



Dataset Discovery and Metadata

What's in it for researchers?

Alicia Urquidi Díaz, MLIS, PhD (ella/elle/she/sie) • aurquidi@oceannetworks.ca
WDS-ITO • Portage Webinar Series • May 19, 2021



Vancouver is on the traditional, ancestral and unceded territories of the **xʷməθkʷəy̓əm** (Musqueam), **Skwxwú7mesh** (Squamish), and **Selílwitulh** (Tsleil-Waututh) Nations.

James Bay (Victoria, BC) is on the traditional territory of the **Lekwungen**-speaking People who are known today as the **Songhees**.

To this day, the **Songhees**, **Esquimalt** and **W̱SÁNEĆ** nations maintain relationships with the land occupied by the city of Victoria and the University of Victoria, just as the Musqueam, Squamish and Tsleil-Waututh do with the city of Vancouver.

For information on these and other Indigenous territories, please visit:

[Native Land Digital Map](#)



Today's Webinar

1. Metadata & Discovery

Researchers, metadata, and discovery infrastructures.

2. Bringing Data Together

An insider look into FRDR's Discovery Service
Kelly Stathis, Discovery & Metadata Coordinator, Portage Network



3. Tips & tools from WDS-ITO





Discovery & Metadata

Data discovery

The ability to derive (or discover) new information and knowledge from existing data sources.

[Open Metadata for Research Data Discovery in Canada](#) (A. Garnett, A. Leahey, D. Savard, B. Towell & L. Wilson: 2017)

Metadata

The information we create, store, and share to describe things, [which] allows us to interact with these things to obtain the knowledge we need.

[Understanding Metadata](#) (Riley & Niso: 2017)



Descriptive metadata

Information to facilitate the discovery (via search or browse) of resources, or provide contextual information useful in the understanding or interpretation of a resource.

[Understanding Metadata](#) (Riley & Niso: 2017)

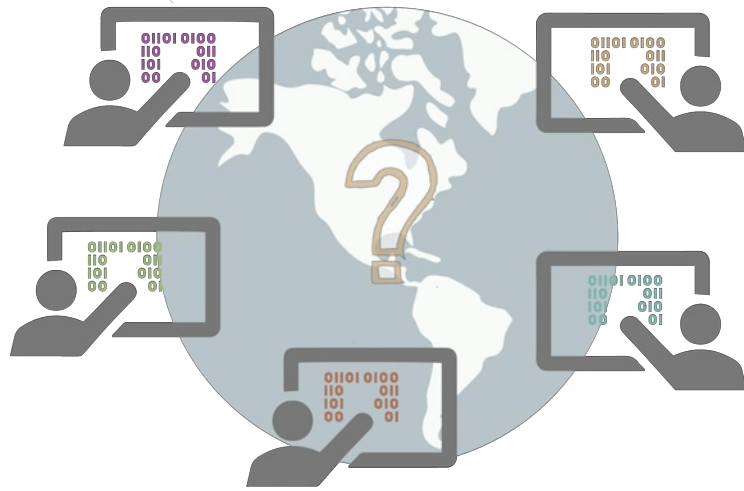
Dublin Core Elements

Rights	Contributor	Creator
Subject	Coverage	Title
Publisher	Identifier	Description
Type	Date	Source
Relation	Format	Language

Core elements of the [Dublin Core metadata standard](#). ([Image source](#))

Descriptive Metadata



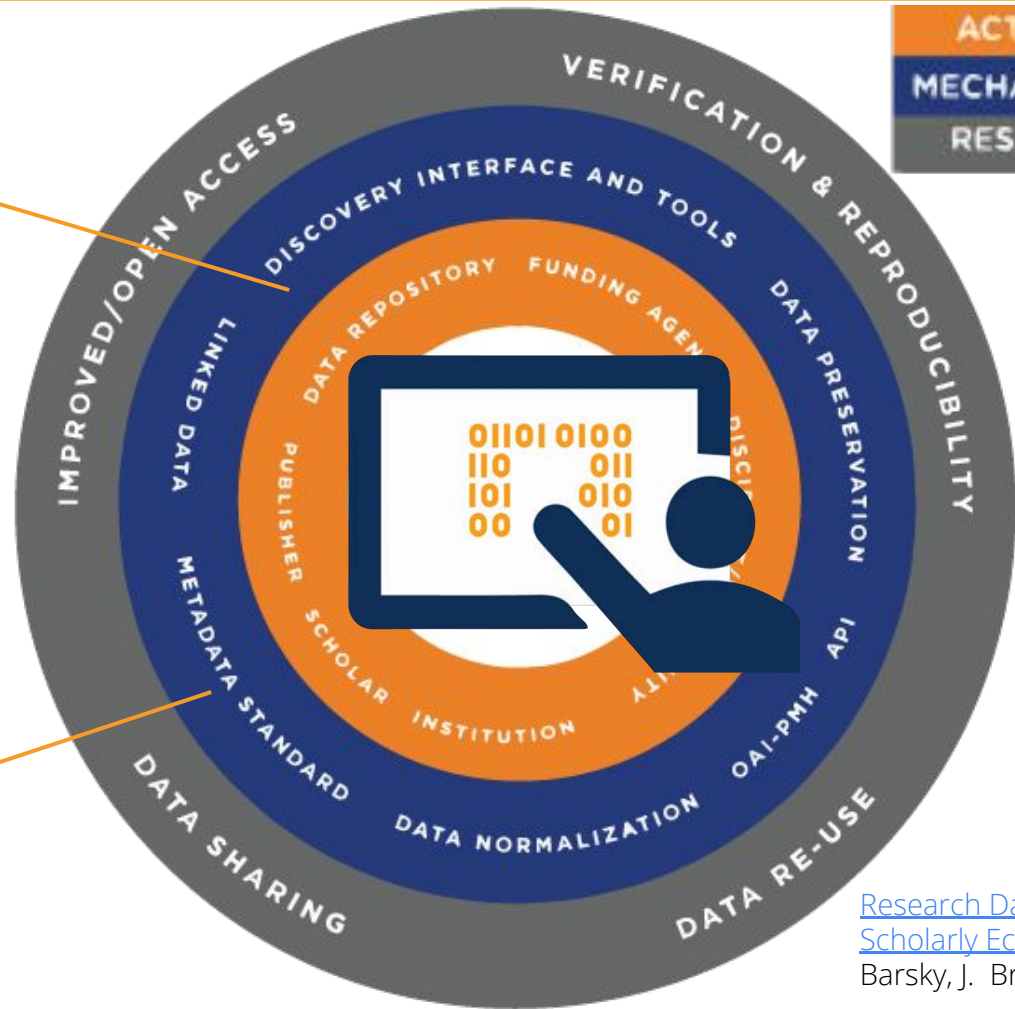


The potential for **reusing research data** is inextricably tied to how discoverable these data are to other researchers

[Open Metadata for Research Data Discovery in Canada](#) (A. Garnett, A. Leahey, D. Savard, B. Towell & L. Wilson: 2017)



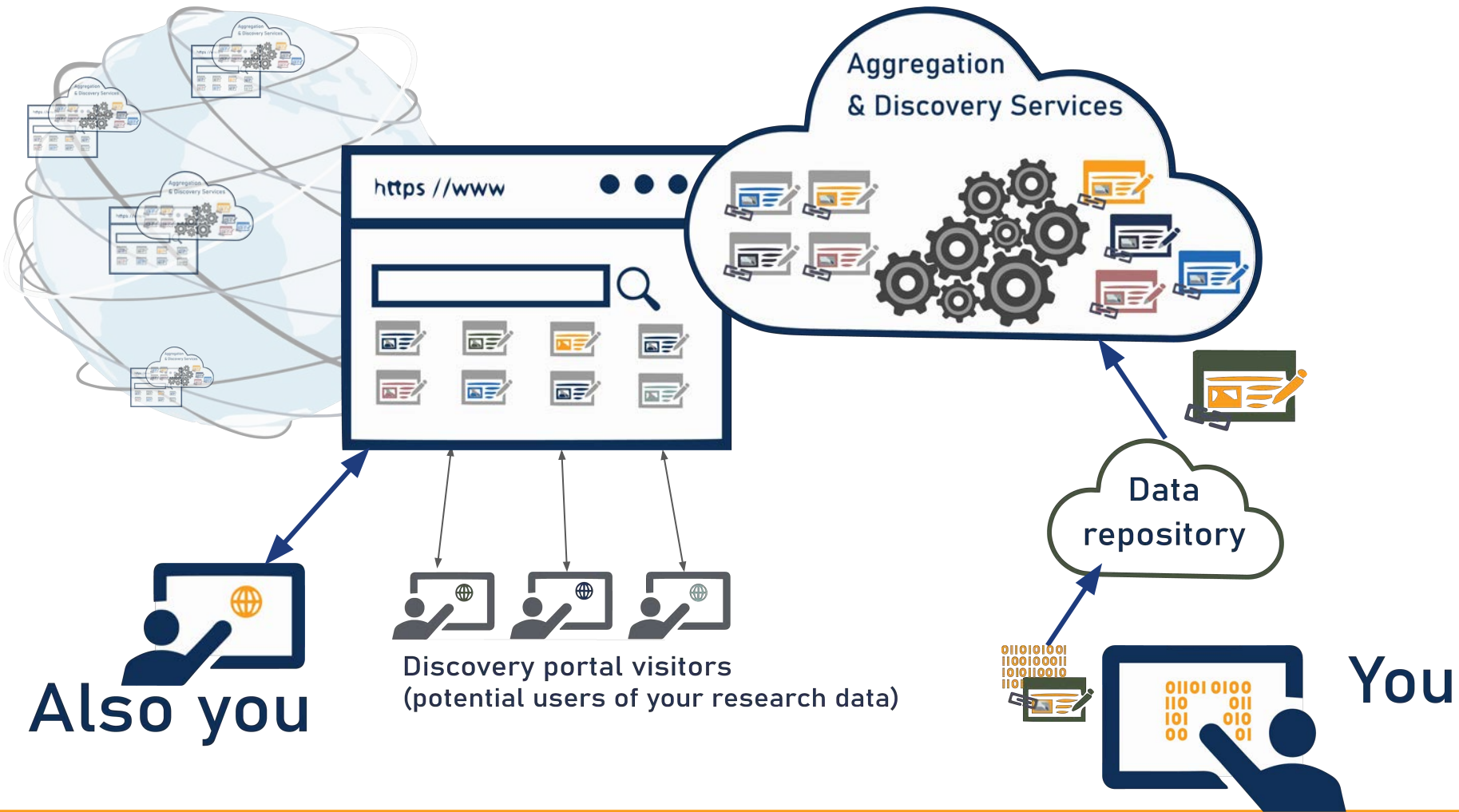
Discovery Infrastructures



ACTORS
MECHANISMS
RESULTS

Metadata

[Research Data Discovery and the Scholarly Ecosystem in Canada](#) (E. Barsky, J. Brosz & A. Leahey: 2016)



