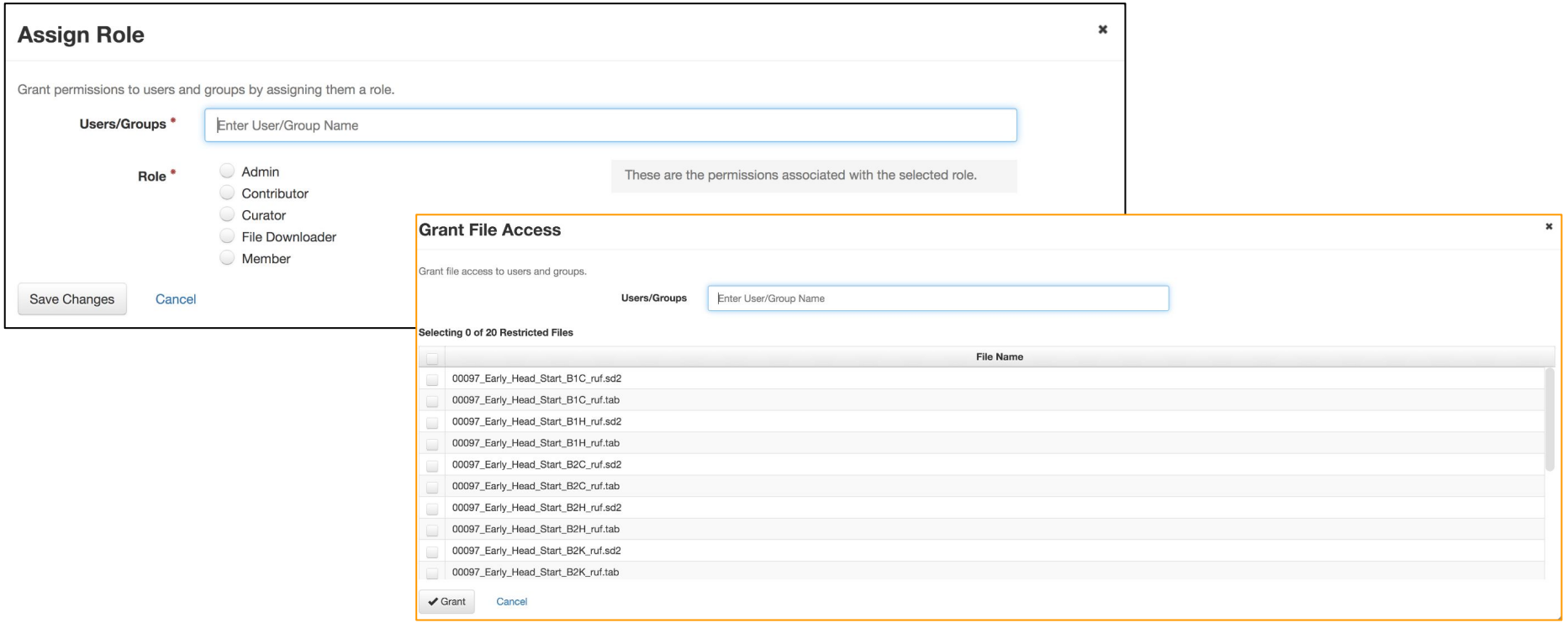


Fig. 1 Example of a data citation based on the Joint Declaration of Data Citation Principles (2014).

