**Guide to Harmonize**

**ISO 19115:2003 / North American Profile**

**Metadata**

**For**

**Government of Canada**

**Geospatial Data**

**V2.3**

**June 18, 2015**

Canada wordmark

Document Change Control

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| --- | --- | --- | --- |
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| 1.0 | Jan 17, 2014 | R. Tondevold (AAFC),  B. Schwarz (AAFC) | First Draft |
| 1.1 | Jan 27, 2014 | R. Tondevold (AAFC),  B. Schwarz (AAFC) | Includes feedback from participants |
| 1.2 | Feb 19, 2014 | R. Tondevold (AAFC),  B. Schwarz (AAFC) | Includes feedback from participants |
| 1.3 | May 16, 2014 | R. Tondevold (AAFC) | Includes feedback from participants, finalized version |
| 1.4 | Sept 25, 2014 | C. Mitchell (NRCAN-FGP) | Added to background and purpose, expanded implementation guidance, integrated into Federal Geospatial Platform policy suite under Data Management and Stewardship – Catalogue. |
| 1.5 | Oct 1, 2014 | S. Smith (NRCan)  J. Rupert (NRCan) | Best practice of useLimitation (5.4.2.1) instead of otherConstraints (5.4.2.4) when useing codelist napMD\_RestrictionCode (5.4.2.3) |
| 2.0 | Oct 2, 2014 | C. Mitchell (NRCAN-FGP) | FGP Guideline for Harmonized North American Profile. Includes feedback from T. Spears, L. McAvoy, K. Aston. |
| 2.1 | Oct 28, 2014 | J. Rupert (NRCan), C. Mitchell (NRCan) | topicCategory is a enumerated list and cannot use a code list. dateStamp and language notes. Add Government of Canada to ResponsibleParty. Added a locale example. Added controlled vocabulary to 5.20.1 Protocol. |
| 2.2 | Nov 14, 2014 | C. Mitchell (NRCan), J. Rupert (NRCan); R. Tondevold (AAFC) | Updates based on group discussion November 4, 2014: <http://www.gcpedia.gc.ca/wiki/Federal_Geospatial_Platform/Policies_and_Standards/Catalogue/Release/Appendix_B_Guidelines_and_Best_Practices/Guide_to_Harmonized_ISO_19115:2003_NAP#Issue_Log> |
| Dec 23, 2014 | Cindy Mitchell | All references to Esri REST Feature Service changed to Esri REST Mapping Service. |
| 2.3 | February 23, 2015 | M-E Martin (NRCan), R. Tondevold (AAFC) Tondevold, Mark Smith (EC), J. Rupert (NRCan) | Further refinement to harmonized profile following metadata validation testing. |
| February 27, 2015 | NRCan, EC and TBS | Updated guidance for 5.20.5. Typographic errors fixed. |
| March 11, 2015 | NRCan | Updated guidance for 5.20.1 Linkage  Typographic errors fixed. |
| May 28, 2015 | NRCan | Correction of hyphen in the metadata standard name guideline 5.2.8. Addition of a warning about autocorrection of hyphens |
| June 16, 2015 | NRCan | Correction: removal of second hyphen that erroneously followed Open Government Licence - Canada; found in 5.4.2.1 guidance. |

Contributors

|  |  |
| --- | --- |
| Participant | Organization |
| Ryan Tondevold | Agriculture and Agri-Food Canada |
| David Lee | Agriculture and Agri-Food Canada |
| Brian Schwarz | Agriculture and Agri-Food Canada |
| Tobias Spears | Department of Fisheries and Oceans |
| Mark Shaw | Environment Canada |
| James Doyle | Environment Canada |
| Paul Paciorek | Environment Canada |
| Mike Weech | Environment Canada |
| Daniel Aramov | Environment Canada |
| Steve Smith | Natural Resources Canada |
| Jamie Rupert | Natural Resources Canada |
| Marie-Eve Martin | Natural Resources Canada |
| Yvon Boucher | Natural Resources Canada |
| Denis Boutin | Natural Resources Canada |
| Sylvie Jodouin | Natural Resources Canada |
| Cindy Mitchell | Natural Resources Canada |
| Ross Thompson | Statistics Canada |
| Kristina Aston | Treasury Board Secretariat of Canada |
| Alannah Hilt | Treasury Board Secretariat of Canada |
| Chris Majewski | Treasury Board Secretariat of Canada |

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# Background

The Government of Canada through the Treasury Board Secretariat implemented the Standard on Geospatial Data in 2009. The Standard on Geospatial Data requires that federal government departments and agencies implement internationally recognized and adopted standards and specifications that support consistent data management and stewardship, and that increase the interoperability of geospatial information across government. Specifically, the Standard on Geospatial Data requires departments to implement ISO19115 Geographic information – Metadata, ISO 19128 Geographic information - Web Map Server Interface and ISO 19115:2003, North American Profile (NAP) metadata. The minimum requirements of NAP are outlined in the document titled “North American Profile ISO 19115:2003 – Geographic Information – Metadata, NAP Metadata, Minimum mandatory set of metadata items – Dataset”.

As Departments began preparing metadata to fulfil requirements to comply with the Standard on Geospatial Data, it became apparent that departments were implementing NAP within the bounds of the standard, but small variations were occurring between departments in the metadata produced, where implementation guidance was either unclear or not provided.

This document is the result of a multi-departmental effort to compare metadata files and identify discrepancies in interpretation and harmonize the Government of Canada implementation of the NAP. This document builds upon the “North American Profile ISO 19115:2003 – Geographic Information – Metadata, NAP Metadata, Minimum mandatory set of metadata items – Dataset” document and is intended to guide federal departments in completing metadata in a manner that is consistent between departments and compliant with the Standard on Geospatial Data.

# Purpose

This guide provides instructions for populating minimum NAP metadata elements for geospatial data produced or managed by the Government of Canada and intended for public publication. Metadata for datasets not for public publication is beyond the scope of this document. Other NAP metadata elements exist and can be utilized according to the standard. This document presents the minimum metadata profile to be compliant with NAP and consistent between Departments.