Bringing Data Together

An insider look into FRDR's Discovery Service
Kelly Stathis, Discovery & Metadata Coordinator, Portage Network



Bringing Canadian Research Data Together: The FRDR Discovery Service

Kelly Stathis (they/elle)

Discovery & Metadata Coordinator, Portage Network

kelly.stathis@engagedri.ca

May 19, 2021

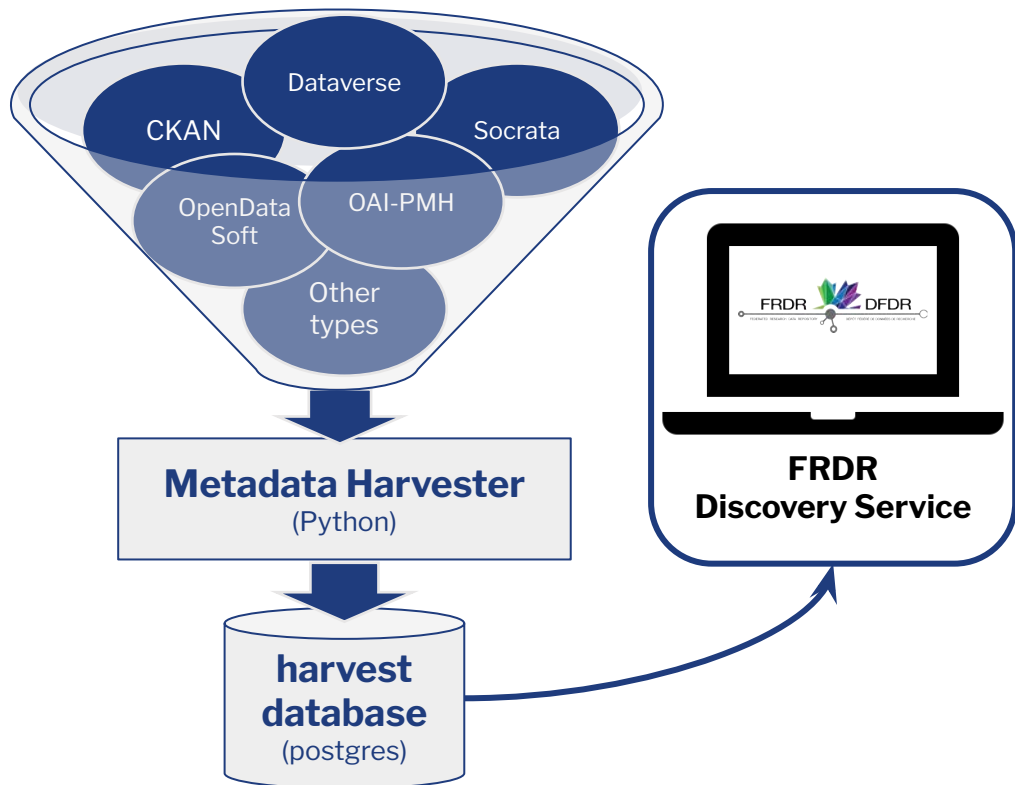


What is the FRDR Discovery Service?

- Federated Research Data Repository (FRDR) / Dépôt fédéré de données de recherche (DFDR)
- Collaboration between the New Digital Research Infrastructure Organization's Portage Network (NDRIO Portage) and Compute Canada
- FRDR Discovery Service:
 - One of FRDR's three components (discovery, deposit, and preservation)
 - A national discovery layer indexing Canadian research data repositories



What is the FRDR Discovery Service?



Find Data

Search FRDR to find research datasets originating from researchers affiliated with Canadian institutions. Data deposited to other repositories across Canada can also be found by searching in FRDR. View the growing list of [collaborating repositories](#).

[Learn more >](#)

Deposit Data

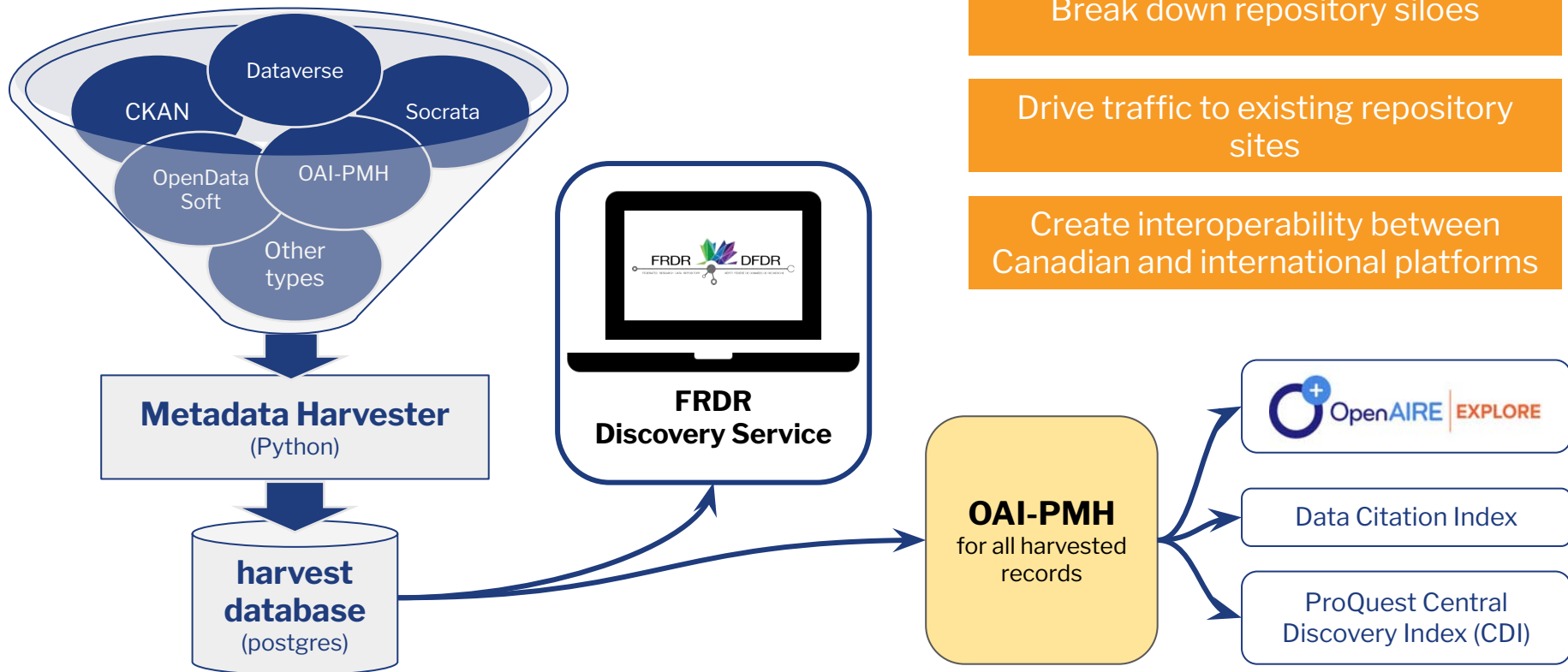
Any researcher affiliated with a Canadian institution can deposit data into FRDR. The platform can efficiently ingest datasets of any size, and preservation processing is done automatically. Data professionals from the Portage Network and institutions across Canada work with researchers to curate and approve deposited items.

[Learn more >](#)



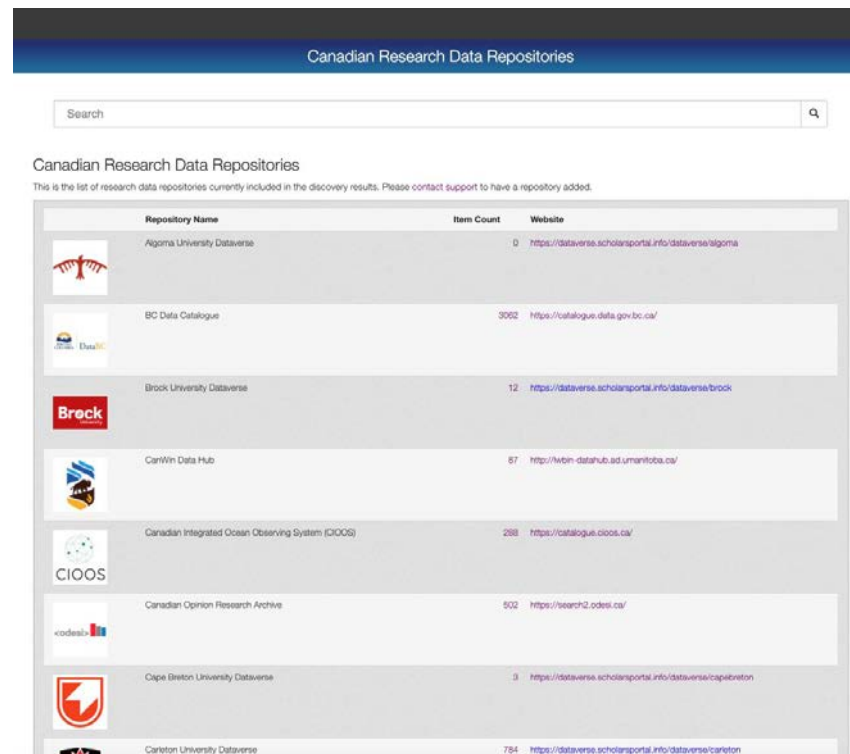
<https://www.frdr-dfdr.ca/>

What are the benefits?











