The Dataverse Project: Managing and Sharing Your Research Data

Sonia Barbosa,
Associate Director of Dataverse Support and Data Curation

The Dataverse Project
Data Science
Harvard University

AfricaRXiv Open Science Webinar Series

Automating workflows and providing academic credit to data curators for F.A.I.R. research data archiving.

August 1, 2024

11am WAT (UTC+1)
12pm CAT
1pm EAT

Register now

Speaker: **Sonia Barbosa**

0000-0002-5477-3522

Moderator: **Ebuka Ezeike**

0000-0003-3452-0306

Presented by UbuntuNet Alliance, Access 2 Perspectives

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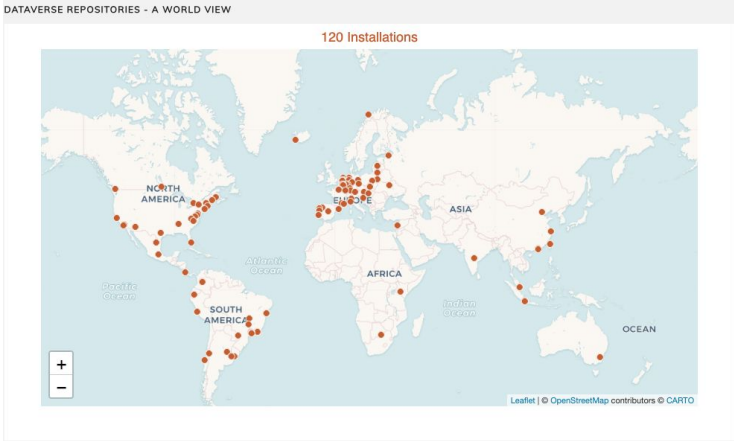
Agenda

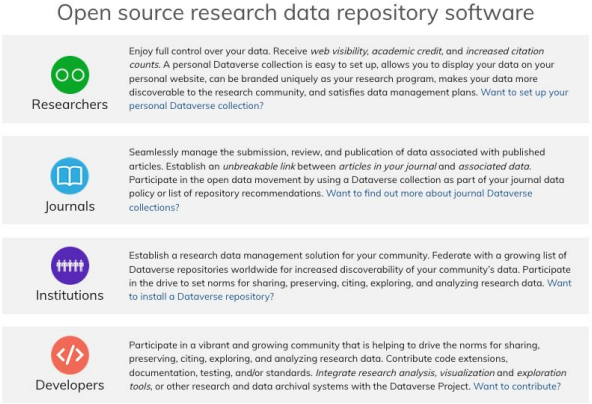
- Introduction and Overview: The Dataverse Project
- Automated Data Workflows in Dataverse
- Dataverse and FAIR
- Features and Highlights

Introduction: The Dataverse Project

Dataverse World-wide Community (dataverse.org)

- Open-source software
- Two bi-weekly Community calls
- Annual Community meetings (since 2015)
- Global Dataverse Community Consortium (GDCC)





Self-curated model

- Deposit/publish
- Review post publishing

Harvested collections

- › Discoverability

Large data support

- Globus Integration

Ask the Data (AI)

Computational Workflow

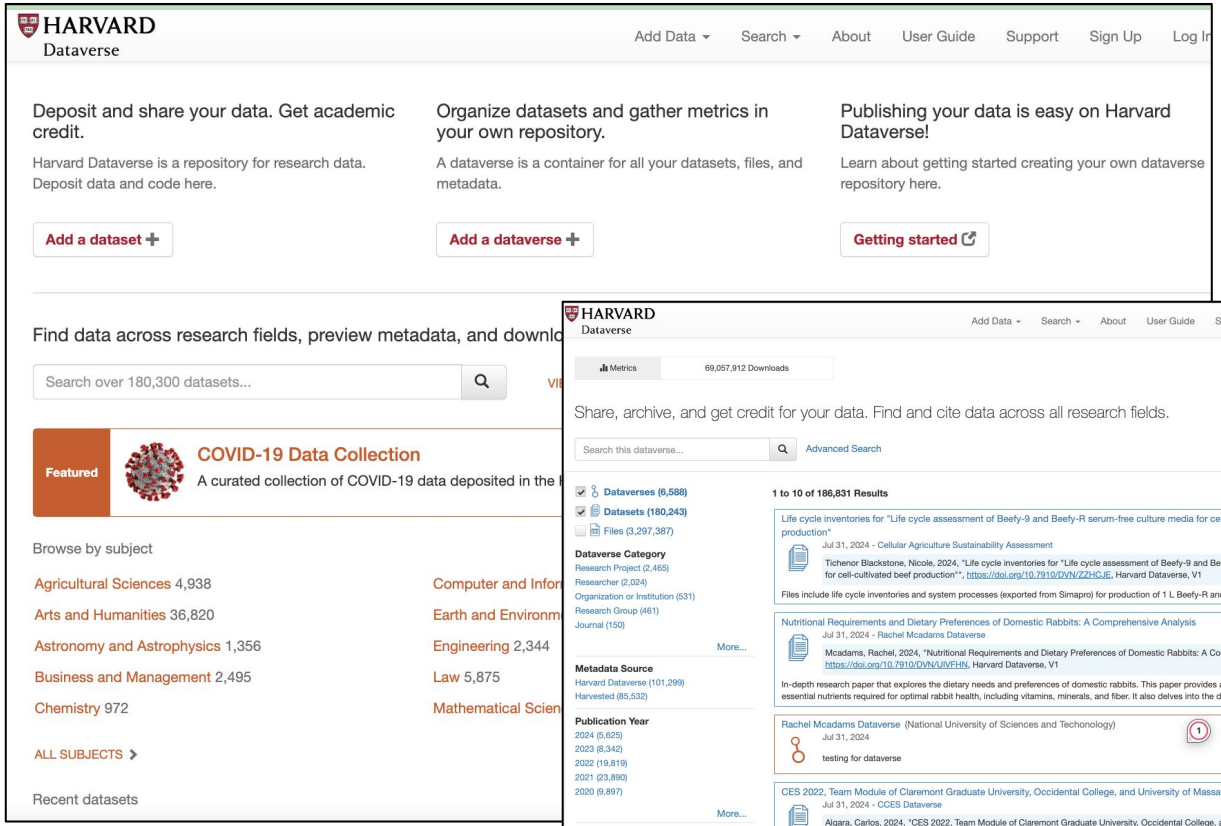
Custom Metadata Blocks

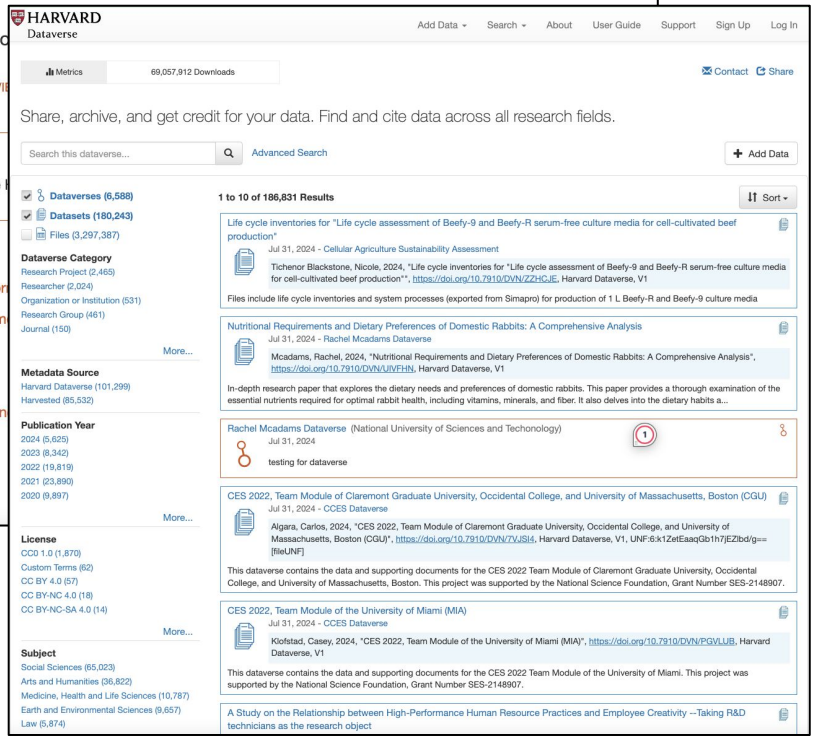
3D Viewer/Metadata support

Folder upload

- Direct Upload enabled collections

Anonymous Peer Review





World Agroforestry (ICRAF)

Metrics | 77,413 Downloads | Contact | Share

Sentinel Landscapes | ICRAF Field Genebanks | ICRAF Soil and Land Health Theme | Africa Rising

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Publication Year
2018 (124)
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Spatial Assessments of Changes in Soil Health Indicators in Kenya — Dataset

Jul 30, 2024 - ICRAF Soil and Land Health Theme

Winowiecki, Leigh Ann; Thiongo Maina, John; Bargués-Tobella, Aida; Otieno Onyango, Jared; Dennis, Ncurai; Kersting, David; Vågen, Tor-Gunnar, 2022, "Spatial Assessments of Changes in Soil Health Indicators in Kenya", https://doi.org/10.34725/DVN/MR2COM, World Agroforestry (ICRAF), V2, UNF:6:WDJT5PMvHss5xbLnTPWzEA== [fileUNF]

The Land Degradation Surveillance Framework (LDSF) (http://landscapeportal.org/blog/2015/03/25/the-land-degradation-surveillance-framework-ldsf/) was developed by the World Agroforestry (ICRAF) in response to the need for consistent field methods and indicator frameworks to asses...

Spatial Assessments of Changes in Soil Health Indicators in Benin — Dataset

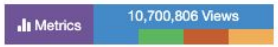
Jul 30, 2024 - ICRAF Soil and Land Health Theme

Winowiecki, Leigh Ann; Arinloye Ademola, Djalal; Adeyemi, Chabi; Takoutsing, Bertin; N'YABA, Ezéchiel T.; Smytzek, Patrick; Vågen, Tor-Gunnar, 2022, "Spatial Assessments of Changes in Soil Health Indicators in Benin", https://doi.org/10.34725/DVN/CF2DGQ, World Agroforestry (ICRAF), V2, UNF:6:hniRCQrJqqvl2LpKiOzAFQ== [fileUNF]

The Land Degradation Surveillance Framework (LDSF) (http://landscapeportal.org/blog/2015/03/25/the-land-degradation-surveillance-framework-ldsf/) was developed by the World Agroforestry (ICRAF) in response to the need for consistent field methods and indicator frameworks to asses...

Evaluating the restoration of the commons: LDSF field data — Dataset

复旦大学社会科学 Dataverse



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2021 (1)

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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。
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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。
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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
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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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Dataverse Category
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Journal (14)
More...
Metadata Source
Harvested (20,818)
UNC Dataverse (5,000)
Publication Year
2022 (136)
2021 (225)
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Sort
State-Level Data on TANF Policy Changes During the COVID-19 Pandemic
Jun 10, 2022 - Emory Dataverse
Dore, Emily; Paul R. Shafer; Melvin D. Livingston, 2022, "State-Level Data on TANF Policy Changes During the COVID-19 Pandemic", https://doi.org/10.15139/S3/79WVWC, UNC Dataverse, V1
This dataset captures changes to the Temporary Assistance for Needy Families by state during the COVID-19 pandemic, from March 2020 through December 2020. It accompanies a soon-to-be submitted publication that describes the dataset and data collection processes.
Replication Data for: The Impact of Course Structure on Students' Political Efficacy and Confidence-in-Knowledge in Introduction to American Government
Jun 9, 2022 - Joshua M. Jansa Dataverse
Jansa, Joshua; Ringsmuth, Eve, 2022, "Replication Data for: The Impact of Course Structure on Students' Political Efficacy and Confidence-in-Knowledge in Introduction to American Government", https://doi.org/10.15139/S3/BVCIOH, UNC Dataverse, V1
Introduction to American Government is a foundational general education course meant to promote understanding of democracy and students' ability to participate in it. But, there is substantial variation in how the course is structured: it can enroll anywhere from a dozen students...
Replication Data for: The Abundance and Persistence of Temperate and Tropical Seagrasses at Their Edge-of-Range in the Western Atlantic Ocean

HARVARD Dataverse

Collection-level

IQSS

Current Features

Collections

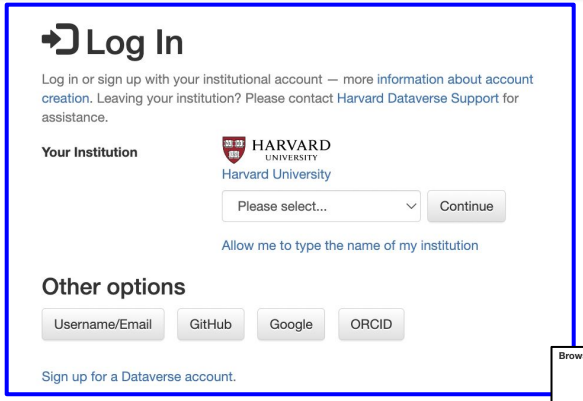
- Own administration
- Own branding (and can be embedded anywhere)

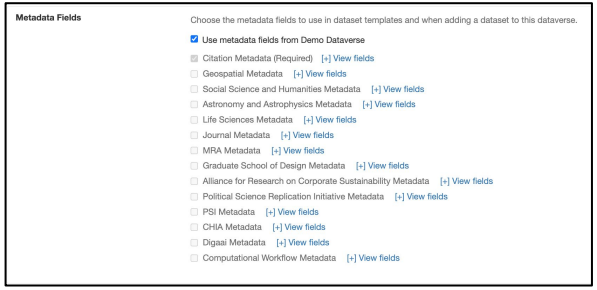
Datasets

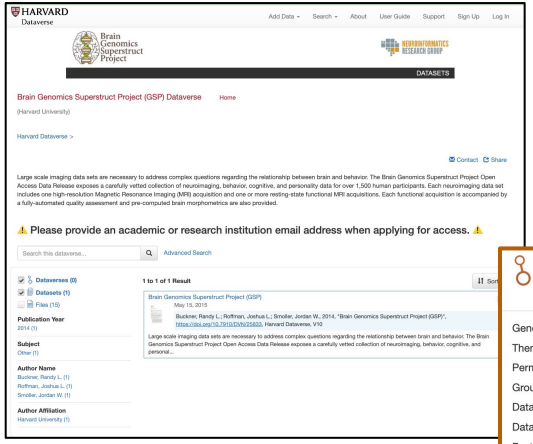
- Citation
- Metadata
- Versioning
- Private URL
- Custom Terms/Multiple License/Permissions
- Guestbooks
- Publishing Workflows

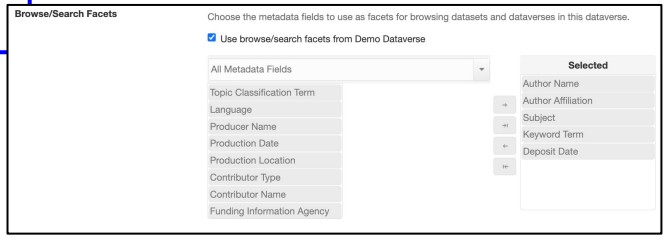
Files

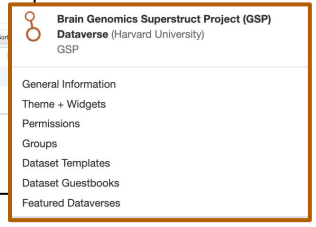
- Citation
- Ingest
- Preview/Explore
- Metadata
- Versioning
- Permissions/Embargo/Restrictions











HARVARD Dataverse

Dataset-level

IQSS

Current Features

Collections

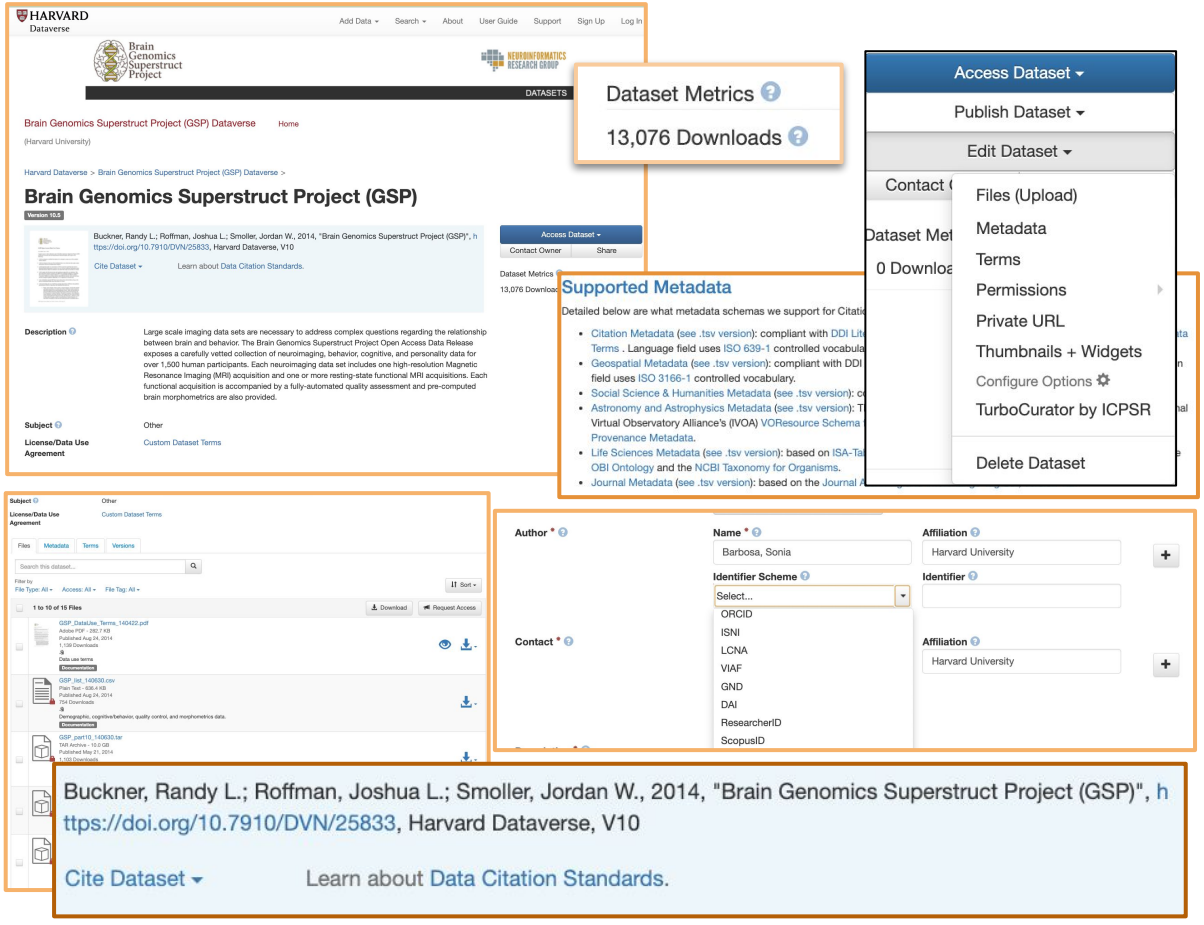
- Own administration
- Own branding (and can be embedded anywhere)