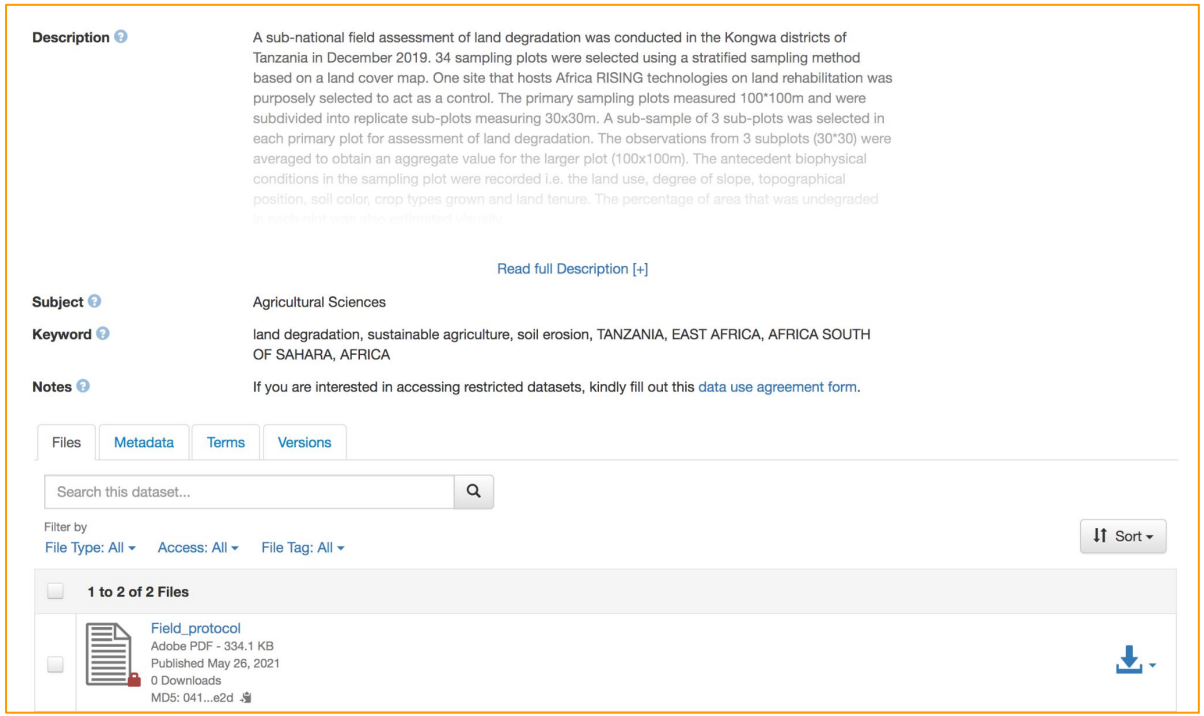
Datasets - Editing Options



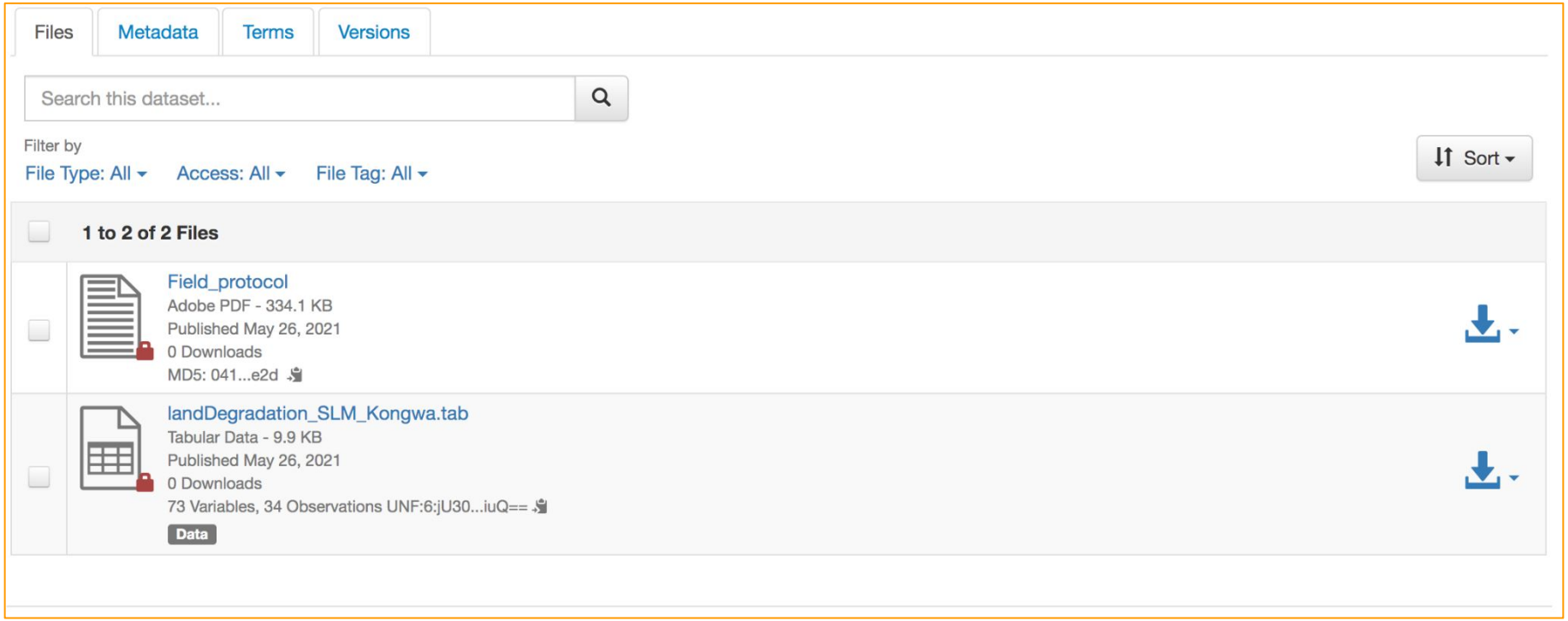
Datasets: Permissions, Workflows and Roles



