

Collection Citations

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Element Description

The Collection Citations element provides the information required to properly cite a data product in professional scientific literature. Providing the Collection Citation is also useful for the attribution of data products in external data catalogs. This information is for citing the collection itself, and is not designed for bibliographic references related to the collection. Any references related to the collection should be provided in the [Publication Reference](#) element.

Best Practices

While Collection Citations is not required, it is highly recommended that it be provided so that the dataset may be appropriately cited. The dataset citation should also be provided on the collection's dataset landing page.

There are seventeen sub-elements that comprise Collection Citation:

Creators: The name of the organization(s) or individual(s) with primary intellectual responsibility for the collection's development.

Editors: The individual(s) responsible for changing the data in the collection.

Title: The title of the collection; this should be the same as the collection [Entry Title](#).

Series Name: The name of the data series, or aggregate data of which the data is a part.

Release Date: The date when the collection was made available for release.

Release Place: The name of the city (and state or province and country if needed) where the collection was made available for release.

Publisher: The name of the individual or organization that made the collection available for release.

Version: The version of the collection. This should be the same value as provided in the [Version](#) element.

Issue Identification: The volume or issue number of the publication (if applicable).

Data Presentation Form: The mode in which the data are represented, e.g. atlas, image, profile, text, etc.

OnlineResource/Linkage: The URL of the website related to the online resource. For Collection Citation, this URL should link to the dataset landing page. If the collection has a DOI, then it is recommended that the DOI URL be provided here.

OnlineResource/Protocol: The protocol of the linkage for the online resource (e.g. https, svn, ftp, etc.). Providing a Protocol is optional.

OnlineResource/ApplicationProfile: The Application Profile holds the name of the application that can service the data. For example if the URL points to a word document, then the Application Profile is MS-Word. Providing an Application Profile is optional.

OnlineResource/Name: A name for the link to the collection. Providing Name is optional.

OnlineResource/Description: A brief description of the link to the collection. Providing a Description is optional.

OnlineResource/Function: The function of the online resource. This field originated from the ISO metadata standard where the valid values are: download, information, offlineAccess, order, and search. Providing a Function is optional.

OnlineResource/MimeType: MIME stands for "Multipurpose Internet Mail Extensions". Mime types are used to identify the nature and format of files provided on the Internet, and are typically used by internet browsers in order to determine how to properly process or display a document or file. Providing the Mime Type element in the metadata helps ensure that the URL contents will be properly displayed on the Web. Providing a Mime Type is optional. Mime Type is a controlled vocabulary field and should be chosen from the [GCMD mime type keyword list](#).

Other Citation Details: Additional free-text information about the collection citation.

Examples:

CollectionCitations/Creator: "Global Modeling and Assimilation Office (GMAO)"

CollectionCitations/ReleasePlace: "Greenbelt, MD, USA"

CollectionCitations/Title: "tavGU_3d_udt_Cp: MERRA 3D IAU Tendency, Wind Components, Diurnal V5.2.0"

CollectionCitations/SeriesName: "MATUCPUdT"

CollectionCitations/Version: "5.2.0"

CollectionCitations/OnlineResource/Linkage: "https://disc.gsfc.nasa.gov/datacollection/MATUCPUdT_5.2.0.html"

CollectionCitations/OnlineResource/Publisher: "Goddard Earth Sciences Data and Information Services Center (GES DISC)"

CollectionCitations/OnlineResource/ReleaseDate: "2008-07-23T00:00:00.000Z"

CollectionCitations/OnlineResource/DataPresentationForm: "Digital Science Data"