Datasets

- Citation
- Metadata
- Versioning
- Private URL
- Custom Terms/Multiple License/Permissions
- Guestbooks
- Publishing Workflows

Files

- Citation
- Ingest
- Preview/Explore
- Metadata
- Versioning
- Permissions/Embargo/Restrictions



File-level

Current Features

Collections

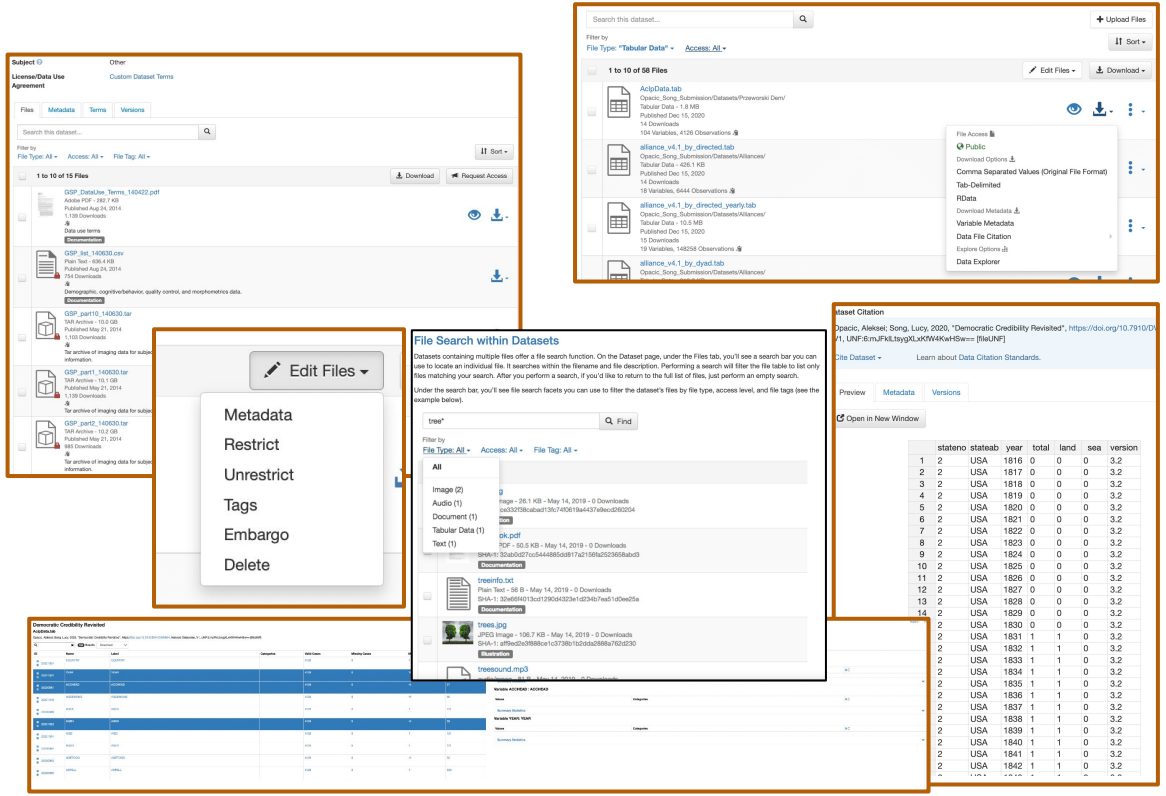
- Own administration
- Own branding (and can be embedded anywhere)

Datasets

- Citation
- Metadata
- Versioning
- Private URL/*Anonymous Peer Review
- Custom Terms/*Multiple Licenses/Permissions
- Guestbooks
- Publishing Workflows

Files

- Citation
- Ingest
- Preview/Explore
- Metadata/Provenance
- Versioning
- Permissions/Embargo/Restrictions



HARVARD Dataverse

File-level - open content

IQSS

Current Features

Collections

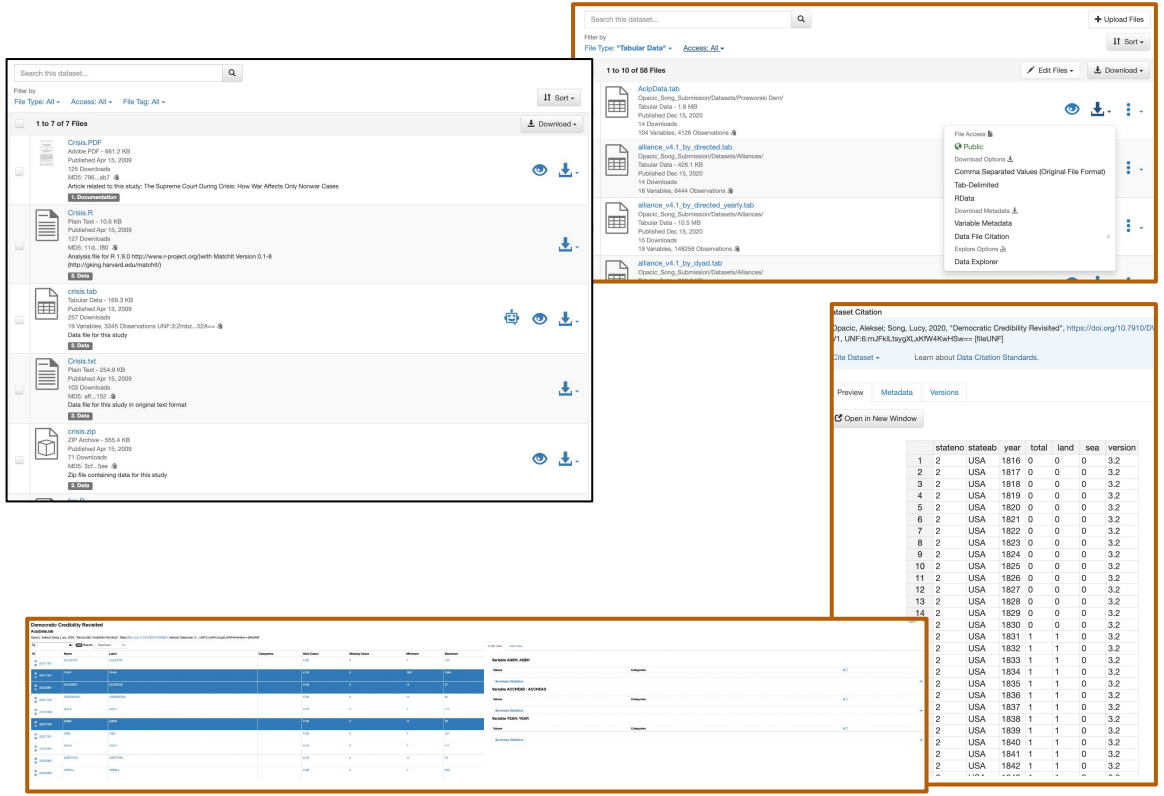
- Own administration
- Own branding (and can be embedded anywhere)

Datasets

- Citation
- Metadata
- Versioning
- Private URL/*Anonymous Peer Review
- Custom Terms/*Multiple Licenses/Permissions
- Guestbooks
- Publishing Workflows

Files

- Open format files allow visualization and analysis of data files without additional user permission



File-level - open content

Current Features

Collections

- Own administration
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Datasets

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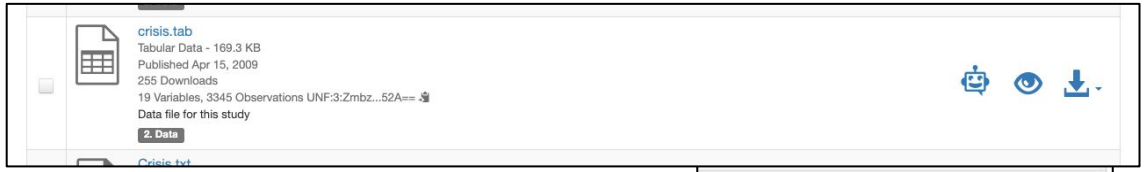
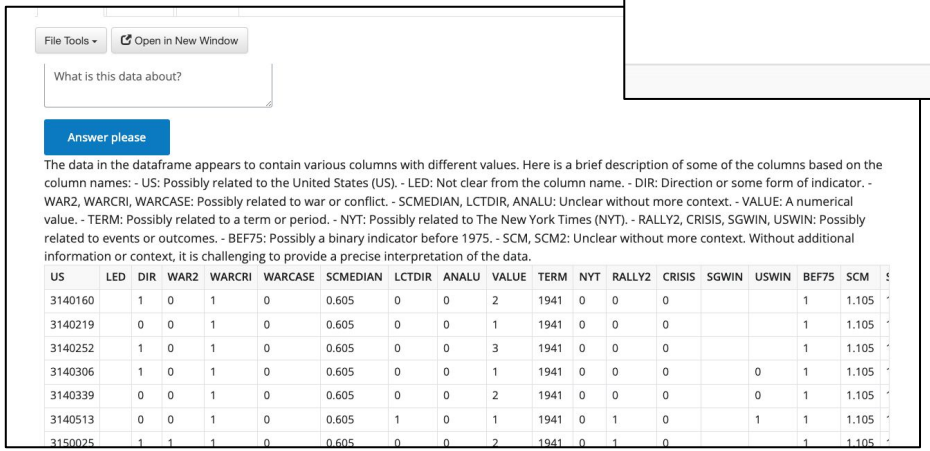
- Publishing Workflows

Files

- Ask The Data - LLM





HARVARD Dataverse

NIH GREI

IQSS

Current Features

Installations

Collections

Datasets

Files

NIH OTA Adds…

Datasets

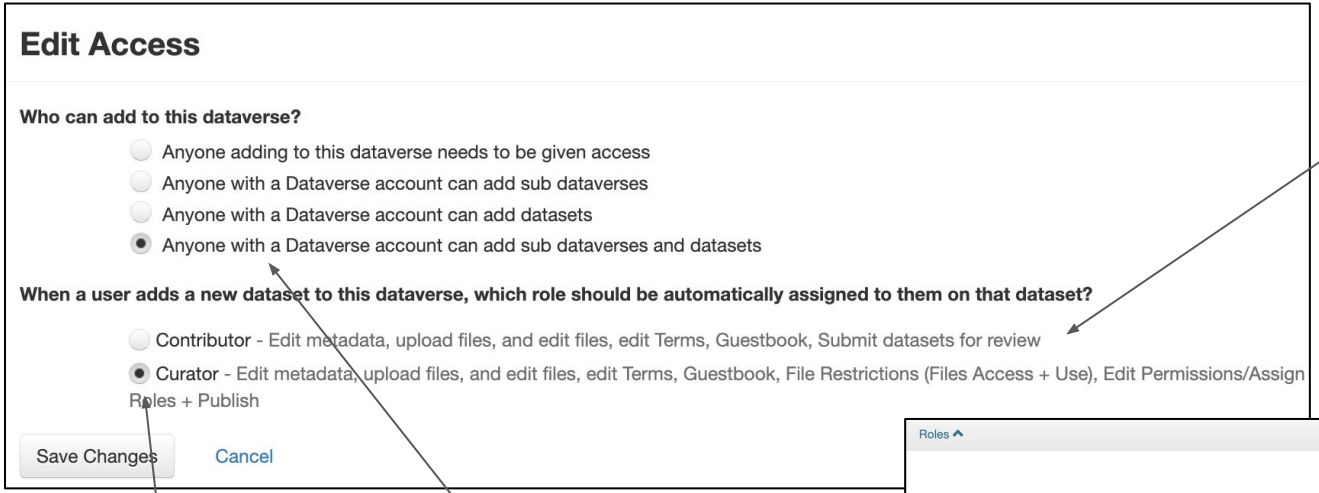
- New Workflows for **Large Data Support** (Globus, demo)
- **Remote** Data Support (TRSA)
- Flexible **Biomedical Metadata** Support through External Vocabularies and Data Dictionaries (UMLS, MeSH)
- Investigate CEDAR integration

Files

- Additional Metadata for **Code files** (Codemeta)
- Support for **Replication Packages** through Workflows and Containers
- **Sensitive Data Support** through Differential Privacy (OpenDP, DataTags, PSIprivacy)
- Encryption

- Usage Metrics
- UX/UI Enhancements
- New APIs
- Interoperability
- Metadata Harvesting
- Curation Services
- Training and Outreach

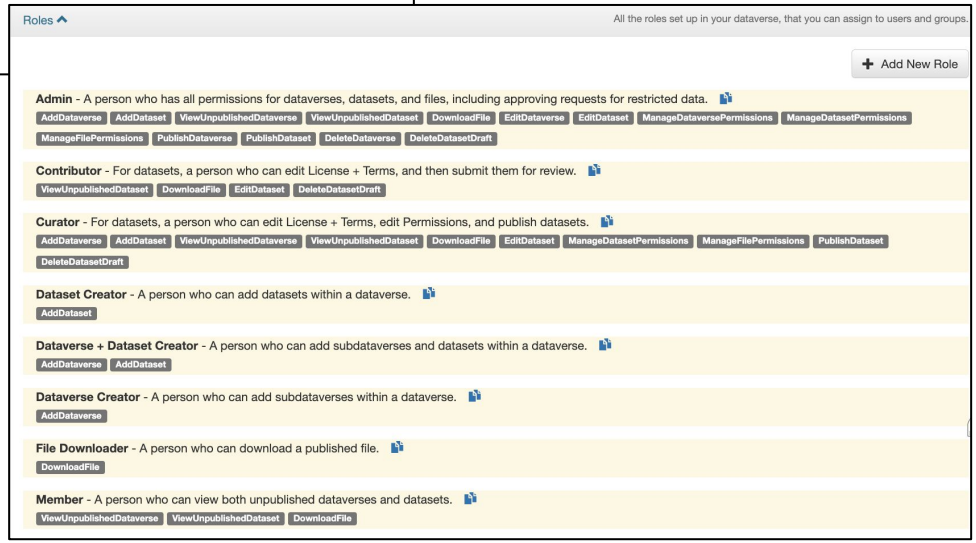
Automated Data Workflows in Dataverse



Submit for review

What can depositors do?

