DOIs and other Digital Persistent Identifiers

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What are Digital Persistent Identifiers?

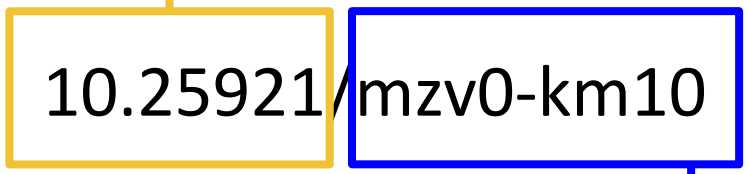
- A string of numbers, letters, symbols that are assigned to the object
- Digital identifier that is globally unique, persistent, machine resolvable and processable
- Used for disambiguation and identification of entities across platforms
- Standard way to cite/reference research components

Types of Persistent Identifiers

- Digital Object Identifiers (DOIs)
  - For work product(s); research output
  - Managed through Registration Agencies (**Datacite**, Crossref)
- Personal Identifiers
  - For people (researchers, grantees)
  - **ORCID**, Scopus Author ID, etc.)
- Organization/Funder Identifiers
  - For organizations (funders, employers, etc.)
  - **Research Organization Registry (ROR).** Ringgold, ISNI, etc.)

DOI Structure

Prefix: Indicates the registrant. This is the prefix for NOAA datasets. The prefix for NOAA publications is different.



Suffix: alphanumeric string that identifies the object associated with the ID; unique for each object