Collaborating repositories

- Over 80 discoverable research data repositories including:
 - **University** repositories, including Scholars Portal Dataverses
 - **Government** repositories at the federal, provincial, and local levels
 - **Domain-specific** repositories
 - Datasets deposited in **FRDR**

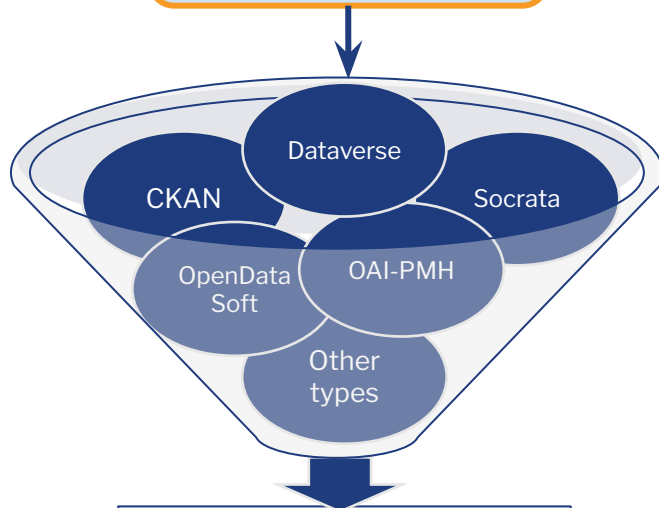


The screenshot shows the 'Canadian Research Data Repositories' website. At the top, there is a search bar with the text 'Search' and a magnifying glass icon. Below the search bar, the title 'Canadian Research Data Repositories' is displayed. A subtitle reads: 'This is the list of research data repositories currently included in the discovery results. Please contact support to have a repository added.' Below this is a table with three columns: 'Repository Name', 'Item Count', and 'Website'. The table lists several repositories, each with a small logo icon to the left of the repository name.

Repository Name	Item Count	Website
 Algoma University Dataverse	0	https://dataverse.scholarsportal.info/dataverse/algoma
 BC Data Catalogue	3002	https://catalogue.data.gov.bc.ca/
 Brock University Dataverse	12	https://dataverse.scholarsportal.info/dataverse/brock
 CarliWin Data Hub	67	http://w6in-datahub.ad.umanitoba.ca/
 Canadian Integrated Ocean Observing System (CIOOS)	288	https://catalogue.cioos.ca/
 Canadian Opinion Research Archive	502	https://search2.odps.ca/
 Cape Breton University Dataverse	3	https://dataverse.scholarsportal.info/dataverse/capbreton
 Carleton University Dataverse	784	https://dataverse.scholarsportal.info/dataverse/carleton

<https://www.frdr-dfdr.ca/discover/html/repository-list.html>

UBC Dataverse (Scholars Portal)



Metadata Harvester (Python)

harvest
database
(postgres)

Search Public Datasets - University of British Columbia - UBC Faculty of Forestry - Master of Geomatics for Environmental Management

The Impacts of Burn Severity on Forest Resiliency in British Columbia

Mundy, Brent, 2021, 'The Impacts of Burn Severity on Forest Resiliency in British Columbia', <https://doi.org/10.5683/SP2/TYN44T>, Scholars Portal Dataverse, 01

Click Dataset + Learn about Data Citation Elements.

Access Dataset +
Contact Owner + Share

Dataset History 0
No Downloads 0

Description 0

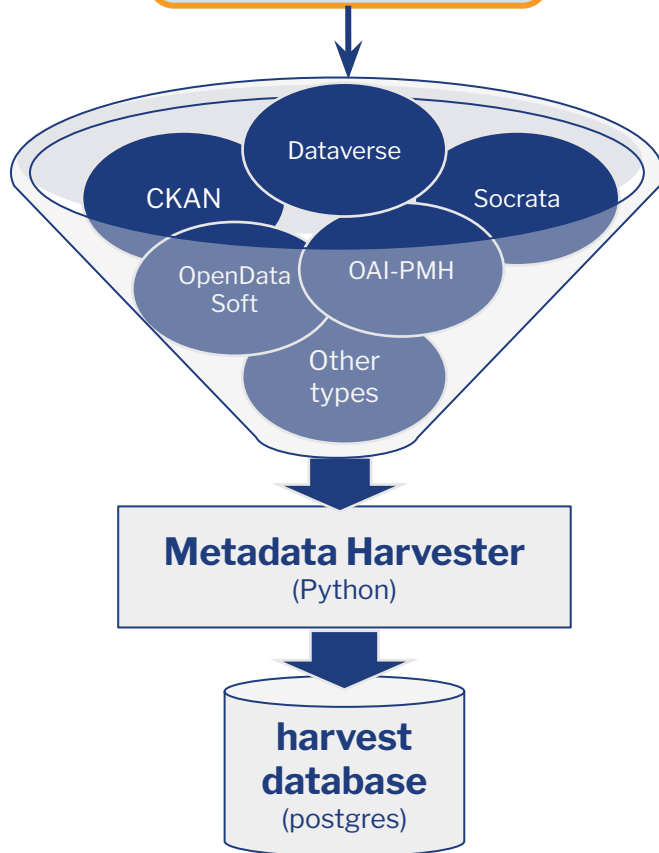
Understanding how resilient forests are after wildfire events is important to forest management practices. The objective of this study was to use Landsat 8 data to understand how the burn severity of the Little Bear/Lake wildfire has impacted forest regrowth several years later. This was done by deriving different vegetation indices to see how the changes in vegetation health were impacted by burn severity. Additionally, landscape pattern metrics were used to understand the changes to the spatial patterns of the burn severity and vegetation health over time. The results showed that the higher the burn severity, the greater the impact on vegetation health immediately after the wildfire, as well as a slower return to pre-fire conditions. When compared to the pre-fire values, the post-fire Normalized Difference Vegetation Index and the Topsoil CgI Greenness values showed an initial drop in the ND value and then a rise in value four years after the wildfire. This differed from the Topsoil CgI Wetness values as the ND showed a continuous drop in value. When looking at the changes in the spatial patterns for vegetation health, the Sparse Vegetation class showed the greatest change for Class Area with a 5.70 hectares increase every year. When looking at burn severity the High Severity class showed the greatest decrease in class area with a loss of 2.80 hectares every year. These results show that monitoring vegetation regrowth can be done using Landsat 8 derived vegetation health indices as well as with spatial pattern analysis. (2021-04-12)

Subject 0 Earth and Environmental Sciences

Keyword 0 remote sensing, regrowth, wildfire, landsat, burn severity, vegetation indices, spatial patterns

<https://doi.org/10.5683/SP2/TYN44T>

UBC Dataverse (Scholars Portal)



Open Access Journals > University of British Columbia > UBC Faculty of Forestry > Master of Geomatics for Environmental Management >

The Impacts of Burn Severity on Forest Resiliency in British Columbia

Citation Metadata

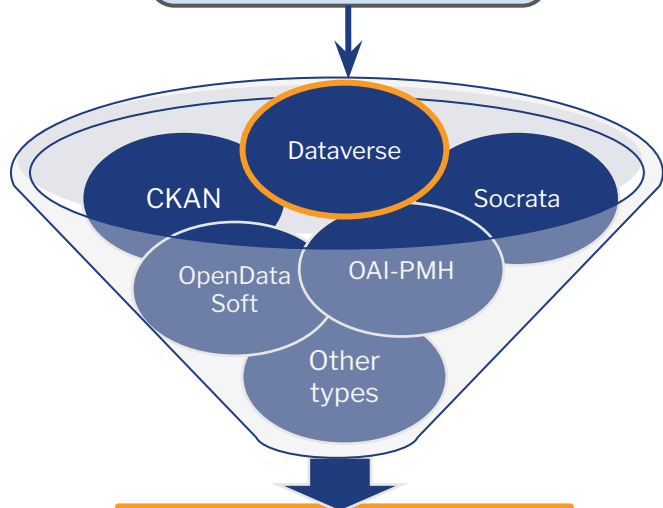
Dataset Persistent ID	doi:10.5683/SP2/TYN44T
Publication Date	2021-04-12
Title	The Impacts of Burn Severity on Forest Resiliency in British Columbia
Subtitle	How has the burn severity of the Little Bobtail Lake wildfire impacted forest regrowth?
Author	Murray, Brent (University of British Columbia) - ORCID: 0000-0003-3053-0448
Contact	Use email button above to contact. Murray, Brent (University of British Columbia)
Description	Understanding how resilient forests are after wildfire events is important to forest management practices. The objective of this study was to use Landsat-8 data to understand how the burn severity of the Little Bobtail Lake wildfire has impacted forest regrowth several years later. This was done by deriving different vegetation indices to see how the changes in vegetation health were impacted by burn severity. Additionally, landscape pattern metrics were used to understand the changes in the spatial patterns of the burn severity and vegetation health over time. The results showed that the higher the burn severity, the greater the impact on vegetation health immediately after the wildfire, as well as a slower return to pre-fire conditions. When compared to the pre-fire values, the post-fire Normalized Difference Vegetation Index and the Tasseled Cap Greenness values showed an initial drop in the R2 value and then a rise in value four years after the wildfire. This differed from the Tasseled Cap Wetness values as the R2 showed a continual drop in value. When looking at the changes in the spatial patterns for vegetation health, the Sparse Vegetation class showed the greatest change for Core Area with a 3.72 hectare increase every year. When looking at burn severity, the High Severity class showed the greatest decrease in core area with a loss of 2.63 hectares every year. These results show that monitoring vegetation regrowth can be done using Landsat-8 derived vegetation health indices as well as with spatial pattern analysis. (2021-04-12)
Subject	Earth and Environmental Sciences
Keyword	remote sensing (CAB Thesaurus) regrowth (CAB Thesaurus) wildfire (CAB Thesaurus) landsat (CAB Thesaurus) burn severity (CAB Thesaurus) vegetation indices (CAB Thesaurus) spatial patterns (CAB Thesaurus)
Language	English
Depositor	Murray, Brent

Geospatial Metadata

Geographic Coverage	Canada, British Columbia, Little Bobtail Lake Canada, British Columbia, Prince George
Geographic Bounding Box	-123.688054 -123.374400 53.840532 53.635545

<https://doi.org/10.5683/SP2/TYN44T>

UBC Dataverse (Scholars Portal)

