

WMO Core Metadata

Notes: The following table provides an overview of the WMO Community Core Metadata Profile suitable for use by decision makers and users - NOT implementers. To implement this standard the ISO DIS 19115 document, which describes the complete ISO standard, must be consulted.

This standard provides a general definition for directory searches and exchange that should be applicable to a wide variety of WMO datasets. It does not specify how these metadata should be archived or presented to users. It also does not specify any particular implementation and could be implemented as a database, a flat file, or any other suitable mechanism. However, XML is recommended as the standard for exchange. The comprehensive and technical details required for implementation of this standard in XML are provided in the WMO Core Metadata XML Schema, which is given in the annex to paragraph 4.2 below. In the XML Schema, Class names (such as MD_Metadata) are reserved for data types. These data type names do not appear in the XML instance. Instead the classes are referenced by the name of an object (e.g. metadata) which is an instance of the class (MD_Metadata).

Of the core elements listed, those in **bold** are required, with all others being optional.

It must be remembered that this list defines a minimum set of information to describe data for WMO exchange and is not exhaustive. To fully meet the requirements of WMO Programmes for metadata, application of far more comprehensive standards would be required. The development of these comprehensive standards should be pursued by the individual programmes.

Generic Name	ISO Field/Class Name and Reference Lines	Definition
Metadata ID	MD_Metadata (1)	Unique identifier for this metadata item
Metadata language	fileIdentifier (2)	Language of this metadata item
Metadata char. set	language (3)	Character set of this metadata item (Default of ISO 10646-1)
Metadata contact	characterSet (4)	Party responsible for this metadata item
	contact (8)	
	CI_ResponsibleParty (see 374 below)	
Metadata date	dateStamp (9)	Date that this metadata item was created
Metadata name	metadataStandardName (10)	Name of the metadata standard (including profile name) used
Metadata Version	metadataStandardVersion (11)	Version (profile) of the metadata standard used
	referenceSystemInfo (13)	Description of the data temporal and spatial reference system
	MD_ReferenceSystem (186)	Information about the reference systems used (temporal, coordinate and geographic)
Data Reference System	ReferenceSystemIdentifier (187)	Name of reference system
	ReferenceAuthority (206)	
	CI_ResponsibleParty (374)	Person or party responsible for maintenance of the reference system

Data information	(see below) ReferenceDescription (207) IdentificationInfo (15) MD_DataIdentification (see 36 below)	Description of the Reference System Basic information about the data
Data distribution Information	distributionInfo (17) MD_Distribution (see 270 below)	Information about the data distribution and availability
Data Lineage or Quality	dataQualityInfo(18) LI_Lineage (see 82 below)	Information about the data lineage or quality
Title	MD_DataIdentification (36) Citation (24) title (360)	Basic information required to uniquely identify a dataset Name of the dataset
Reference Date	referenceDate (362) CI_Date (see 393 below)	Reference date for the dataset
Identifier	identifier (365) IdentifierType (366)	Unique identifier for dataset Form of the unique identifier (if standardized)
Abstract	abstract (25)	Brief narrative summary of the contents of the dataset
Dataset Contact	pointOfContact (29) CI_ResponsibleParty (see 374 below)	Identification of, and means of communication with, person(s) and organizations(s) associated with the dataset
Update frequency	resourceMaintenance(30) maintenanceAnd UpdateFrequency(143) maintenanceNote(148)	Frequency with which changes are made to the dataset after the initial dataset is created Information regarding specific requirements for maintaining the dataset
Access Rights or Restrictions	resourceConstraints (35) MD_Constraints (67) (see below)	Restrictions on the access and use of the resource or metadata
Spatial Resolution	spatialResolution (38) spatialRepresentationType (37) language(39)	Spatial density of the data in the dataset (e.g. grid spacing) Method used to spatially represent data in the dataset [Code list: B.5.26]
Language	characterSet (40)	Language(s) used in the dataset, if applicable
Character set	topicCategory (41)	Character set used in the dataset, if applicable
Topic Category		Discipline covered by this dataset [ISO code list B.5.27] - Note this field is of limited use for WMO purposes but is a required field within the ISO standard and is

Keywords	descriptiveKeywords (33)	included to ensure conformity. List of predefined and other keywords used to describe the dataset
Date or period	CI_Date (393) date or period (394) dateType (395)	Reference date or period for the dataset Type of date [code list: creation, publication or revision date]
Responsible Party Organisation Org. role Individual name Position Phone number Fax number Address E-mail address Web Site	CI_ResponsibleParty (374) organisationName (376) role (379) individualName (375) positionName (377) contactInfo (378) CI_Contact (387) phone (388) voice (408) facsimile (409) address(389) deliveryPoint (381) city (382) postalCode (384) country (385) electronicMailAddress (386) onLineAddress (390)	Name of the responsible organization Function performed by the responsible party [code list: resourceProvider, custodian, owner, user, distributor, originator, etc"] Name of the responsible person Position of the responsible person NOTE: Either a phone number or address is required Telephone by which individuals can speak to the responsible party Telephone number of a fax machine for the responsible party Address line for the location City of the location Postal code Country Electronic mail address of the responsible party URL of organisation
Vertical Extent Geographic Extent Geographic name Bounding box	EX_Extent (334) Description (335) Ex_VerticalExtent (354) minimumValue (355) maximumValue (356) unitOfMeasure (357) verticalDatum (358) EX_GeographicExtent (339) EX_GeographicDescription (348) geographicIdentifier (349) EX_GeographicBoundingBox	Information about spatial, vertical, and temporal extent of the dataset Spatial and temporal extent for the dataset (in text) Vertical domain of the dataset Lowest vertical extent contained in the dataset Highest vertical extent contained in the dataset Vertical units used for vertical extent information (E.g.: metres, feet, hectopascals) Information about the origin from which the maximum and minimum elevation values are measured (see ISO 1911) Note: At least either a description, bounding box or bounding polygon is required Description of the geographic area using identifiers (names) Identifier used to represent a geographic area or location NOTE This is only an approximate reference so specifying the co-ordinate system is