Expressing a DOI

DOI Number

10.25921/mzv0-km10

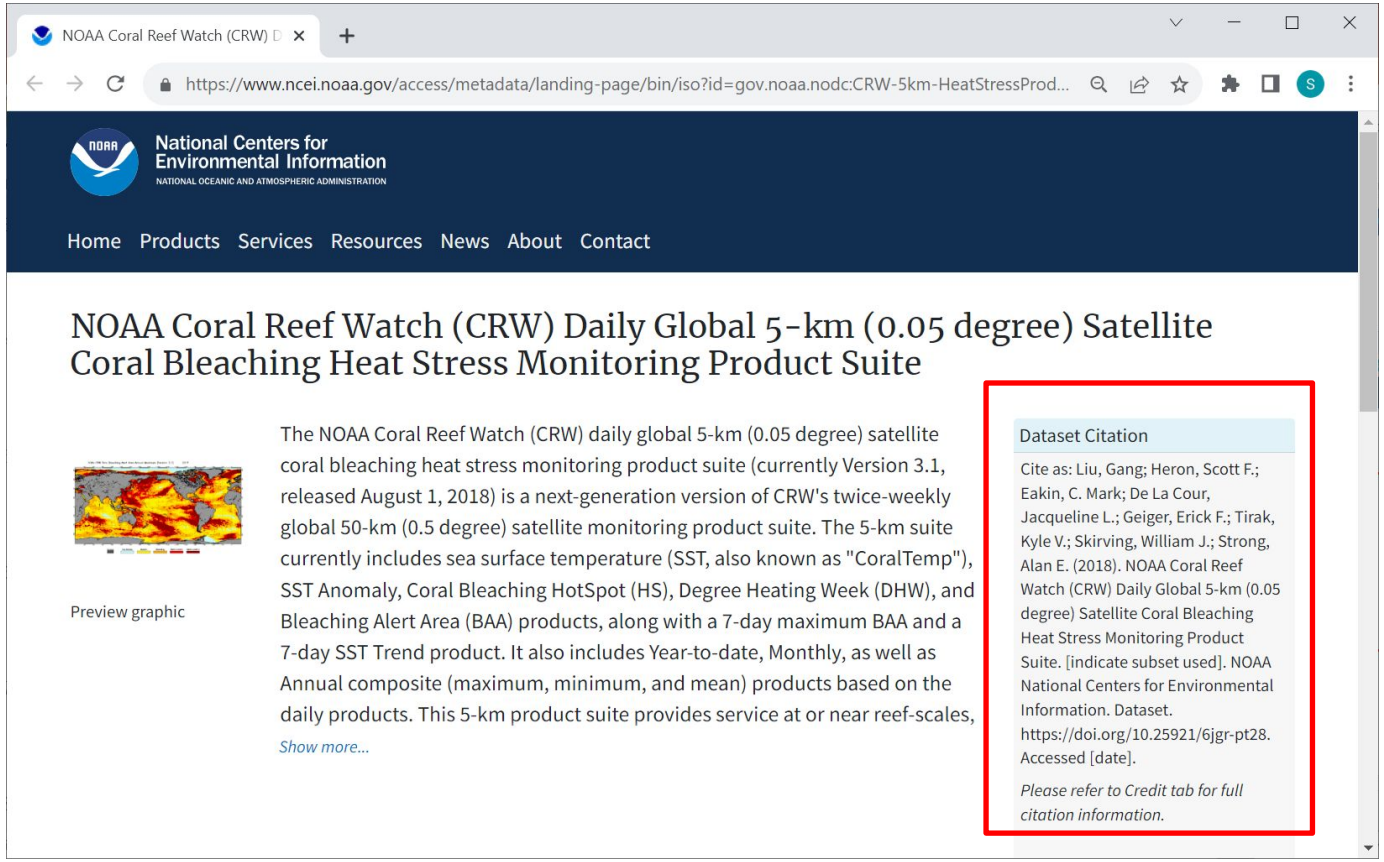
vs

DOI URL

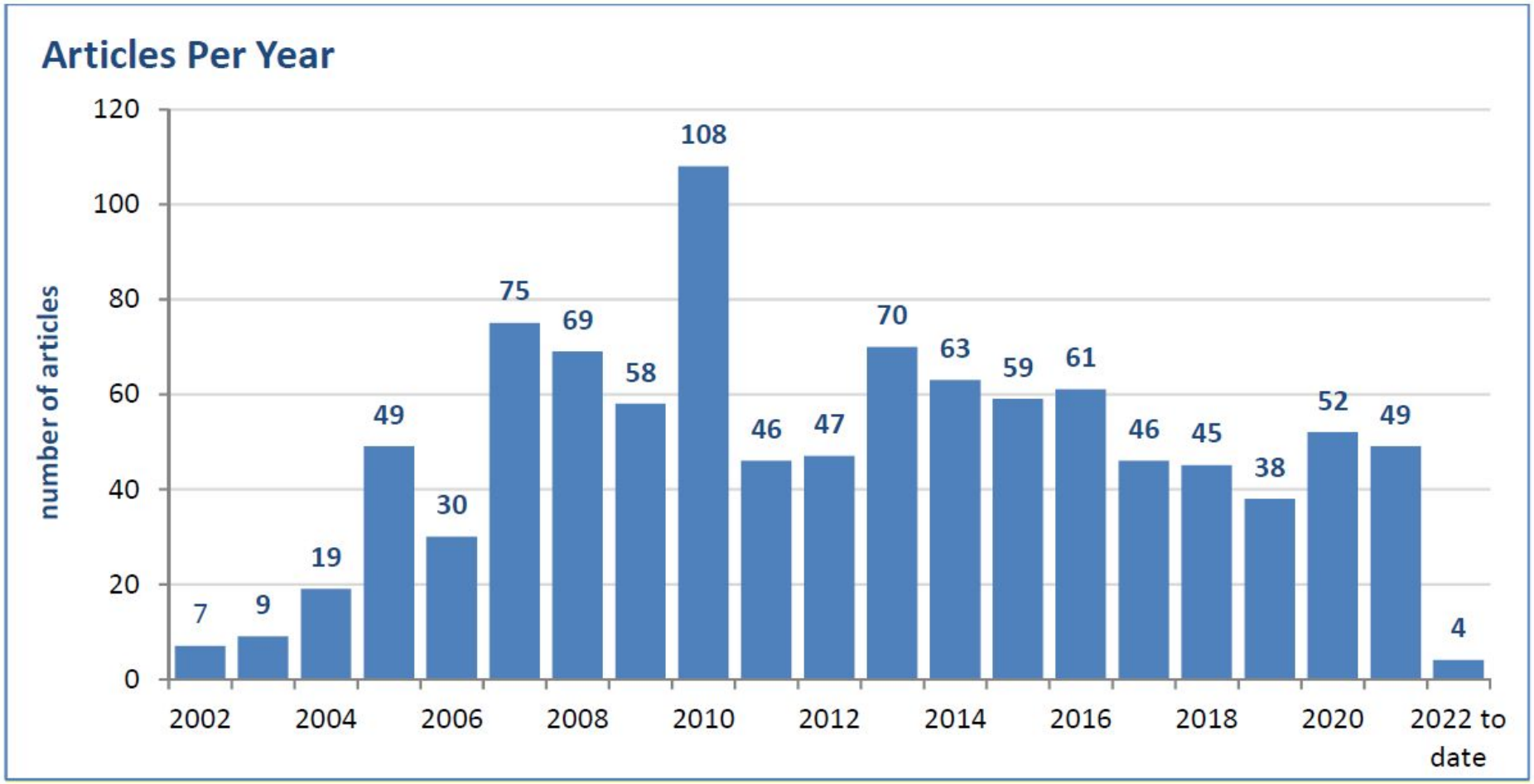
https://doi.org/10.25921/mzv0-km10

Dataset Citation - Benefits of a DOI

- Permanent URL
- Research Attribution
- Potential increased dataset discovery
  - Crosslinks between datasets and publications
- Recognition and ability to track dataset usage