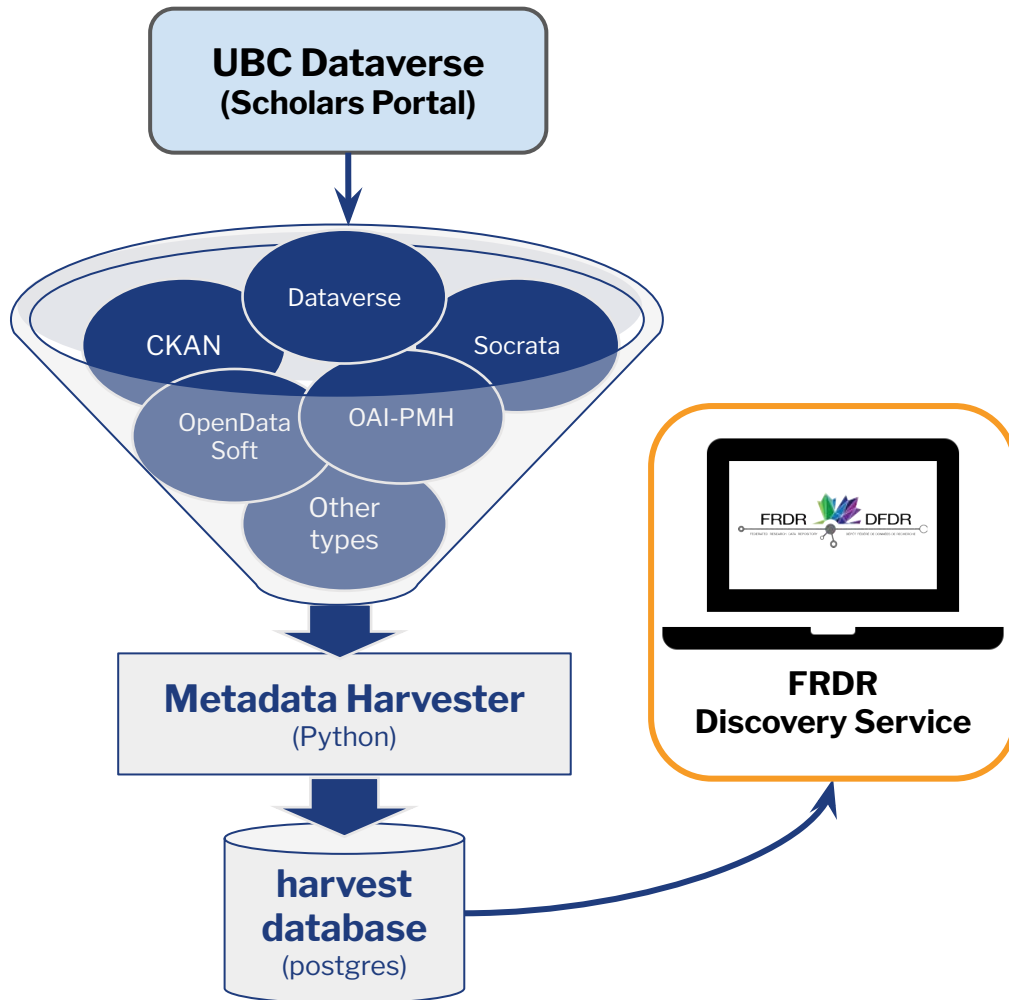


Metadata Harvester (Python)

harvest
database
(postgres)

```
1 from harvester.HarvestRepository import HarvestRepository
2 import requests
3 import time
4 import json
5 import re
6 import os.path
7 from dateutil import parser
8
9
10 class DataverseRepository(HarvestRepository):
11     """ DataverseRepository Repository """
12
13
14     def setRepoParams(self, repoParams):
15         self.metadataprefix = "dataverse"
16         super(DataverseRepository, self).setRepoParams(repoParams)
17         self.domain_metadata = []
18         self.params = {
19             }
20
21     def _crawl(self):
22         kwargs = {
23             "repo_id": self.repository_id, "repo_url": self.url, "repo_set": self.set, "repo_name": self.name,
24             "repo_type": "dataverse",
25             "enabled": self.enabled, "repo_thumbnail": self.thumbnail, "item_url_pattern": self.item_url_pattern,
26             "abort_after_numerrors": self.abort_after_numerrors,
27             "max_records_updated_per_run": self.max_records_updated_per_run,
28             "update_log_after_numitems": self.update_log_after_numitems,
29             "record_refresh_days": self.record_refresh_days,
30             "repo_refresh_days": self.repo_refresh_days, "homepage_url": self.homepage_url,
31             "repo_oai_name": self.repo_oai_name,
32             "dataverses_list": self.dataverses_list # only retrieve these sub-dataverses; defaults to None
33         }
34         self.repository_id = self.db.update_repo(**kwargs)
35
36     try:
37         dataverse_id = ":root" # If set is not specified, get the entire dataverse (:root)
38         if self.set != "":
39             # If a single set is specified, use the specified set as the dataverse_id
40
41         it
42         se
43         re
```

https://github.com/frdr-dfdr/frdr_harvest



Find Data

Search FRDR to find research datasets originating from researchers affiliated with Canadian institutions. Data deposited to other repositories across Canada can also be found by searching in FRDR. View the growing list of collaborating repositories.

[Learn more -](#)

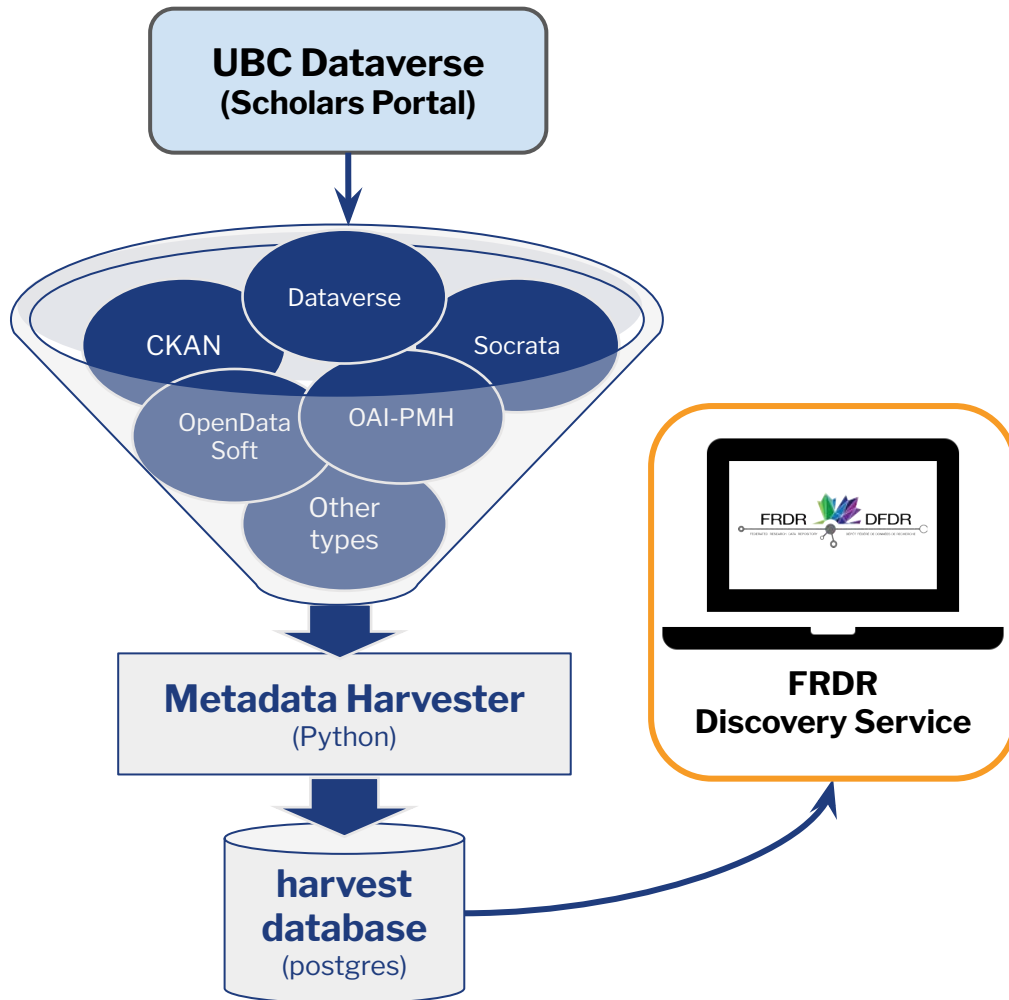
Deposit Data

Any researcher affiliated with a Canadian institution can deposit data into FRDR. The platform can efficiently ingest datasets of any size, and preservation processing is done automatically. Data professionals from the Portage Network and institutions across Canada work with researchers to curate and approve deposited items.

[Learn more -](#)