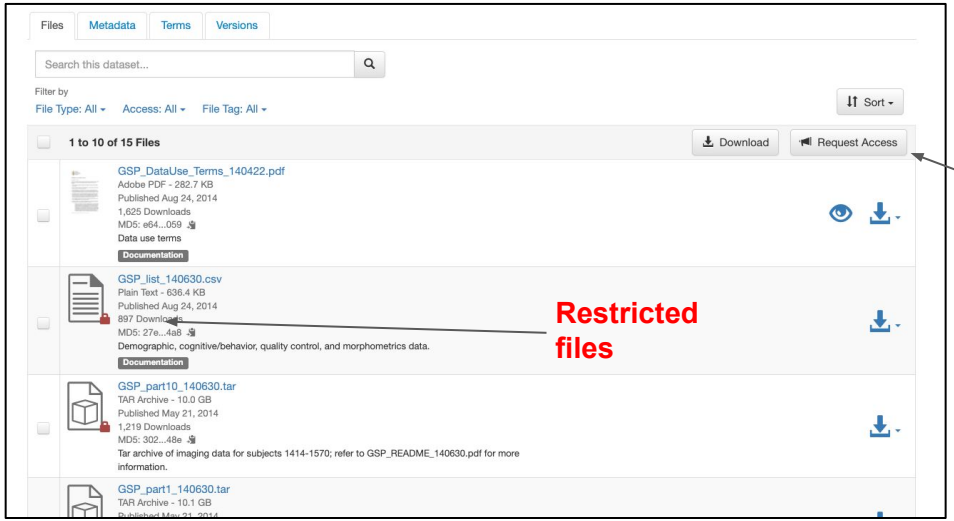
Open publishing workflow



Repository and Collection level

Collection Level Workflows

Dataset and File Level Workflows

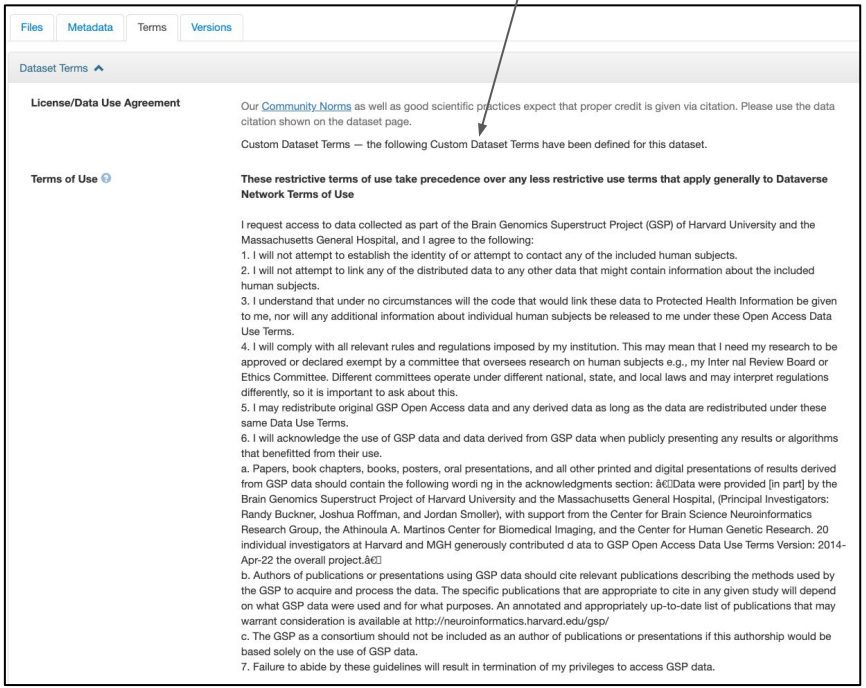


Request Access workflow

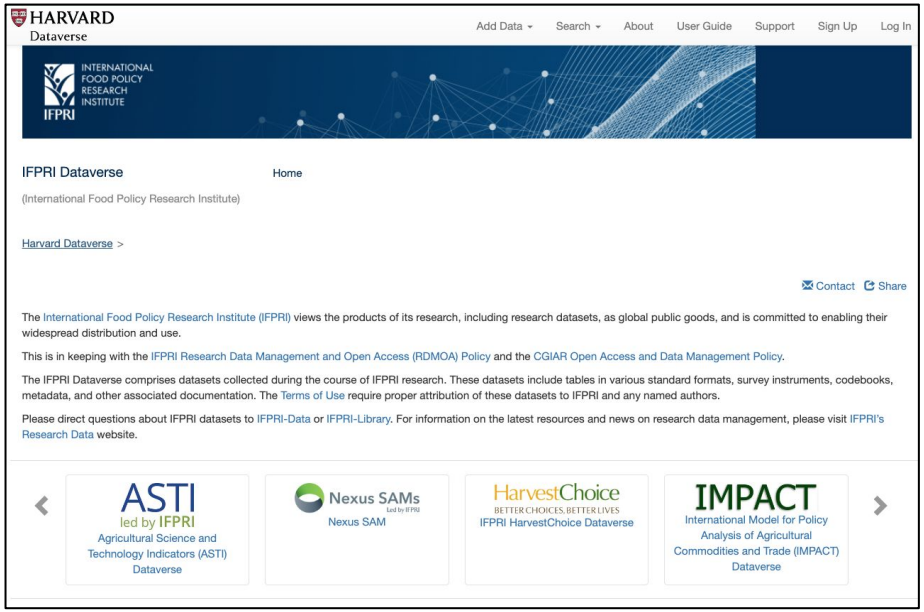
Restricted files

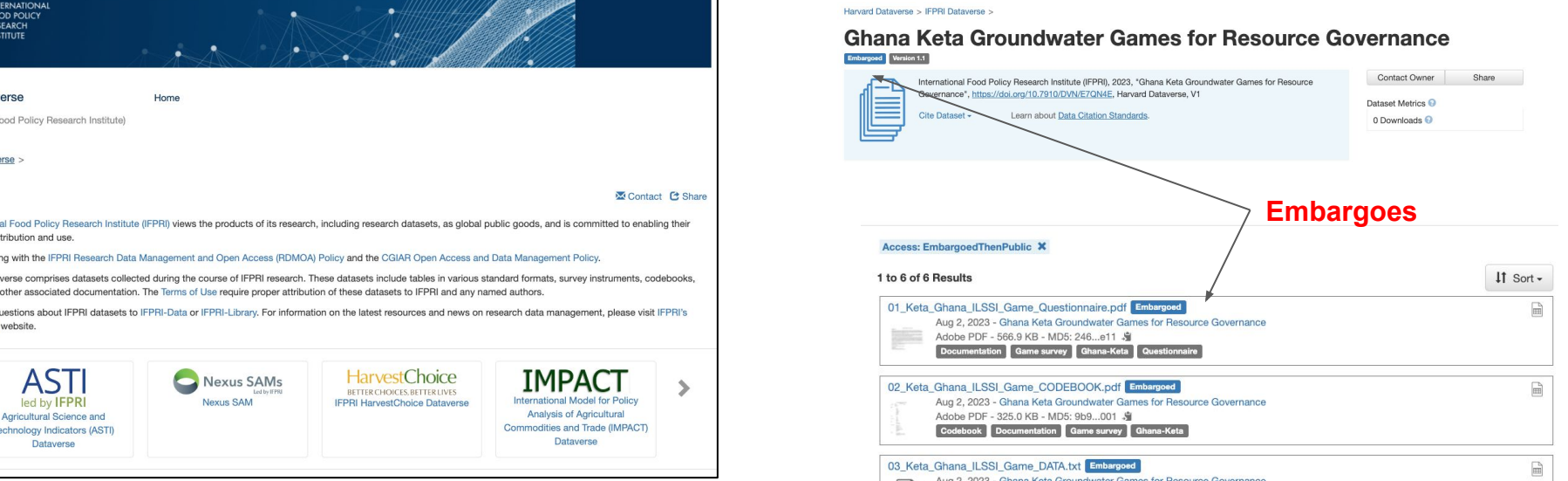
Guestbook

Additional Terms of Use



File Level Workflows





Access

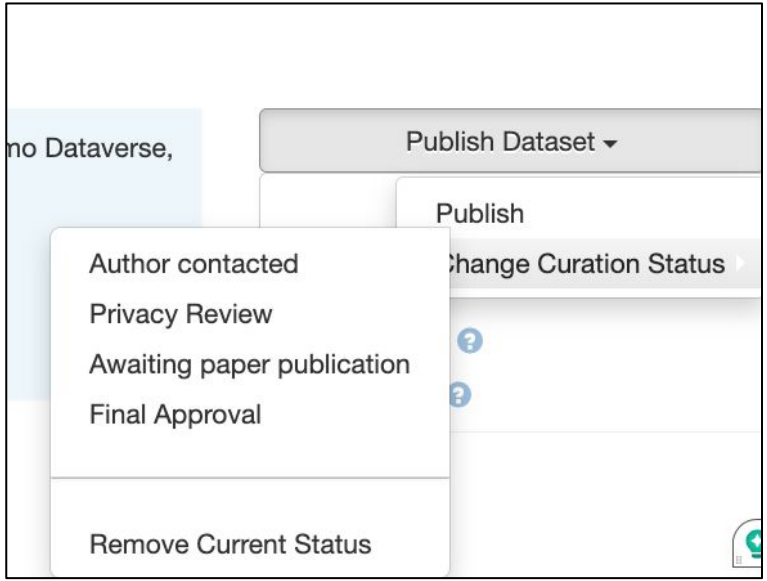
Public (13,368)

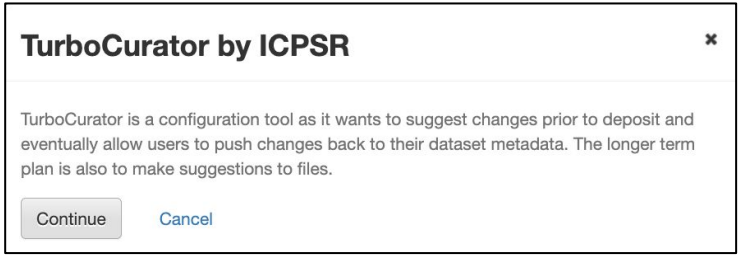
Restricted (1,191)

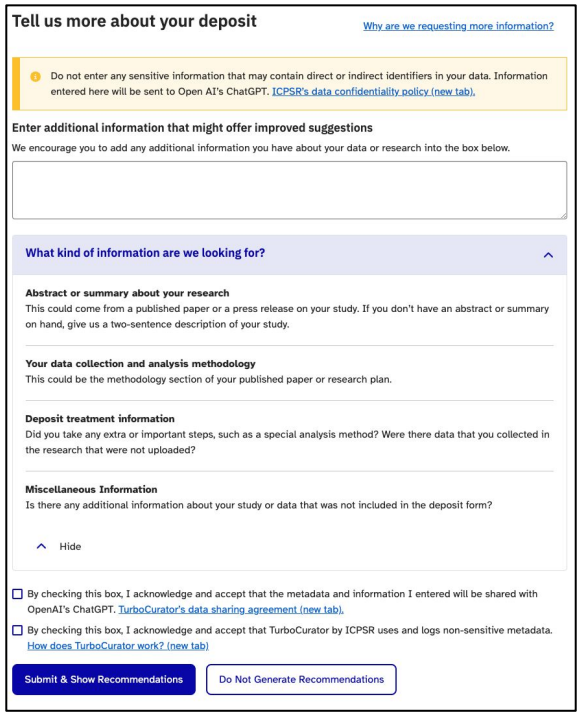
Embargoed then Public (6)

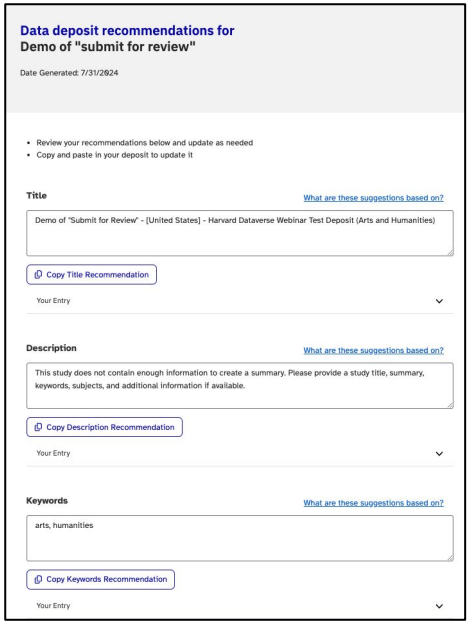
Several managed access workflows in one collection

Restricted access







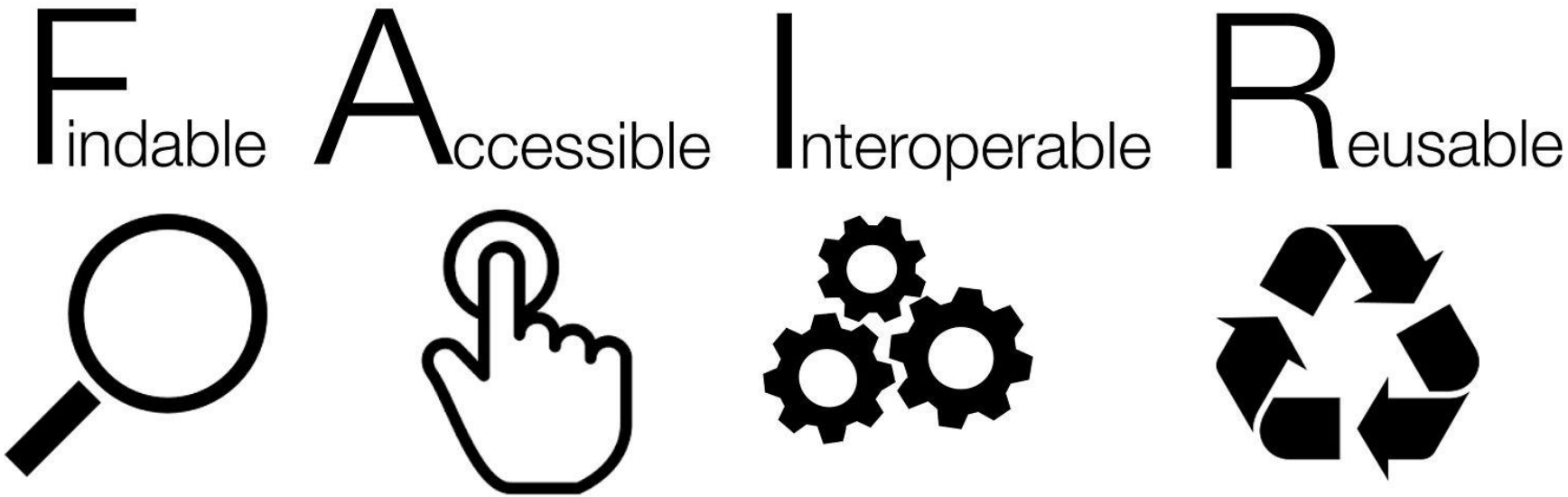


Curation workflow tools

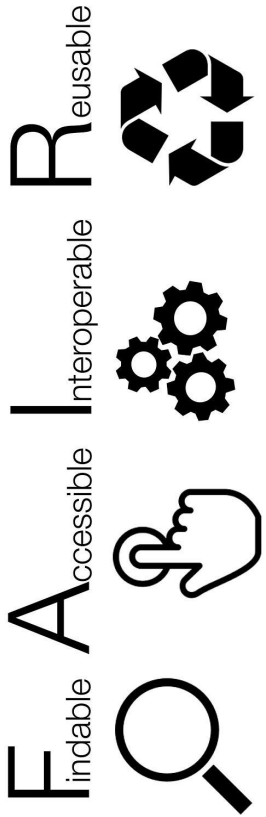
Dataset Level Workflows

The DV project and FAIR

FAIR principles and Dataverse



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



https://www.go-fair.org/fair-principles/

published in *Scientific Data*. The authors intended to provide guidelines to improve the **F**indability, **A**ccessibility, **I**nteroperability, and **R**euse of digital assets. The principles emphasise machine-actionability (i.e., the capacity of computational systems to find, access, interoperate, and reuse data with none or minimal human intervention) because humans increasingly rely on computational support to deal with data as a result of the increase in volume, complexity, and creation speed of data.

A practical "how to" guidance to go FAIR can be found in the **Three-point FAIRification Framework**.

Findable

The first step in (re)using data is to find them. Metadata and data should be easy to find for both humans and computers. Machine-readable metadata are essential for automatic discovery of datasets and services, so this is an essential component of the **FAIRification process**.

F1. (Meta)data are assigned a globally unique and persistent identifier

F2. Data are described with rich metadata (defined by R1 below)

F3. Metadata clearly and explicitly include the identifier of the data they describe

F4. (Meta)data are registered or indexed in a searchable resource

Accessible

Once the user finds the required data, she/he/they need to know how they can be accessed, possibly including authentication and authorisation.

A1. (Meta)data are retrievable by their identifier using a standardised communications protocol

> **A1.1 The protocol is open, free, and universally implementable**
>
> **A1.2 The protocol allows for an authentication and authorisation procedure, where necessary**

A2. Metadata are accessible, even when the data are no longer available

Interoperable

The data usually need to be integrated with other data. In addition, the data need to interoperate with applications or workflows for analysis, storage, and processing.

I1. (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.

I2. (Meta)data use vocabularies that follow FAIR principles

I3. (Meta)data include qualified references to other (meta)data

Reusable

The ultimate goal of FAIR is to optimise the reuse of data. To achieve this, metadata and data should be well-described so that they can be replicated and/or combined in different settings.

R1. (Meta)data are richly described with a plurality of accurate and relevant attributes

> **R1.1. (Meta)data are released with a clear and accessible data usage license**
>
> **R1.2. (Meta)data are associated with detailed provenance**
>
> **R1.3. (Meta)data meet domain-relevant community standards**

The principles refer to three types of entities: data (or any digital object), metadata (information about that digital object), and infrastructure. For instance, principle F4 defines that both metadata and data are registered or indexed in a searchable resource (the infrastructure component).

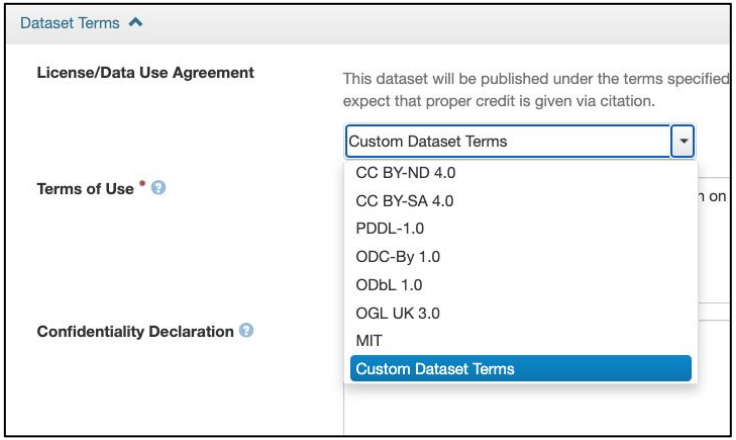
How Dataverse Supports FAIR

- **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



HARVARD Dataverse

Re-use of Datasets

IQSS

2D Acoustic Numerical Breast Phantoms and USCT Measurement Data

Version 1.1

Li, Fu; Villa, Umberto; Park, Seonyeong; Anastasio, Mark, 2021, "2D Acoustic Numerical Breast Phantoms and USCT Measurement Data", https://doi.org/10.7910/DVN/CUFVKE, Harvard Dataverse, V1

Cite Dataset · Learn about Data Citation Standards.

Access Dataset · Contact Owner · Share

Dataset Metrics
904 Downloads

Description

Companion dataset of the manuscript:
Fu Li, Umberto Villa, Seonyeong Park, Mark A. Anastasio. Three-dimensional stochastic numerical breast phantoms for enabling virtual imaging trials of ultrasound computed tomography. Arxiv preprint 2106.02744 (2021)

This dataset includes a collection of 52 two-dimensional slices of numerical breast phantoms (NBPs) and corresponding ultrasound computed tomography (USCT) simulated measurement data. The anatomical structures of these NBPs were obtained by use of tools from the Virtual Imaging Clinical

cited by

Generative models based on eigendecomposition for dense ray tracing

The Journal of the Acoustical Society of America **152**, 679 (2022); https://doi.org/10.1121/10.0012973

Jorge A. Ramos Oliveira, Mario Castelan[a], *and* Arturo Baltazar

View Affiliations · View Contributors

PDF

TOPICS
- Covariance and correlation
- Calculus of variations

ABSTRAC
In this wo

REFERENCES

13. Li, F., Villa, U., Park, S., and Anastasio, M. (2021). " 2D acoustic numerical breast phantoms and USCT measurement data," https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/CUFVKE (Last viewed June 5, 2022). Google Scholar

Harvard Dataverse > Integrated Crisis Early Warning System (ICEWS) Dataverse >

ICEWS Coded Event Data

Version 36.0

Boschee, Elizabeth; Lautenschlager, Jennifer; O'Brien, Sean; Shellman, Steve; Starz, James; Ward, Michael, 2015, "ICEWS Coded Event Data", https://doi.org/10.7910/DVN/28075, Harvard Dataverse, V36, UNF:6:NOSHB7wyt0SQ8sMg7+w38w== [fileUNF]

Cite Dataset · Learn about Data Citation Standards.