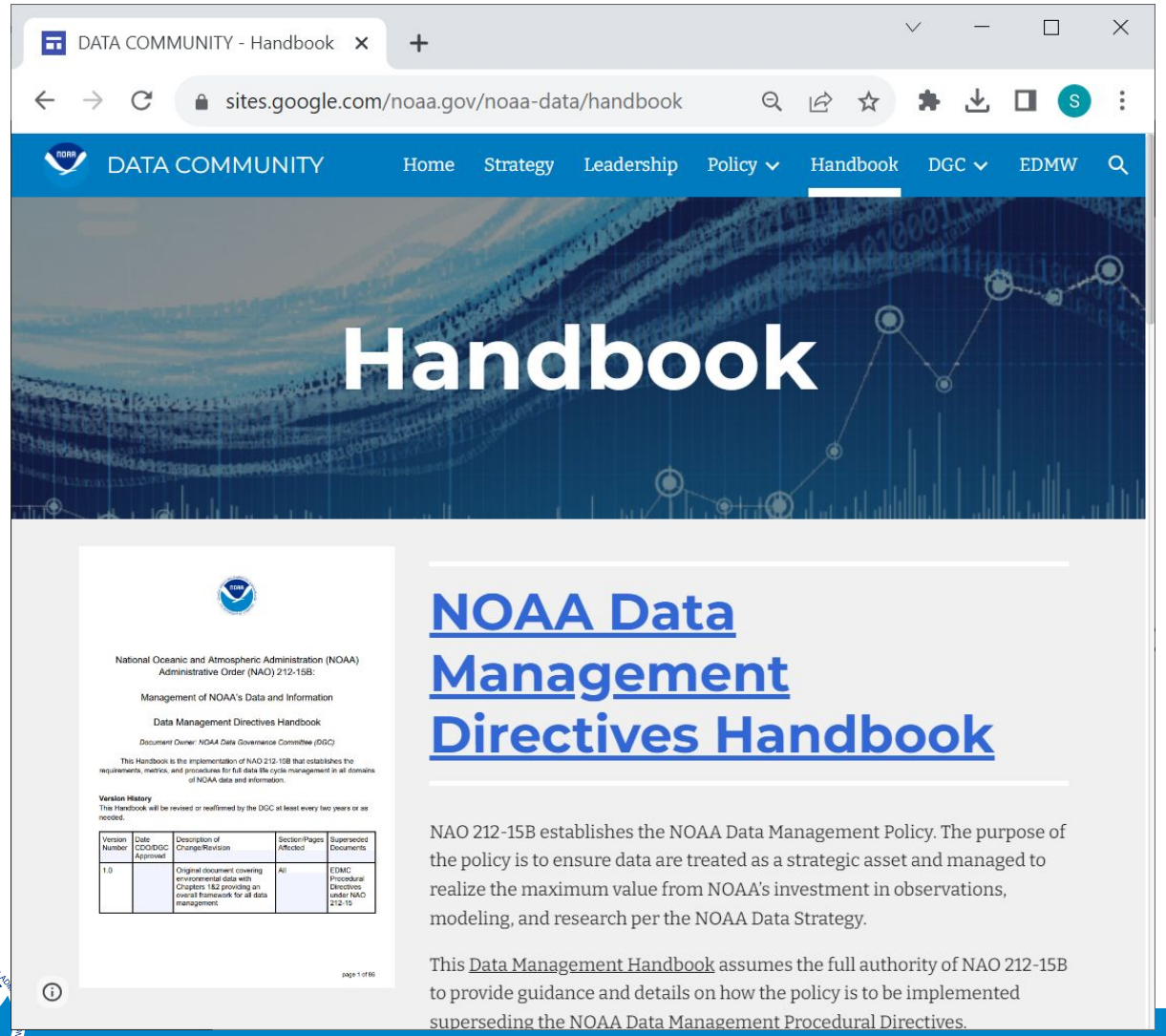


Articles per Year that use OER data



(Davis & Shinn, 2022)

Guidance and Best Practices



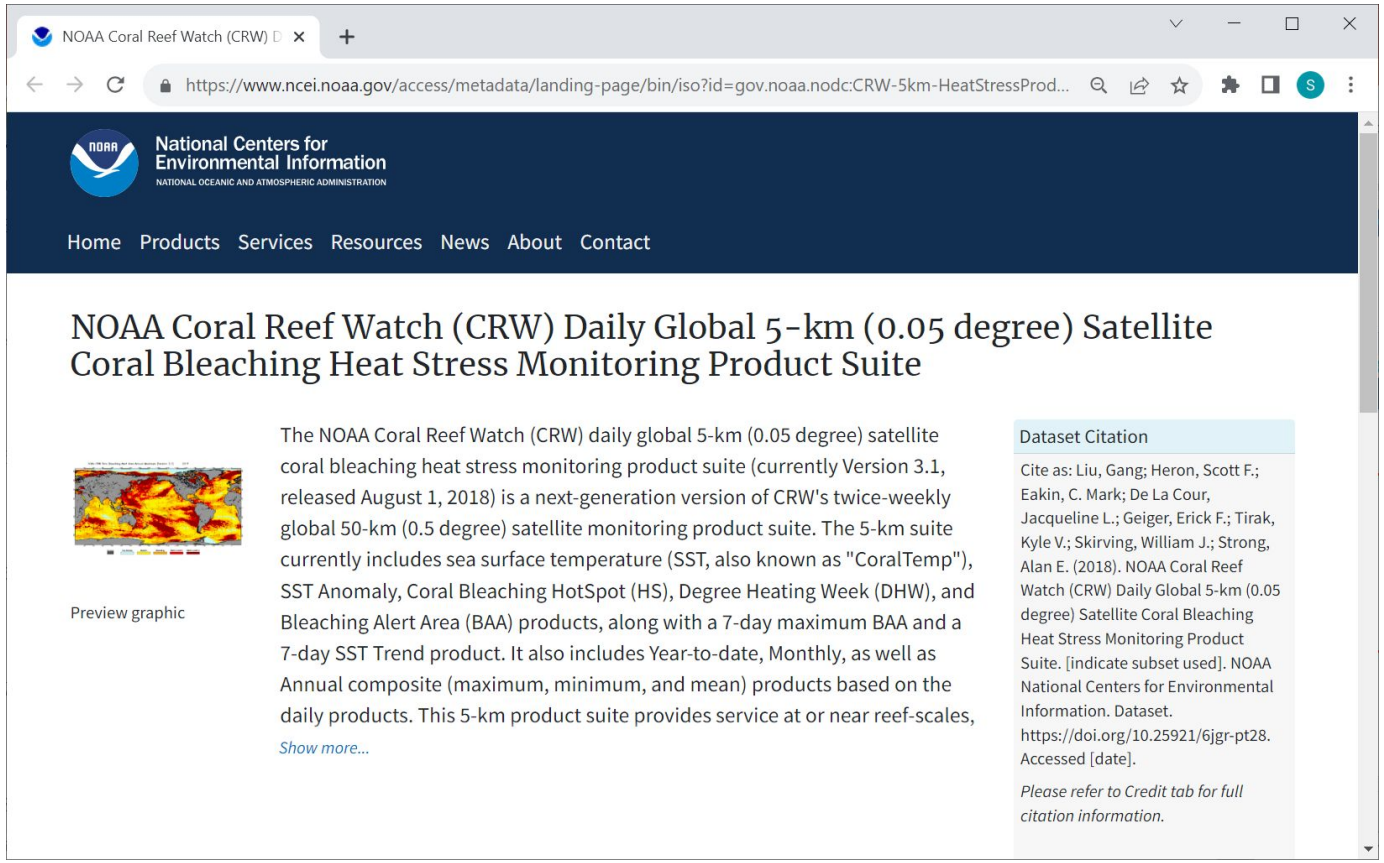
DOI requirements at the NOAA Level are set by the **NOAA Data Governance Council** and documented in the NOAA Data Management Handbook