This guide is the result of several Government of Canada departmental metadata experts harmonizing their rules for complying with the NAP profile requirements in a consistent manner. The guidelines for a harmonized implementation are called the Harmonized North American Profile (HNAP)

It is also necessary to support the metadata requirements of the Government of CanadaOpen Government Portal. To this end, within HNAP, other ISO 19115:2003 metadata elements have been adopted as mandatory and standardized for consistency between departmental data catalogs and the Government of Canada Open Government Portal.

This guide is presented in two sections. Section 3 augments the published minimum mandatory set of metadata items for datasets with elements and conditions agreed upon by departmental experts. In addition, guidelines and best practices for metadata elements are provided to improve consistency. Section 4 focuses on other characteristics of metadata, such as language, that will also benefit from a standardized implementation.

This guide is not intended as an exhaustive resource for ensuring consistent populating of all NAP metadata elements between Canadian federal government departments. Best practices identified in the NAP, except where this document suggests otherwise, should be followed to comply with the standard.

The North American Profile ISO 19115:2003 – Geographic Information – Metadata, minimum mandatory set of metadata, combined with the additional elements and conditions presented in the HNAP below, comply with the implementation conditions for Appendix D: Implementation Conditions for NAP – Metadata included in the Government of Canada Standard on Geospatial Data.

# Harmonized Minimum Mandatory Metadata Elements – North American Profile (HNAP)

This section provides guidelines for populating NAP minimum mandatory metadata elements for Government of Canada geospatial datasets with the additional guidance and examples present to support a more consistent, government wide application of the metadata standards. To supplement the minimum mandatory elements of NAP, other ISO 19115:2003 metadata elements have been added and are considered mandatory.

Notes:

* Items identified with a \* are additional minimum mandatory requirements from ISO 19115:2003 as defined by NAP.
* Items identified with a \*\* are additional minimum mandatory requirements from ISO 19115:2003 for consistency within Government of Canada departmental and Open Data catalogues.
* Items identified with a (C) are requirements conditional to a rule specified.
* Items identified with a (O) are optional but are included with guidance to promote consistency when implemented.
* Shaded areas in table below have been taken verbatim from document entitled “North American Profile of ISO 19115:2003 – Geographic Information – Metadata, Minimum mandatory set of metadata items – Dataset”. Areas without shading contain HNAP conditions, guidance and examples.

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| --- | --- | --- | --- | --- |
| **Metadata class** | **Clause** | **Metadata item** | **Reference** | **Notes** |
|  |  |  |  |  |
| Metadata Record Information  *(MD\_Metadata)* | 5.2.1 | fileIdentifier\* |  |  |
| **Guideline:** Each metadata record shall have a universal unique identifier (UUID) to distinguish it from others. UUID will be generated according to ISO/IEC 9834-8:2005 using version 4 (random) or version 5 (SHA-1 hash) variants. Single or bulk version 4 (random) UUIDs can be generated at https://www.uuidgenerator.net/version4. | | | |
| **Example:**  <gmd:fileIdentifier>  <gco:CharacterString>c959fb7e-6bac-41dd-a881-582332</gco:CharacterString>  </gmd:fileIdentifier> | | | |
| 5.2.2 | language\* |  | Language code and country code: fra; CAN or eng; CAN of the initial metadata language |
| **Guideline: Each metadata record shall be provided in a bilingual format with both Official Languages provided.**  NAP registered code lists based on ISO 639.2 alpha-3 codes for language and ISO 3166-1 alpha-3 codes for countries shall be used to describe language. | | | |
| **Example:**  <gmd:language>  <gco:CharacterString>eng; CAN</gco:CharacterString>  </gmd:language> | | | |
| 5.2.3 | characterSet\* |  | The character set for the metadata representation is restricted to "utf8," as used for  ISO/TS 19139:2007 compliant XML encoding. |
| **Guideline:** characterSet shall use codelist [napMD\_CharacterSetCode](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html#IC_95). Value will be “utf8; utf8”. | | | |
| **Example:**  <gmd:MD\_CharacterSetCode codeListValue=”RI\_458” codeList=<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_95>”>utf8; utf8</gmd:MD\_CharacterSetCode> | | | |
| 5.2.4 | parentIdentifier\* (C[[1]](#footnote-1)) |  | parentIdentifier is documented when the hierarchy of a higher level exists. |
| 5.2.5 | hierarchyLevel\* |  | Dataset level to which the metadata applies. |
| **Guideline:** hierarchyLevel shall use codelist [napMD\_ScopeCode](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html#IC_106). Values typically are “dataset” or “series”. | | | |
| 5.2.6 | contact | See Responsible Party | contactInfo is mandatory in this case |
| 5.2.7 | dateStamp |  | Date that the metadata was last modified a Date or DateTime type. |
| 5.2.8 | metadataStandardName\* |  |  |
| **Guideline:** metadataStandardName shall conform to “North American Profile of ISO 19115:2003 - Geographic information - Metadata; Profil nord-américain de la norme ISO 19115:2003 - Information géographique - Métadonnées”. Warning: in some software, because of autocorrection, "-" becomes "–" which is not valid. | | | |
| **Example:**  <metadataStandardName xsi:type="gmd:PT\_FreeText\_PropertyType>  <gco:CharacterString>North American Profile of ISO 19115:2003 - Geographic information - Metadata</gco:CharacterString>  <gmd:PT\_FreeText>  <gmd:textGroup>  <gmd:LocalisedCharacterString locale="#fra">Profil nord-américain de la norme ISO 19115:2003 - Information géographique - Métadonnées</gmd:LocalisedCharacterString>  </gmd:textGroup>  </gmd:PT\_FreeText>  </metadataStandardName> | | | |
| 5.2.11 | locale\*\* | See Locale | Mandatory as more than one language is used in free text descriptions. |
| 5.2.12 | Identification Information | See Data Identification |  |
| 5.2.17 | Reference System Information  (C)\* | See Reference System  Information | Mandatory, if spatialRepresentionType[[2]](#footnote-2) in Data Identification is "vector," "grid" or "tin”. |
| 5.2.20 | Distribution Information\*\* | See Distribution Information (see 5.11) | Information about acquiring the dataset. |

