

Access Constraints

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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

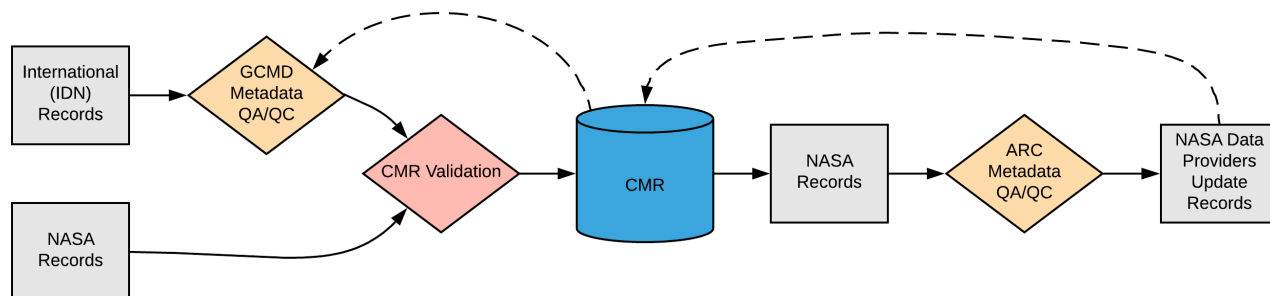
Element Specification

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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 |
|---------------------------------------|--|--------|--|
| AccessCon straints /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/gmxCodetlists.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. |
| AccessCon straints /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/gmxCodetlists.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
/gmxCodetlists.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 |
|---------------------------------------|---|--------|---|
| AccessCon straints /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. |
| AccessCon straints /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 |