Element Specification

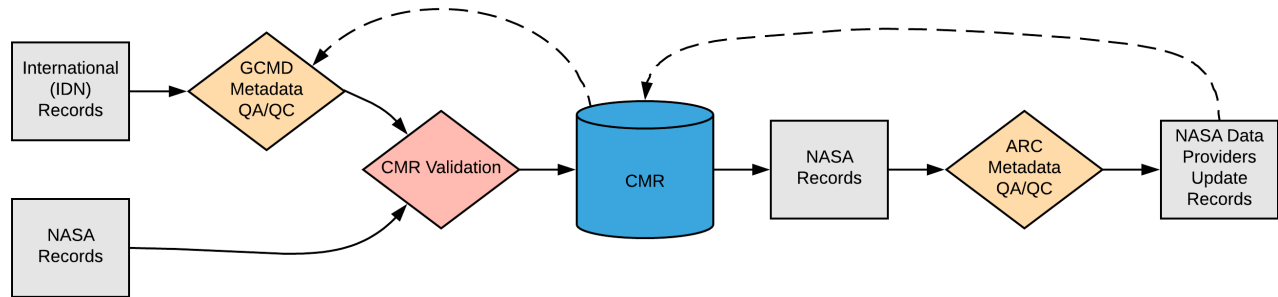
Providing the Collection Citations element is optional. Only 1 Collection Citation may be provided (Cardinality: 0..1)

Model	Element	Type	Constraints	Required?	Cardinality	Notes
UMM-C	CollectionCitations /Creators	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /Editors	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations/Title	String	1 - 1030 characters	No	0..1	
UMM-C	CollectionCitations /SeriesName	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /ReleaseDate	date-time	N/A	No	0..1	Dates must comply with the ISO 8601 Standard .
UMM-C	CollectionCitations /ReleasePlace	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /Publisher	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /Version	String	1 - 80 characters	No	0..1	
UMM-C	CollectionCitations /IssueIdentification	String	1 - 80 characters	No	0..1	
UMM-C	CollectionCitations /DataPresentationForm	String	1 - 80 characters	No	0..1	
UMM-C	CollectionCitations /OnlineResource/Linkage	String	1 - 1024 characters	Yes, if applicable	1	Providing a Linkage is optional, however, none of the OnlineResource sub-elements (see below) may be provided without a Linkage. Recommend providing the DOI URL is applicable.
UMM-C	CollectionCitations /OnlineResource /Protocol	String	1 - 80 characters	No	0..1	
UMM-C	CollectionCitations /OnlineResource /ApplicationProfile	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /OnlineResource/Name	String	1 - 80 characters	No	0..1	
UMM-C	CollectionCitations /OnlineResource /Description	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /OnlineResource /Function	String	1 - 1024 characters	No	0..1	
UMM-C	CollectionCitations /OnlineResource /MimeType	String	KMS controlled	No	0..1	

UMM-C	CollectionCitations /OtherCitationDetails	String	1 - 4000 characters	No	0..1	
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Metadata Validation and QA/QC

All metadata entering the CMR goes through the below process to ensure metadata quality requirements are met. All records undergo CMR validation before entering the system. The process of QA/QC is slightly different for NASA and non-NASA data providers. Non-NASA providers include interagency and international data providers and are referred to as the International Directory Network (IDN).



Please see the expandable sections below for flowchart details.

- Manual Review
 - Identify errors, discrepancies or omissions.
 - Proof all content for conciseness and readability.
- Automated Review
 - Checks that Dataset_Release_Date is properly formatted.
 - Checks that URLs are properly formatted and operational.
 - Checks that field lengths do not exceed maximum characters allowed.
 - Checks that Persistent_Identifier/Type keyword is valid.
- Automated Review
 - Checks that field lengths do not exceed maximum characters allowed.
 - Checks that Mime Type keyword is valid.

