Gap Analysis for Integrated Atmospheric ECV Climate Monitoring

(GAIA-CLIM)

Task 1.2: Guide to the metadata compilation



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1. How to compile the metadata file

* Go to http://gaiaclimmd.imaa.cnr.it
* Login with your credentials
* Choose you preferred language though the help to the compilation page is available in English only).
* Go to the menu on the top left of the page, scroll the arrow and go to “add new record”.
* In the following page, to add a new metadata file push the “CREATE” button

Now you can start filling your metadata following the guidelines or the help function. The example provided by the authors is pre-loaded in the page just for your convenience and must be modified.

To activate the help function please go the upper right side corner and push the eye icon.



Scroll the arrow and activate the option “Tooltips”.

Now, the help function is active and it appears when you click in each one of the compilation windows of the metadata page.

At the end of the metadata compiling, push the “VALIDATE” button and, if there are no errors, push the button “SAVE AND CLOSE”.

The complied metadata file will be saved and you will able to visualize it in the catalogue directory, where you can decide also to edit or remove an the inserted file.

When you finish your work please remember to sign out.

1. Metadata categories
   1. Identification info

*Title*: This a characteristic, and often unique, name by which the resource is known. The value domain of this metadata element is free text. Please name the file using the name of the considered network and of the considered Essential Climate Variables (ECV) according to the table reported in the grant agreement and finally add the measurement type (profile, column...).

*Date*: Date of creation of metadata (Must select 'creation' from menu)

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Applicable for** |
| creation | date identifies when the resource was brought into existence | start date of a data collection, start date of a cruise.. |
| publication | date identifies when the resource was issued | paper publication date, dataset/resource release |
| revision | date identifies when the resource was examined or re-examined and improved or amended |  |
| adopted | date identifies when resource was adopted |  |
| deprecated | date identifies when resource was deprecated |  |
| distribution | date identifies when an instance of the resource was distributed |  |
| expiry | date identifies when resource expires |  |
| inForce | date identifies when resource became in force |  |
| lastRevision | date identifies when resource was last reviewed |  |
| lastUpdate | date identifies when resource was last updated |  |
| nextUpdate | date identifies when resource will be next updated |  |
| released | the date that the resource shall be released for public access |  |
| superseded | date identifies when resource was superseded or replaced by another resource |  |
| unavailable | date identifies when resource became not available or obtainable |  |
| validityBegins | time at which the data are considered to become valid. NOTE: There could be quite a delay between creation and validity begins |  |
| validityExpires | time at which the data are no longer considered to be valid |  |

*Abstract*: This is a brief narrative summary of the content of the resource. Please follow the provided template.

*Purpose*: The reason for which the metadata is collected. You could also leave the one reported in the example.

*Topic category code*: The topic category is a high-level classification scheme to assist in the grouping and topic-based search of available spatial data resources. The user can choose across a list of categories.

Entries available:

|  |  |
| --- | --- |
| **Entry** | **Description** |
| farming | rearing of animals and/or cultivation of plants. Examples: agriculture, irrigation, aquaculture, plantations, herding, pests and diseases affecting crops and livestock |
| biota | flora and/or fauna in natural environment. Examples: wildlife, vegetation, biological sciences, ecology, wilderness, sealife, wetlands, habitat |
| boundaries | legal land descriptions. Examples: political and administrative boundaries |
| climatologyMeteorologyAtmosphere | processes and phenomena of the atmosphere. Examples: cloud cover, weather, climate, atmospheric conditions, climate change, precipitation |
| economy | economic activities, conditions and employment. Examples: production, labour, revenue, commerce, industry, tourism and ecotourism, forestry, fisheries, commercial or subsistence hunting, exploration and exploitation of resources such as minerals, oil and gas |
| elevation | height above or below sea level. Examples: altitude, bathymetry, digital elevation models, slope, derived products |
| environment | environmental resources, protection and conservation. Examples: environmental pollution, waste storage and treatment, environmental impact assessment, monitoring environmental risk, nature reserves, landscape |
| geoscientificInformation | information pertaining to earth sciences. Examples: geophysical features and processes, geology, minerals, sciences dealing with the composition, structure and origin of the earth s rocks, risks of earthquakes, volcanic activity, landslides, gravity information, soils, permafrost, hydrogeology, erosion |
| health | health, health services, human ecology, and safety. Examples: disease and illness, factors affecting health, hygiene, substance abuse, mental and physical health, health services |
| imageryBaseMapsEarthCover | base maps. Examples: land cover, topographic maps, imagery, unclassified images, annotations |
| intelligenceMilitary | military bases, structures, activities. Examples: barracks, training grounds, military transportation, information collection |
| inlandWaters | inland water features, drainage systems and their characteristics. Examples: rivers and glaciers, salt lakes, water utilization plans, dams, currents, floods, water quality, hydrographic charts |
| location | positional information and services. Examples: addresses, geodetic networks, control points, postal zones and services, place names |
| oceans | features and characteristics of salt water bodies (excluding inland waters). Examples: tides, tidal waves, coastal information, reefs |
| planningCadastre | information used for appropriate actions for future use of the land. Examples: land use maps, zoning maps, cadastral surveys, land ownership |
| society | characteristics of society and cultures. Examples: settlements, anthropology, archaeology, education, traditional beliefs, manners and customs, demographic data, recreational areas and activities, social impact assessments, crime and justice, census information |
| structure | man-made construction. Examples: buildings, museums, churches, factories, housing, monuments, shops, towers |
| transportation | means and aids for conveying persons and/or goods. Examples: roads, airports/airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location, aeronautical charts, railways |
| utilitiesCommunication | energy, water and waste systems and communications infrastructure and services. Examples: hydroelectricity, geothermal, solar and nuclear sources of energy, water purification and distribution, sewage collection and disposal, electricity and gas distribution, data communication, telecommunication, radio, communication networks |
| extraTerrestrial | region more than 100 km above the surface of the Earth |
| disaster | Information related to disasters. Examples: site of the disaster, evacuation zone, disaster-prevention facility, disaster relief activities |