Access Dataset · Contact Owner · Share

Dataset Metrics
95,873 Downloads

Description

Event data consists of coded interactions between socio-political actors (i.e., cooperative or hostile actions between individuals, groups, sectors and nation states). Events are automatically identified and extracted from news articles by the BBN ACCENT event coder. These events are essentially triples consisting of a source actor, an event type (according to the CAMEO taxonomy of events), and a target actor. Geographical-temporal metadata are also extracted and associated with the relevant events within a news article. We plan to update this data on a periodic basis. Additional event data may be made available For Official Use Only (FOUO), government sponsored research activities. (2014)

Subject Social Sciences

Related Publication Shilliday, A., and Lautenschlager, J. Data for a Global ICEWS and Ongoing Research. 2nd

cited by

ELSEVIER

Journal of Asian Economics
Volume 84, February 2023, 101578

The Arab Spring, a setback for gender equality? Evidence from the Gallup World Poll

Robert Rudolf[a] ✉, Sh

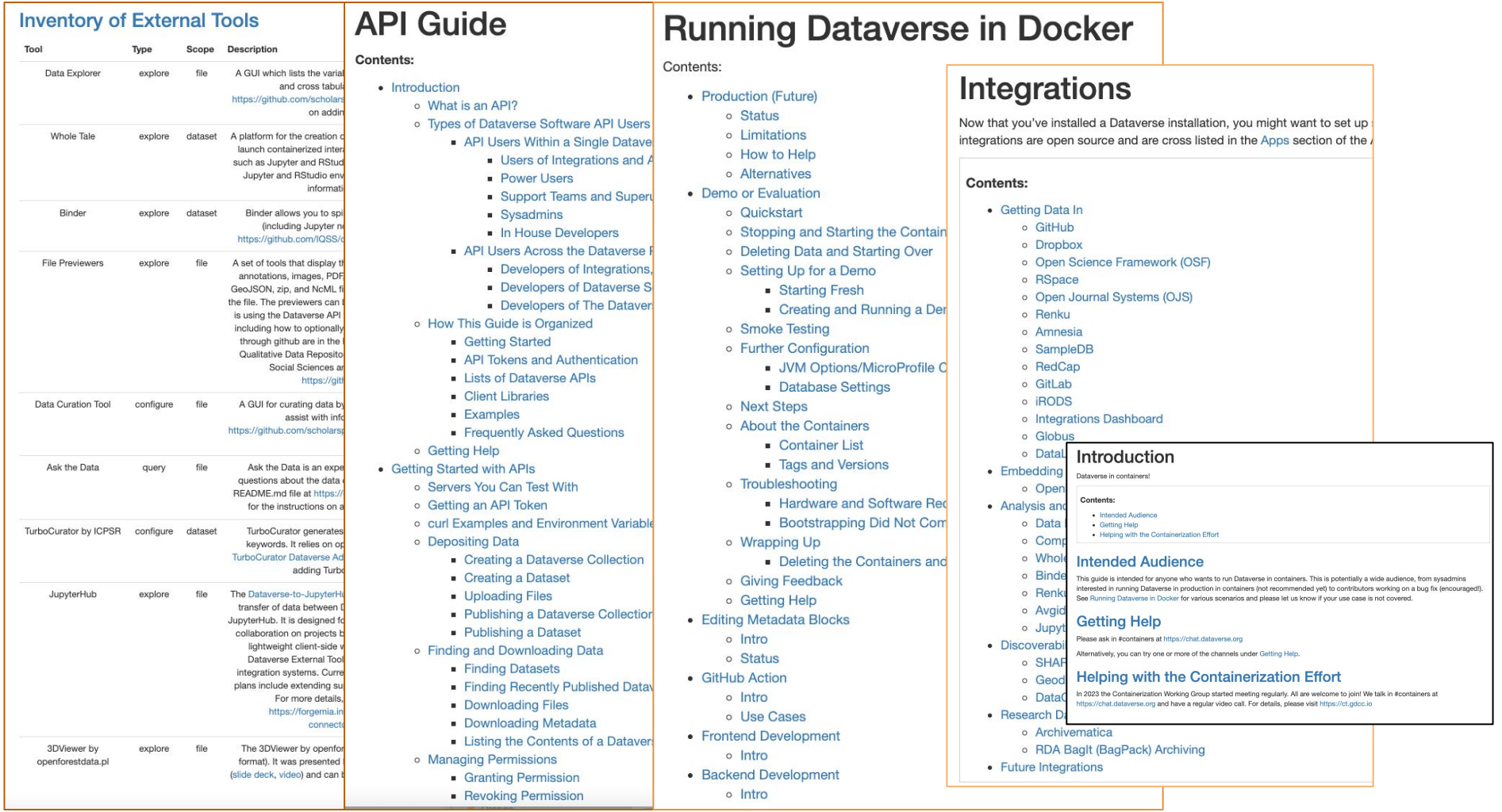
Show more

+ Add to Mendele

References

Boschee et al., 2015 Boschee, E., Lautenschlager, J., O'Brien, S., Shellm (2015). *ICEWS coded event data*. Harvard Dataverse, V28, UNF:6:NOSHB7wyt0SQ8sMg7+w38w== [fileUNF]. Retrieved fro 〈https://doi.org/10.7910/DVN/28075〉 , .
Google Scholar

Dataverse Features & Highlights



Inventory of External Tools

Tool	Type	Scope	Description
Data Explorer	explore	file	A GUI which lists the varial and cross tabul https://github.com/scholars on addi
Whole Tale	explore	dataset	A platform for the creation launch containerized inter such as Jupyter and RStud Jupyter and RStudio env informati
Binder	explore	dataset	Binder allows you to spi (including Jupyter n https://github.com/IQSS/
File Previewers	explore	file	A set of tools that display t annotations, images, PDF GeoJSON, zip, and NcML fi the file. The previewers can is using the Dataverse API including how to optionally through github are in the Qualitative Data Reposito Social Sciences ar https://gith
Data Curation Tool	configure	file	A GUI for curating data by assist with info https://github.com/scholars
Ask the Data	query	file	Ask the Data is an expe questions about the data README.md file at https:// for the instructions on a
TurboCurator by ICPSR	configure	dataset	TurboCurator generates keywords. It relies on op TurboCurator Dataverse Ad adding Turb
JupyterHub	explore	file	The Dataverse-to-JupyterHu transfer of data between D JupyterHub. It is designed fo collaboration on projects b lightweight client-side v Dataverse External Tool integration systems. Curre plans include extending su For more details, https://forgemia.in connecto
3DViewer by openforestdata.pl	explore	file	The 3DViewer by openfor format). It was presented (slide deck, video) and can b

API Guide

Contents:

Running Dataverse in Docker

Contents:

Integrations

Now that you've installed a Dataverse installation, you might want to set up integrations are open source and are cross listed in the Apps section of the

Contents:

Introduction

Dataverse in containers!

Contents:

Intended Audience

This guide is intended for anyone who wants to run Dataverse in containers. This is potentially a wide audience, from sysadmins interested in running Dataverse in production in containers (not recommended yet) to contributors working on a bug fix (encouraged!). See Running Dataverse in Docker for various scenarios and please let us know if your use case is not covered.

Getting Help

Please ask in #containers at https://chat.dataverse.org

Alternatively, you can try one or more of the channels under Getting Help.

Helping with the Containerization Effort

In 2023 the Containerization Working Group started meeting regularly. All are welcome to join! We talk in #containers at https://chat.dataverse.org and have a regular video call. For details, please visit https://ct.gdcc.io

Make Data Count

Make Data Count is a project to collect and standardize metrics on data use, especially views, downloads, and citations. The Dataverse Software can integrate Make Data Count to collect and display usage metrics including counts of dataset views, file downloads, and dataset citations.

Contents:

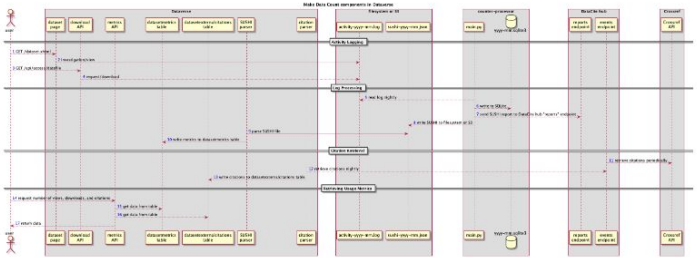
Introduction

Make Data Count is part of a broader Research Data Alliance (RDA) Data Usage Metrics Working Group which helped to produce a specification called the COUNTER Code of Practice for Research Data (PDF, HTML) that the Dataverse Software makes every effort to comply with. The Code of Practice (CoP) is built on top of existing standards such as COUNTER and SUSHI that come out of the article publishing world. The Make Data Count project has emphasized that they would like feedback on the code of practice. You can keep up to date on the Make Data Count project by subscribing to their newsletter.

Architecture

Dataverse installations who would like support for Make Data Count must install Counter Processor, a Python project created by California Digital Library (CDL) which is part of the Make Data Count project and which runs the software in production as part of their DASH data sharing platform.

The diagram below shows how Counter Processor interacts with your Dataverse installation and the DataCite hub, once configured. Dataverse installations using Handles rather than DOIs should note the limitations in the next section of this page.



The most important takeaways from the diagram are:

- Once enabled, your Dataverse installation will log activity (views and downloads) to a specialized date-stamped file.
- You should run Counter Processor once a day to create reports in SUSHI (JSON) format that are saved to disk for your Dataverse installation to process and that are sent to the DataCite hub.

Exploratory Data Analysis Using Differentially Private Metadata (Experimental)

Through an integration with tools from the OpenDP Project (opendp.org), the Dataverse Software offers an experimental workflow that allows a data depositor to create and deposit Differentially Private (DP) Metadata files, which can then be used for exploratory data analysis. This workflow allows researchers to view the DP metadata for a tabular file, determine whether or not the file contains useful information, and then make an informed decision about whether or not to request access to the original file.

If the data depositor has made available DP metadata for one or more files in their dataset, these access options will appear on the access dropdown on both the Dataset Page and the File Page. These access options will be available even if a file is restricted. Three types of DP metadata will be available:

- .PDF
- .XML
- .JSO

For more i
section of

Building the OpenDP Community

- At the core, OpenDP needs a community of:
  - DP experts
  - Researchers who need results from sensitive data
  - Developers to build the libraries and systems
  - Those who provide the data
- At large, any individual in society might have an interest in OpenDP to protect her data or the data from others.

New or Upcoming Features & Services

Ask the Data: Natural language interface enabling exploration of tabular datasets
Croissant-ML: Support for machine learning/AI ready datasets using the Croissant standard
Large Data Services: Support for datasets over 2.5T up to PB size. Includes support for tape and disk access via Globus and S3
Search and Facet by License: New ability to search and facet by dataset license (e.g., CC0)
New Contributor Guide: The UX Working Group released a new Dataverse Contributor Guide.
File-Level Retention Periods: Dataverse now supports new file-level retention periods. See the Retention Periods section of the guide for details.
Support for Multiple Persistent Identifier Providers: Support for using multiple PID provider accounts (e.g., DOI, Handle, PermaLink). Great for consortia.

Forthcoming
Traditional Knowledge Labels: Support for datasets using the TK Labels controlled vocabulary
New Dataset Types: Support for software, computational workflows, and other new types of datasets
Dataverse Marketplace: Centralized location for simple setup of configurable plug ins such as exporters, external tools, etc.
External Search: New External Tool type, “search”, for external API-enabled search engines to search Dataverse content in different ways
Dataverse Metrics Hub: A new service providing metrics about the Dataverse Project, Harvard Dataverse, and the Dataverse network via APIs

HARVARD Dataverse

Features

IQSS

- 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

Harvard Dataverse

Thank you!

support@dataverse.org

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

Additional Slides of Information

The Dataverse Project

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

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.

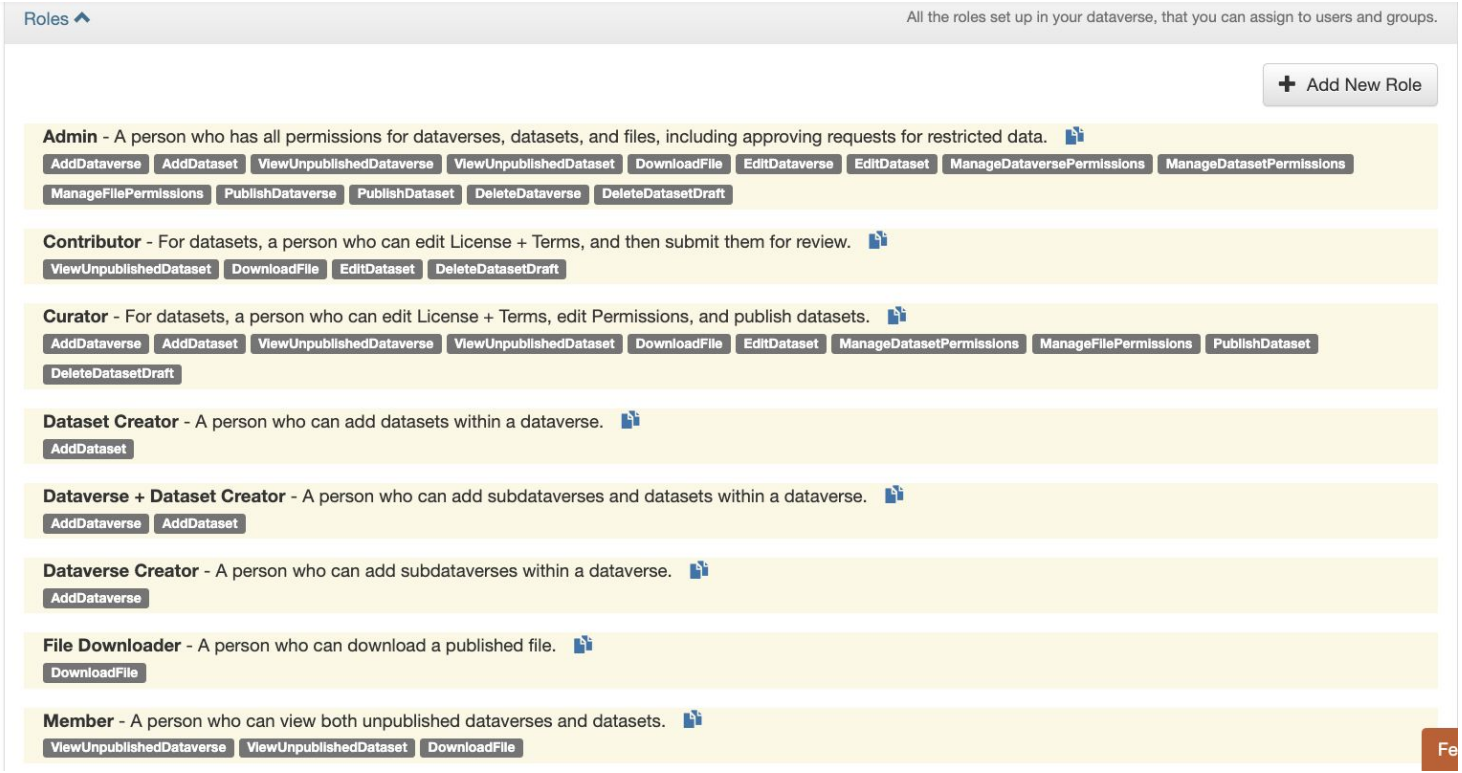
Experimental Metadata

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

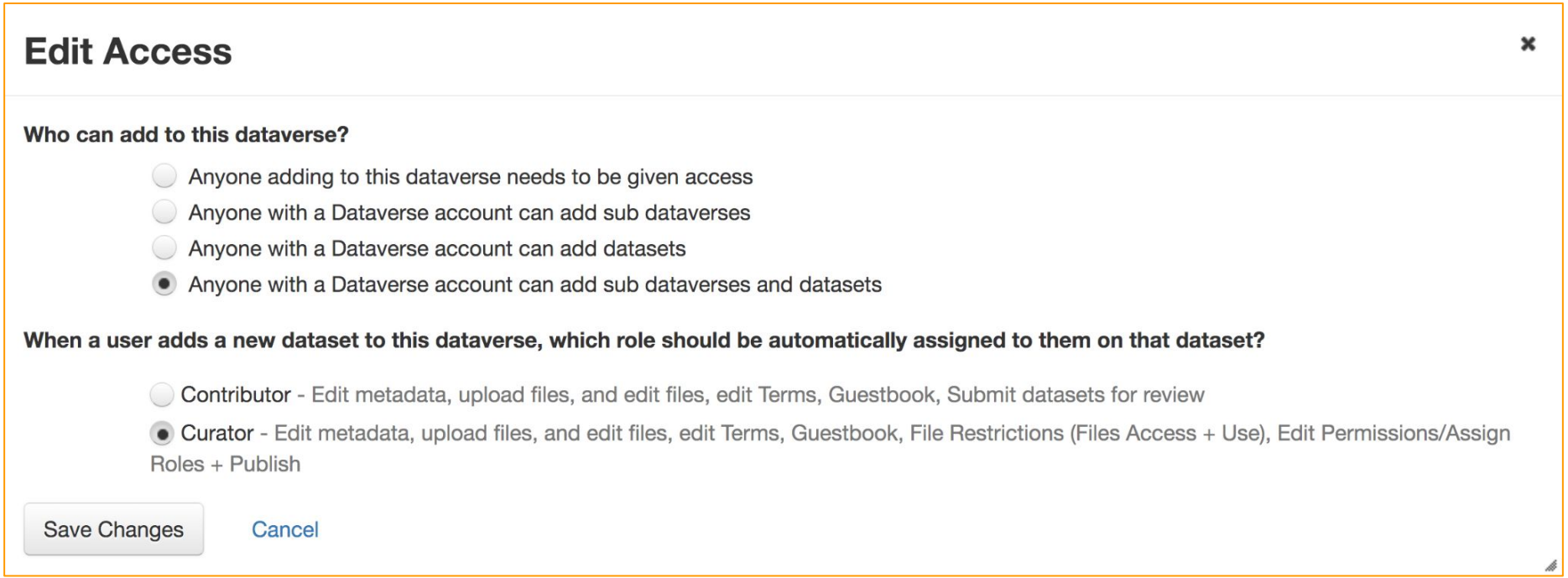
- CodeMeta Software Metadata: based on the CodeMeta Software Metadata Schema, version 2.0 (see .tsv version)
- Computational Workflow Metadata (see .tsv version): adapted from Bioschemas Computational Workflow Profile, version 1.0 and Codemeta.