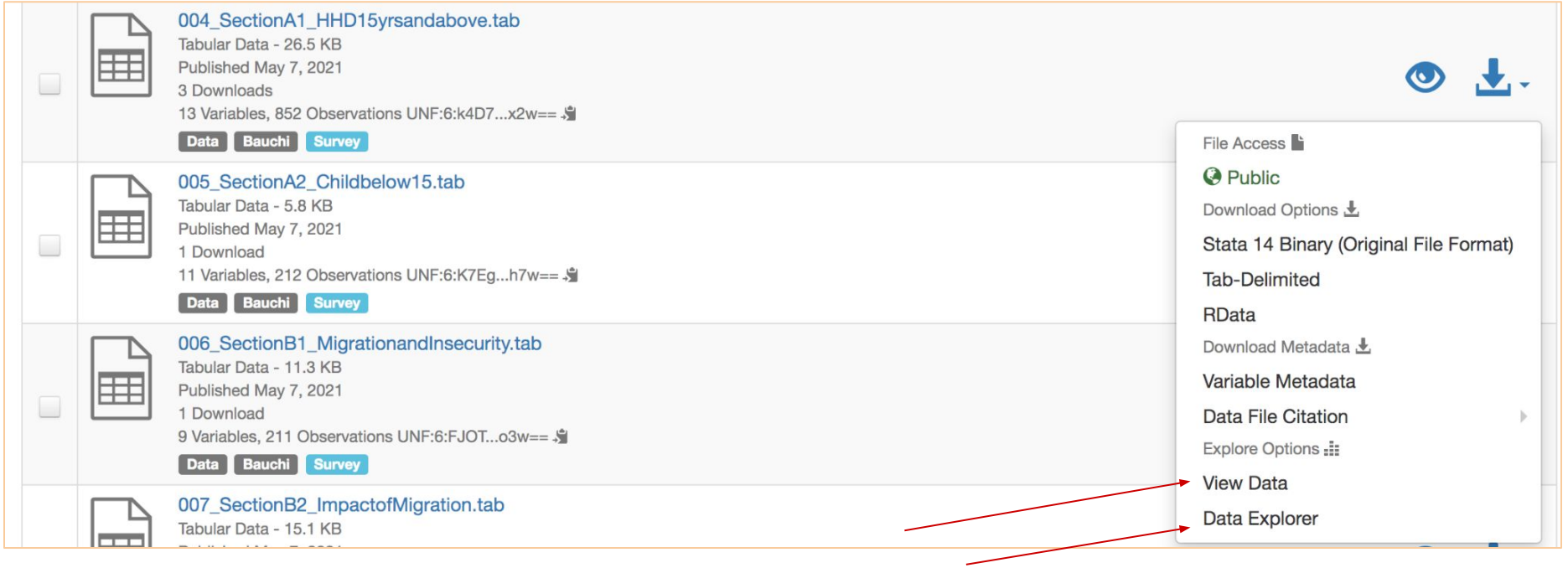
Datasets


Description
A sub-national field assessment of land degradation was conducted in the Kongwa districts of Tanzania in December 2019. 34 sampling plots were selected using a stratified sampling method based on a land cover map. One site that hosts Africa RISING technologies on land rehabilitation was purposely selected to act as a control. The primary sampling plots measured 100*100m and were subdivided into replicate sub-plots measuring 30x30m. A sub-sample of 3 sub-plots was selected in each primary plot for assessment of land degradation. The observations from 3 subplots (30*30) were averaged to obtain an aggregate value for the larger plot (100x100m). The antecedent biophysical conditions in the sampling plot were recorded i.e. the land use, degree of slope, topographical position, soil color, crop types grown and land tenure. The percentage of area that was undegraded
Read full Description [+]
Subject
Agricultural Sciences
Keyword
land degradation, sustainable agriculture, soil erosion, TANZANIA, EAST AFRICA, AFRICA SOUTH OF SAHARA, AFRICA
Notes
If you are interested in accessing restricted datasets, kindly fill out this data use agreement form.
Files
Metadata
Terms
Versions
Search this dataset...
Filter by
File Type: All
Access: All
File Tag: All
Sort
1 to 2 of 2 Files
Field_protocol
Adobe PDF - 334.1 KB
Published May 26, 2021
0 Downloads
MD5: 041...e2d