- Publication DOIs - NOAA Library
- Dataset DOIs - NCEI
- Software - No Policy

NOAA Dataset DOI Requirements

- Data must be archived with NCEI to receive a NOAA dataset DOI
- Datasets that have previously been issued a DOI will not have a NOAA DOI issued.
- NOAA Avoid DOIs for subsets of collections that have DOIs,
  - ex. Parent-Child relationships
- Data should be accessible*
- Data from a Federal source cannot be withheld from access "solely for the purpose of being the first to publish"

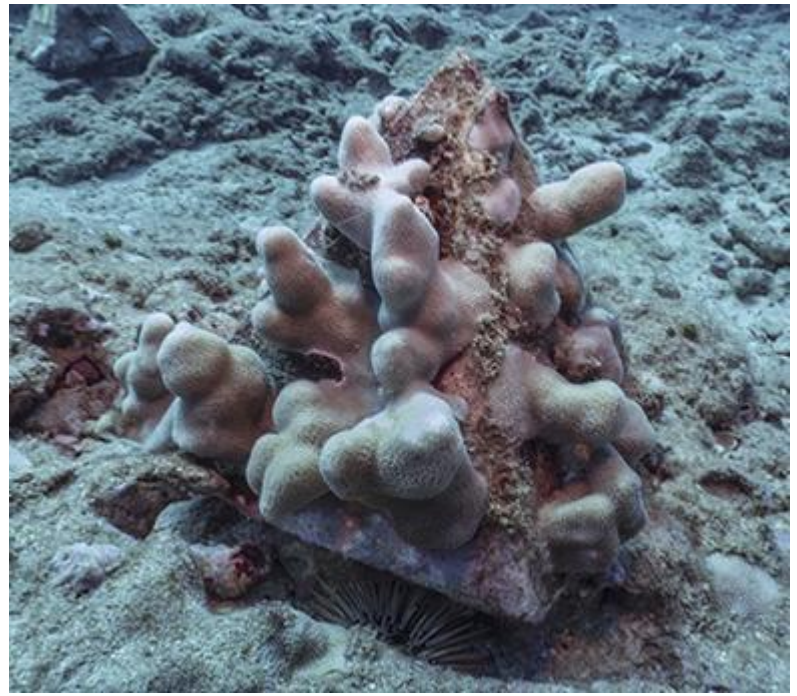
Required Fields for a DOI



- Author(s)
- Title
- Abstract
- Publisher
- Publication Year
- Recommended Citation
- Browse Graphic