*Language*: This is the language(s) used within the resource. The value domain of this metadata element is limited to the languages defined in ISO 639-2. You cannot edit directly this element, you have to choose from a list and then click to add.

*Character encoding*: Preferably this should be UTF-8.

*Description*: Description of the station (e.g. Name: St. Koloman AT0004R, Lat: 47.65, Lon: 13.2, Alt: 851.0 m a.s.l.)

*Minimum value*: Lowest vertical extent (e.g. altitude) contained in dataset. For vertically integrated measurement please write “column”, for surface measurements please write “surface” and similarly for tower installation and aircraft, write “tower” or “aircraft”.

*Maximum value*: Highest vertical extent (e.g. altitude) contained in dataset. For vertically integrated measurement please write “column”, for surface measurements please write “surface” and similarly for tower installation and aircraft, write “tower” or “aircraft”.

*Maintenance and update frequency*: frequency with which modifications and deletions are made to the data after it is first produced.

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Notes** |
| continual | data is repeatedly and frequently updated | use fo data that is updated at a greater than daily frequency |
| daily | data is updated each day |  |
| weekly | data is updated on a weekly basis |  |
| fortnightly | data is updated every two weeks |  |
| monthly | data is updated each month |  |
| quarterly | data is updated every three months |  |
| biannually | data is updated twice each year |  |
| annually | data is updated every year |  |
| asNeeded | data is updated as deemed necessary | applies to resources with 'completed' status |
| irregular | data is updated in intervals that are uneven in duration |  |
| notPlanned | there are no plans to update the data | applies to resources with 'completed' status |
| unknown | frequency of maintenance for the data is not known |  |

* + 1. Point of contact:

*Role*: Function performed by the responsible party

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Applicable for** |
| author | party who authored the resource |  |
| custodian | party that accepts accountability and responsability for the data and ensures appropriate care and maintenance of the resource | archive |
| distributor | party who distributes the resource |  |
| originator | party who created the resource |  |
| owner | party that owns the resource |  |
| pointOfContact | party who can be contacted for acquiring knowledge about or acquisition of the resource | data collector, contactable expert |
| principalInvestigator | key party responsible for gathering information and conducting research | chief scientist |
| processor | party who has processed the data in a manner such that the resource has been modified |  |
| publisher | party who published the resource |  |
| resourceProvider | party that supplies the resource |  |
| sponsor | party that sponsors the resource |  |
| user | party who uses the resource |  |
| coAuthor | party who jointly authors the resource |  |
| collaborator | party who assists with the generation of the resource other than the principal investigator |  |
| contributor | party contributing to the resource |  |
| editor | party who reviewed or modified the resource to improve the content |  |
| funder | party providing monetary support for the resource |  |
| mediator | a class of entity that mediates access to the resource and for whom the resource is intended or useful |  |
| rightsHolder | party owning or managing rights over the resource |  |
| stakeholder | party who has an interest in the resource or the use of the resource |  |

* + - 1. Party

*Name*: The name of organisation

*Electronic mail address*: E-mail of organisation

* + - * 1. Individual

Identification of, and means of communication with, person(s) and organisation(s) associated with the resource(s)

*Name*: Name of the responsible person

*Position name*: Role or position of the responsible person

* + 1. Temporal Extent

The temporal extent defines the time period covered by the content of the resource. This time period may be expressed as an interval of dates expressed through the starting date and end date of the interval

*Begin date*: Time Period covered by the content – begin date. Please add the network/station starting operation for the measurement for the considered ECV and the considered measurements technique.

* + 1. Descriptive keywords

*Keyword*: Common-use word(s) or phrase(s) used

*Type*: Methods used to group similar keywords

The following list describes the type required used in the template:

*dataCentre*: keyword identifies a repository or archive that manages and distributes data

*discipline*: keyword identifies a branch of instruction or specialized learning (e.g. default is Atmospheric science)

*instrument*: keyword identifies a device used to measure or compare physical properties (i.e. sonde lidar, FTIR, …)

*product*: keyword identifies a type of product (e.g. the measured ECV)

*platform*: keyword identifies a structure upon which an instrument is mounted (please say if the instrument is fixed, mobile, aircraft-based, ….)