ARC Priority Matrix

Priority Categorization	Justification
Red = High Priority Finding	This element is categorized as highest priority when: • The citation information provided is for a resource other than the dataset. • Information provided in any of the Collection Citations sub-elements is incorrect for the dataset. • The Collection Citations/Online Resource/Linkage is a broken URL. • The incorrect DOI is provided for the dataset in the Collection Citations/Online Resource/Linkage element. • The Collection Citations/Online Resource/Linkage links to an incorrect dataset.
Yellow = Medium Priority Finding	This element is categorized as medium priority when: • No Collection Citations is provided in the metadata. • A recommendation is made to add an important sub-element to the Collection Citations. • A link besides the DOI URL (if applicable) is provided as the Collection Citations/Online Resource/Linkage.
Blue = Low Priority Finding	This element is categorized as low priority when: • A recommendation is made to update the Collection Citations/Online Resource/Linkage from "http" to "https". • The Collection Citations/Online Resource/Description or Collection Citations/Other Citation Details contains grammatical errors.
Green = No Findings/Issues	The element is provided and follows all applicable criteria specified in the best practices section above.

ARC Automated Checks

ARC uses the [pyQuARC library](#) for automated metadata checks. Please see the [pyQuARC GitHub](#) for more information.

Dialect Mappings

DIF 9 (Note: DIF-9 is being phased out and will no longer be supported after 2018)

DIF 10

Providing the Dataset_Citation element is optional (Cardinality: 0..*)

UMM-C Element	DIF 10 Path	Type	Constraints	Required in DIF 10?	Cardinality	Notes
CollectionCitations/Creators	Dataset_Citation/Dataset_Creator	String		No	0..1	
CollectionCitations/Editors	Dataset_Citation/Dataset_Editor	String		No	0..1	
CollectionCitations/Title	Dataset_Citation/Dataset_Title	String		No	0..1	
CollectionCitations/SeriesName	Dataset_Citation/Dataset_Series_Name	String		No	0..1	
CollectionCitations/ReleaseDate	Dataset_Citation/Dataset_Release_Date	Date		No	0..1	Date fields should be in date (YYYY-MM-DD) format.
CollectionCitations/ReleasePlace	Dataset_Citation/Dataset_Release_Place	String		No	0..1	
CollectionCitations/Publisher	Dataset_Citation/Dataset_Publisher	String		No	0..1	
CollectionCitations/Version	Dataset_Citation/Version	String		No	0..1	
CollectionCitations/IssueIdentification	Dataset_Citation/Issue_Identifier	String		No	0..1	
CollectionCitations/DataPresentationForm	Dataset_Citation/Data_Presentation_Form	String		No	0..1	
CollectionCitations/OtherCitationDetails	Dataset_Citation/Other_Citation_Details	String		No	0..1	
DOI/DOI	Dataset_Citation/Persistent_Identifier	See DOI for details	See DOI for details	No	0..1	There is no equivalent field in the UMM for Persistent_Identifier within the Dataset_Citation. Note: there are several sub-elements that comprise Persistent_Identifier. Refer to the DOI wiki page for full details on Persistent_Identifier.
CollectionCitations/OnlineResource/Linkage	Dataset_Citation/Online_Resource	String		No	0..1	A URL may be provided here. For Dataset_Citation, this should be a link to the dataset landing page.

Example Mapping

DIF 10

```

<Dataset_Citation>
  <Dataset_Creator>Seto, K., B. Guneralp, and L.R.
  Huttyra</Dataset_Creator>
  <Dataset_Title>Global Grid of Probabilities of
  Urban Expansion to 2030</Dataset_Title>
  <Dataset_Release_Date>2015-12-31<
  /Dataset_Release_Date>
  <Dataset_Release_Place>Palisades, NY<
  /Dataset_Release_Place>
  <Dataset_Publisher>NASA Socioeconomic Data and
  Applications Center (SEDAC)</Dataset_Publisher>
  <Version>1.0</Version>
  <Persistent_Identifier>
    <Type>DOI</Type>
    <Identifier>10.7927/H4Z899CG</Identifier>
  </Persistent_Identifier>
  <Online_Resource>https://doi.org/10.7927/H4Z899CG<
  /Online_Resource>
</Dataset_Citation>