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| Data Identification  *(MD\_DataIdentification)* | 5.3.1.1 | citation | See Citation |  |
| 5.3.1.2 | abstract |  |  |
| 5.3.1.5 | status\* | CodeList  [napMD\_ProgressCod](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html#IC_106)e |  |
| 5.3.1.9 | language |  | The language of the data set. Repeat for multiple languages. |
| 5.3.1.7 | spatialRepresentationType\*\* | CodeList  napMD\_SpatialRepresentationTypeCode. |  |
| **Guideline:** spatialRepresentationType shall be included and conform to “vector; vecteur, grid; grille, textTable; texteTable, tin; tin, stereoModel ; stéréomodèle, video; vidéo” | | | |
| **Example:**  <gmd:spatialRepresentationType>  <gmd:MD\_SpatialRepresentationTypeCode codeListValue="RI\_635" codeList="http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC\_109">vector; vecteur</gmd:MD\_SpatialRepresentationTypeCode>  </gmd:spatialRepresentationType> | | | |
| 5.3.1.11 | topicCategory\* | CodeList [napMD\_TopicCategoryCod](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html" \l "IC_110)e | A topicCategory code shall be provided when hierarchyLevel is set to "dataset." Since this is an enumerated list in the schema, a codelist cannot be used; only the English term can be entered. |
| **Guideline:** See example. | | | |
| **Example:**  <gmd:topicCategory>  <gmd:MD\_TopicCategoryCode> imageryBaseMapsEarthCover</gmd:MD\_TopicCategoryCode>  </gmd: topicCategory > | | | |
| 5.3.1.13 | extent\* | See Extent (Geographic Bounding Box and Temporal Extent is mandatory for dataset) | Geographic Bounding Box and Temporal Extent are required. |
| 5.3.1.15 | Resource Maintenance Information\*\* | See Maintenance Information |  |
| 5.3.1.17 | Descriptive Keywords\*\* | See Keywords |  |
| 5.3.1.18 | Resource Constraints\*\* | See Legal Constraints |  |
| **Guideline:** For data assessed and approved for release under the Open Government Licence - Canada (Open Data), the inclusion of 5.4.2 Legal Constraints (5.4.2.1, 5.4.2.2 and 5.4.2.3) is mandatory.  For data not released under the Open Government Licence - Canada (non-open data), 5.4.2 Legal Constraints is mandatory with the appropriate text added to 5.4.2.1 useLimitation to convey restrictions and the appropriate code selected from napMD\_RestrictionCode for both 5.4.2.2 accessConstraints and 5.4.2.3 useConstraints.  5.2.3.4 otherConstraints is mandatory where accessConstraints and/or useConstraints are set to “otherRestrictions”, and will appropriately note any other restrictions. | | | |

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| Keywords  *(MD\_Keywords)* | 5.3.6.1 | keyword\*\* |  | Applies to dataset not metadata. |
| Guidance: The MD\_Keywords category of metadata elements shall be mandatory. At a minimum, one keyword must be supplied from the [Government of Canada Core Subject Thesaurus](http://www.thesaurus.gc.ca/default.asp?lang=En&n=EAEAD1E6-1). **Only the preferred terms can be used.**  Choose the most specific terms available when describing the subject of a resource. As a general rule, a resource should **not** be indexed with both broader and narrower terms from a same hierarchical string. More than one preferred term can be used to fully express the subject of a resource. | | | |
| 5.3.6.3 | thesaurusName (C)\*\* |  |  |
| **Guideline:** Where keywords come from a controlled source, the thesaurus name along with its creation date, publication date and organization name will be cited. Ensure latest publication date is referenced at time of metadata creation.  If the keyword does not come from a thesaurus (i.e. user defined keyword) then only the keyword element is mandatory. | | | |
| **Example:**  <gmd:descriptiveKeywords>          <gmd:MD\_Keywords>            <gmd:keyword xsi:type="gmd:PT\_FreeText\_PropertyType">              <gco:CharacterString>Drainage</gco:CharacterString>              <gmd:PT\_FreeText>                <gmd:textGroup>                  <gmd:LocalisedCharacterString locale=“#fra”>Drainage</gmd:LocalisedCharacterString>                </gmd:textGroup>              </gmd:PT\_FreeText>            </gmd:keyword>            <gmd:keyword xsi:type="gmd:PT\_FreeText\_PropertyType">              <gco:CharacterString>Remote sensing</gco:CharacterString>              <gmd:PT\_FreeText>                <gmd:textGroup>                  <gmd:LocalisedCharacterString locale=“#fra”>Télédétection</gmd:LocalisedCharacterString>                </gmd:textGroup>              </gmd:PT\_FreeText>            </gmd:keyword>                  <gmd:thesaurusName>              <gmd:CI\_Citation>                <gmd:title xsi:type="gmd:PT\_FreeText\_PropertyType">                  <gco:CharacterString>Government of Canada Core Subject Thesaurus</gco:CharacterString>                    <gmd:PT\_FreeText>                     <gmd:textGroup>                        <gmd:LocalisedCharacterString locale=“#fra”>Thésaurus des sujets de base du gouvernement du Canada</gmd:LocalisedCharacterString>                     </gmd:textGroup>                   </gmd:PT\_FreeText>                </gmd:title>  <gmd:date>                  <gmd:CI\_Date>                    <gmd:date>                      <gco:Date>2004</gco:Date>                    </gmd:date>                    <gmd:dateType>                      <gmd:CI\_DateTypeCode codeListValue="RI\_366"  codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_87>">creation;création </gmd:CI\_DateTypeCode>                    </gmd:dateType>                  </gmd:CI\_Date>                </gmd:date>  <gmd:date>                  <gmd:CI\_Date>                    <gmd:date>                      <gco:Date>2013-11-05</gco:Date>                    </gmd:date>                    <gmd:dateType>                      <gmd:CI\_DateTypeCode codeListValue="RI\_368"  codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_87>">revision;révision</gmd:CI\_DateTypeCode>                    </gmd:dateType>                  </gmd:CI\_Date>                </gmd:date>                <gmd:citedResponsibleParty>                  <gmd:CI\_ResponsibleParty>                    <gmd:organisationName xsi:type="gmd:PT\_FreeText\_PropertyType">                      <gco:CharacterString>Government of Canada; Library and Archives Canada</gco:CharacterString>                                      <gmd:PT\_FreeText>                         <gmd:textGroup>                            <gmd:LocalisedCharacterString locale=“#fra”>Gouvernement du Canada; Bibliothèque et Archives Canada</gmd:LocalisedCharacterString>                         </gmd:textGroup>                      </gmd:PT\_FreeText>                    </gmd:organisationName>                    <gmd:role>                      <gmd:CI\_RoleCode codeListValue="RI\_409" codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_90>">custodian; conservateur</gmd:CI\_RoleCode>                    </gmd:role>                  </gmd:CI\_ResponsibleParty>                </gmd:citedResponsibleParty>              </gmd:CI\_Citation>            </gmd:thesaurusName>          </gmd:MD\_Keywords>  </gmd:descriptiveKeywords> | | | |