Custom Metadata Blocks*

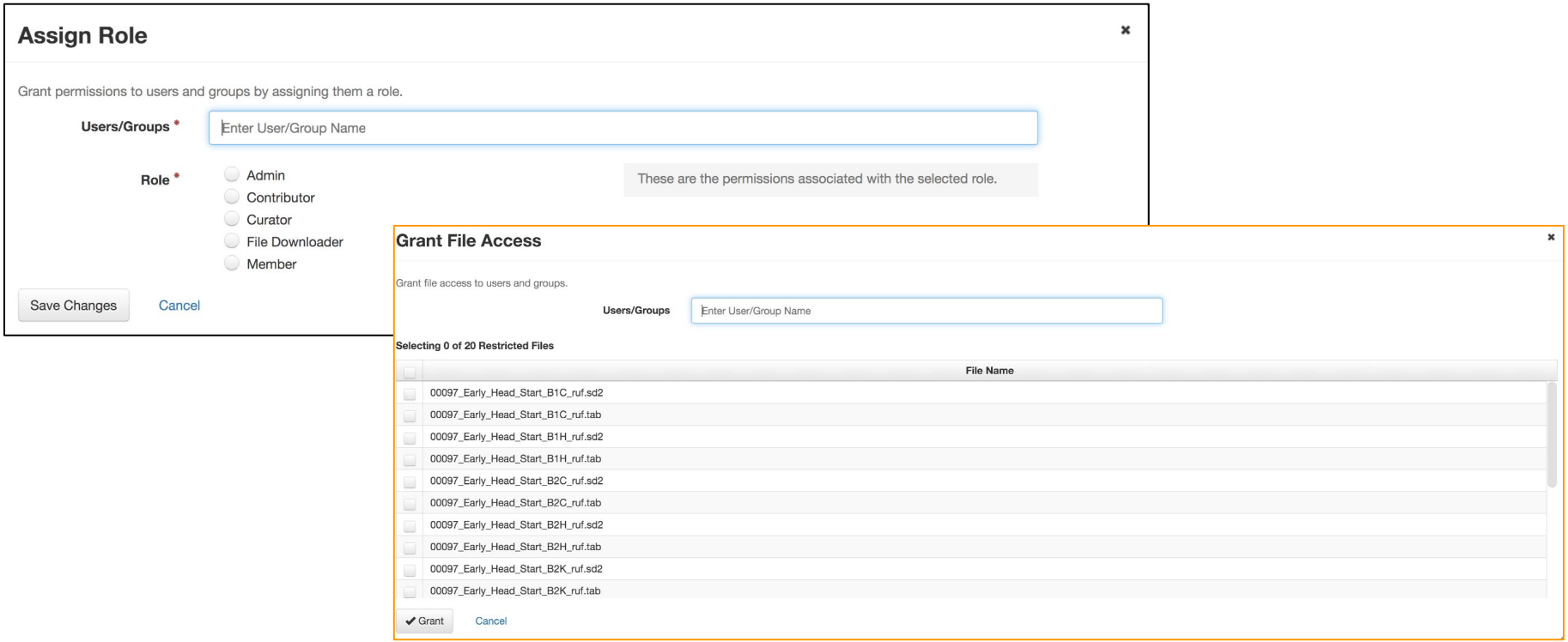
Permissions, Workflows and Roles (Collection, Dataset and Files)



Permissions, Workflows and Roles: Collection level contribution and publishing



Permissions, Workflows and Roles: Dataset and File Level



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

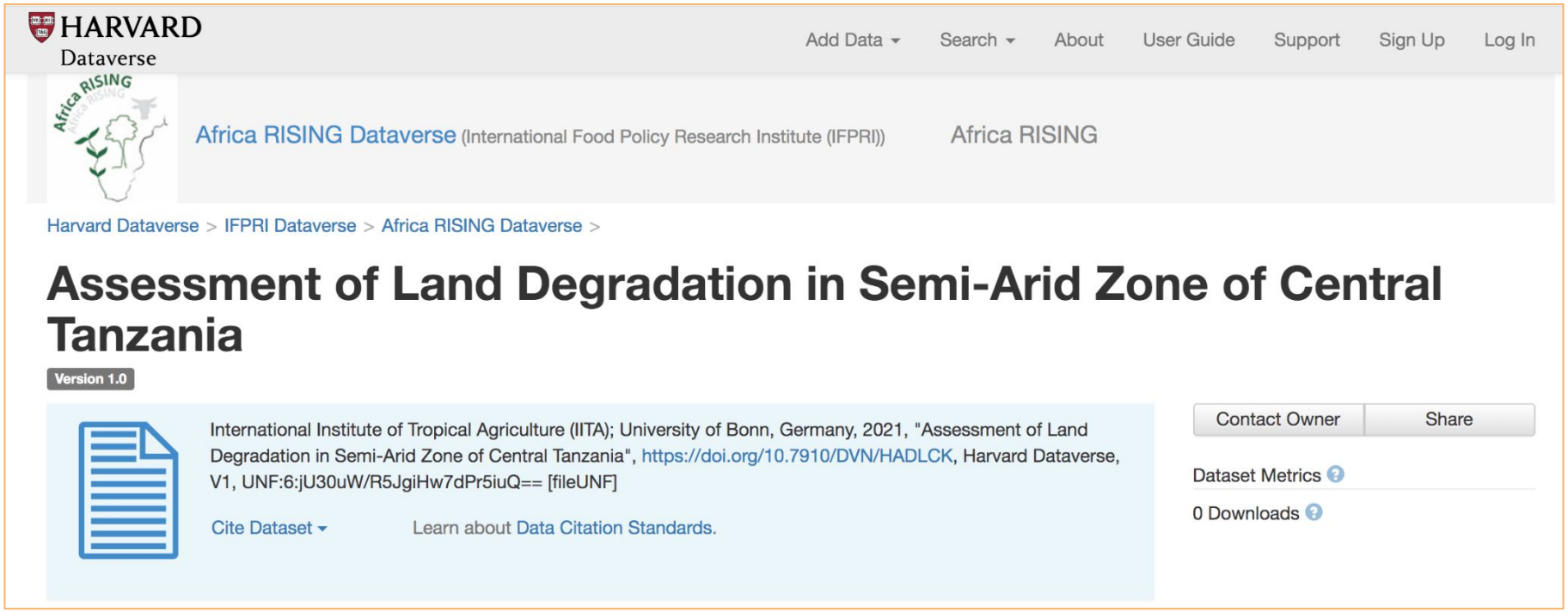
Discoverability

- OAI-PMH (Harvesting)
- SHARE
- Geodisy

Preservation

- Archivematica
- RDA BagIt Archiving
- Future Integrations*

Datasets - Citations

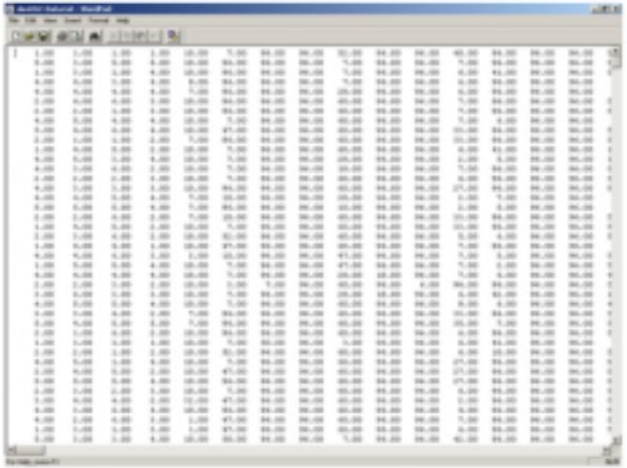


Data - Citations

Your Publication

Formal Data Citation

Your Data



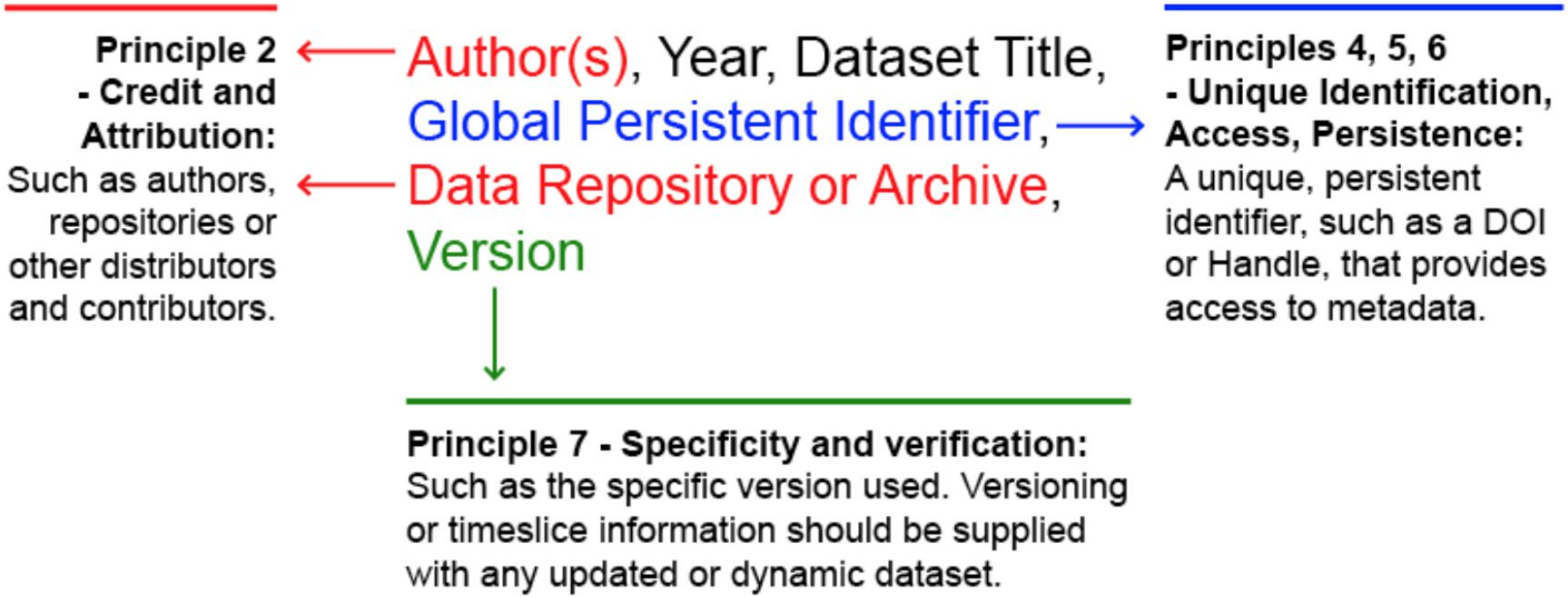


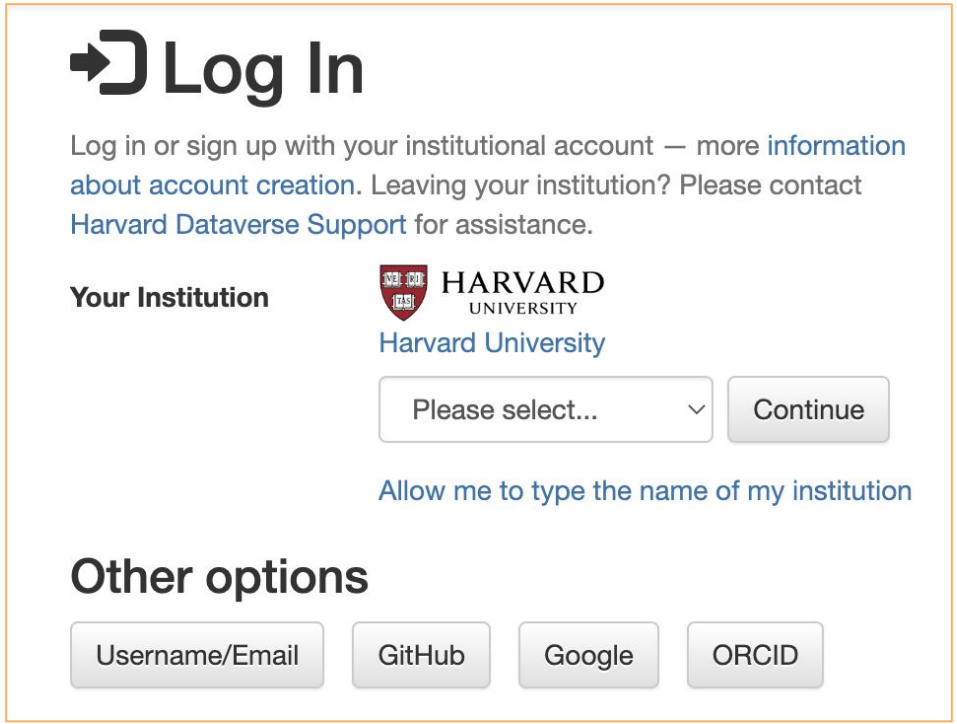
Fig. 1 Example of a data citation based on the Joint Declaration of Data Citation Principles (2014).

Getting started with the DV Project

Create Collections and Datasets

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

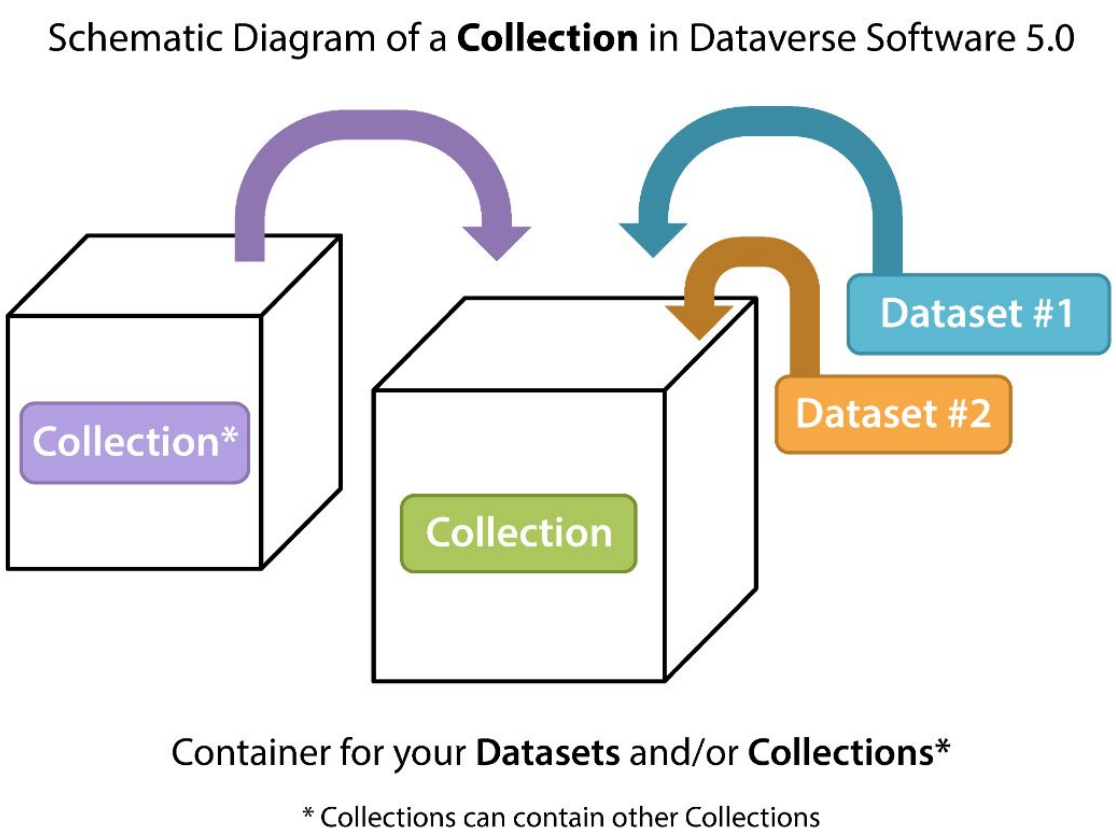
Account Creation



Create a Dataverse "Collection"

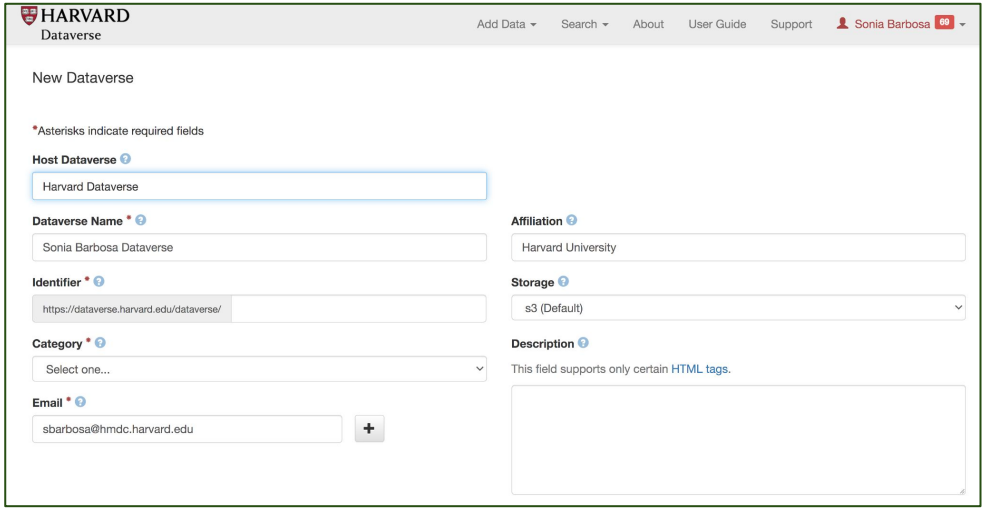
- Edit Dataverse Collection
  - General Information
  - Theme
  - Widgets
    - Dataverse Collection Search Box Widget
    - Dataverse Collection Listing Widget
    - Adding Widgets to an OpenScholar Website
  - Roles & Permissions
    - Setting Access Configurations
    - Assigning Roles to Users and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

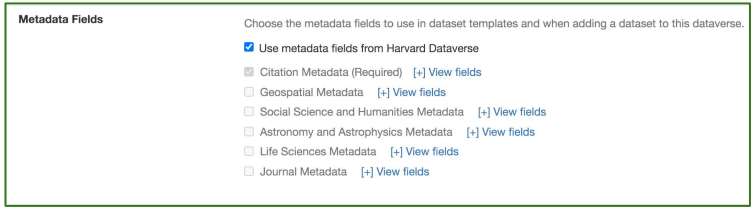
A Dataverse collection is a container for datasets (research data, code, documentation, and metadata) and other Dataverse collections, which can be setup for individual researchers, departments, journals and organizations.