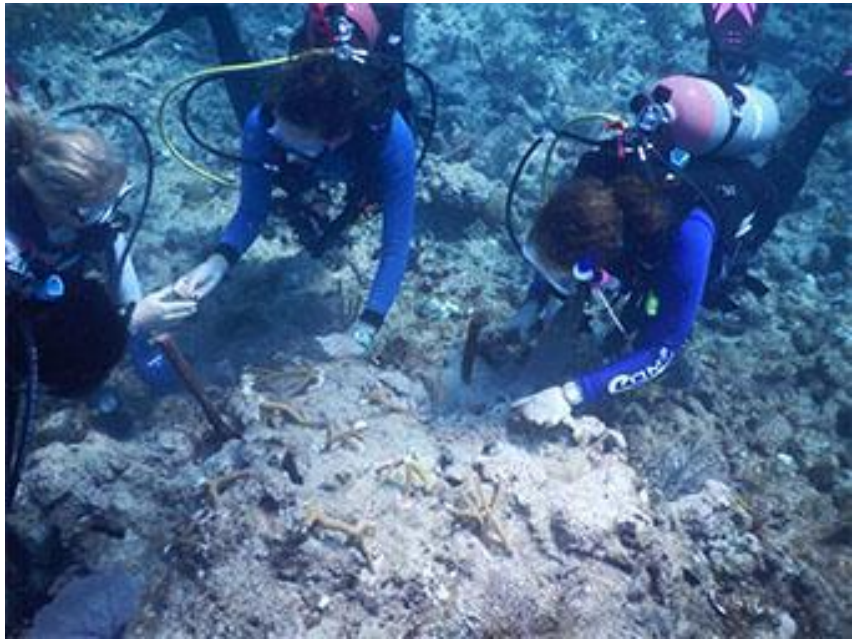
Reserved DOIs

- Support dataset DOIs required by publishers in order to publish articles.
- NCEI must have a copy of the data even if draft
- ***Factor in timeline for receiving DOIs and publication processes***
- *NCEI can issue a DOI without releasing the data for 12 to 24 months depending on funding source**



Two Options for Assigning a DOI

- DOI for a collection of data
  - Station
  - Network
  - Parameter / Instrument Package
- DOI for individual datasets
  - Total estimated number of DOIs may come into discussion when reviewing citation granularity
- Most DOI assignments occur at the time of dataset submission & may involve discussion to determine the right resolution
- After the fact - Contact ncei.doi@noaa.gov to request a doi



DOI Granularity Considerations

Fair Credit: The contents of this granularity have the same source (see examples below) to ensure that fair credit is given by the citation.

- Project/Program
- Science Researcher(s) or Data Collectors
- Funding source

Data Reference: This granularity guides users to the data at a useful level for scientific use and reproducibility (the citation may contain further subset information).

- Instrument(s)
- Platform(s)
- Variables measured

Publication Requirements: This granularity meets the citation needs for a publication (which may contain further subset information in the citation).