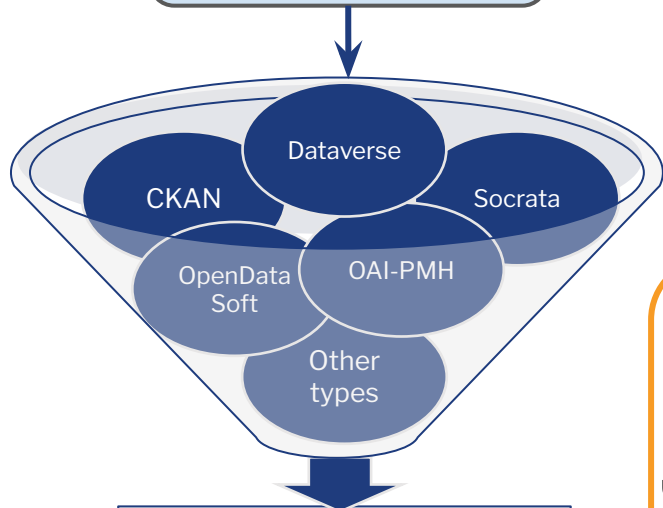
<https://www.frdr-dfdr.ca/>



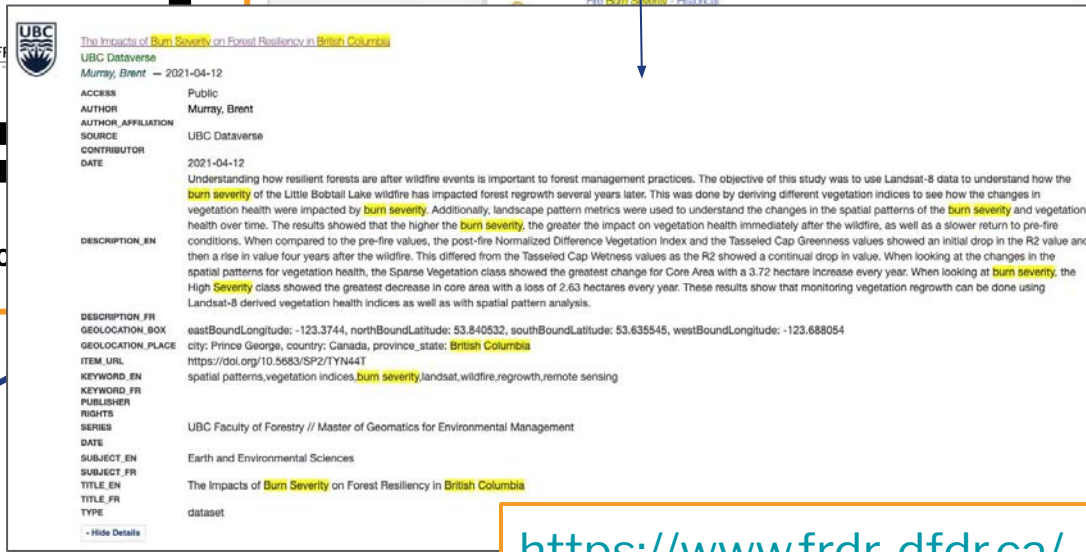
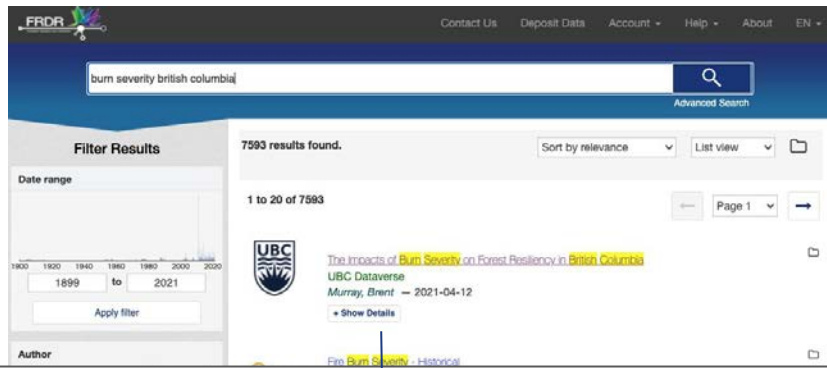
The screenshot shows the FRDR Discovery Service search results page. The search query is "burn severity british columbia". The page displays 7593 results found. The results are sorted by relevance and are shown in a list view. The first result is "The impacts of Burn Severity on Forest Resiliency in British Columbia" by UBC Dataverse, Murray Brent, dated 2021-04-12. Other results include "Fire Burn Severity - Historical" by BC Data Catalogue, "2018 Same Year Burn Severity" by BC Data Catalogue, "CAGDB - British Columbia - 4014" by Open Data Canada, "CAGDB - British Columbia - 4021" by Open Data Canada, and "CAGDB - British Columbia - 6265" by Open Data Canada. The page also includes a filter sidebar with options for Date range, Author, and Subject.

<https://www.frdr-dfdr.ca/>

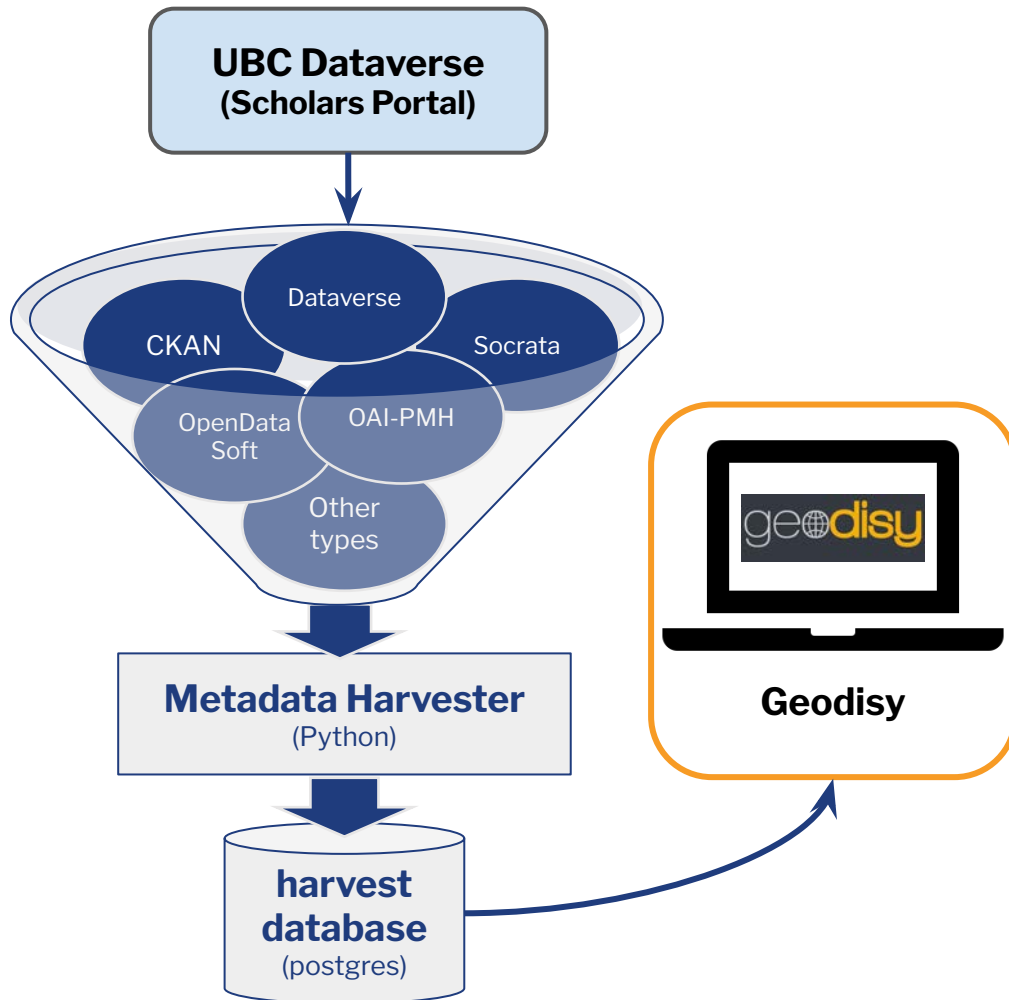
UBC Dataverse (Scholars Portal)




Metadata Harvester (Python)



<https://www.frdr-dfdr.ca/>




FRDR  Help About Contact Us EN ▾

Important: Geodisy provides map search functionality to supplement the FRDR discovery service. Currently in beta, the map search includes datasets from repositories indexed by FRDR with bounding box metadata. Dataverse repository datasets with location metadata and/or geospatial files are also included. To perform a text only search, return to frdr-dfdr.ca.

Explore Canadian research data

Search by keywords...

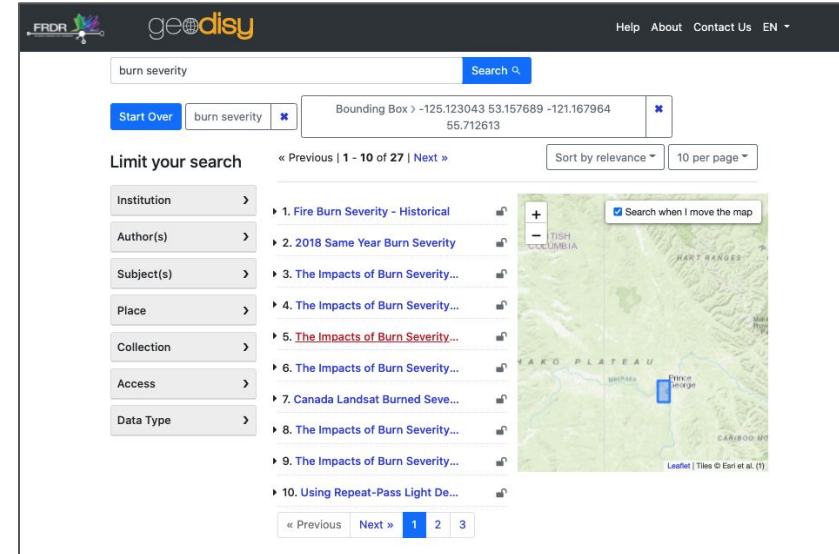
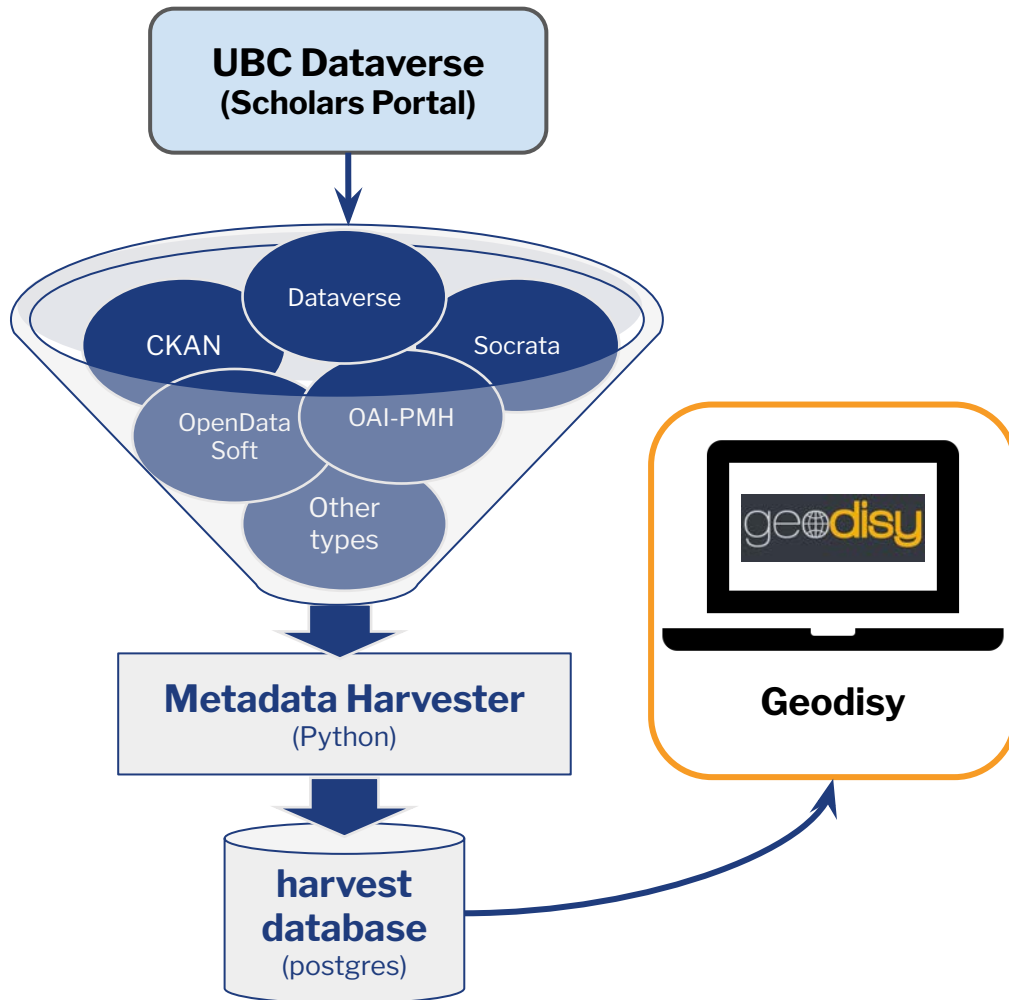
Search by location