```

UMM

```

CollectionCitations: [
  {
    Creator: "Seto, K., B. Guneralp, and L.R.
Hutyra",
    ReleasePlace: "Palisades, NY",
    Title: "Global Grid of Probabilities of
Urban Expansion to 2030",
    OnlineResource: {
      Linkage: "https://doi.org/10.7927/H4Z899CG"
    },
    Publisher: "NASA Socioeconomic Data and
Applications Center (SEDAC)",
    ReleaseDate: "2015-12-31",
    Version: "1.0"
  }
],

```

ECHO 10

Providing the Citation For External Publication element is optional (Cardinality: 0..*)

UMM-C Element	ECHO 10 Path	Type	Constraints	Required in ECHO10?	Cardinality	Note
CollectionCitations/OtherCitationDetails	CitationForExternalPublication	String	1 - 4000 characters	No	0..1	In ECHO10 the collection citation is currently a single block of free text. As a result, the entire citation will map to the UMM field "CollectionCitations/OtherCitationDetails" The citation should include: the originator (the name of an organization or individual that developed the dataset), where the data were published, editor(s) names followed by (ed.), the publication date (the date of publication or release of the dataset), the dataset title, and the DOI if applicable.

Example Mapping

ECHO 10

```

<CitationForExternalPublication>Bourgeau-Chavez, L.
L., S. Endres, L. Jenkins, M. Battaglia, E. Serocki,
and M. Billmire. 2017. ABoVE: Burn Severity, Fire
Progression, and Field Data, NWT, Canada, 2015-2016.
ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org
/10.3334/ORNLDAAC/1548<
/CitationForExternalPublication>

```

UMM

```

CollectionCitations: [
  {
    OtherCitationDetails: "Bourgeau-Chavez, L.
L., S. Endres, L. Jenkins, M. Battaglia, E. Serocki,
and M. Billmire. 2017. ABoVE: Burn Severity, Fire
Progression, and Field Data, NWT, Canada, 2015-2016.
ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org
/10.3334/ORNLDAAC/1548"
  }
],

```

ISO 19115-2 MENDS

Providing the Collection Citation element is required (Cardinality: 1)

UMM-C Element	ISO Path	Type	Notes
CollectionCitations /Creators	/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:citation/gmd:CI_Citation [=> (READ from both individualName and organisationName and concatenate - WRITE to individual name only since we don't know how to parse the data. WRITE and READ - must NOT have positionName with the value of editor.) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:individualName/gco:CharacterString and/or [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=author	String	
CollectionCitations /Editors	(READ from both individualName and organisationName and concatenate - WRITE to individual name only since we don't know how to parse the data. WRITE and READ - must have positionName and the value must be editor where the role is author) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:individualName/gco:CharacterString and/or [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:positionName/gco:CharacterString = editor and [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=author	String	
CollectionCitations/Title	[=>/gmd:title/gco:CharacterString	String	
CollectionCitations /SeriesName	[=>/gmd:series/gmd:CI_Series/gmd:name/gco:CharacterString	String	
CollectionCitations /ReleaseDate	[=>/gmd:editionDate/gco:DateTime	String	
CollectionCitations /ReleasePlace	(READ - concatenate all elements of CI_Address WRITE - if parsable parse into individual components if not then put all into deliveryPoint READ and WRITE: must contain positionName and the value must be release place and the role must be publisher) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty>/gmd:contactInfo/gmd:CI_Contact/gmd:address/gmd:CI_Address [==> [==>/gmd:deliveryPoint [==>/gmd:city/gco:CharacterString (0..1) [==>/gmd:administrativeArea/gco:CharacterString (0..1) [==>/gmd:postalCode/gco:CharacterString (0..1) [==>/gmd:country/gco:CharacterString (0..1) [==>/gmd:electronicMailAddress/gco:CharacterString (0..*) with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:positionName/gco:CharacterString = release place and [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=publisher	String	
CollectionCitations /Publisher	(READ from both individualName and organisationName and concatenate - WRITE to individual name only since we don't know how to parse the data. READ and WRITE: must NOT contain positionName with value of release place) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:individualName/gco:CharacterString and/or [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=publisher	String	
CollectionCitations /Version	[=>/gmd:edition/gco:CharacterString	String	
CollectionCitations /IssueIdentification	[=>/gmd:series/gmd:CI_Series/gmd:issueIdentification/gco:CharacterString	String	
ICollectionCitations /DataPresentationForm	[=>/gmd:presentationForm/gmd:CI_PresentationFormCode codeList="" codeListValue="" =	String	
CollectionCitations /OtherCitationDetails	[=>/gmd:otherCitationDetails/gco:CharacterString "Other Details:"	String	Provide the prefix "Other Details: "
CollectionCitations /OnlineResource	[=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:contactInfo/gmd:onlineResource/gmd:CI_OnlineResource [====> and [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/gmd:CI_RoleCode codeList="https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmx/Codelists.xml#CI_RoleCode" codeListValue="resourceProvider" = resourceProvider	String	
CollectionCitations /OnlineResource /Linkage	[====>/gmd:linkage/gmd:URL	String	
CollectionCitations /OnlineResource /Protoco	[====>/gmd:protocol/gco:CharacterString	String	
CollectionCitations /OnlineResource /ApplicationProfile	[====>/gmd:applicationProfile/gco:CharacterString	String	

