Access Constraints

Element Description

The Access Constraints element describes any restrictions imposed on data access. Access Constraints can be described in a free text field with the option to provide an access control list (ACL) value.

Best Practices

There are two sub-elements that comprise Access Constraints: Description and Value.

- **Description:** The Description sub-element allows the author to provide information concerning access constraints. This includes any special restrictions, legal prerequisites, and limitations and/or warnings on obtaining the data. Examples of values include: Public, In-house, Limited, and None.
- **Value:** Providers have the option to use the AccessConstraints/Value element to specify various restriction levels with access control lists (ACLs). The provider is responsible for defining their own ACL rules (http://en.wikipedia.org/wiki/Access_control_list). For example, a provider might specify a service level ACL that hides all items (collections for this example) with a value element set to '15.0' in order to hide metadata when it isn't ready for public consumption. There is no controlled mapping for what the values represent.

Examples:

AccessConstraints/Description: None

AccessConstraints/Value: 15

AccessConstraints/Description: Limited

AccessConstraints/Value: 4

AccessConstraints/Description: This product has full public access.

AccessConstraints/Value: 0

Element Specification

Providing Access Constraints is optional (Cardinality 0..1)

Model	Element	Type	Constraints	Required?	Cardinality	Notes
UMM-C	AccessConstraints/Description	String	1 - 4000 characters	Yes, if applicable	1	Free-text description of the constraint. In DIF, this field is called Access_Constraints. In ECHO, this field is called RestrictionComment.
UMM-C	AccessConstraints/Value	Number	n/a	No	0..1	Numeric value (ACL) used to restrict (or not restrict) access to this collection. In DIF, this field is called Access_Control. In ECHO, this field is called RestrictionFlag.

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).
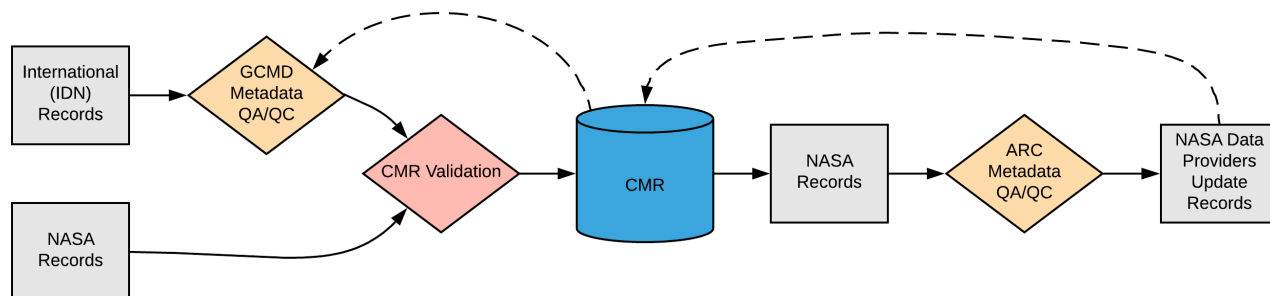
Please see the expandable sections below for flowchart details.

- Manual Review
  - Confirm that the URLs link to the appropriate web pages.
  - Identify errors, discrepancies or omissions.
  - Proof all content for conciseness and readability.
- Automated Review
  - Check that the field length is not greater than 4,000 characters.
  - Check for potential broken links.

- If this element is used, the description sub element is required
- The description must have at least 1 character and be no longer than 4000 characters in length

ARC Priority Matrix

Priority Categorization	Justification
Red = High Priority Finding	This element is categorized as highest priority when: - The information provided is not related to the element. - The Access Constraints Description is inaccurate for the dataset. - The Access Constraints Description include major spelling or grammatical errors.
Yellow = Medium Priority Finding	This element is categorized as medium priority when: - The information provided is not related to access constraint information (i.e. incorrect or non-optimal usage of the metadata element).
Blue = Low Priority Finding	This element is categorized as low priority when: - The Access Constraints Description includes a re-direct link.
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 Access Constraints is optional (Cardinality 0..1)

UMM-C Element	DIF 10 Path	Type	Constraints	Required in DIF 10?	Cardinality	Notes

AccessConstraints/Description	Access_Constraints /Description	String	1 - 4000 characters	Yes, if applicable	1	A free-text description that details access constraints of the collection.
AccessConstraints/Value	Access_Constraints /Access_Control	Integer	number from 0 - 255	No	0..1	ACL value
	Access_Constraints /Access_Control_Description	String	1 - 4000 characters	No	0..1	The definition of the ACL value. This is defined by the provider. This element does not map to UMM.

Example Mapping

DIF 10

```
<Access_Constraints>
  <Description>None. This dataset is free and
available to the public.</Description>
  <Access_Control>0</Access_Control>
  <Access_Control_Description>No restriction<
/Access_Control_Description>
</Access_Constraints>
```

UMM

```
"AccessConstraints" : {
  "Description": "None. This dataset is free and
available to the public.",
  "Value": "0"
  }
```

ECHO 10

Providing a Restriction Comment and/or Restriction Flag is optional (Cardinality 0..1)

UMM-C Element	ECHO 10 Path	Type	Constraints	Required in ECHO10?	Cardinality	Notes
AccessConstraints /Description	RestrictionComment	String	1 - 1024 characters	No	0..1	Restrictions and legal prerequisites for accessing the collection. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the collection. These restrictions differ from Use Restrictions in that they only apply to access.
AccessConstraints /Value	RestrictionFlag	Decimal	n/a	No	0..1	A numerical value that indicates the type of restriction that applies on this collection (i.e. an ACL value).