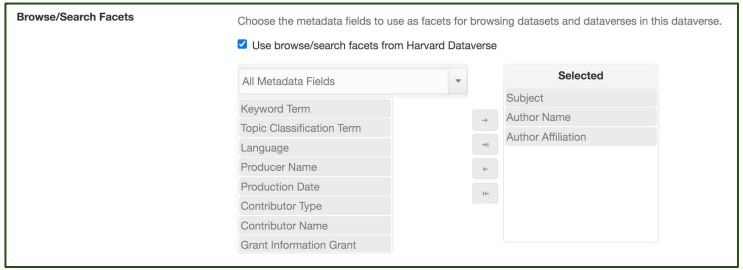


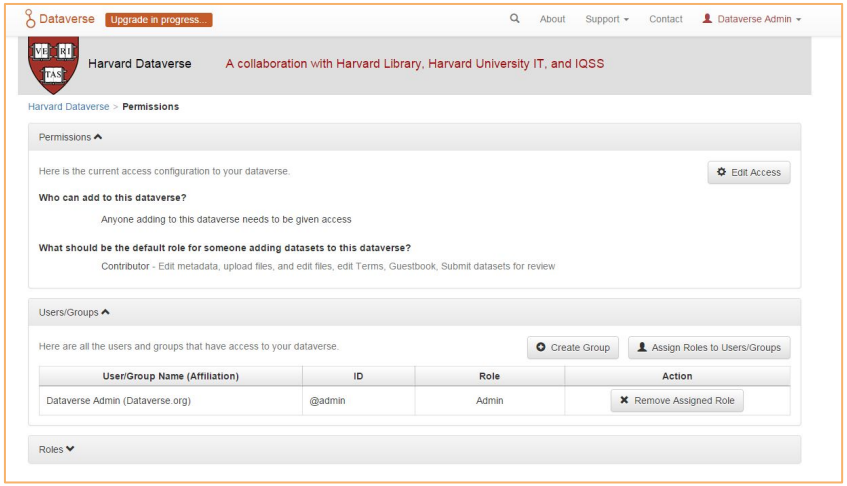
- Metadata
- Searchable facets
- Holds datasets

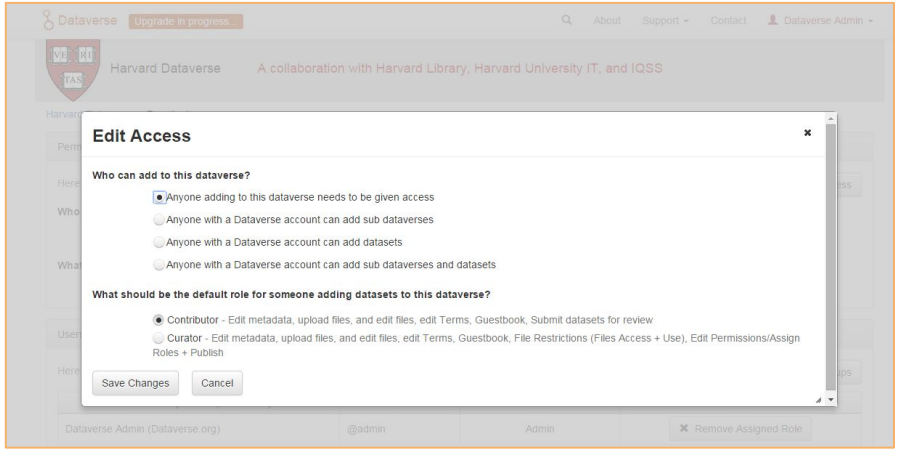
Customizable with descriptions, logos, collection space URLs, affiliation, contact emails, permissions, metadata and searchable facets. **Dataverse collections hold datasets.**

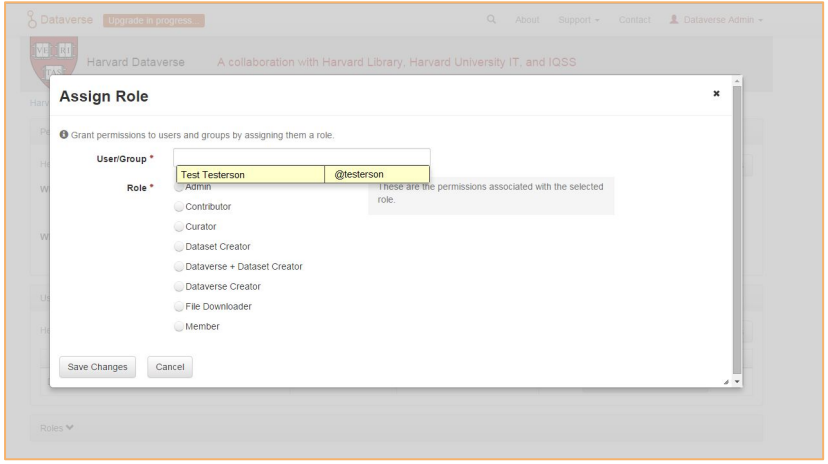


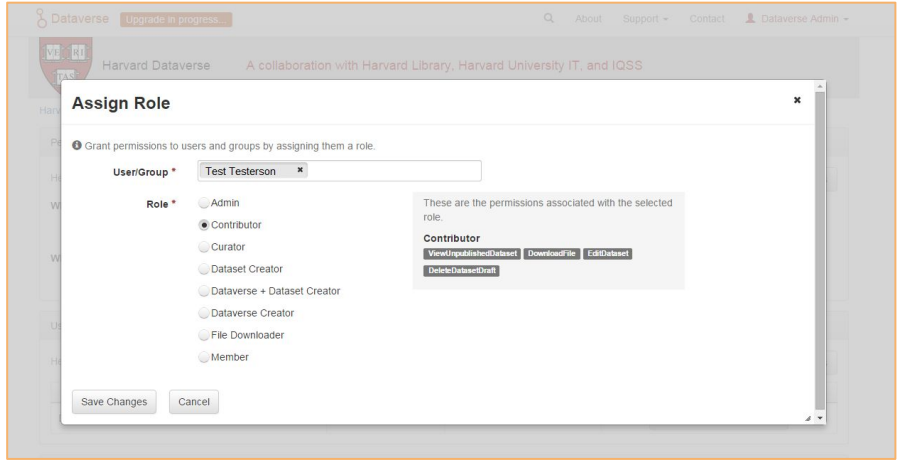


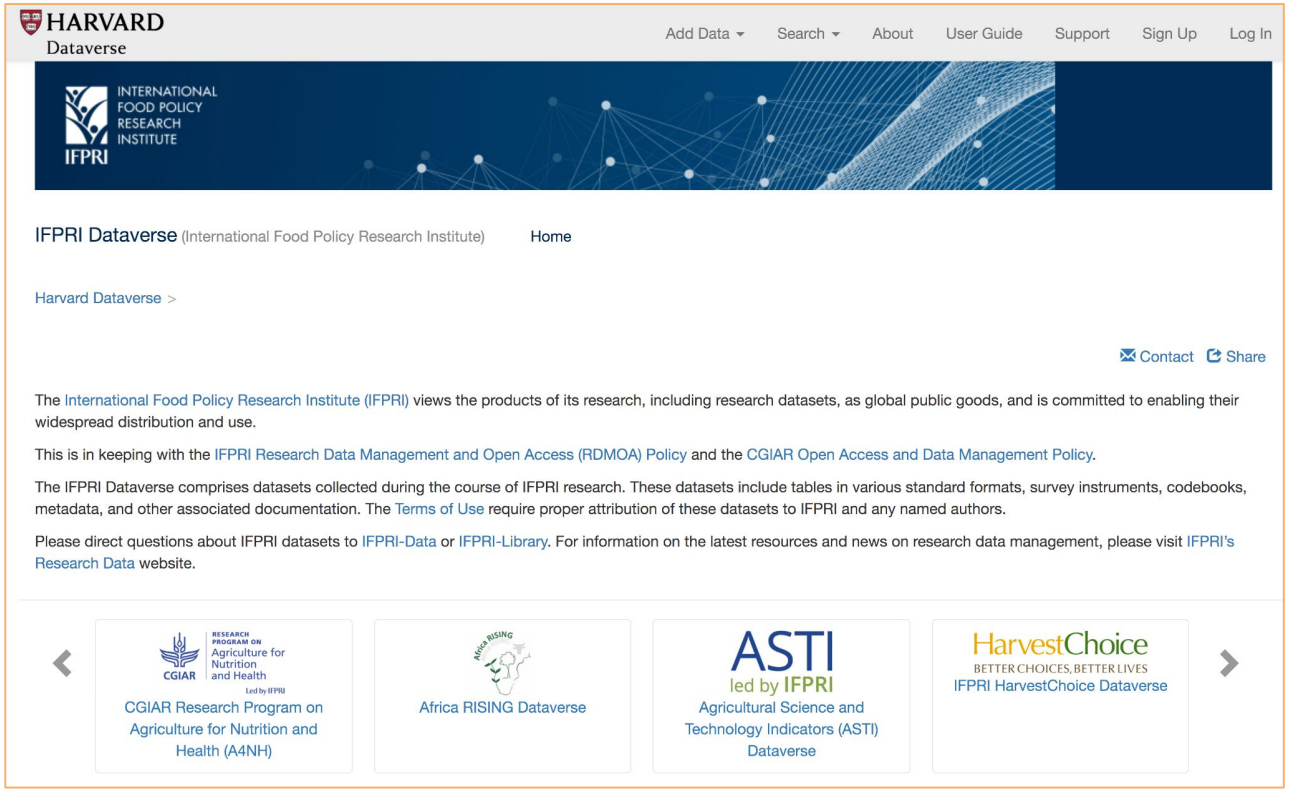


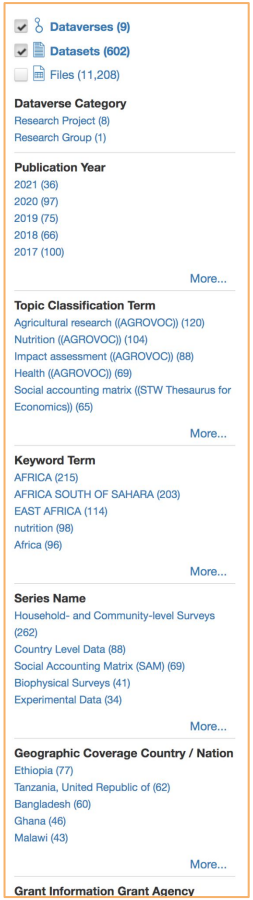

Dataverse
Upgrade in progress...
About
Support
Contact
Dataverse Admin
Harvard Dataverse
A collaboration with Harvard Library, Harvard University IT, and IQSS
Harvard Dataverse > Permissions
Permissions
Here is the current access configuration to your dataverse.
Edit Access
Who can add to this dataverse?
Anyone adding to this dataverse needs to be given access
What should be the default role for someone adding datasets to this dataverse?
Contributor - Edit metadata, upload files, and edit files, edit Terms, Guestbook, Submit datasets for review
Users/Groups
Here are all the users and groups that have access to your dataverse.
Create Group
Assign Roles to Users/Groups
User/Group Name (Affiliation)
ID
Role
Action
Dataverse Admin (Dataverse.org)
@admin
Admin
Remove Assigned Role
Roles


Edit Access
Who can add to this dataverse?
Anyone adding to this dataverse needs to be given access
Anyone with a Dataverse account can add sub dataverses
Anyone with a Dataverse account can add datasets
Anyone with a Dataverse account can add sub dataverses and datasets
What should be the default role for someone adding datasets to this dataverse?
Contributor - Edit metadata, upload files, and edit files, edit Terms, Guestbook, Submit datasets for review
Curator - Edit metadata, upload files, and edit files, edit Terms, Guestbook, File Restrictions (Files Access + Use), Edit Permissions/Assign Roles + Publish
Save Changes
Cancel

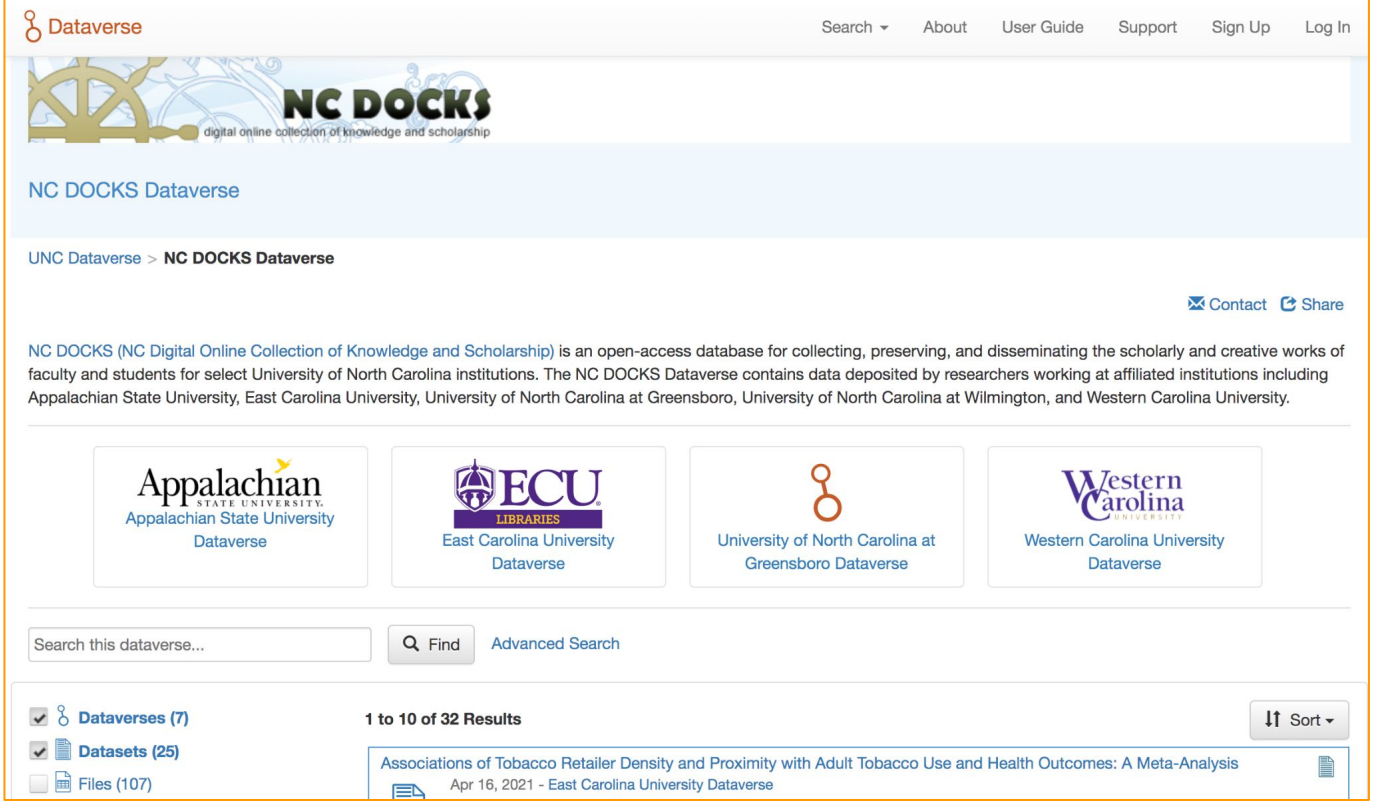

Assign Role
Grant permissions to users and groups by assigning them a role.
User/Group *
Test Testerson
@testerson
Role *
Admin
Contributor
Curator
Dataset Creator
Dataverse + Dataset Creator
Dataverse Creator
File Downloader
Member
These are the permissions associated with the selected role.
Save Changes
Cancel

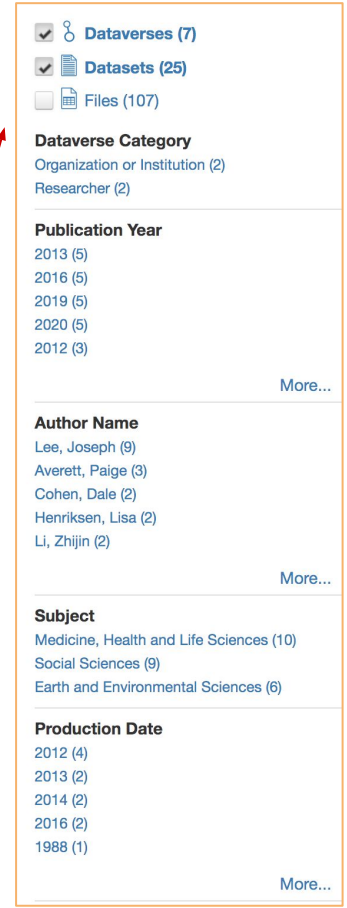

Assign Role
Grant permissions to users and groups by assigning them a role.
User/Group *
Test Testerson
Role *
Admin
Contributor
Curator
Dataset Creator
Dataverse + Dataset Creator
Dataverse Creator
File Downloader
Member
These are the permissions associated with the selected role.
Contributor
ViewUnpublishedDataset
DownloadFile
EditDataset
DeleteDatasetDraft
Save Changes
Cancel