CollectionCitations /OnlineResource/Name	[==>/gmd:name/gco:CharacterString	String	
CollectionCitations /OnlineResource /Description	[==>/gmd:description/gco:CharacterString	String	
CollectionCitations /OnlineResource /Function	[==>/gmd:function/gmd:CI_OnLineFunctionCode codeList=" https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmx/Codelists.xml#CI_OnLineFunctionCode " codeListValue="information" = information	String	

Example Mapping

ISO 19115-2 MENDS

```

<gmi:MI_Metadata>
...
  <gmd:identificationInfo>
    <gmd:MD_DataIdentification>
      <gmd:citation>
        <gmd:CI_Citation>
          <gmd:title>
            <gco:CharacterString>Global Grid of
Probabilities of Urban Expansion to 2030</gco:
CharacterString>
          </gmd:title>
          <gmd:edition>
            <gco:CharacterString>1.0</gco:
CharacterString>
          </gmd:edition>
          <gmd:editionDate>
            <gco:DateTime>2015-12-31T00:00:00.000Z<
/gco:DateTime>
          </gmd:editionDate>
          <gmd:citedResponsibleParty>
            <gmd:CI_ResponsibleParty>
              <gmd:individualName>
                <gco:CharacterString>Seto, K., B.
Guneralp, and L.R. Hutyr</gco:CharacterString>
              </gmd:individualName>
              </md:CI_ResponsibleParty>
            </gmd:citedResponsibleParty>
            <gmd:citedResponsibleParty>
              <gmd:CI_ResponsibleParty>
                <gmd:individualName>
                  <gco:CharacterString>NASA
Socioeconomic Data and Applications Center (SEDAC)<
/gco:CharacterString>
                </gmd:individualName>
                <gmd:role>
                  <gmd:CI_RoleCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmx/Codelists.xml#CI_RoleCode" codeListValue="
publisher">publisher</gmd:CI_RoleCode>
                  </gmd:role>
                </gmd:CI_ResponsibleParty>
              </gmd:citedResponsibleParty>
              <gmd:citedResponsibleParty>
                <gmd:CI_ResponsibleParty>
                  <gmd:positionName>
                    <gco:CharacterString>release place<
/gco:CharacterString>
                  </gmd:positionName>
                  <gmd:contactInfo>
                    <gmd:CI_Contact>
                      <gmd:address>
                        <gmd:CI_Address>
                          <gmd:deliveryPoint>
                            <gco:
CharacterString>Palisades, NY</gco:CharacterString>
                          </gmd:deliveryPoint>
                        </gmd:CI_Address>