Example Mapping

ECHO 10

```
<RestrictionComment>None. This dataset is free and
available to the public.</RestrictionComment>
<RestrictionFlag>0</RestrictionFlag>
```

UMM

```
"AccessConstraints" : {
  "Description": "None. This dataset is free and
available to the public.",
  "Value": "0"
  }
```

ISO 19115-2 MENDS

Providing Access Constraints is optional (Cardinality 0..1)

UMM-C Element	ISO Path	Type	Notes
AccessConstraints /Description	/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints /gmd:MD_LegalConstraints/gmd:accessConstraints/gmd:MD_RestrictionCode codeList "https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmxCodelists.xml#MD_RestrictionCode" codeListValue "otherRestrictions" = "otherRestrictions" /gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints /gmd:MD_LegalConstraints/gmd:otherConstraints/gco:CharacterString (prefix: 'Access Constraints Description:')	String	The value of "Access Constraints Description:" must be provided at the beginning of the string so that CMR can properly parse out the constraint description text.
AccessConstraints /Value	/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints /gmd:MD_LegalConstraints/gmd:accessConstraints/gmd:MD_RestrictionCode codeList "https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmxCodelists.xml#MD_RestrictionCode" codeListValue "otherRestrictions" = "otherRestrictions" /gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints /gmd:MD_LegalConstraints/gmd:otherConstraints/gco:CharacterString (prefix: 'Access Constraints Value:')	String	The value of "Access Constraints Value:" must be provided at the beginning of the string so that CMR can properly parse out the constraint value.

Example Mapping

ISO 19115-2 MENDS

```
<gmi:MI_Metadata>
  ...
  <gmd:identificationInfo>
  <gmd:MD_DataIdentification>
    ...
    <gmd:resourceConstraints>
      <gmd:MD_LegalConstraints>
      ...
        <gmd:accessConstraints>
        <gmd:MD_RestrictionCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmxCodelists.xml#MD_RestrictionCode" codeListValue="
otherRestrictions">otherRestrictions</gmd:
MD_RestrictionCode>
        </gmd:accessConstraints>
        ...
        <gmd:otherConstraints>
         <gco:CharacterString>Access Constraints
Description: None. This dataset is free and
available to the public.</gco:CharacterString>
        </gmd:otherConstraints>
        <gmd:otherConstraints>
         <gco:CharacterString>Access Constraints
Value: 0</gco:CharacterString>
        </gmd:otherConstraints>
      </gmd:MD_LegalConstraints>
     </gmd:resourceConstraints>
    ...
  </gmd:MD_DataIdentification>
  </gmd:identificationInfo>
  ...
</gmi:MI_Metadata>
```

UMM

```
"AccessConstraints" : {
  "Description": "None. This dataset is free and
available to the public.",
  "Value": "0"
  }
```

ISO 19115-2 SMAP

Providing Access Constraints is optional (Cardinality 0..1)

UMM-C Element	ISO Path	Type	Notes
AccessConstraints /Description	/gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints/gmd:MD_LegalConstraints/gmd:accessConstraints/gmd:MD_RestrictionCode codeList "https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmxCodelists.xml#MD_RestrictionCode" codeListValue "otherRestrictions" = "otherRestrictions" /gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints/gmd:MD_LegalConstraints/gmd:otherConstraints/gco:CharacterString (prefix: 'Access Constraints Description:')	String	The value of "Access Constraints Description:" must be provided at the beginning of the string so that CMR can properly parse out the constraint description.
AccessConstraints /Value	/gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints/gmd:MD_LegalConstraints/gmd:accessConstraints/gmd:MD_RestrictionCode codeList "https://cdn.earthdata.nasa.gov/iso/resources/Codelist/gmxCodelists.xml#MD_RestrictionCode" codeListValue "otherRestrictions" = "otherRestrictions" /gmd:DS_Series/gmd:seriesMetadata/gmi:MI_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:resourceConstraints/gmd:MD_LegalConstraints/gmd:otherConstraints/gco:CharacterString (prefix: 'Access Constraints Value:')	String	The value of "Access Constraints Value:" must be provided at the beginning of the string so that CMR can properly parse out the constraint value.

Example Mapping

ISO 19115-2 SMAP

```
<gmd:DS_Series>
  <gmd:seriesMetadata>
    <gmi:MI_Metadata>
      ...
      <gmd:identificationInfo>
      <gmd:MD_DataIdentification>
        ...
       <gmd:resourceConstraints>
         <gmd:MD_LegalConstraints>
         ...
           <gmd:accessConstraints>
            <gmd:MD_RestrictionCode codeList="
https://cdn.earthdata.nasa.gov/iso/resources/Codelist
/gmxCodelists.xml#MD_RestrictionCode" codeListValue="
otherRestrictions">otherRestrictions</gmd:
MD_RestrictionCode>
           </gmd:accessConstraints>
           ...
           <gmd:otherConstraints>
             <gco:CharacterString>Access
Constraints Description: None. This dataset is free
and available to the public.</gco:CharacterString>
           </gmd:otherConstraints>
           <gmd:otherConstraints>
             <gco:CharacterString>Access
Constraints Value: 0</gco:CharacterString>
           </gmd:otherConstraints>
         </gmd:MD_LegalConstraints>
       </gmd:resourceConstraints>
      ...
      </gmd:MD_DataIdentification>
    </gmd:identificationInfo>
    ...
    </gmi:MI_Metadata>
  </gmd:seriesMetadata>
</gmd:DS_Series>
```

UMM

```
"AccessConstraints" : {
  "Description": "None. This dataset is free and
available to the public.",
  "Value": "0"
  }
```

UMM Migration

None

History

UMM Versioning

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

ARC Documentation

Version	Date	What Changed	Author
1.0	09/28/18	Recommendations/priority matrix transferred from internal ARC documentation to wiki space	Jeanne' le Roux