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| Legal Constraints  *(MD\_LegalConstraints)* | 5.4.2.1 | useLimitations \*\* | free text (CharacterString) | | Applies to dataset and metadata. | |
| **Guideline:** For data assessed and approved for release under the Open Government Licence - Canada useLimitation shall be mandatory and conform to, “Open Government Licence - Canada (<http://open.canada.ca/en/open-government-licence-canada>)” (English) and “Licence du gouvernement ouvert - Canada (<http://ouvert.canada.ca/fr/licence-du-gouvernement-ouvert-canada>)” (French).  For data not released under the Open Government Licence - Canada (i.e. assessed as non-open data) appropriate text will be added to convey restrictions. | | | | | |
| 5.4.2.2 | accessConstraints\*\* | CodeList napMD\_RestrictionCode | | Applies to dataset and metadata. | |
| **Guideline:** For data assessed and approved for release under the Open Government Licence - Canada accessConstraints shall be mandatory and conform to “licence; licence” (see example). | | | | | |
| 5.4.2.3 | useConstraints \*\* | CodeList napMD\_RestrictionCode | | Applies to dataset and metadata. | |
| Guideline: For data assessed and approved for release under the Open Government Licence - Canada useConstraints shall be mandatory and conform to “licence; licence” (see example). | | | | | |
| 5.4.2.4 | otherConstraints | | free text (CharacterString) | | Applies to dataset and metadata. |
| **Guideline:** otherConstraints shall be provided where accessConstraints (5.4.2.2) or useConstraints (5.4.2.3) is set to "otherRestrictions." | | | | | |
| Example:  <gmd:resourceConstraints>  <gmd:MD\_LegalConstraints>  <gmd:useLimitation xsi:type="gmd:PT\_FreeText\_PropertyType">  <gco:CharacterString>Open Government Licence - Canada ([http://open.canada.ca/en/open-government-licence-canada)</gco:CharacterString](http://open.canada.ca/en/open-government-licence-canada)%3c/gco:CharacterString)>  <gmd:PT\_FreeText>  <gmd:textGroup>  <gmd:LocalisedCharacterString locale="#fra">Licence du gouvernement ouvert - Canada ([http://ouvert.canada.ca/fr/licence-du-gouvernement-ouvert-canada)</gmd:LocalisedCharacterString](http://ouvert.canada.ca/fr/licence-du-gouvernement-ouvert-canada)%3c/gmd:LocalisedCharacterString)>  </gmd:textGroup>  </gmd:PT\_FreeText>  </gmd:useLimitation>  <gmd:accessConstraints>  <gmd:MD\_RestrictionCode codeListValue="RI\_606" codeList="http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC\_107">license; licence</gmd:MD\_RestrictionCode>  </gmd:accessConstraints>  <gmd:useConstraints>  <gmd:MD\_RestrictionCode codeListValue="RI\_606" codeList="http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC\_107">license; licence</gmd:MD\_RestrictionCode>  </gmd:useConstraints>  </gmd:MD\_LegalConstraints>  </gmd:resourceConstraints> | | | | | |

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| Maintenance Information  *(MD\_MaintenanceInformation)* | 5.6.1 | maintenanceAndUpdateFrequency\*\* | CodeList  [napMD\_MaintenanceFrequencyCode](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html#IC_106) |  |
| **Guideline**: maintenanceAndUpdateFrequency shall be mandatory. Select one of: continual, daily, weekly, fortnightly, monthly, quarterly, biannually, annually, asNeeded, irregular, notPlanned, unknown, semimonthly (continue, quotidien, hebdomadaire, quinzomadaire, mensuel, trimestriel, semestriel, annuel, auBesoin, irrégulier, nonPlanifié, inconnu, bimensuel) | | | |
| **Example:**  <gmd:resourceMaintenance>  <gmd:MD\_MaintenanceInformation>  <gmd:maintenanceAndUpdateFrequency>  <gmd:MD\_MaintenanceFrequencyCode codeListValue="RI\_538"codeList="http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC\_102">biannually; semestriel</gmd:MD\_MaintenanceFrequencyCode>  </gmd:maintenanceAndUpdateFrequency>  </gmd:MD\_MaintenanceInformation>  </gmd:resourceMaintenance> | | | |