```

```

        </gmd:address>
      </gmd:CI_Contact>
    </gmd:contactInfo>
    <gmd:role>
      <gmd:CI_RoleCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmx/Codelists.xml#CI_RoleCode" codeListValue="
publisher"=publisher</gmd:CI_RoleCode>
    </gmd:role>
    </gmd:CI_ResponsibleParty>
  </gmd:citedResponsibleParty>
  <gmd:citedResponsibleParty>
    <gmd:CI_ResponsibleParty>
      <gmd:contactInfo>
        <gmd:CI_Contact>
          <gmd:onlineResource>
            <gmd:CI_OnlineResource>
              <gmd:linkage>
                <gmd:URL>https://doi.org/10.
7927/H4Z899CG</gmd:URL>
              </gmd:linkage>
            </gmd:CI_OnlineResource>
          </gmd:onlineResource>
        </gmd:CI_Contact>
      </gmd:contactInfo>
    </gmd:role>
      <gmd:CI_RoleCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmx/Codelists.xml#CI_RoleCode" codeListValue="
resourceProvider"=resourceProvider</gmd:CI_RoleCode>
    </gmd:role>
    </gmd:CI_ResponsibleParty>
  </gmd:citedResponsibleParty>
</gmd:CI_Citation>
</gmd:citation>
</gmd:MD_DataIdentification>
</gmd:identificationInfo>
...
</gmi:MI_Metadata>

```

UMM

```

CollectionCitations: [
  {
    Creator: "Seto, K., B. Guneralp, and L.R.
Hutyra",
    ReleasePlace: "Palisades, NY",
    Title: "Global Grid of Probabilities of
Urban Expansion to 2030",
    OnlineResource: {
      Linkage: "https://doi.org/10.7927/H4Z899CG"
    },
    Publisher: "NASA Socioeconomic Data and
Applications Center (SEDAC)",
    ReleaseDate: "2015-12-31",
    Version: "1.0"
  }
],

```

ISO 19115-2 SMAP

Providing the Collection Citation element is required (Cardinality: 1)

UMM-C Element	ISO Path	Type
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CollectionCitations /Creators	/gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd: citation/gmd:CI_Citation [=> (READ from both individualName and organisationName and concatenate - WRITE to individual name only since we don't know how to parse the data. WRITE and READ - must NOT have positionName with the value of editor.) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:individualName/gco:CharacterString and/or [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=author	String
CollectionCitations /Editors	/gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd: citation/gmd:CI_Citation [=> (READ from both individualName and organisationName and concatenate - WRITE to individual name only since we don't know how to parse the data. WRITE and READ - must have positionName and the value must be editor where the role is author) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:individualName/gco:CharacterString and/or [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:positionName/gco:CharacterString = editor and [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=author	String
CollectionCitations/Title	[=>/gmd:title/gco:CharacterString	String
CollectionCitations /SeriesName	[=>/gmd:series/gmd:CI_Series/gmd:name/gco:CharacterString	String
CollectionCitations /ReleaseDate	[=>/gmd:editionDate/gco:DateTime	String
CollectionCitations /ReleasePlace	/gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd: citation/gmd:CI_Citation [=> (READ - concatenate all elements of CI_Address WRITE - if parsable parse into individual components if not then put all into deliveryPoint READ and WRITE: must contain positionName and the value must be release place and the role must be publisher) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty>/gmd:contactInfo/gmd:CI_Contact/gmd:address /gmd:CI_Address [==> [==>/gmd:deliveryPoint [==>/gmd:city/gco:CharacterString (0..1) [==>/gmd:administrativeArea/gco:CharacterString (0..1) [==>/gmd:postalCode/gco:CharacterString (0..1) [==>/gmd:country/gco:CharacterString (0..1) [==>/gmd:electronicMailAddress/gco:CharacterString (0..*) with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:positionName/gco:CharacterString = release place and [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=publisher	String
CollectionCitations /Publisher	/gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd: citation/gmd:CI_Citation [=> (READ from both individualName and organisationName and concatenate - WRITE to individual name only since we don't know how to parse the data. READ and WRITE: must NOT contain positionName with value of release place) [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:individualName/gco:CharacterString and/or [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString with [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/CI_RoleCode=publisher	String
CollectionCitations /Version	[=>/gmd:edition/gco:CharacterString	String
CollectionCitations /IssueIdentification	[=>/gmd:series/gmd:CI_Series/gmd:issueIdentification/gco:CharacterString	String
CollectionCitations /DataPresentationForm	[=>/gmd:presentationForm/gmd:CI_PresentationFormCode codeList="" codeListValue="" =	String
CollectionCitations /OtherCitationDetails	[=>/gmd:otherCitationDetails/gco:CharacterString	String
CollectionCitations /OnlineResource	[=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:contactInfo/gmd:onlineResource/gmd: CI_OnlineResource [===> and [=>/gmd:citedResponsibleParty/gmd:CI_ResponsibleParty/gmd:role/gmd:CI_RoleCode codeList="https://cdn. earthdata.nasa.gov/iso/resources/Codelist/gmxCodeLists.xml#CI_RoleCode" codeListValue=" " resourceProvider" = resourceProvider	String