Datasets - Files



Datasets - Tabular Files



https://guides.dataverse.org/en/latest/user/tabulardataingest/index.html

Datasets - Tabular Files

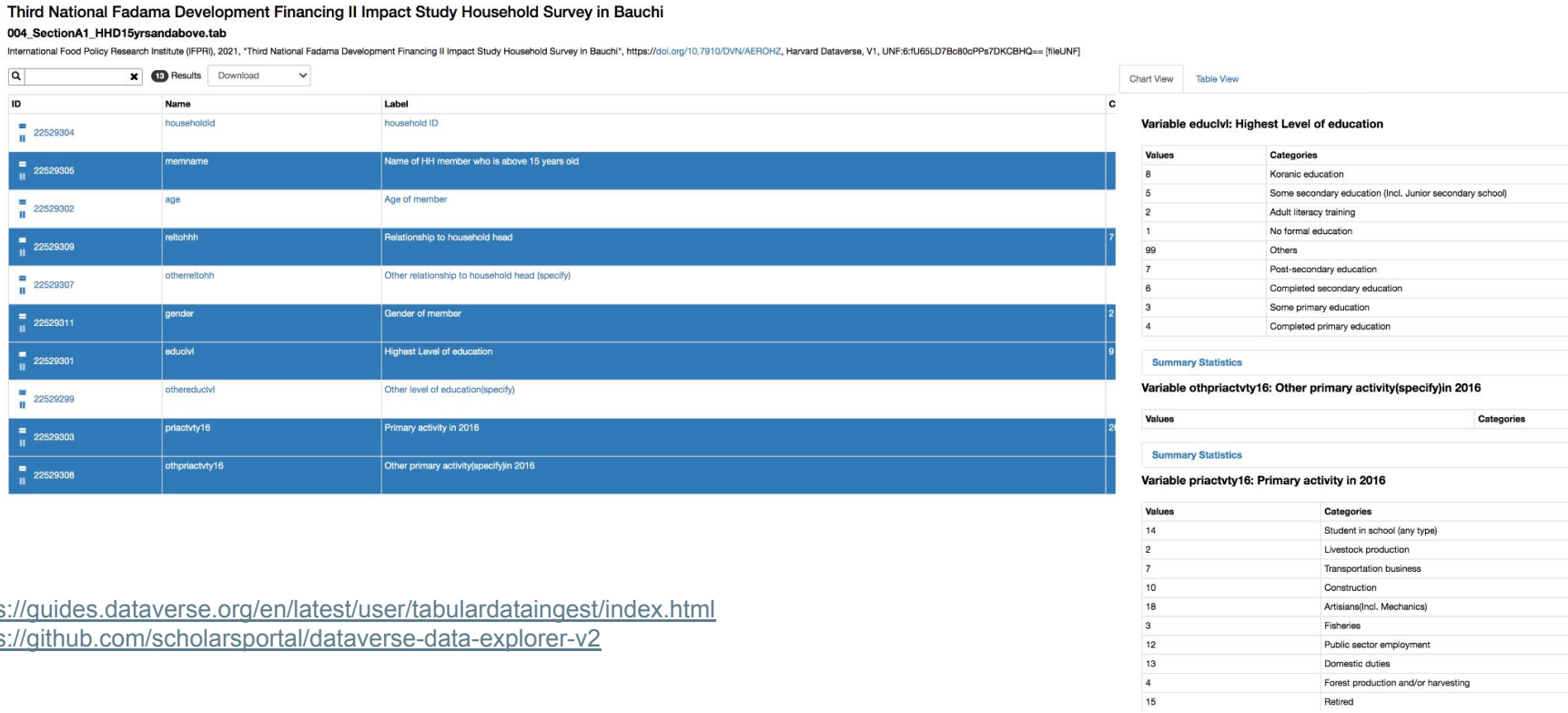
Supported File Formats

Tabular Data ingest supports the following file formats:

File format	Versions supported
SPSS (POR and SAV formats)	7 to 22
STATA	4 to 15
R	up to 3
Excel	XLSX only (XLS is NOT supported)
CSV (comma-separated values)	(limited support)

See the subsections in the left sidebar for more information on each of these supported formats.

Datasets - Tabular Files/Data Explorer



Third National Fadama Development Financing II Impact Study Household Survey in Bauchi

004_SectionA1_HHD15yrsandabove.tab

International Food Policy Research Institute (IFPRI), 2021, "Third National Fadama Development Financing II Impact Study Household Survey in Bauchi", https://doi.org/10.7910/DVN/AEROHZ, Harvard Dataverse, V1, UNF:6:fU65LD7Bc80cPPs7DKCBHQ== [fileUNF]

13 Results | Download | Chart View | Table View

ID	Name	Label	C
22529304	householdid	household ID	
22529305	memname	Name of HH member who is above 15 years old	
22529302	age	Age of member	
22529309	reltohhh	Relationship to household head	7
22529307	otherreltohh	Other relationship to household head (specify)	
22529311	gender	Gender of member	2
22529301	educlvl	Highest Level of education	9
22529299	othereduclvl	Other level of education(specify)	
22529303	priactvty16	Primary activity in 2016	2
22529308	othpriactvty16	Other primary activity(specify)in 2016	

Variable educlvl: Highest Level of education

Values	Categories
8	Koranic education
5	Some secondary education (Incl. Junior secondary school)
2	Adult literacy training
1	No formal education
99	Others
7	Post-secondary education
6	Completed secondary education
3	Some primary education
4	Completed primary education