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| --- | --- | --- | --- | --- |
| Reference System Identifier  (*RS\_Identifier*) | 5.8.2.2 | code |  | The alphanumeric value identifying  the reference system, e.g.  "EPSG:4269" |
| 5.8.2.3 | codespace \*\*(C) |  | Identifier/namespace of the system in which the code is valid, e.g.<http://www.epsg-registry.org>. In cases where an identifier/namespace is not specified (e.g. Proj4), codespace is not mandatory. |
| 5.8.2.4 | version \*\* (C) |  | In cases where a version is not specified (e.g. Proj4), version is not mandatory. |
| **Guideline**: The preference is to only use projections that have their parameters described on a web accessible resource (see example). The first preference is to use the EPSG code from <http://www.epsg-registry.org>, The second preference is to use the SR-ORG code from [http://www.spatialreference.org](http://www.spatialreference.org/). However, some projections are not registered in an online registry. In these cases try registering the spatial reference with either <http://www.epsg-registry.org> or [http://www.spatialreference.org](http://www.spatialreference.org/). As a last resort, enter the proj4 parameters into the code element and leave codespace and version empty. | | | |
| **Examples:**    **EPSG.org**  <gmd:referenceSystemInfo>  <gmd:MD\_ReferenceSystem>  <gmd:referenceSystemIdentifier>  <gmd:RS\_Identifier>  <gmd:code>  <gco:CharacterString>EPSG:4269</gco:CharacterString>  </gmd:code>  <gmd:codeSpace>  <gco:CharacterString>http://www.epsg-registry.org</gco:CharacterString>  </gmd:codeSpace>  <gmd:version>  <gco:CharacterString>8.6.2</gco:CharacterString>  </gmd:version>  </gmd:RS\_Identifier>  </gmd:referenceSystemIdentifier>  </gmd:MD\_ReferenceSystem>  </gmd:referenceSystemInfo>  **SR-ORG**  <gmd:referenceSystemInfo>  <gmd:MD\_ReferenceSystem>  <gmd:referenceSystemIdentifier>  <gmd:RS\_Identifier>  <gmd:code>  <gco:CharacterString>SRG-ORG:29</gco:CharacterString>  </gmd:code>  <gmd:codeSpace>  <gco:CharacterString>http://www.spatialreference.org</gco:CharacterString>  </gmd:codeSpace>  </gmd:RS\_Identifier>  </gmd:referenceSystemIdentifier>  </gmd:MD\_ReferenceSystem>  </gmd:referenceSystemInfo>  **Proj4**  <gmd:referenceSystemInfo>  <gmd:MD\_ReferenceSystem>  <gmd:referenceSystemIdentifier>  <gmd:RS\_Identifier>  <gmd:code>  <gco:CharacterString>+proj=lcc +lat\_1=50 +lat\_2=70 +lat\_0=40 +lon\_0=-96 +x\_0=0 +y\_0=0 +ellps=GRS80 +datum=NAD83 +units=m +no\_defs  +proj=lcc +ellps=GRS80 +lat\_0=60+lon\_0=-95 +lat\_1=55 +lat\_2=80 +datum=NAD83 +units=m no\_defs  +proj=tmerc +lat\_0=0.000000000 +lon\_0=-62.000000000 +k=0.999500 +x\_0=400000.000 +y\_0=0.000 +ellps=clrk80 +towgs84=-255,-15,71,0,0,0,0 +units=m no\_defs  +proj=tmerc +lat\_0=0.000000000 +lon\_0=-62.000000000 +k=0.999500 +x\_0=400000.000 +y\_0=0.000 +ellps=clrk80 +towgs84=725,685,536,0,0,0,0 +units=m no\_defs  +proj=lcc +ellps=WGS84 +lat\_0=0 +lon\_0=-95 +lat\_1=49 +lat\_2=77 +x\_0=0 +y\_0=-8000000.0 +datum=WGS84 +units=m no\_defs  +proj=aea +ellps=GRS80 +lat\_0=45 +lon\_0=-126.0 +lat\_1=50.0 +lat\_2=58.5 +x\_0=1000000.0 +y\_0=0 +datum=NAD83 +units=m no\_defs  +proj=lcc +ellps=GRS80 +lat\_0=49 +lon\_0=-95 +lat\_1=49 +lat\_2=77 +datum=NAD83 +units=m no\_defs  </gco:CharacterString>  </gmd:code>  </gmd:RS\_Identifier>  </gmd:referenceSystemIdentifier>  </gmd:MD\_ReferenceSystem>  </gmd:referenceSystemInfo> | | | |

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| Distribution Information  *(MD\_Distribution)* | 5.11.1 | Transfer Options\*\* | See TransferOptions |  |
| 5.11.2 | Distributor \*\* | See MD\_Distributor |  |
| 5.11.3 | Distribution Format\*\* | See Distribution Format |  |
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| *Distributor*  *(MD\_Distributor)* | 5.11.2.1 | distributorContact\*\* | See CI\_ResponsibleParty | Information on party  responsible for dataset  distribution. |
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| Transfer Options  *MD\_DigitalTransferOptions* | 5.11.1.3 | onLine\*\* | See Online Resource |  |  |
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| Distribution Format  *(MD\_Format)* | 5.11.3.1 | name\*\* |  |  |
|
| **Guideline:** Name shall be mandatory. Choose one of: AI. AMF, Application, ASCII Grid, BMP, CDED ASCII, CDR, CSV, DOC, dxf, E00, ECW, EDI, EMF, EPS, ESRI REST, EXE, FGDB / GDB, Flat raster binary, GeoPDF, GeoRSS, GeoTIF, GIF, GML, HDF, HTML, IATI, JPEG 2000, JPG, JSON, JSON Lines, KML / KMZ, NetCDF, ODP, ODS, ODT, PDF, PNG, PPT, RDF, RDFa, RSS, RTF, SAR / CCT, SAV, SEGY, SHP, SQL, SVG, TIFF, TXT, XLS, XLSM, XML, WFS, WMS, WMTS, Zip, Other. | | | |
| 5.11.3.2 | version\*\* |  |  |
| **Guideline:** version shall be mandatory. Choose the version number or date of the format chosen. If version is unknown use the value unknown. | | | |

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| Extent  (*EX\_extent*) | 5.13.3 | Geographic Bounding Box | See Geographic Bounding Box |  |
| 5.13.5 | Temporal Element | See Temporal Element |  |