CollectionCitations /OnlineResource /Linkage	[==>/gmd:linkage/gmd:URL	String
CollectionCitations /OnlineResource /Protocol	[==>/gmd:protocol/gco:CharacterString	String
CollectionCitations /OnlineResource /ApplicationProfile	[==>/gmd:applicationProfile/gco:CharacterString	String
CollectionCitations /OnlineResource/Name	[==>/gmd:name/gco:CharacterString	String
CollectionCitations /OnlineResource /Description	[==>/gmd:description/gco:CharacterString	String
CollectionCitations /OnlineResource /Function	[==>/gmd:function/gmd:CI_OnLineFunctionCode codeList="https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmxCodeLists.xml#CI_OnLineFunctionCode" codeListValue="information" = information	String

Example Mapping

ISO 19115-2 SMAP

```

<gmd:DS_Series>
<gmd:seriesMetadata>
<gmi:MI_Metadata>
...
  <gmd:identificationInfo>
    <gmd:MD_DataIdentification>
      <gmd:citation>
        <gmd:CI_Citation>
          <gmd:title>
            <gco:CharacterString>Global Grid of
Probabilities of Urban Expansion to 2030</gco:
CharacterString>
          </gmd:title>
          <gmd:edition>
            <gco:CharacterString>1.0</gco:
CharacterString>
          </gmd:edition>
          <gmd:editionDate>
            <gco:DateTime>2015-12-31T00:00:00.000Z<
/gco:DateTime>
          </gmd:editionDate>
          <gmd:citedResponsibleParty>
            <gmd:CI_ResponsibleParty>
              <gmd:individualName>
                <gco:CharacterString>Seto, K., B.
Gunalp, and L.R. Hutyra</gco:CharacterString>
              </gmd:individualName>
            </md:CI_ResponsibleParty>
          </gmd:citedResponsibleParty>
          <gmd:citedResponsibleParty>
            <gmd:CI_ResponsibleParty>
              <gmd:individualName>
                <gco:CharacterString>NASA
Socioeconomic Data and Applications Center (SEDAC)<
/gco:CharacterString>
              </gmd:individualName>
              <gmd:role>
                <gmd:CI_RoleCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmxCodeLists.xml#CI_RoleCode" codeListValue="
publisher">publisher</gmd:CI_RoleCode>
              </gmd:role>
            </gmd:CI_ResponsibleParty>
          </gmd:citedResponsibleParty>
          <gmd:citedResponsibleParty>