Summary Statistics

Variable othpriactvty16: Other primary activity(specify)in 2016

Values	Categories

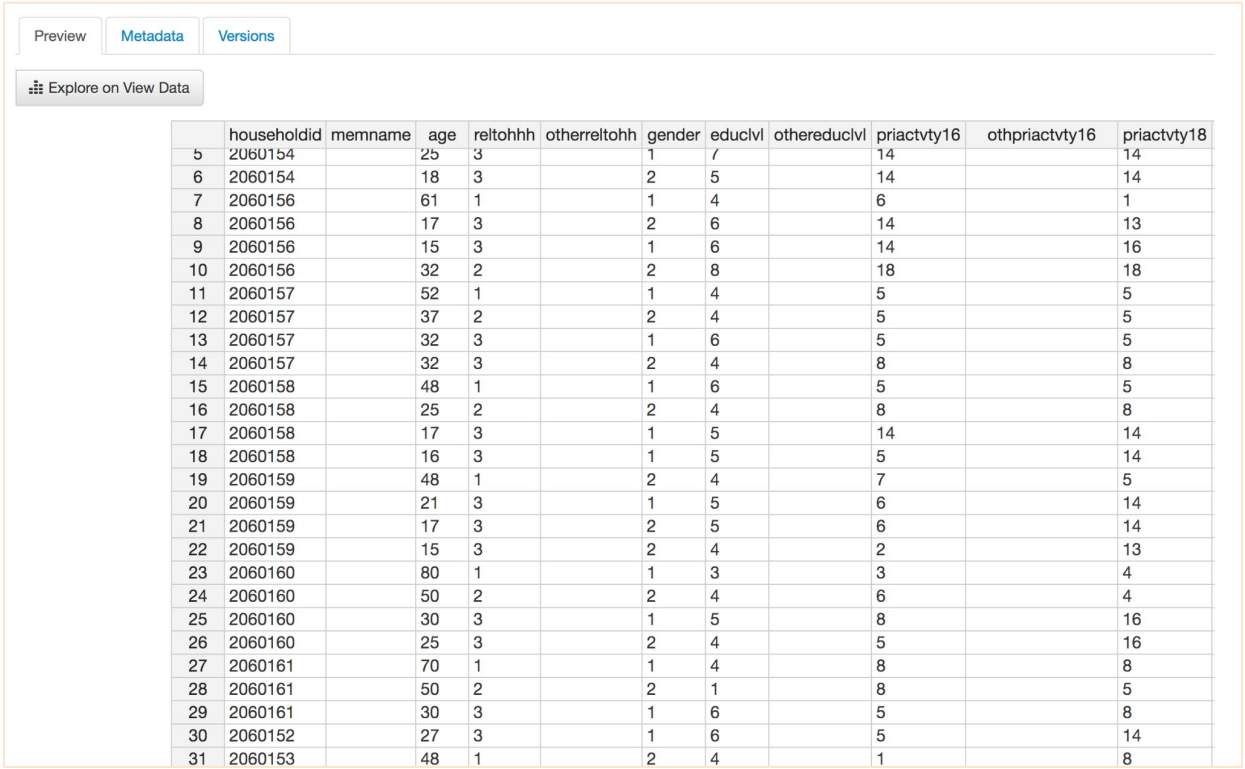
Summary Statistics

Variable priactvty16: Primary activity in 2016

Values	Categories
14	Student in school (any type)
2	Livestock production
7	Transportation business
10	Construction
18	Artisians(Incl. Mechanics)
3	Fisheries
12	Public sector employment
13	Domestic duties
4	Forest production and/or harvesting
15	Retired

https://guides.dataverse.org/en/latest/user/tabulardataingest/index.html
https://github.com/scholarsportal/dataverse-data-explorer-v2