Additional Resources

- ORCID For Researchers - NOAA Libguide https://libguides.library.noaa.gov/ORCID
- For my ally is the DOI, and a powerful ally it is ” Basics of Digital Object Identifiers - NOAA Library Seminar https://www.youtube.com/watch?v=TeI10uQXDqA
- If you only knew the power of ORCID ” Using ORCIDs for Disambiguation - NOAA Library Seminar https://www.youtube.com/watch?v=FdvopbKMfRQ
- Talk to me, Goose” Using Dataset DOIs: Part 2 of our Digital Object Identifier Series - NOAA Library Seminar https://www.youtube.com/watch?v=yfPPFBKjHFE
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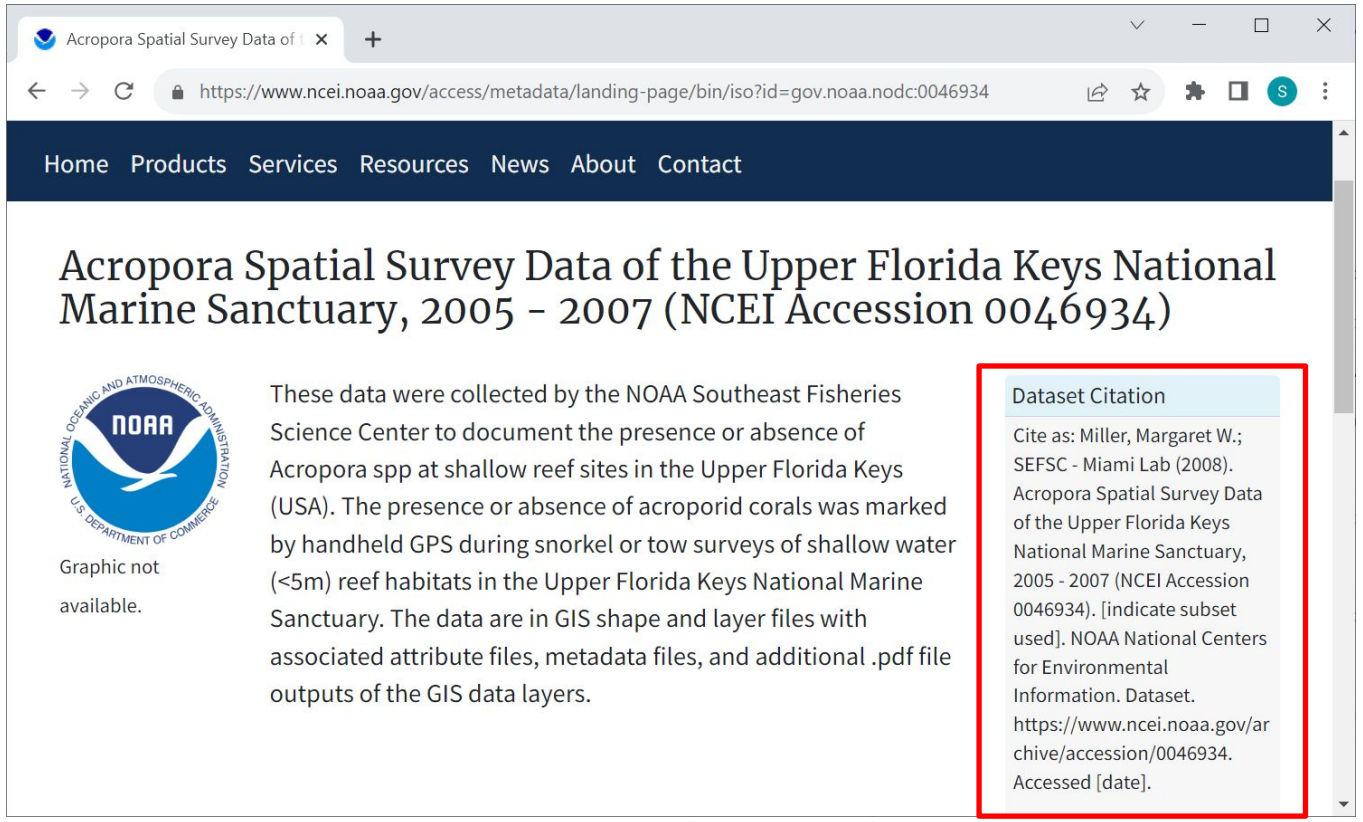
Questions

Backup Slides

Benefits of a DOI

DOI's can help a user locate referenced data

- Datasets, books, articles can have the same name.
  - A unique identifier allows the user to distinguish your item from similarly named items
- URLs can change over time
- Organization names can change over time



Example - Changing Citation

Existing dataset citations changed with NCEI's creation in 2015.