```

```

        <gmd:CI_ResponsibleParty>
          <gmd:positionName>
            <gco:CharacterString>release place<
/gco:CharacterString>
          </gmd:positionName>
          <gmd:contactInfo>
            <gmd:CI_Contact>
              <gmd:address>
                <gmd:CI_Address>
                  <gmd:deliveryPoint>
                    <gco:
CharacterString>Palisades, NY</gco:CharacterString>
                  </gmd:deliveryPoint>
                </gmd:CI_Address>
              </gmd:address>
            </gmd:CI_Contact>
          </gmd:contactInfo>
          <gmd:role>
            <gmd:CI_RoleCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmxCodelists.xml#CI_RoleCode" codeListValue="
publisher"=publisher</gmd:CI_RoleCode>
            </gmd:role>
          </gmd:CI_ResponsibleParty>
        </gmd:citedResponsibleParty>
      <gmd:citedResponsibleParty>
        <gmd:CI_ResponsibleParty>
          <gmd:contactInfo>
            <gmd:CI_Contact>
              <gmd:onlineResource>
                <gmd:CI_OnlineResource>
                  <gmd:linkage>
                    <gmd:URL>https://doi.org/10.
7927/H4Z899CG</gmd:URL>
                  </gmd:linkage>
                </gmd:CI_OnlineResource>
              </gmd:onlineResource>
            </gmd:CI_Contact>
          </gmd:contactInfo>
          <gmd:role>
            <gmd:CI_RoleCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmxCodelists.xml#CI_RoleCode" codeListValue="
resourceProvider"=resourceProvider</gmd:CI_RoleCode>
            </gmd:role>
          </gmd:CI_ResponsibleParty>
        </gmd:citedResponsibleParty>
      </gmd:CI_Citation>
    </gmd:citation>
  </gmd:MD_DataIdentification>
</gmd:identificationInfo>
...
</gmi:MI_Metadata>
</gmd:seriesMetadata>
</gmd:DS_Series>

```

UMM

```

CollectionCitations: [
  {
    Creator: "Seto, K., B. Guneralp, and L.R.
Hutyra",
    ReleasePlace: "Palisades, NY",
    Title: "Global Grid of Probabilities of
Urban Expansion to 2030",
    OnlineResource: {
      Linkage: "https://doi.org/10.7927/H4Z899CG"
    },
    Publisher: "NASA Socioeconomic Data and
Applications Center (SEDAC)",
    ReleaseDate: "2015-12-31",
    Version: "1.0"
  }
],

```

UMM Migration

UMM Version 1.9.0	Translation Direction	UMM Version 1.10.0

History

UMM Versioning

Version	Date	What Changed
1.15.5	12/3/2020	No changes were made for Collection Citations during the transition from version 1.15.4 to 1.15.5
1.15.4	9/18/2020	No changes were made for Collection Citations during the transition from version 1.15.3 to 1.15.4
1.15.3	7/1/2020	No changes were made for Collection Citations during the transition from version 1.15.2 to 1.15.3
1.15.2	5/20/2020	No changes were made for Collection Citations during the transition from version 1.15.1 to 1.15.2
1.15.1	3/25/2020	No changes were made for Collection Citations during the transition from version 1.15.0 to 1.15.1
1.15.0	2/26/2020	No changes were made for Collection Citations during the transition from version 1.14.0 to 1.15.0
1.14.0	10/21/2019	No changes were made for Collection Citations during the transition from version 1.13.0 to 1.14.0
1.13.0	04/11/2019	No changes were made for Collection Citations during the transition from version 1.12.0 to 1.13.0
1.12.0	01/22/2019	No changes were made for Collection Citations during the transition from version 1.11.0 to 1.12.0.
1.11.0	11/28/2018	No changes were made for Collection Citations during the transition from version 1.10.0 to 1.11.0.
1.10.0	05/02/2018	No changes were made for Collection Citations during the transition from version 1.9.0 to 1.10.0.
1.9.0		

ARC Documentation

Version	Date	What Changed	Author
1.0	11/16/18	Recommendations/priority matrix transferred from internal ARC documentation to wiki space	Jeanne'le Roux Ingrid Garcia-Solera
1.1	9/15/2020	The ARC priority matrix was updated to specify that if a Collection Citations is missing from the metadata, a yellow (medium priority) recommendation will be made to provide it. This recommendation is driven by the need to make data product citation information more easily accessible/visible, so that NASA data can be appropriately cited by external entities that re-distribute NASA data.	Jeanne'le Roux