To use the map search:

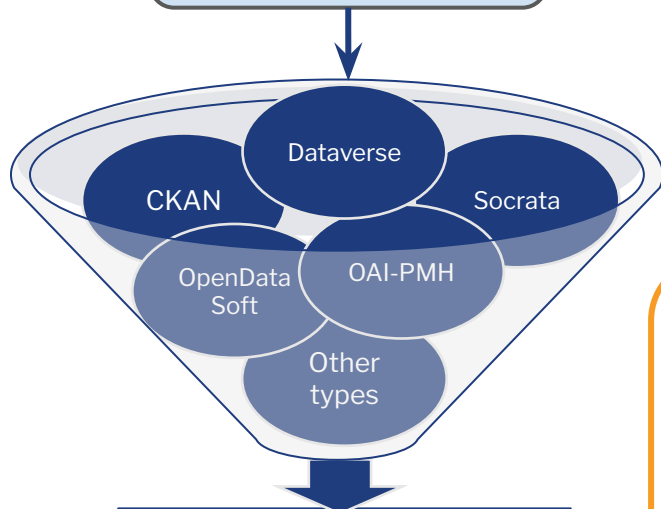
1. Move the map to display your area of interest. You can also hold the shift key and click to draw a box for the map to zoom toward
2. Click "Search Here" to see the results

<https://geo.frdr-dfdr.ca/>

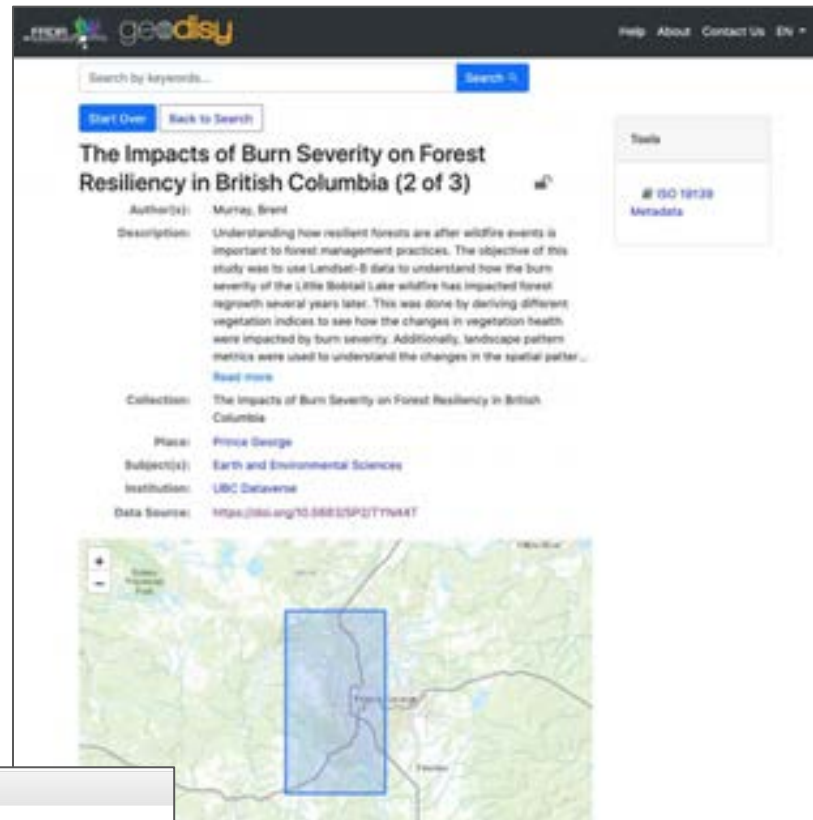


<https://geo.frdr-dfdr.ca/>

UBC Dataverse (Scholars Portal)

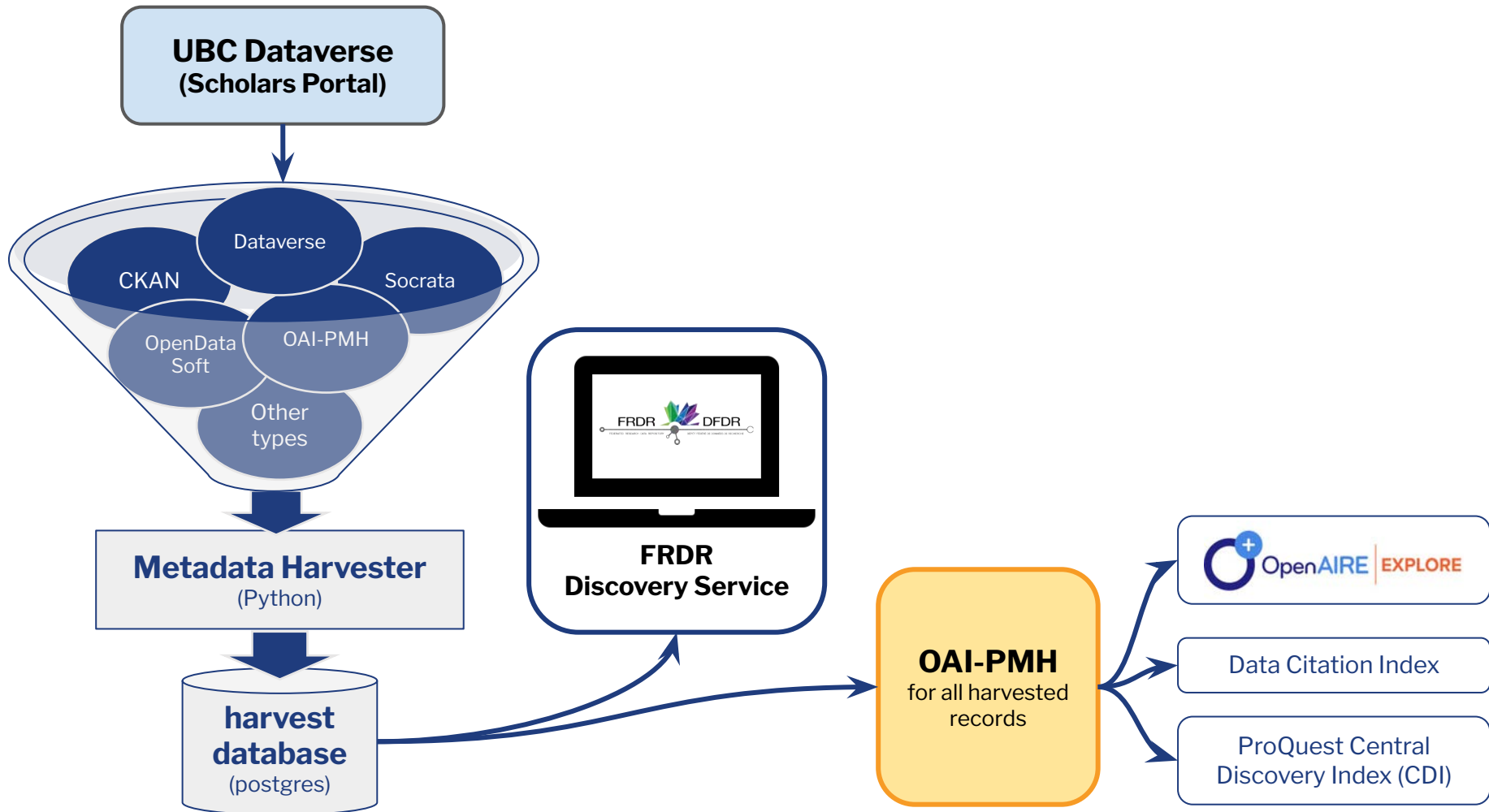


Metadata Harvester (Python)



Geospatial Metadata ^	
Geographic Coverage	Canada, British Columbia, Little Bobtail Lake Canada, British Columbia, Prince George
Geographic Bounding Box	-123.688054 -123.374400 53.840532 53.635545

<https://geo.frdr-dfdr.ca/>



(Open Archives Initiative Protocol for Metadata Harvesting)

The screenshot shows the OpenAIRE EXPLORE search interface. At the top, there are navigation links: SEARCH, DEPOSIT, LINK, CONTENT PROVIDERS, and SIGN IN. A search bar contains the text "burn severity british columbia" and a "SEARCH" button. Below the search bar, there are tabs for "RESEARCH OUTCOMES (15)", "PROJECTS (0)", "CONTENT PROVIDERS (0)", and "ORGANIZATIONS (0)". The "Filters" section includes "Open Access" (checked), "Results per page: 10", and "Sort by: Date (most recent)". The "Access Mode (1)" section shows "Open Access (15)". The "Result Types (4)" section includes checkboxes for "Publications", "Research data", "Software", and "Other research products". The "Year range" section shows "e.g. 1800" and "e.g. 2031". A search result is displayed for "Research Data . 2021" titled "The Impacts of Burn Severity on Forest Resiliency in British Columbia". The result includes an "OPEN ACCESS" badge, authors "Murray, Brent", a DOI "10.5683/sp2/tyn44t", and a publisher "UBC Dataverse". The abstract text reads: "Understanding how resilient forests are after wildfire events is important to forest management practices. The objective of this study was to use Landsat-8 data to understand how the burn severity of the Little Bobtail Lake wildfire has impacted forest...". A "(postgres)" label is positioned below the search results area.