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



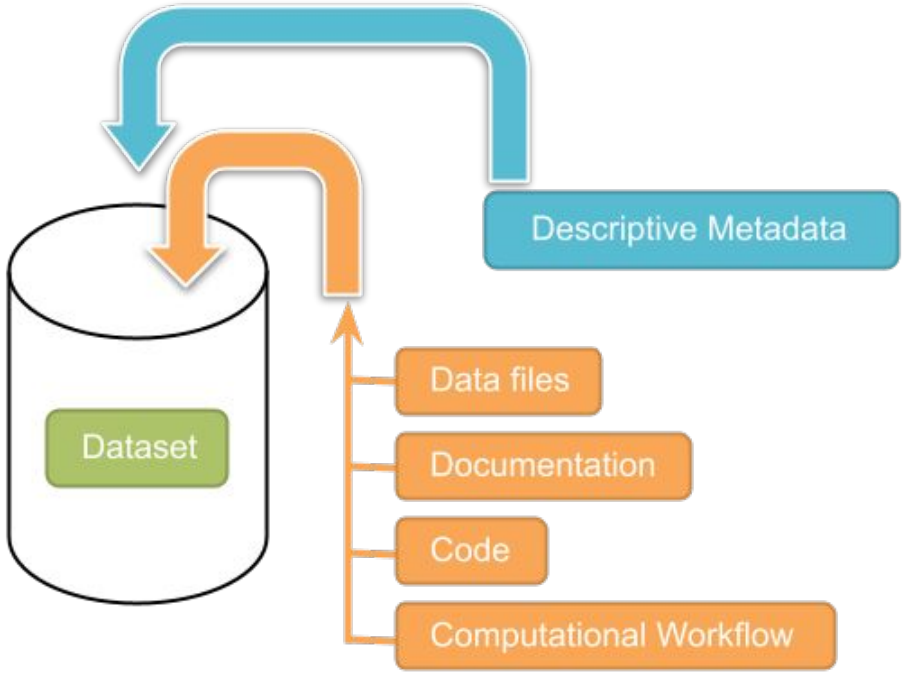


https://dataverse.unc.edu/dataverse/ncdocks

Deposit a Dataset

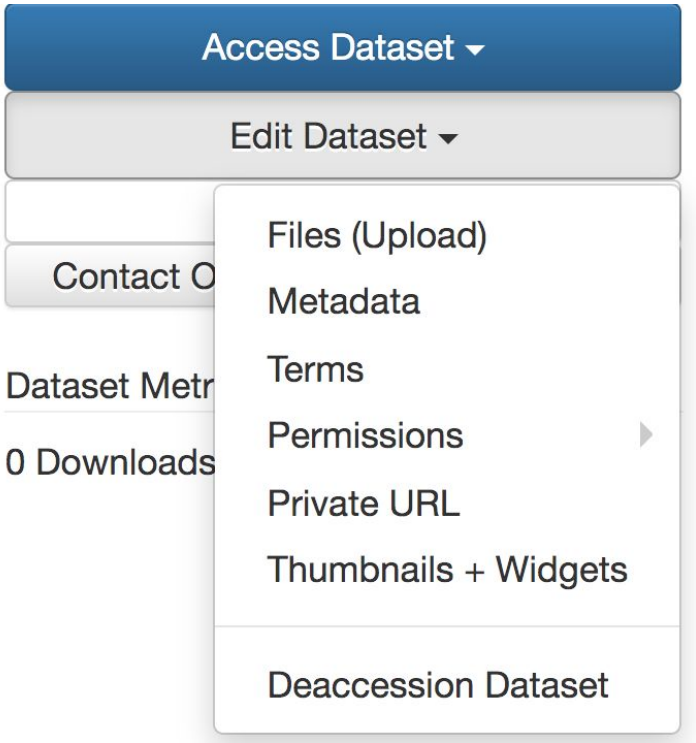
- Supported Metadata
- Adding a New Dataset
- File Upload
- File Handling
- Restricted Files
- Edit Files
- Replace Files
- Terms
- Roles & Permissions
- Data Provenance
- Thumbnails + Widgets
- Publish Dataset
- Submit for Review
- Private URL to Review Unpublished Dataset
- Embargoes
- Dataset Versions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

Schematic Diagram of a **Dataset** in Dataverse 4.0

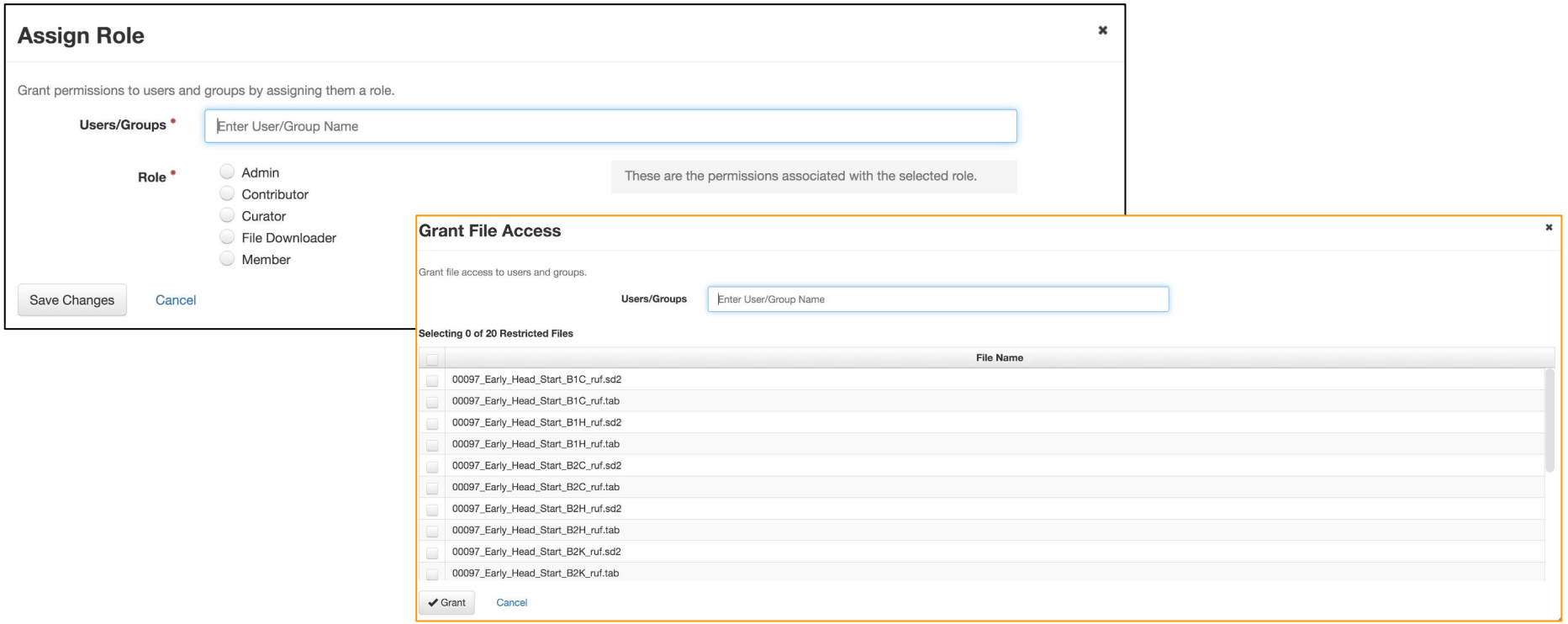


Container for your data, documentation, code, and computational workflow.

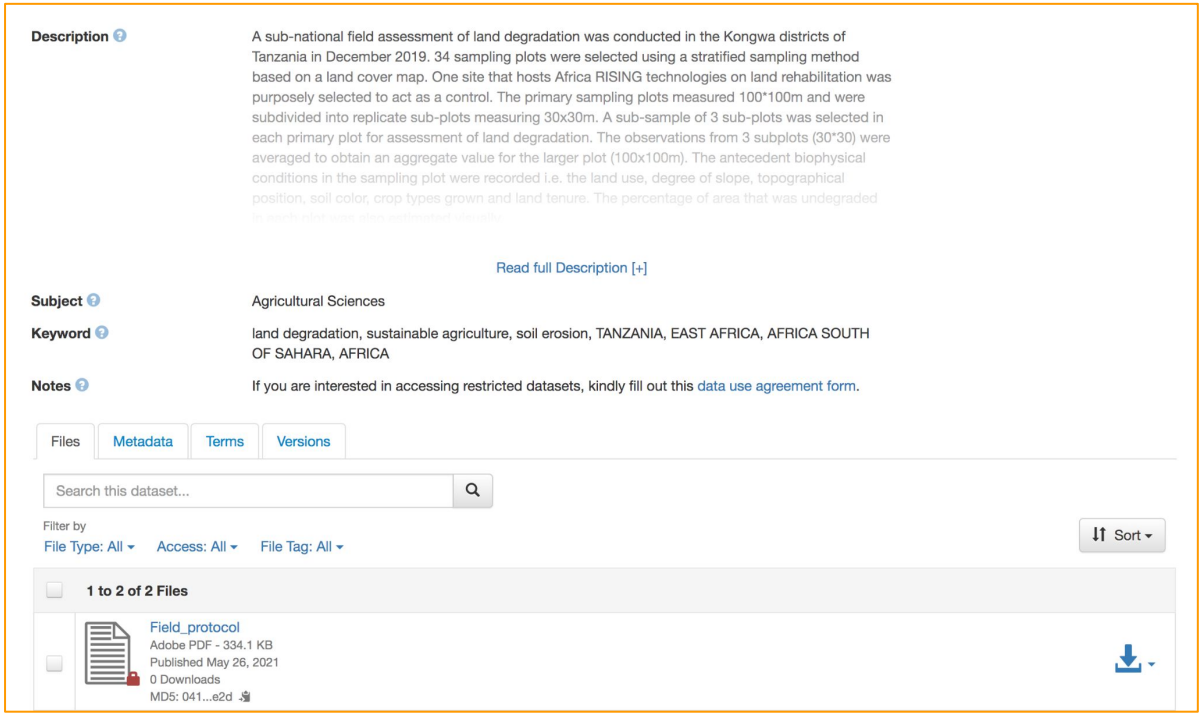
Datasets - Editing Options



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
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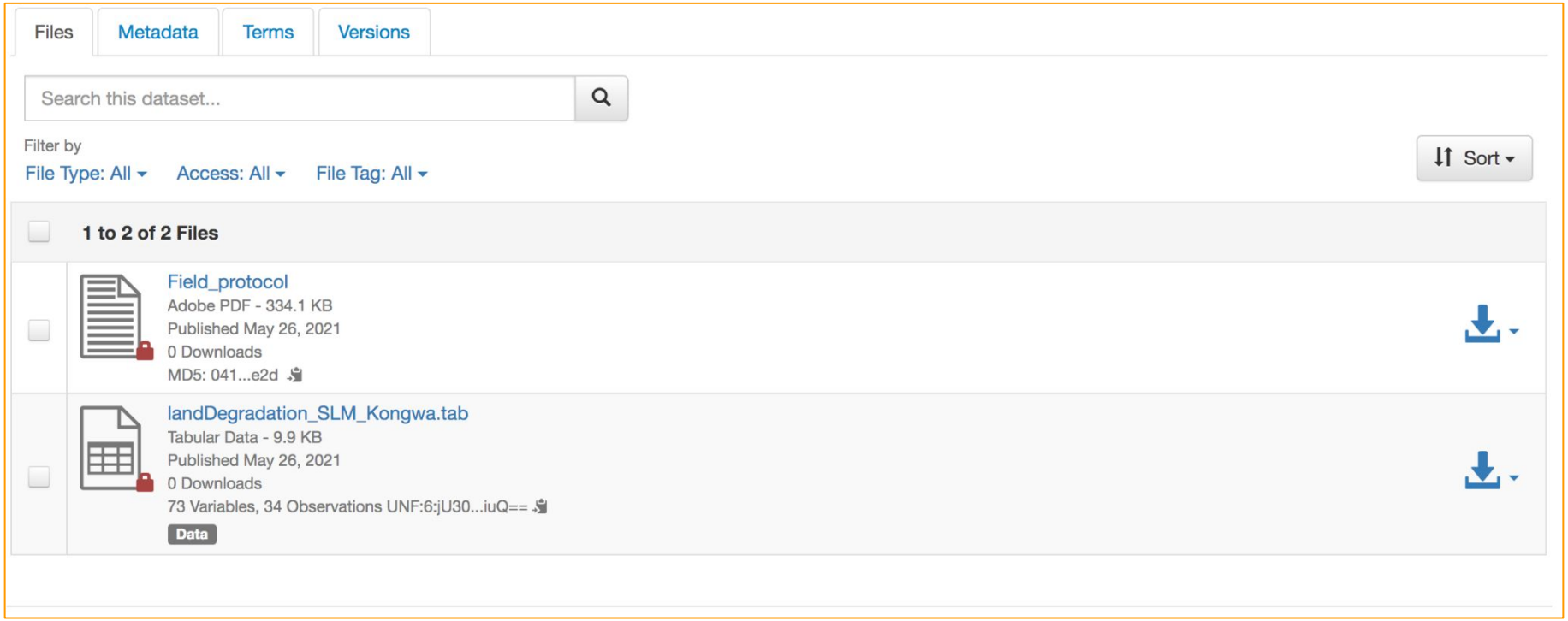
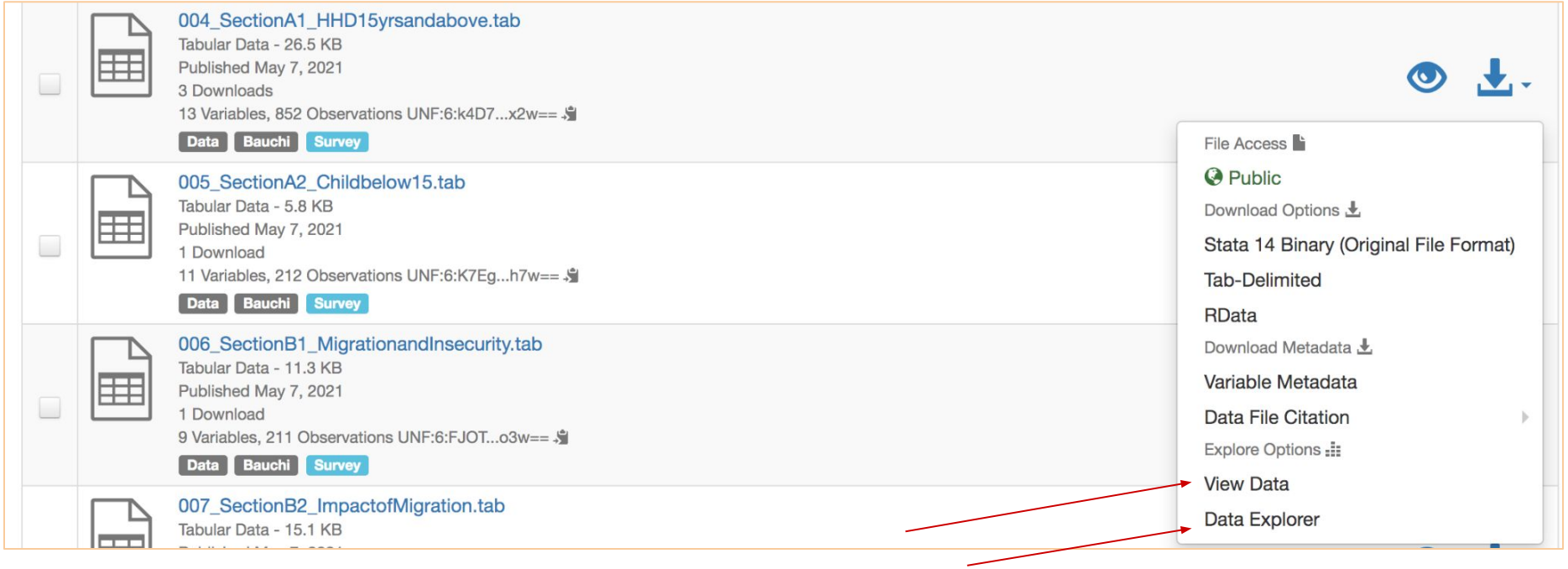
Datasets - Files