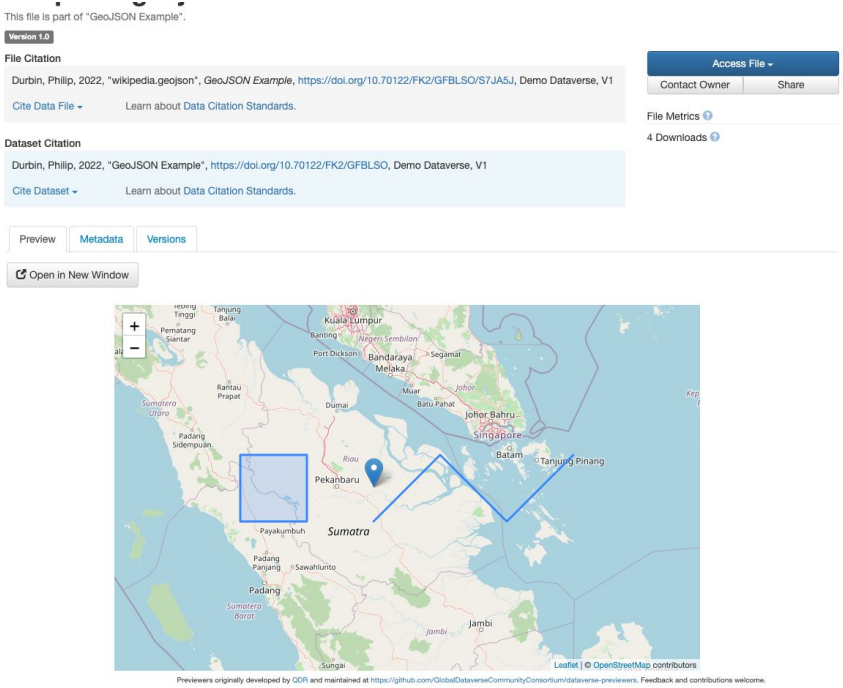
Datasets - File Previewer



	householdid	memname	age	reltohhh	otherreltohh	gender	educlvl	othereduclvl	priactvty16	othpriactvty16	priactvty18
5	2060154		25	3		1	7		14		14
6	2060154		18	3		2	5		14		14
7	2060156		61	1		1	4		6		1
8	2060156		17	3		2	6		14		13
9	2060156		15	3		1	6		14		16
10	2060156		32	2		2	8		18		18
11	2060157		52	1		1	4		5		5
12	2060157		37	2		2	4		5		5
13	2060157		32	3		1	6		5		5
14	2060157		32	3		2	4		8		8
15	2060158		48	1		1	6		5		5
16	2060158		25	2		2	4		8		8
17	2060158		17	3		1	5		14		14
18	2060158		16	3		1	5		5		14
19	2060159		48	1		2	4		7		5
20	2060159		21	3		1	5		6		14
21	2060159		17	3		2	5		6		14
22	2060159		15	3		2	4		2		13
23	2060160		80	1		1	3		3		4
24	2060160		50	2		2	4		6		4
25	2060160		30	3		1	5		8		16
26	2060160		25	3		2	4		5		16
27	2060161		70	1		1	4		8		8
28	2060161		50	2		2	1		8		5
29	2060161		30	3		1	6		5		8
30	2060152		27	3		1	6		5		14
31	2060153		48	1		2	4		1		8

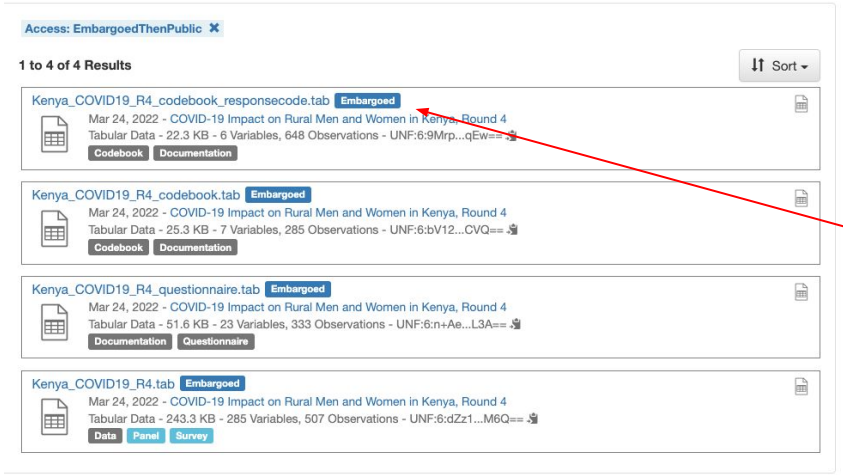
https://github.com/gdcc/dataverse-previewers

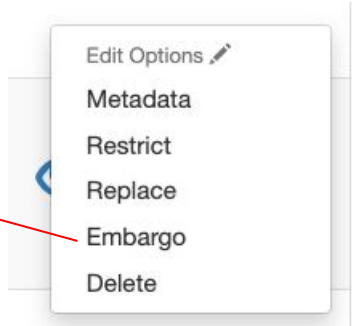
Datasets - GeoJSON Previewer

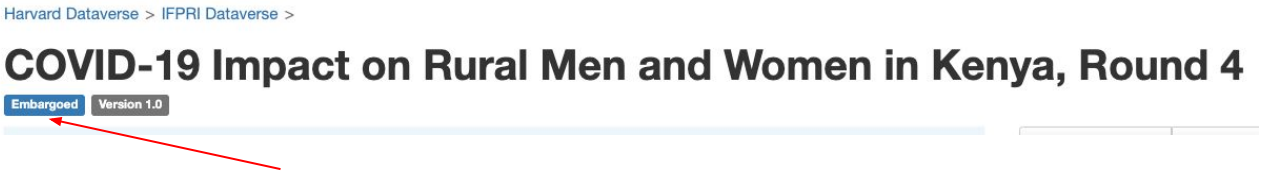


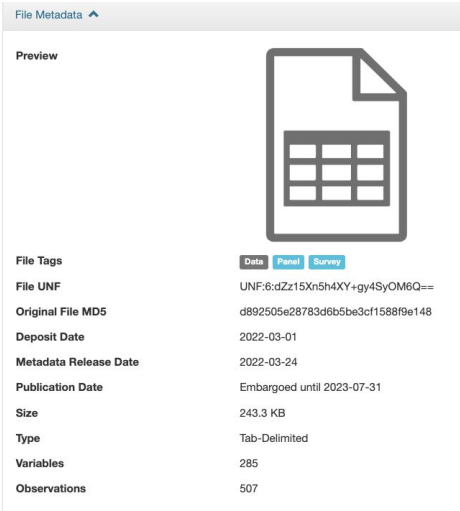
https://github.com/GlobalDataverseCommunityConsortium/dataverse-previewers

Datasets - File Level Embargo









Datasets - Metadata

Detailed below are what metadata schemas we support for Citation and Domain Specific Metadata in the Dataverse Project:

- Citation Metadata: compliant with DDI Lite, DDI 2.5 Codebook, DataCite 3.1, and Dublin Core's DCMI Metadata Terms (see .tsv version). Language field uses ISO 639-1 controlled vocabulary.
- Geospatial Metadata: compliant with DDI Lite, DDI 2.5 Codebook, DataCite, and Dublin Core (see .tsv version). Country / Nation field uses ISO 3166-1 controlled vocabulary.
- Social Science & Humanities Metadata: compliant with DDI Lite, DDI 2.5 Codebook, and Dublin Core (see .tsv version).
- Astronomy and Astrophysics Metadata : These metadata elements can be mapped/exported to the International Virtual Observatory Alliance's (IVOA) VOResource Schema format and is based on Virtual Observatory (VO) Discovery and Provenance Metadata (see .tsv version).
- Life Sciences Metadata: based on ISA-Tab Specification, along with controlled vocabulary from subsets of the OBI Ontology and the NCBI Taxonomy for Organisms (see .tsv version).
- Journal Metadata: based on the Journal Archiving and Interchange Tag Set, version 1.2 (see .tsv version).

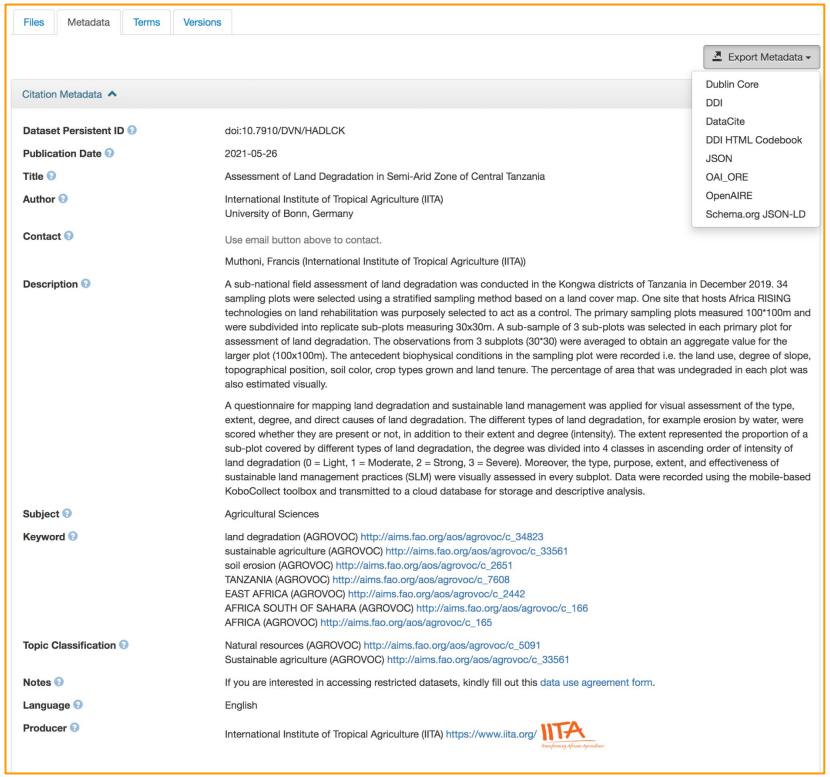
See also the Dataverse Software 4.0 Metadata Crosswalk: DDI, DataCite, DC, DCTerms, VO, ISA-Tab document and the Metadata Customization section of the Admin Guide.