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| Geographic Bounding Box  (*EX\_GeographicBoundingBox*) | 5.13.3.2 | westBoundingLongitude |  |  |
| 5.13.3.3 | eastBoundingLongitude |  |  |
| 5.13.3.4 | southBoundingLatitude |  |  |
| 5.13.3.5 | northBoundingLatitude |  |  |
| **Examples:**  <gmd:extent>  <gmd:EX\_Extent>  <gmd:geographicElement>  <gmd:EX\_GeographicBoundingBox>  <gmd:westBoundLongitude>         <gco:Decimal>**-135.4338658**</gco:Decimal>        </gmd:westBoundLongitude>  <gmd:eastBoundLongitude>       <gco:Decimal>**-131.4236097**</gco:Decimal>      </gmd:eastBoundLongitude>      <gmd:southBoundLatitude>       <gco:Decimal>**57.705188766**</gco:Decimal>       </gmd:southBoundLatitude>      <gmd:northBoundLatitude>       <gco:Decimal>**59.696028939**</gco:Decimal>       </gmd:northBoundLatitude>  </gmd:EX\_GeographicBoundingBox>    </gmd:geographicElement>  </gmd:EX\_Extent>  </gmd:extent> | | | |
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|  |  |  |  |  |
| Temporal Element  (*EX\_TemporalExtent*) | 5.13.5.1 | extent |  |  |
| **Guideline**: TemporalExtent will be used to describe the time period that a particular dataset covers or describes. beginPosition describes the Beginning or Start date of the dataset while endPosition describes the Final date for which the dataset is describing. Some datasets will have a known beginPosition but will not have a known endPosition as the dataset is still “valid” for the current time period. Therefore beginPosition is mandatory and endPosition is optional. Date format in beginPosition and endPosition will comply with YYYY-MM-DD, YYYY-MM, or YYYY (ISO 8601). | | | |
| **Example:**  <gmd:extent>  <gmd:EX\_Extent>  <gmd:temporalElement>  <gmd:EX\_TemporalExtent>  <gmd:extent>  <gml:TimePeriod gml:id="**timeperiod1**">  <gml:beginPosition>2011-01-01</gml:beginPosition>  <gml:endPosition>2011-12-31</gml:endPosition>  </gml:TimePeriod>  </gmd:extent>  </gmd:EX\_TemporalExtent>  </gmd:temporalElement>  </gmd:EX\_Extent>  </gmd:extent>  <gmd:extent> | | | |

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| --- | --- | --- | --- | --- |
| Citation  (*CI\_Citation*) | 5.14.1 | title |  |  |
| 5.14.3 | date | See Date |  |
| 5.14.7 | citedResponsibleParty\* | See Responsible Party |  |

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| Date  (*CI\_Date*) | 5.15.1 | date |  |  |  |
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|  |
| 5.15.2 | dateType | Codelist  [napCI\_DateTypeCod](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html#IC_87)e |  |  |
| **Guideline:** date and dateType values shall be provided for dateType values of creation, publication, and (where applicable) revision. | | | |  |
| **Example:**  <gmd:date>  <gmd:CI\_Date>  <gmd:date>  <gco:Date>2009-10-31</gco:Date>  </gmd:date>        <gmd:dateType>  <gmd:CI\_DateTypeCode codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_87>" codeListValue="RI\_367">publication; publication</gmd:CI\_DateTypeCode>  </gmd:dateType>  </gmd:CI\_Date>  </gmd:date>  <gmd:date>  <gmd:CI\_Date>  <gmd:date>  <gco:Date>2009-10-31</gco:Date>  </gmd:date>  <gmd:dateType>  <gmd:CI\_DateTypeCode codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_87>" codeListValue="RI\_366">creation; création</gmd:CI\_DateTypeCode>  </gmd:dateType>  </gmd:CI\_Date>  </gmd:date>  <gmd:date>  <gmd:CI\_Date>  <gmd:date>  <gco:Date>2009-10-31</gco:Date>  </gmd:date>  <gmd:dateType>  <gmd:CI\_DateTypeCode codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_87>" codeListValue="RI\_368">revision; révision</gmd:CI\_DateTypeCode>  </gmd:dateType>  </gmd:CI\_Date>  </gmd:date> | | | |  |
|  |  |  |  |  |  |
| Responsible Party  *(CI\_ResponsibleParty)* | 5.16.2 | organizationName\*\* |  |  |  |
| **Guideline:** organizationName shall be mandatory. Federal department and agency titles will conform to Federal Identity Program policy and use the Applied Title for their department or agency as defined at <http://www.tbs-sct.gc.ca/fip-pcim/reg-eng.asp>. 5.16.2 organizationName will conform to the format: Government of Canada; AppliedTitle. Sub-organizations (sectors, branches, etc.) may be included at the option of the department. See Responsible Party example below. | | | |  |
| 5.16.4 | contactInfo\* (C) | See Contact | Mandatory in the context of Metadata Record Information, Data Identification and Distributor Information. |  |
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|  |
| 5.16.5 | role | Codelist  [napCI\_RoleCod](http://nap.geogratis.gc.ca/metadata/register/codelists-eng.html#IC_90)e |  |  |
| **Example:**  <gmd:contact>  <gmd:CI\_ResponsibleParty>  <gmd:organisationName “xsi:type="gmd:PT\_FreeText\_PropertyType">  <gco:CharacterString>Government of Canada; Agriculture and Agri-Food Canada; Science and Technology Branch; Agri-Geomatics</gco:CharacterString>  <PT\_FreeText>  <textGroup>  <gmd:LocalisedCharacterString locale=“#fra”>Gouvernement du Canada; Agriculture et Agroalimentaire Canada; Direction générale des sciences et de la technologie; Agrogéomatiques</LocalisedCharacterString>  </textGroup>  </PT\_FreeText>  </gmd:organisationName>  <gmd:contactInfo>  <gmd:CI\_Contact>  <gmd:address>  <gmd:CI\_Address>  <gmd:electronicMailAddress>  <gco:CharacterString>agri-geomatics-agrog@agr.gc.ca</gco:CharacterString>  </gmd:electronicMailAddress>  </gmd:CI\_Address>  </gmd:address>  </gmd:CI\_Contact>  </gmd:contactInfo>  <gmd:role>  <gmd:CI\_RoleCode codeListValue="RI\_414"  codeList="http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC\_90">pointOfContact; contact</gmd:CI\_RoleCode>  </gmd:role>  </gmd:CI\_ResponsibleParty>  </gmd:contact> | | | |  |
|  |
|  |
| Contact  (*CI\_Contact*) | 5.17.2 | address\*\* | See Address |  |  |
|  |
| **Guideline:** address shall be mandatory (see Responsible Party example). | | | |  |