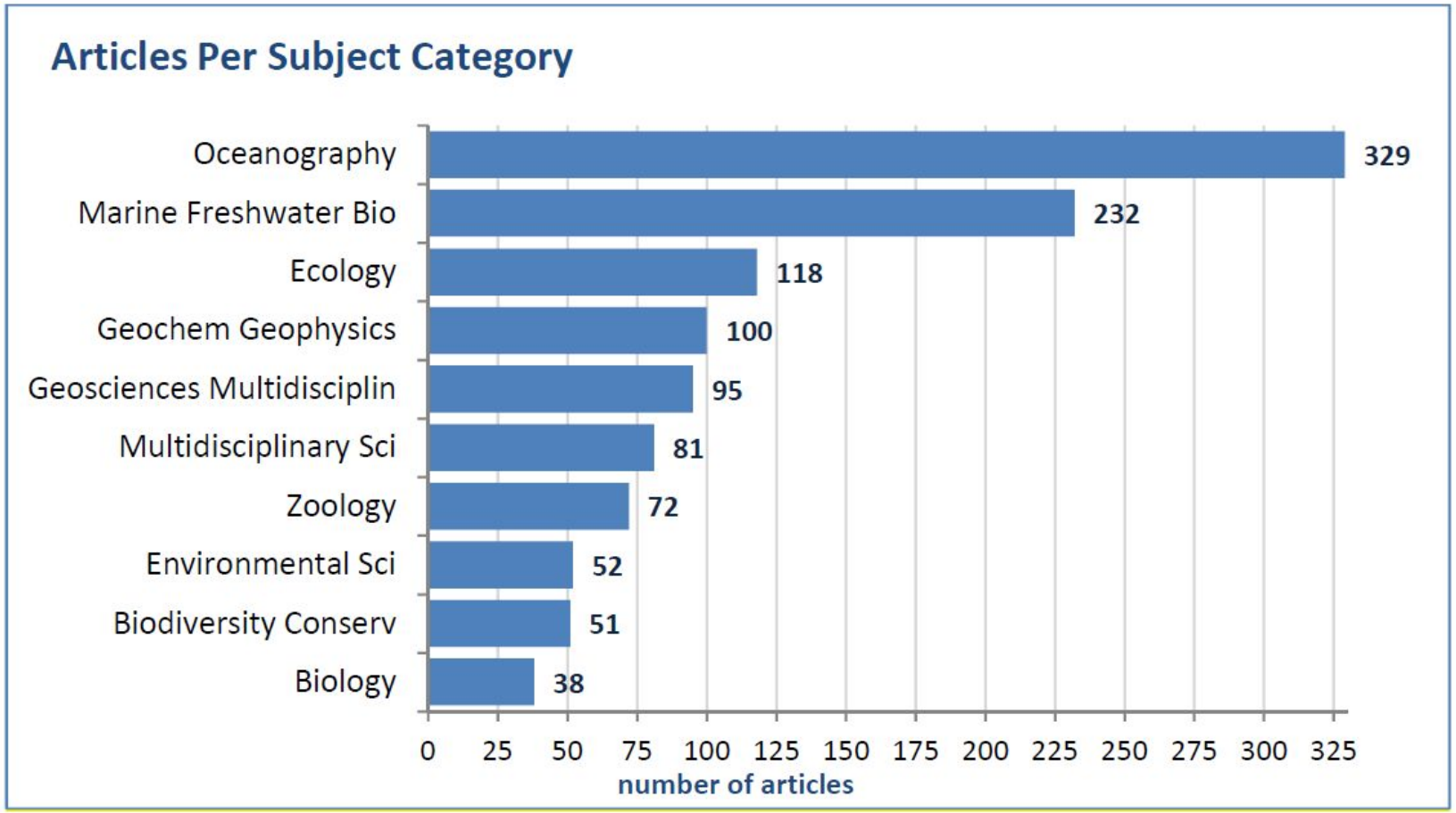
Original Citation

Miller, Margaret W.; SEFSC - Miami Lab (2008). Acropora Spatial Survey Data of the Upper Florida Keys National Marine Sanctuary, 2005 - 2007 (**NODC Accession 0046934**). [indicate subset used]. **NOAA National Oceanographic Data Center**. Dataset. **https://accession.nodc.noaa.gov/0046934**. Accessed [date].

New Citation

Miller, Margaret W.; SEFSC - Miami Lab (2008). Acropora Spatial Survey Data of the Upper Florida Keys National Marine Sanctuary, 2005 - 2007 (**NCEI Accession 0046934**). [indicate subset used]. **NOAA National Centers for Environmental Information**. Dataset. **https://www.ncei.noaa.gov/archive/accession/0046934**. Accessed [date].

Top Articles per Subject Category that use OER data



(Davis & Shinn, 2022)

DataCite – NOAA's DOI Provider

- When a data provider requests a DOI we login to the system to:
  - Manually enter in information and generate DOI
  - Use the API to generate DOIs in an automated fashion