OAI-PMH
for all harvested
records



Data Citation Index

ProQuest Central
Discovery Index (CDI)

<https://explore.openaire.eu/>

UBC Dataverse

OpenAIRE | EXPLORE

SEARCH DEPOSIT LINK CONTENT PROVIDERS SIGN IN

Research Data - Dataset - 2021
The Impacts of Burn Severity on Forest Resiliency in British Columbia

Murray Brent

OPEN ACCESS

Published: 11 Apr 2021
Publisher: UBC Dataverse
Country: Canada

LINK THIS RESEARCH DATA TO...
CITE THIS RESEARCH DATA
ADD TO COLLECTION
ADD ANNOTATION

SUMMARY

Abstract:
Understanding how resilient forests are after wildfire events is important to forest management practices. The objective of this study was to use Landsat 8 data to understand how the burn severity of the Little Bobtail Lake wildfire has impacted forest regrowth several years later. This was done by deriving different vegetation indices to see how the changes in vegetation health were impacted by burn severity. Additionally, landscape pattern metrics were used to understand the changes in the spatial patterns of the burn severity and vegetation health over time. The results showed that the higher the burn severity, the greater the impact on vegetation health was...

Communities:
Rural Digital Europe

Download from:

- Federated Research Data Repositories / Dépôt fédéré de données de recherche
- UBC Dataverse

Permanent Identifiers:
DOI: 10.5833/1p2r7yn4k

Subjects:
FREE TEXT KEYWORDS: Earth and Environmental Sciences, spatial patterns, vegetation indices, burn severity, landsat, wildfire, regrowth, remote sensing

OAI-PMH
for all harvested
records

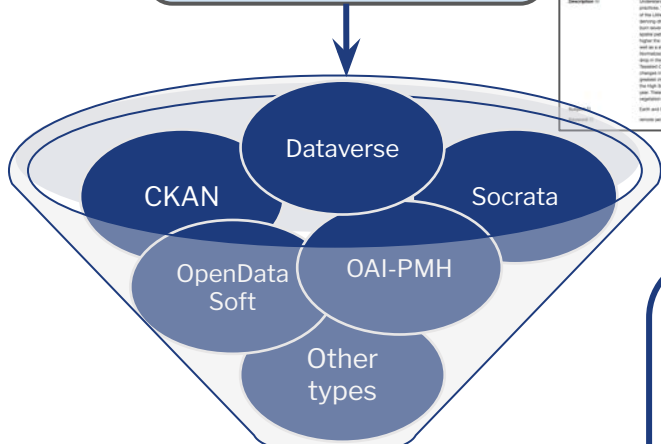


Data Citation Index

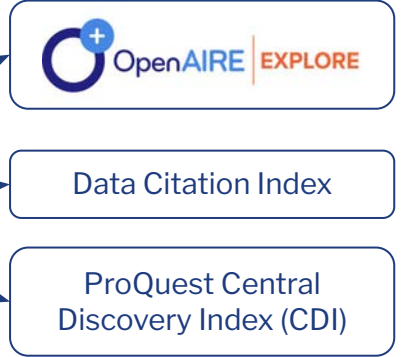
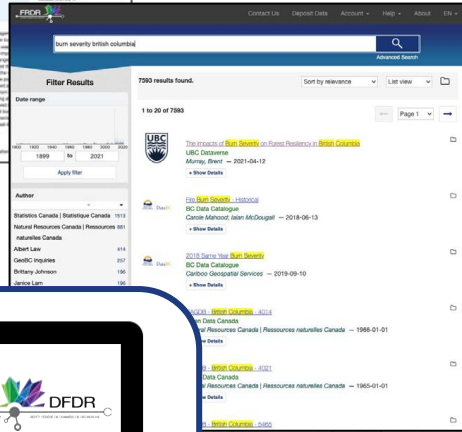
ProQuest Central
Discovery Index (CDI)

<https://explore.openaire.eu/>

UBC Dataverse (Scholars Portal)



Metadata Harvester (Python)



Discovery & Metadata Tips



Discovery Activity

1. Go to one of the platforms listed
2. Do a keyword search:
earthquake monitoring vancouver island
3. Find the dataset that has 2 co-authors named Martin

Discovery Platforms



- [OpenAIRE Explore](#)
- [WorldWideScience.org](#)
- [Google Dataset Search](#)
- [DataCite Commons](#)
- DCI Web of Science*

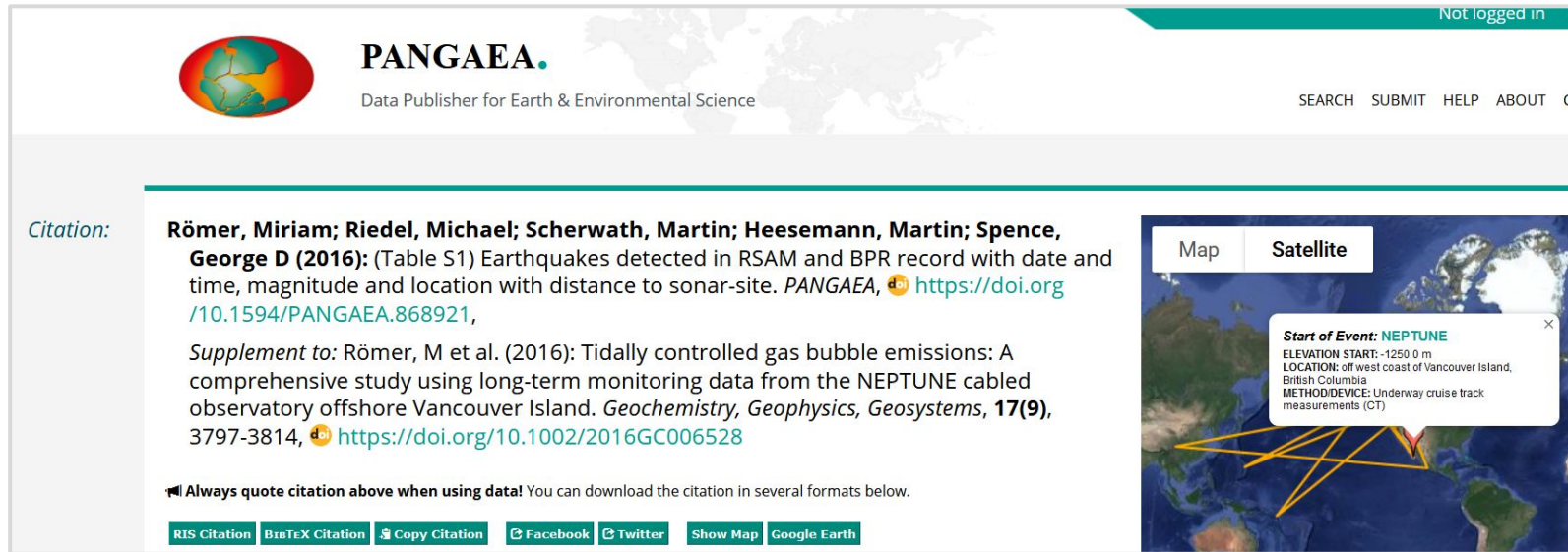
*if you have access to it

Finding and Being Found through Discovery Services



Original dataset

Römer, Miriam; Riedel, Michael; Scherwath, Martin; Heesemann, Martin; Spence, George D (2016): (Table S1) Earthquakes detected in RSAM and BPR record with date and time, magnitude and location with distance to sonar-site. PANGAEA, <https://doi.org/10.1594/PANGAEA.868921>.



The screenshot shows the PANGAEA website interface. At the top left is the PANGAEA logo, a globe with red and green continents, and the text "PANGAEA. Data Publisher for Earth & Environmental Science". At the top right, it says "Not logged in" and has navigation links for "SEARCH", "SUBMIT", "HELP", and "ABOUT". The main content area is titled "Citation:" and contains the following text: "Römer, Miriam; Riedel, Michael; Scherwath, Martin; Heesemann, Martin; Spence, George D (2016): (Table S1) Earthquakes detected in RSAM and BPR record with date and time, magnitude and location with distance to sonar-site. PANGAEA, <https://doi.org/10.1594/PANGAEA.868921>,
Supplement to: Römer, M et al. (2016): Tidally controlled gas bubble emissions: A comprehensive study using long-term monitoring data from the NEPTUNE cabled observatory offshore Vancouver Island. *Geochemistry, Geophysics, Geosystems*, **17(9)**, 3797-3814, <https://doi.org/10.1002/2016GC006528>

Below the citation, there is a note: "Always quote citation above when using data! You can download the citation in several formats below." and a row of buttons: "RIS Citation", "BIBTEX Citation", "Copy Citation", "Facebook", "Twitter", "Show Map", and "Google Earth". On the right side of the page, there is a map showing the location of the NEPTUNE cabled observatory off the west coast of Vancouver Island. A pop-up window titled "Start of Event: NEPTUNE" provides details: "ELEVATION START: -1250.0 m", "LOCATION: off west coast of Vancouver Island, British Columbia", and "METHOD/DEVICE: Underway cruise track measurements (CT)".

Full metadata: https://doi.pangaea.de/10.1594/PANGAEA.868921?format=metadata_jsonld

DOI creation

Aggregation & Discovery

(Meta)data
Deposit



5 researchers
1 dataset
1 subject repository
1 DOI minting agency
6+ different international search platforms




Römer, Miriam; Riedel, Michael; Scherwath, Martin; Heesemann, Martin; Spence, George D (2016): (Table S1) Earthquakes detected in RSAM and BPR record with date and time, magnitude and location with distance to sonar-site. PANGAEA, <https://doi.org/10.1594/PANGAEA.868921>,



Duplicate records?

Google


2 datasets found

 (Table S1) Earthquakes detected in RSAM and BPR record with date and time,...

doi.pangaea.de

html, tsv

Updated Nov 30, 2016



 (Table S1) Earthquakes detected in RSAM and BPR record with date and time...


search.datacite.org

Updated 2016

Download from [View all 4 versions](#)

Dataset . 2016
Provider: figshare

 **PANGAEA** 
Dataset . 2016
Provider: PANGAEA

? **figshare** 
Dataset . 2016

Many sources, but only one dataset → **DOIs ftw!**

Tip #1 DOIs

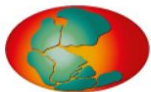
Unique, persistent identifiers for digital objects that allow your dataset to be found, referred to and linked unambiguously.