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| Address  (*CI\_Address*) | 5.19.6 | electronicMailAddress\*\* |  |  |
| **Guideline:** electronicMailAddress shall be mandatory (see Responsible Party example). | | | |

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| Online Resource  (*CI\_OnlineResource*) | **FGP R1 Requirement:** For each web service noted as an online resource, add an attribute on the "online" element to register the language of the resource. Acceptable values are xlink:role="urn:xml:lang:eng-CAN" and xlink:role="urn:xml:lang:fra-CAN". Required for FGP R1 implementation of Geonetwork/RCS/Ramp system. See example. | | | |
| 5.20.1 | linkage |  |  |
| **Guideline**:  1) For a web map service (OGC:WMS type):  An OGC WMS GetCapabilities request with the addition of a non-standard “LAYERS=<layername>” parameter. For FGP R1 implementation, layername is limited to only one layer or one group layer name.  Optionally, two other non-standard parameters can be added to indicate the preferred legend and get\_feature\_info  formats. The parameters are: LEGEND\_FORMAT=<legend\_format> and FEATURE\_INFO\_TYPE=<featureInfoformat>. When not provided, FGP R1 implementation may not enable legend and get feature info functionalities correctly.  Example without the optional parameters:  <http://ows.geobase.ca/wms/geobase_fr?service=WMS&request=GetCapabilities&version=1.3.0&layers=nhn:hydrography>  Example with the optional parameters:  <http://maps.geogratis.gc.ca/wms/railway_en?service=WMS&version=1.3.0&request=GetCapabilities&layers=railway&legend_format=image/png&feature_info_type=text/html>  2) For a web map service (ESRI type):  An Esri mapserver request with the addition of the layer number.  Example: <http://www.agr.gc.ca/atlas/rest/services/servicesdecarte/aac_bassin_hydrographique_2013/MapServer/10>  3) For any other online resource (dataset, supporting document, data dictionary, etc.), add a valid URL. | | | |
| 5.20.2 | protocol\* |  |  |
| **Guideline**: For FGP R1, two types of web map services are accepted for online visualization. Web map services will be documented in the protocol element as:   1. **OGC:WMS** for OGC Web Map Service 2. **ESRI REST: Map Service** for Esri Mapping Service.   For any other online resources (not an FGP R1 web map service), a value for 5.20.2 protocol should be taken from an official controlled list such as the Official Internet Protocol Standards published on the Web at <http://www.rfc-editor.org/rfcxx00.html> or the Internet Assigned Numbers Authority (IANA) at <http://www.iana.org/numbers.html>. Protocol value is typically HTTP, HTTPS or FTP. | | | |
| 5.20.4 | name\*\* |  |  |
| **Guideline:**  the name of the resource being described. | | | |
| 5.20.5 | description\*\* |  |  |
| **Guideline:**  Description shall be mandatory and will support the display of the language, content type and format of the resource on the Open Government Portal. **To allow for successful loading and access of resources on Open Government Portal, it is imperative that this field conform to the guidance below.**    The following information describing the online resource will be entered into this field, in precisely the following format: ContentType;Format;Lang,Lang,Lang    ContentType:  Select one content type from the following list: Dataset, Données, Web Service, Service Web, API, API, Supporting Document, Document de soutien, Application, Application    NOTE: Supporting Document is used to indicate resources such as data dictionary, metadata record, etc..    Format:  Select one format from the following list: AI. AMF, Application, ASCII Grid, BMP, CDED ASCII, CDR, CSV, DOC, dxf, E00, ECW, EDI, EMF, EPS, ESRI REST, EXE, FGDB / GDB, Flat raster binary, GeoPDF, GeoRSS, GeoTIF, GIF, GML, HDF, HTML, IATI, JPEG 2000, JPG, JSON, JSON Lines, KML / KMZ, NetCDF, ODP, ODS, ODT, PDF, PNG, PPT, RDF, RDFa, RSS, RTF, SAR / CCT, SAV, SEGY, SHP, SQL, SVG,  TIFF, TXT, XLS, XLSM, XML, WFS, WMS, WMTS, Zip, Other.  NOTE: If you have a format that is not listed contact FGP Help Desk (cimitche@nrcan.gc.ca)  Language:  Select one or more language designation from the following list: eng, fra, zxx  NOTE: zxx is the ISO 639-2/T code for "no linguistic content", e.g. animal sounds, raw satellite image.  Delimit each language designation with a comma (,).  To add a language other than French or English, include the appropriate ISO 639-2/T (use /T terminological, not /B bibliographical) code and append it with another comma separator. | | | |
| **Example:**  <gmd:transferOptions>          <gmd:MD\_DigitalTransferOptions>            <gmd:onLine xlink:role="urn:xml:lang:eng-CAN">              <gmd:CI\_OnlineResource>                <gmd:linkage>                  <gmd:URL><http://maps.geogratis.gc.ca/wms/emerald_ash_borer_reg_area?service=WMS&amp;request=getCapabilities&amp;version=1.3.0&amp;layers=emerald_ash_borer_reg_area></gmd:URL>                </gmd:linkage>                <gmd:protocol>                  <gco:CharacterString>OGC:WMS</gco:CharacterString>                </gmd:protocol>                <gmd:name xsi:type="gmd:PT\_FreeText\_PropertyType">                  <gco:CharacterString>CFIA Emerald Ash Borer Regulated Areas English Web Service</gco:CharacterString>                  <gmd:PT\_FreeText>                    <gmd:textGroup>                      <gmd:LocalisedCharacterString locale="#fra">ACIA Service web en anglais des lieux règlementés de l'agrile du frêne</gmd:LocalisedCharacterString>                    </gmd:textGroup>                  </gmd:PT\_FreeText>                </gmd:name>                <gmd:description xsi:type="gmd:PT\_FreeText\_PropertyType">                  <gco:CharacterString>Web Service;WMS;eng</gco:CharacterString>                  <gmd:PT\_FreeText>                    <gmd:textGroup>                      <gmd:LocalisedCharacterString locale="#fra">ServiceWeb;WMS;eng</gmd:LocalisedCharacterString>                    </gmd:textGroup>                  </gmd:PT\_FreeText>                </gmd:description>               </gmd:CI\_OnlineResource>            </gmd:onLine>            <gmd:onLine xlink:role="urn:xml:lang:fra-CAN">              <gmd:CI\_OnlineResource>                <gmd:linkage>                  <gmd:URL>[http://cartes.geogratis.gc.ca/wms/lieux\_reg\_agrile\_du\_frene?service=WMS&amp;request=getCapabilities&amp;version=1.3.0&amp;layers=lieux\_reg\_agrile\_du\_frene</gmd:URL](http://cartes.geogratis.gc.ca/wms/lieux_reg_agrile_du_frene?service=WMS&amp;request=getCapabilities&amp;version=1.3.0&amp;layers=lieux_reg_agrile_du_frene%3c/gmd:URL)>                </gmd:linkage>                <gmd:protocol>                  <gco:CharacterString>OGC:WMS</gco:CharacterString>                </gmd:protocol>                <gmd:name xsi:type="gmd:PT\_FreeText\_PropertyType">                  <gco:CharacterString>CFIA Emerald Ash Borer Regulated Areas French Web Service</gco:CharacterString>                  <gmd:PT\_FreeText>                    <gmd:textGroup>                      <gmd:LocalisedCharacterString locale="#fra">ACIA Service web en français des lieux règlementés de l'agrile du frêne</gmd:LocalisedCharacterString>                    </gmd:textGroup>                  </gmd:PT\_FreeText>                </gmd:name>                <gmd:description xsi:type="gmd:PT\_FreeText\_PropertyType">                  <gco:CharacterString>Web Service;WMS;fra</gco:CharacterString>                  <gmd:PT\_FreeText>                    <gmd:textGroup>                      <gmd:LocalisedCharacterString locale="#fra">Service Web;WMS;fra</gmd:LocalisedCharacterString>                    </gmd:textGroup>                  </gmd:PT\_FreeText>                </gmd:description>               </gmd:CI\_OnlineResource>            </gmd:onLine>          </gmd:MD\_DigitalTransferOptions> | | | |