Datasets - Tabular Files



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

Datasets - Tabular Files

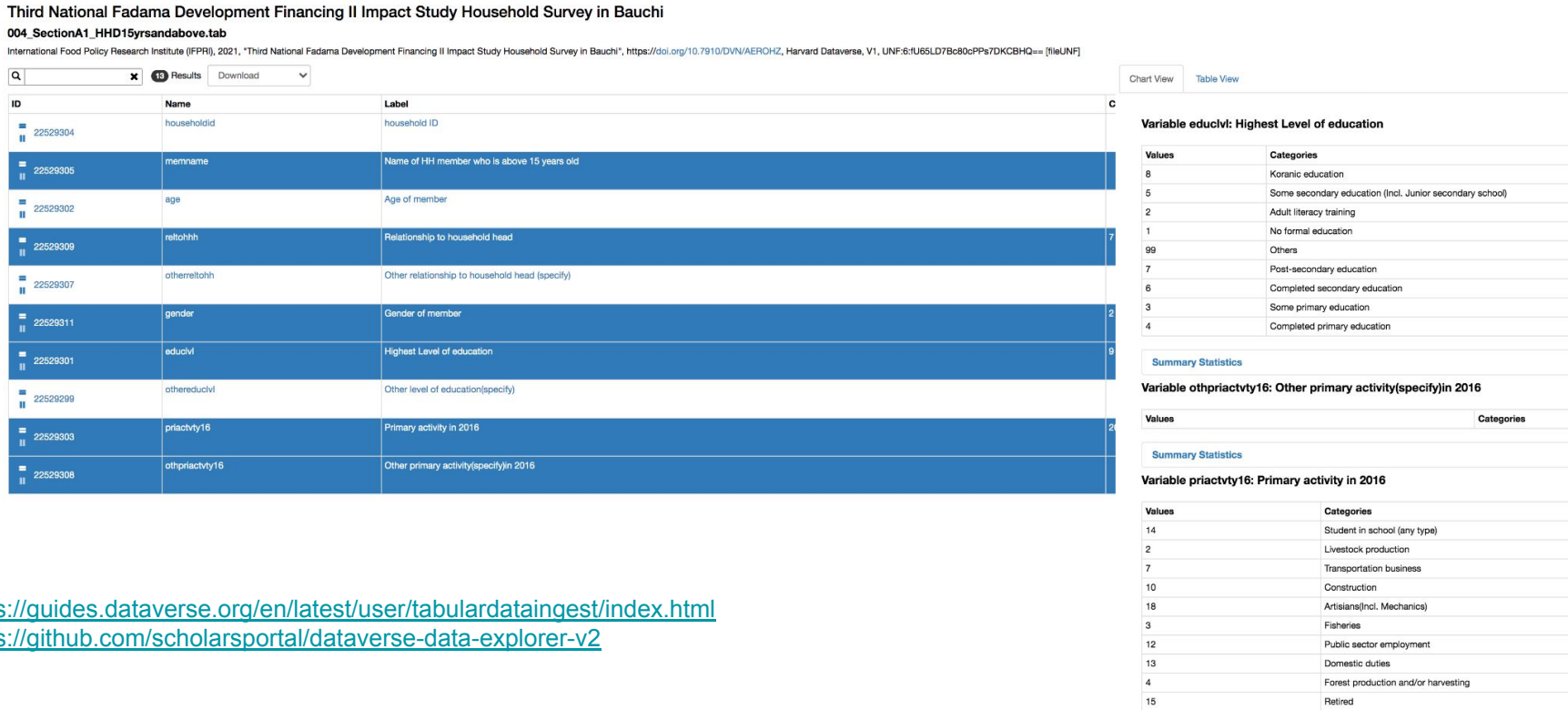
Supported File Formats

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

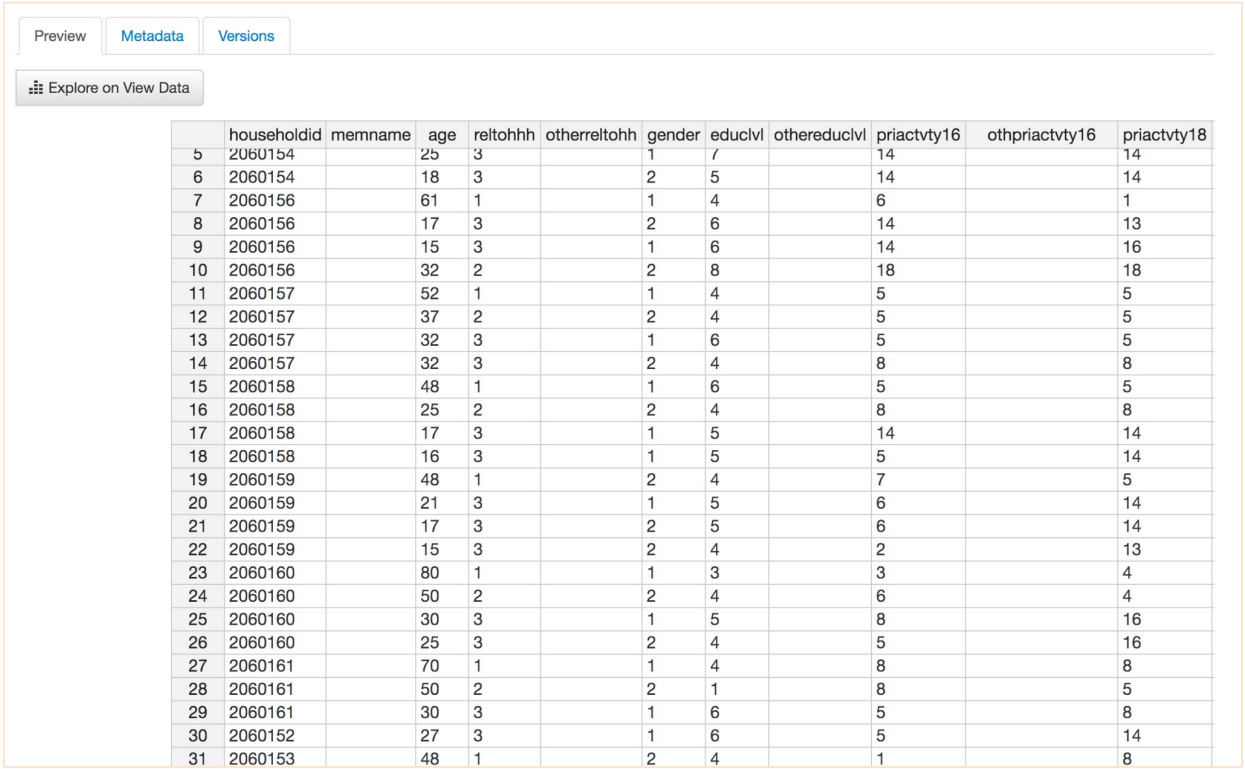
Summary Statistics

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

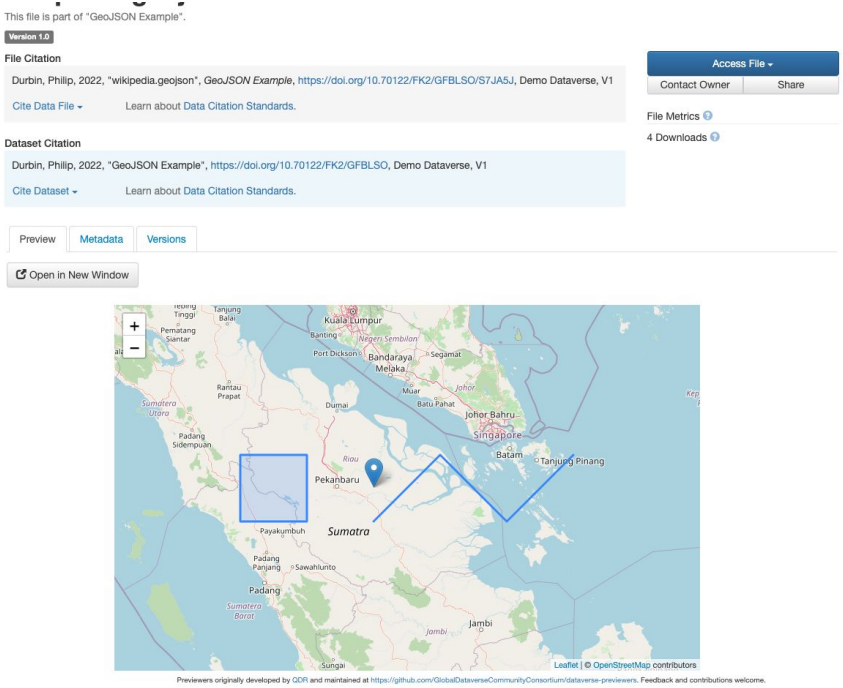
Datasets - File Previewer



	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

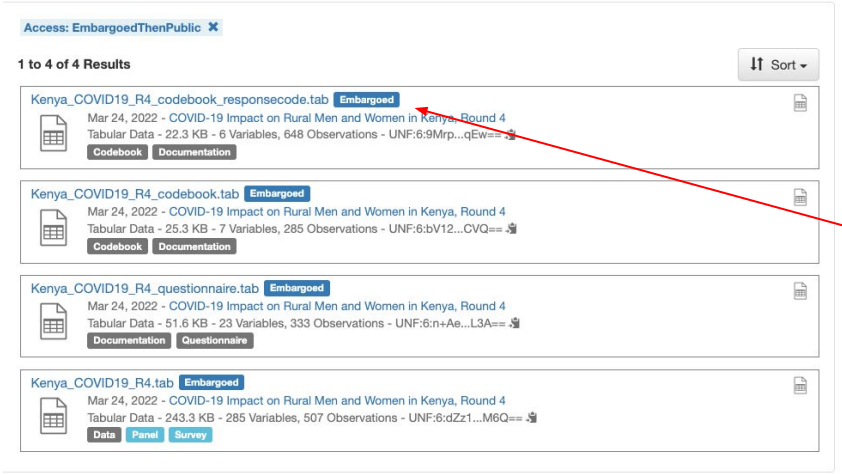
https://github.com/gdcc/dataverse-previewers

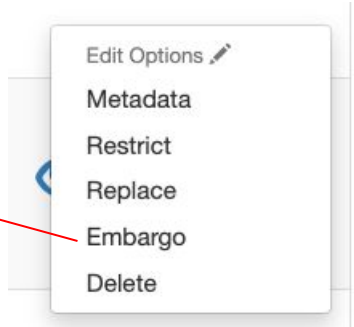
Datasets - GeoJSON Previewer

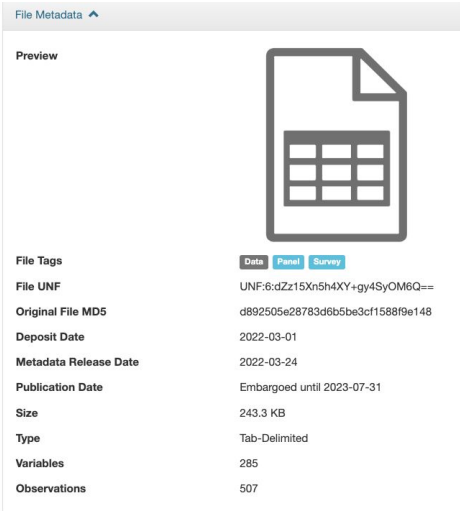


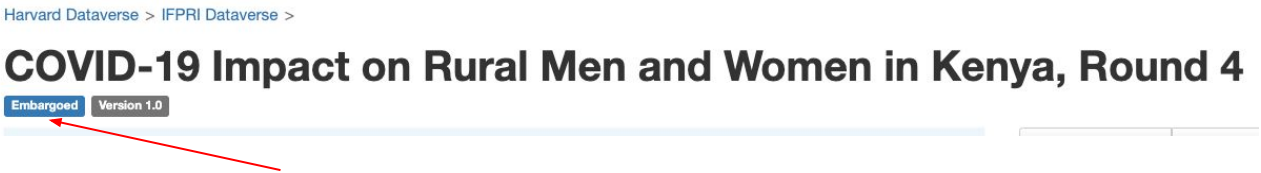
https://github.com/GlobalDataverseCommunityConsortium/dataverse-previewers

Datasets - File Level Embargo









Datasets - Metadata

Metadata Fields

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

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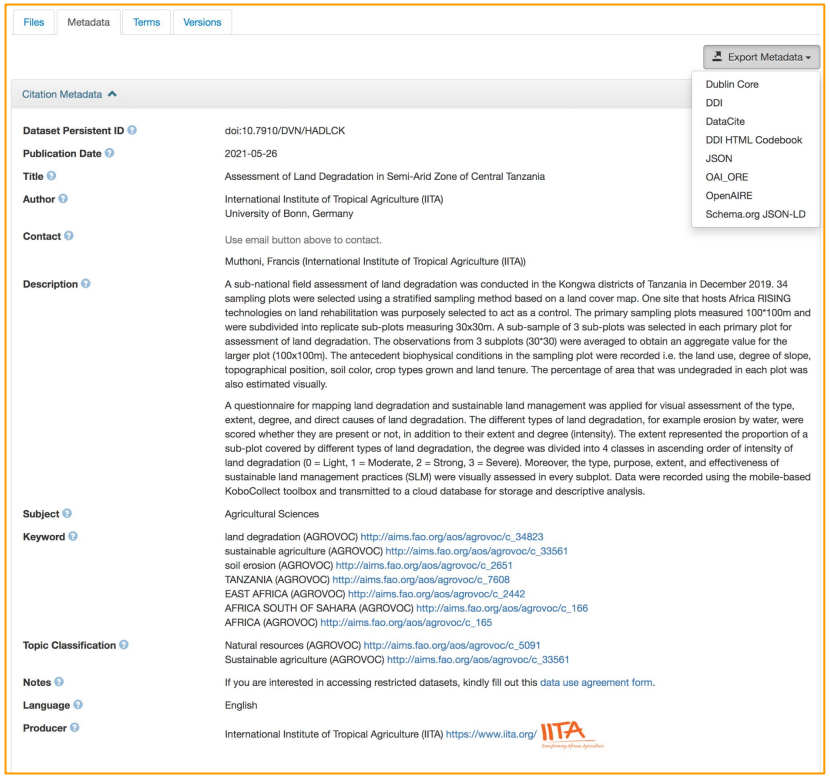
- [ ] Life Sciences Metadata [+] View fields
- [ ] Journal Metadata [+] View fields



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Export Metadata

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DataCite
DDI HTML Codebook
JSON
OAI_ORE
OpenAIRE
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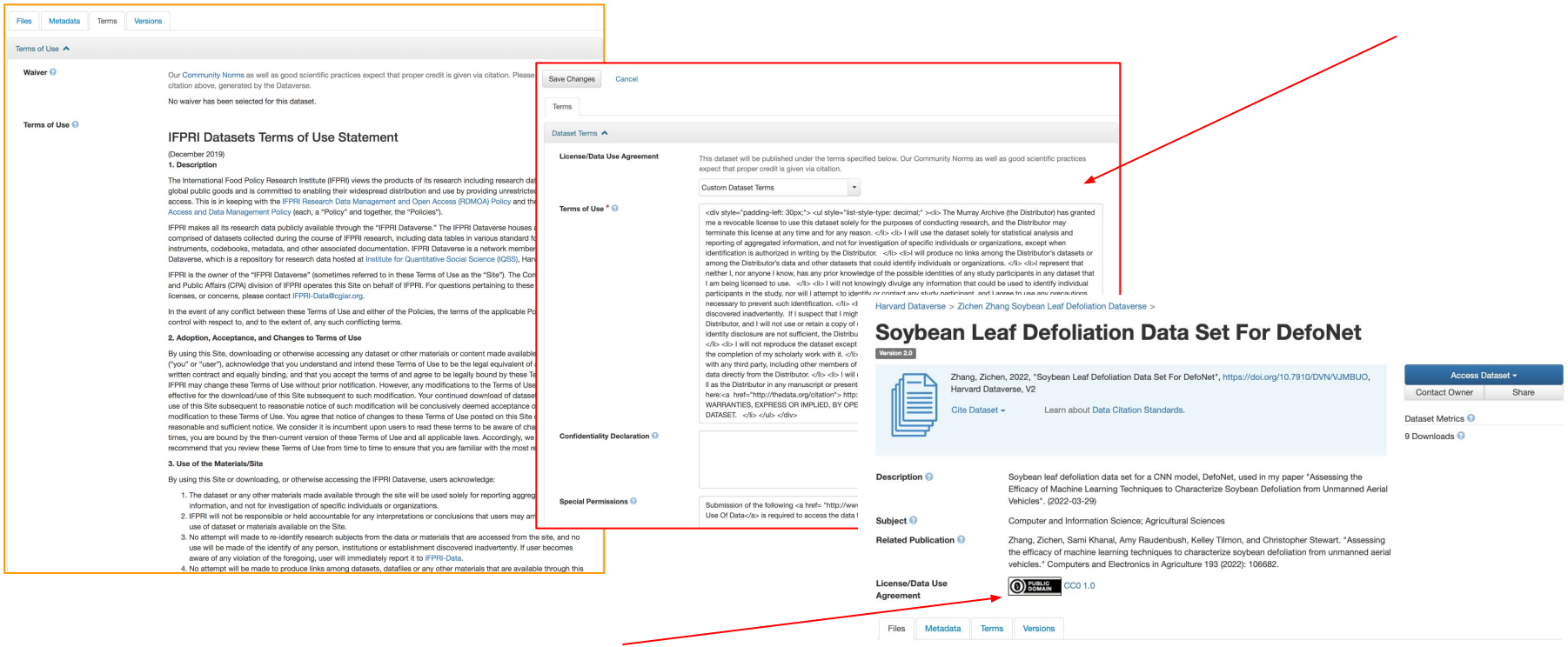
Citation Metadata

Dataset Persistent ID	doi:10.7910/DVN/HADLCK
Publication Date	2021-05-26
Title	Assessment of Land Degradation in Semi-Arid Zone of Central Tanzania
Author	International Institute of Tropical Agriculture (IITA) University of Bonn, Germany
Contact	Use email button above to contact. Muthoni, Francis (International Institute of Tropical Agriculture (IITA))
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 in each plot was also estimated visually. A questionnaire for mapping land degradation and sustainable land management was applied for visual assessment of the type, extent, degree, and direct causes of land degradation. The different types of land degradation, for example erosion by water, were scored whether they are present or not, in addition to their extent and degree (intensity). The extent represented the proportion of a sub-plot covered by different types of land degradation, the degree was divided into 4 classes in ascending order of intensity of land degradation (0 = Light, 1 = Moderate, 2 = Strong, 3 = Severe). Moreover, the type, purpose, extent, and effectiveness of sustainable land management practices (SLM) were visually assessed in every subplot. Data were recorded using the mobile-based KoboCollect toolbox and transmitted to a cloud database for storage and descriptive analysis.
Subject	Agricultural Sciences
Keyword	land degradation (AGROVOC) http://aims.fao.org/aos/agrovoc/c_34823 sustainable agriculture (AGROVOC) http://aims.fao.org/aos/agrovoc/c_33561 soil erosion (AGROVOC) http://aims.fao.org/aos/agrovoc/c_2651 TANZANIA (AGROVOC) http://aims.fao.org/aos/agrovoc/c_7608 EAST AFRICA (AGROVOC) http://aims.fao.org/aos/agrovoc/c_2442 AFRICA SOUTH OF SAHARA (AGROVOC) http://aims.fao.org/aos/agrovoc/c_166 AFRICA (AGROVOC) http://aims.fao.org/aos/agrovoc/c_165
Topic Classification	Natural resources (AGROVOC) http://aims.fao.org/aos/agrovoc/c_5091 Sustainable agriculture (AGROVOC) http://aims.fao.org/aos/agrovoc/c_33561
Notes	If you are interested in accessing restricted datasets, kindly fill out this data use agreement form.
Language	English
Producer	International Institute of Tropical Agriculture (IITA) https://www.iita.org/

Datasets - Terms



Datasets - Versions

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

Datasets - Deaccession

Replication Data for: Democratic Subversion: Elite Cooptation and Opposition Fragmentation **Deaccessioned**

Jun 8, 2021

Arriola, Leonardo R.; DeVaro, Jed; Meng, Anne, 2021, "Replication Data for: Democratic Subversion: Elite Cooptation and Opposition Fragmentation", https://doi.org/10.7910/DVN/GHDKSY, Harvard Dataverse, V1, DEACCESSIONED VERSION, UNF:6:Nk/xhGPVreurGI55KFcKrQ== [fileUNF]

The dataset has been transferred to another repository

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

Create an Account and Collection: https://demo.dataverse.org/ and test the Dataverse software! (content is removed every 30 days)