Source: <https://datasetsearch.research.google.com/>

Source: <https://explore.openaire.eu/search/find>

OpenAIRE and Google Dataset Search



PANGAEA.

Data Publisher for Earth & Environmental Science

Not logged in

SEARCH SUBMIT HELP ABOUT CONTACT

Citati

Römer, Miriam

 <https://orcid.org/0000-0003-2540-9286>
 mroemer@marum.de

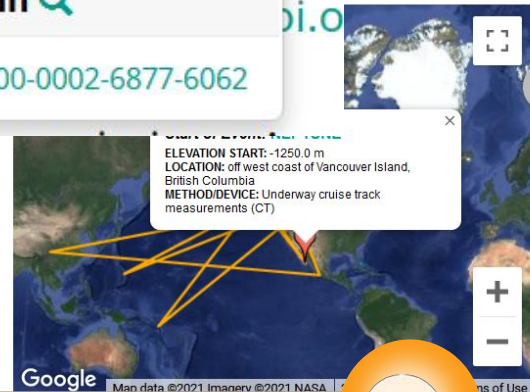
Heesemann, Martin

 <https://orcid.org/0000-0002-6877-6062>

...controlled gas bubble emissions: A
g data from the NEPTUNE cabled
observatory offshore Vancouver Island. *Geochemistry, Geophysics, Geosystems*, **17(9)**,
3797-3814,  <https://doi.org/10.1002/2016GC006528>

 Always quote citation above when using data! You can download the citation in several formats below.

[RIS Citation](#) [BIBTeX Citation](#) [Copy Citation](#) [Facebook](#) [Twitter](#) [Show Map](#) [Google Earth](#)



ORCID
stands for
Open Researcher and Contributor ID

Tip #2

ORCID

Free, unique identifiers
that researchers create
and manage themselves.



Tip #3

Include machine-readable rights metadata

[I]nformation a human or machine needs to provide appropriate access to a resource, provide appropriate notification and compensation to rights holders, and to inform end users of any use restrictions that may exist.

Riley (2011): [Seeing Standards](#)



Access Mode (7)

- Open Access (5,329,588)
- Restricted (1,829,366)
- Closed Access (110,953)
- Embargo (5,112)
- Open Source (3,538)
- Other (2,080)

License

<input type="checkbox"/> CC-BY-NC-4.0	389
<input type="checkbox"/> CC-BY-3.0	6
<input type="checkbox"/> CC-BY-4.0	6
<input type="checkbox"/> CC0-1.0	1

Many discovery platforms index datasets by access mode and kind of license, which powers the filters you can apply in your search (Source: <https://explore.openaire.eu/search/find>, <https://commons.datacite.org/>)

Access & Rights Metadata



Tip #3b

Indigenous Data Sovereignty

“The right of Indigenous peoples to control data from and about their communities and lands, articulating both individual and collective rights to data access and to privacy.

IDS also raises overarching, “fundamental questions about assumptions of ownership, representation, and control in open data communities”



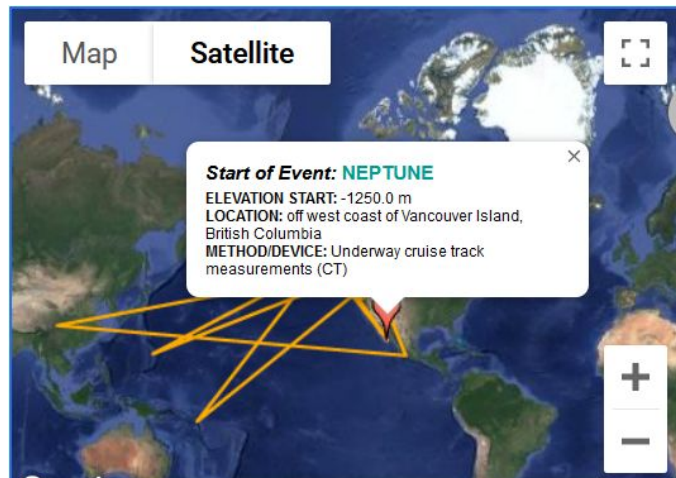
Source:

[First Nations Information Governance Centre - OCAP Principles](#)

Tip #4

Add spatial metadata and view your dataset on a map

Google Dataset Search, FRDR's Geodisy, and other discovery platforms have map search functionalities, which rely on geolocation fields the metadata record.










Coverage:	<i>Median Latitude: 49.192688 * Median Longitude: -131.117628 * South-bound Latitude: -10.800000 * West-bound Longitude: 102.890000 * North-bound Latitude: 56.298000 * East-bound Longitude: -102.180000</i> <i>Date/Time Start: 2012-06-19T13:40:00 * Date/Time End: 2013-06-21T05:18:00</i> <i>Minimum Elevation: -1250.0 m * Maximum Elevation: -1250.0 m</i>
Event(s):	NEPTUNE * <i>Latitude Start: 24.670000 * Longitude Start: -110.170000 * Latitude End: 40.180000 * Longitude End: -121.030000 * Elevation Start: -1250.0 m * Elevation End: -1250.0 m</i> * <i>Location: off west coast of Vancouver Island, British Columbia</i> * <i>Method/Device: Underway cruise track measurements (CT)</i> * <i>Comment: Ocean Networks Canada's North-East Pacific Time Series Underwater Networked Experiments (NEPTUNE) cabled ocean observatory.</i>

Source: <https://doi.pangaea.de/10.1594/PANGAEA.868921>

Spatial metadata



#	Name	Short Name	Unit
1	DATE/TIME 	Date/Time	
2	Magnitude 	Magnitude	
3	LATITUDE 	Latitude	
4	LONGITUDE 	Longitude	
5	Distance 	Distance	km
6	Azimuth 	Azim	deg
7	Time delay 	Time delay	

Tip #5

Standard terminology

Use standardized terms and (wherever possible) controlled vocabularies, and link to and use specific terminologies in your research field.

And → Metadata is for humans too! Use descriptive documents and free-text fields to include human-readable summaries.



Comment:

Earthquakes detected in RSAM and BPR record with date and time, magnitude and location (Latitude and Longitude) with distance to sonar-site. **The azimuth is the angle between sonar and earthquake location.** Time delays for P- and S-wave were calculated using standard Earth reference velocity model.

Describing your dataset





Tip #5

Standard terminology (cont)

```

@type:          "PropertyValue"
name:           "Azimuth"
unitText:       "deg"
url:            "https://en.wikipedia.org/wiki/Azimuth"
subjectOf:      "DefinedTermSet"
  @type:
  ▼ hasDefinedTer
    ▼ 0:
      @id:       "http://qudt.org/1.1/vocab/quantity#Angle"

```

rdf:Description **rdf:about**="http://qudt.org/vocab/quantity#Angle">

<**skos:exactMatch** **rdf:resource**="http://dbpedia.org/resource/Angle"/>

<**qudt:generalization** **rdf:resource**="http://qudt.org/vocab/quantity#DimensionlessRatio"/>

<**qudt:description** **rdf:datatype**="http://www.w3.org/2001/XMLSchema#string">

The inclination to each other of two intersecting lines, measured by the arc of a circle between the two lines forming the angle, the center of the circle being the point of intersection. An acute angle, less than 90°; a right angle 90°; an obtuse angle, more than 90° but less than 180°; a straight angle, 180°; a reflex angle, more than 180° but less than 360°; a perigon, 360°. Any angle not a multiple of 90° is an oblique angle. If the sum of two angles is 90°, they are complementary angles; if 180°, supplementary angles. Two adjacent angles have a common vertex and a common side. A dihedral angle is the angle between two intersecting planes. A spherical angle between two intersecting great circles.





Tip #6

CoreTrustSeal

An international, community based, non-governmental, and non-profit organization that promotes sustainable and trustworthy data infrastructures.

- [Find CTS certified repositories](#)
- [Canadian 2021 CTS certification cohort](#)



R13. Data discovery and identification

- Inclusion in disciplinary or generic resource registries
- Presence of search facilities with
 - A searchable metadata catalogue using international standards
 - Persistent identifier systems
 - Enabled machine harvesting of the metadata
 - Recommended data citations

R14. Data reuse

- Metadata provided with dataset download
 - In formats used by target community
 - Ensure continued data understandability
 - Account for the possible evolution of formats

Source: [DOI:10.5281/zenodo.3638211](https://doi.org/10.5281/zenodo.3638211)

Finding recommended repositories





Tip #7

Metadiscovery Tools

You can find more repositories, as well as other discovery & aggregation platforms in these service registries:

- [re3data](#)
- [EOSC Marketplace](#)
- [Scientific Data's recommended repository list](#)
- WDS-ITO's Searchable Index of Metadata Aggregators (will be available soon under doi.org/10.5281/zenodo.4589050)

Finding research data services

the “meta-meta catalogues”





Tip #7

Schema.org

A few repositories and discovery services are now offering automatic semantic enrichment to make your metadata understandable to search engines such as Google, and other semantic digital tools.

WDS-ITO has some interesting resources on Schema.org and semantic markup:

- [Portage Webinar: Schema.org for Research Data Managers](#) (by Chantelle Verhey)
- [Schema.org for Research Data Managers: A Primer](#) (Verhey & Payne, 2020, will be published in the near future).
- [Schema Crosswalks Visualization](#) (In collaboration with the Research Data Alliance's [Research Metadata Schemas Working Group](#))

Semantic Metadata





APRIL 15, 2021

Call for Applications: NDRIO-Portage COVID-19 Data Curation Funding

NDRIO and Portage are pleased to announce the availability of funding to support the curation of Canadian research data related to the COVID-19 pandemic. The purpose of this funding is to bring COVID-19 related data into timely compliance with the [FAIR Guiding Principles](#) (Findable, Accessible, Interoperable, and Reusable) for the management of research data, algorithms, tools and workflows.^[1] Ultimately, increasing the FAIRness of datasets makes them discoverable and re-usable by both humans and machines, enabling downstream research. As a secondary objective, this initiative aims to build capacity for research data management (RDM) in Canada by supporting the training of highly-qualified personnel (HQP) in data stewardship and curation.

21 May: Deadline for applications to [NDRIO-Portage COVID-19 Data Curation Funding](#) (for Canadian researchers and research programs)





Thank you!