Datasets - Metadata

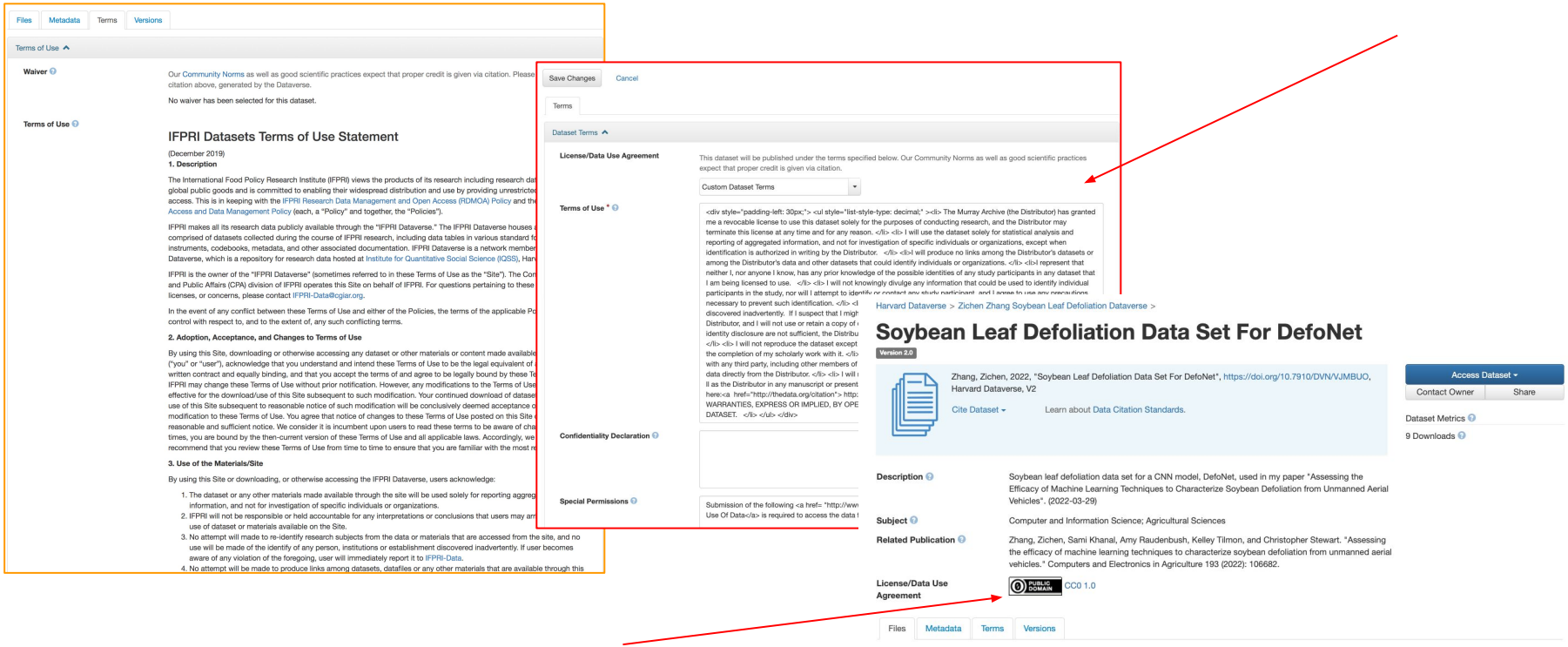
Metadata Fields

Choose the metadata fields to use in dataset templates and when adding a dataset to this dataverse.

- [x] Use metadata fields from Harvard Dataverse
  - [x] Citation Metadata (Required) [+] View fields
  - [ ] Geospatial Metadata [+] View fields
  - [ ] Social Science and Humanities Metadata [+] View fields
  - [ ] Astronomy and Astrophysics Metadata [+] View fields
  - [ ] Life Sciences Metadata [+] View fields
  - [ ] Journal Metadata [+] View fields



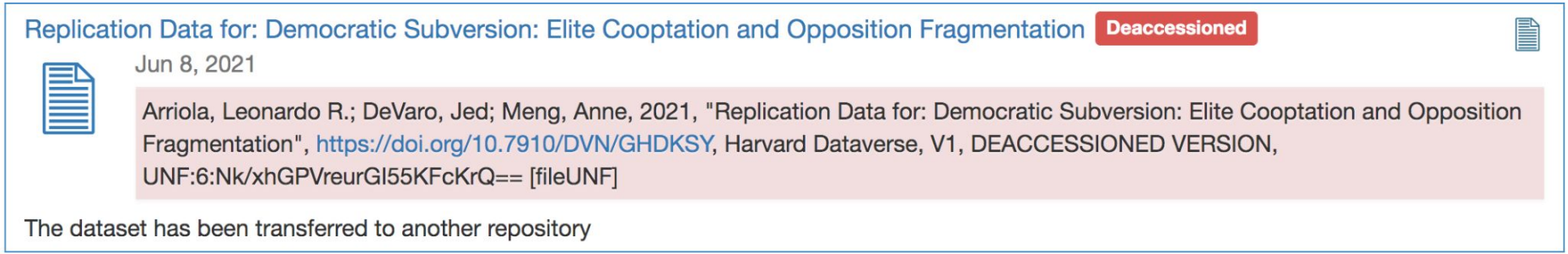
Datasets - Terms



Datasets - Versions

https://dataverse.org/files/dataverseorg/files/metadataprovenance-mercecrosas.pdf

Datasets - Deaccession



Summary

- The Dataverse Project facilitates the creation of digital repositories to ensure that the data are high quality, properly documented, organized, and accessible.

- Metadata is an essential component of the Dataverse Project

- Best Practices in a Dataverse repository; Collection creation and customization, dataset creation and file uploads, publishing workflows, and Q&A to ensure FAIR

Guides

User Guide

- Account creation and management
- Finding and using data
- Dataverse collection management
- Dataset and file management
- Tabular Data File Ingest

- Admin Guide
- API Guide
- Installation Guide
- Developer Guide
- Container Guide and Style Guide

Create an Account and Collection:

https://demo.dataverse.org/

Q&A

Thank You!

The Dataverse Project
https://dataverse.org/

The Harvard Dataverse repository
https://dataverse.harvard.edu/

Integrating Dataverse and DSpace
https://osf.io/72w4m

The Dataverse Guide
https://guides.dataverse.org/en/latest/

Dataverse on Github
https://github.com/IQSS/dataverse

Dataverse google community
https://groups.google.com/g/dataverse-community