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| --- | --- | --- | --- | --- |
| Locale  (*PT\_Locale*) |  | language\*\* |  |  |
|  | country\*\* |  |  |
|  | characterEncoding\*\* |  |  |
| **Guideline:** NAP registered code lists based on ISO 639.2 alpha-3 terminology codes for language (eng=English, fra=French) and ISO 3166-1 alpha-3 codes (CAN=Canada) for countries shall be used to describe locale and character encoding shall be set to "utf8; utf8", as shown in the following example: | | | |
| **Example:**  <gmd:locale>  <gmd:PT\_Locale id="fra">  <gmd:languageCode>  <gmd:LanguageCode codeListValue="fra" codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_116>">French; Français</gmd:LanguageCode>  </gmd:languageCode>  <gmd:country>  <gmd:Country codeListValue="CAN" codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_117>" >Canada; Canada</gmd:Country>  </gmd:country>  <gmd:characterEncoding>  <gmd:MD\_CharacterSetCode codeListValue="RI\_458"  codeList="<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC_95>" >utf8; utf8</gmd:MD\_CharacterSetCode>  </gmd:characterEncoding>  </gmd:PT\_Locale>  </gmd:locale> | | | |

# Additional Guidelines

This section identifies other metadata characteristics identified as benefiting from standardization.

## Bilingual Support

Implement one bilingual metadata record per dataset.

## Header Information

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| **Guideline:** The information in the header of the NAP metadata profile should appear as in the example below. |
| Example:  <?xml version='1.0' encoding='UTF-8'?>  <gmd:MD\_Metadata  xmlns="http://www.isotc211.org/2005/gmd"  xmlns:xsi="<http://www.w3.org/2001/XMLSchema-instance>"  xmlns:gco="<http://www.isotc211.org/2005/gco>"  xmlns:gfc="<http://www.isotc211.org/2005/gfc>"  xmlns:gmd="<http://www.isotc211.org/2005/gmd>"  xmlns:xlink="<http://www.w3.org/1999/xlink>"  xmlns:gmi="<http://www.isotc211.org/2005/gmi>"  xmlns:gml="<http://www.opengis.net/gml/3.2>"  xmlns:gmx="<http://www.isotc211.org/2005/gmx>"  xmlns:gsr="<http://www.isotc211.org/2005/gsr>"  xmlns:gss="<http://www.isotc211.org/2005/gss>"  xmlns:gts="<http://www.isotc211.org/2005/gts>"  xmlns:srv="<http://www.isotc211.org/2005/srv>"  xsi:schemaLocation="http://www.isotc211.org/2005/gmd http://nap.geogratis.gc.ca/metadata/tools/schemas/metadata/can-cgsb-171.100-2009-a/gmd/gmd.xsd <http://www.isotc211.org/2005/srv> http://nap.geogratis.gc.ca/metadata/tools/schemas/metadata/can-cgsb-171.100-2009-a/srv/srv.xsd http://www.geconnections.org/nap/napMetadataTools/napXsd/napm <http://nap.geogratis.gc.ca/metadata/tools/schemas/metadata/can-cgsb-171.100-2009-a/napm/napm.xsd>"> |

## Codelists

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| **Guideline:** Codelists shall conform to “<http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml>”. Codelist values will be implemented such that both English and French are part of one value (See example below). Note: the Isotc211.org codelists does not include bilingual codelists while nap.geogratis.gc.ca does. |
| **Example:**  <gmd:CI\_RoleCode codeList="http://nap.geogratis.gc.ca/metadata/register/napMetadataRegister.xml#IC\_90" codeListValue="RI\_418">author; auteur</gmd:CI\_RoleCode> |

1. mandatory under given conditions [↑](#footnote-ref-1)
2. spatialRepresentionType is a Data Identification's optional attribute and as such is not part of this document. [↑](#footnote-ref-2)