<p>Bounding polygon</p> <p>Temporal Extent</p>	<p>westBoundLongitude (344) eastBoundLongitude (345) southBoundLatitude (346) northBoundLatitude (347)</p> <p>EX_BoundingPolygon (341) polygon (342)</p> <p>EX_TemporalExtent (350) Extent (351) beginDateTime (new) endDateTime (new) dataFrequency (new)</p>	<p>unnecessary Western-most limit of the dataset, longitude in decimal degrees (positive east) Eastern-most limit of the dataset, longitude in decimal degrees (positive east) Southern-most limit of the dataset, latitude in decimal degrees (positive north) Northern-most, limit of the dataset, latitude in decimal degrees (positive north)</p> <p>Sets of points defining a bounding polygon</p> <p>NOTE: Each of the 3 fields below is required if applicable Beginning date of the data in the dataset Ending date of data in the dataset Observing frequency of the data in the dataset [code: WMO_DataFrequencyCode]</p>
<p>Access Rights or Restrictions</p>	<p>MD_Constraints (67) useLimitation (68)</p> <p>MD_LegalConstraints (69) accessConstraints (70) useConstraints (71) otherConstraints (72)</p> <p>MD_SecurityConstraints (73) classification (74) userNote (75)</p> <p>classificationSystem (76) handlingDescription (78)</p>	<p>Restrictions on the access and use of the dataset or metadata (Could specify WMO Additional Data as free text Restrictions and legal prerequisites for accessing and using the dataset Any special restrictions or limitations on obtaining the dataset Any special restrictions or limitations or warnings on using the dataset Other restrictions and legal prerequisites for accessing and using the dataset Handling restrictions imposed on the dataset for security reasons Name of the handling restrictions on the dataset Explanation of the application of the legal constraints or other restrictions and legal prerequisites for obtaining and using the dataset Name of the classification system Additional information about the restrictions on handling the dataset</p>
<p>Format name</p> <p>Format version</p> <p>On-line source</p> <p>Off-line media</p>	<p>MD_Distribution (270) distributionFormat (271) name (285) version (286) TransferOptions (273) OnLine (277) linkage (397) WMO_Source (new)</p> <p>Offline (278)</p>	<p>Information about the distributor of and options for obtaining the dataset Provides a description of the format of the data to be distributed Name of the data transfer format(s) Version of the format (date, number, etc.) NOTE: At least either on-line source or off-line media is required Information about online sources from which the dataset can be obtained Location (address) for on-line access using a Uniform Resource Locator WMO centre identifier</p> <p>Information about offline media on which the dataset can be obtained</p>

	mediumName (292)	Name of the medium on which the dataset can be received [code list: ISO B.5.20]
Processing Level	LI_Lineage (82) statement(83) processStep(84) source(85)	Information about the level of processing applied to the dataset Information about the events or source data used in constructing the dataset Information about an event in the creation process for the dataset Information about the source data used in creating the dataset
Reference System	MD_ReferenceSystem (186) referenceSystemIdentifier (187) authority (206) CI_ResponsibleParty (374) (see above) code(207)	Information about the reference systems used (temporal, coordinate and geographic) Name of reference system Person or party responsible for maintenance of the reference system namespace Alphanumeric value identifying an instance in the namespace

Extensions to ISO Code Lists

B.5.26 MD_SpatialRepresentationTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_SpatialRepresentationTypeCode	SpatRepTypCd	method used to represent geographic information in the dataset
2.	vector	001	vector data is used to represent geographic data
3.	grid	002	grid data is used to represent geographic data
4.	textTable	003	textual or tabular data is used to represent geographic data
5.	tin	004	triangulated irregular network
6.	stereoModel	005	three-dimensional view formed by the intersecting homologous rays of an overlapping pair of images
7.	video	006	scene from a video recording
Additional entries			
8.	irregularPoints	007	Irregularly-spaced points, such as meteorological stations

NEW:

WMO_DataFrequencyCode <<CodeList>>

	Name	Domain code	Definition
1.	WMO_DataFrequencyCode	DataFreqCd	Temporal sampling frequency of the data within the dataset
2.	Continuous	001	More than once per minute
3.	1minute	002	
4.	5minute	003	
5.	10minute	004	
6.	15minute	005	
7.	30minute	006	
8.	Hourly	007	
9.	3hourly	008	
10.	6hourly	009	
11.	8hourly	010	
12.	12hourly	011	
13.	Daily	012	
14.	Weekly	013	
15.	10day	014	
16.	Fortnightly	015	
17.	Monthly	016	
18.	3monthly	017	
19.	6monthly	018	
20.	Annual	019	
21.	decade	020	Decade or longer