*temporal*: keyword identifies a time period related to the dataset (e.g. typical sampling time, for example weekly, daily, continuous, ….)

*featureType*: keyword identifies a resource containing or about a collection of feature instances with common characteristics (please specify the measurement type as “profile”, “column”, “surface”, “tower”, aircraft”, similarly to the Excel table including the review of the existing network circulated in advance).

* + 1. Resource constraints

*Access constraints*: limitation(s) placed upon the access of the data

*Use constraints*: limitation(s) placed upon the use of the data

Entries available for *Access constraints* and *Use constraints*:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Notes** |
| copyright | exclusive right to the publication, production, or sale of the rights to a literary, dramatic, musical, or artistic work, or to the use of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distributor |  |
| patent | government has granted exclusive right to make, sell, use or license an invention or discovery |  |
| patentPending | produced or sold information awaiting a patent |  |
| trademark | a name, symbol, or other device identifying a product, officially registered and legally restricted to the use of the owner or manufacturer |  |
| license | formal permission to do something |  |
| intellectualPropertyRights | rights to financial benefit from and control of distribution of non-tangible property that is a result of creativity |  |
| restricted | withheld from general circulation or disclosure |  |
| otherRestrictions | limitation not listed | applies to data is public and in the archive, but not distributed by the archive - add more info in free text field |
| unrestricted | no constraints exist |  |
| licenceUnrestricted | formal permission not required to use the resource |  |
| licenceEndUser | formal permission required for a person or an entity to use the resource and that may differ from the person that orders or purchases it |  |
| licenceDistributor | formal permission required for a person or an entity to commercialize or distribute the resource |  |
| private | protects rights of individual or organisations from observation, intrusion, or attention of others |  |
| statutory | prescribed by law |  |
| confidential | not available to the public contains information that could be prejudicial to a commercial, industrial, or national interest |  |
| SBU | although unclassified, requires strict controls over its distribution. |  |
| in-confidence | with trust |  |

*Other constraints*: This is a free-text field where additional constraints can be added

* 1. Metadata

*Language*: This is the language in which the metadata elements are expressed.

*Character encoding*: Preferably this should be UTF-8

*Title*: (Identifier and onlineResource for a parent metadata record)

*Date*: The date which specifies when the metadata record was created or updated.

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Applicable for** |
| creation | date identifies when the resource was brought into existence | start date of a data collection, start date of a cruise.. |
| publication | date identifies when the resource was issued | paper publication date, dataset/resource release |
| revision | date identifies when the resource was examined or re-examined and improved or amended |  |
| adopted | date identifies when resource was adopted |  |
| deprecated | date identifies when resource was deprecated |  |
| distribution | date identifies when an instance of the resource was distributed |  |
| expiry | date identifies when resource expires |  |
| inForce | date identifies when resource became in force |  |
| lastRevision | date identifies when resource was last reviewed |  |
| lastUpdate | date identifies when resource was last updated |  |
| nextUpdate | date identifies when resource will be next updated |  |
| released | the date that the resource shall be released for public access |  |
| superseded | date identifies when resource was superseded or replaced by another resource |  |
| unavailable | date identifies when resource became not available or obtainable |  |
| validityBegins | time at which the data are considered to become valid. NOTE: There could be quite a delay between creation and validity begins |  |
| validityExpires | time at which the data are no longer considered to be valid |  |

* + 1. Identifier

A value uniquely identifying the resource; it is generated automatically.

* + 1. Contact [1]

*Role*: Role of the person responsible for the creation and maintenance of the metadata (this section must contain data of the point of contact)

* + 1. Contact [2]

*Role*: Role of the person responsible for the creation and maintenance of the metadata (this section must contain data of the principal investigator)

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Applicable for** |
| author | party who authored the resource |  |
| custodian | party that accepts accountability and responsability for the data and ensures appropriate care and maintenance of the resource | archive |
| distributor | party who distributes the resource |  |
| originator | party who created the resource |  |
| owner | party that owns the resource |  |
| pointOfContact | party who can be contacted for acquiring knowledge about or acquisition of the resource | data collector, contactable expert |
| principalInvestigator | key party responsible for gathering information and conducting research | chief scientist |
| processor | party who has processed the data in a manner such that the resource has been modified |  |
| publisher | party who published the resource |  |
| resourceProvider | party that supplies the resource |  |
| sponsor | party that sponsors the resource |  |
| user | party who uses the resource |  |
| coAuthor | party who jointly authors the resource |  |
| collaborator | party who assists with the generation of the resource other than the principal investigator |  |
| contributor | party contributing to the resource |  |
| editor | party who reviewed or modified the resource to improve the content |  |
| funder | party providing monetary support for the resource |  |
| mediator | a class of entity that mediates access to the resource and for whom the resource is intended or useful |  |
| rightsHolder | party owning or managing rights over the resource |  |
| stakeholder | party who has an interest in the resource or the use of the resource |  |

* + - 1. Party

*Name*: The name of the organisation as free text

*Electronic mail address*: A contact e-mail address as a character string

Linkage: A referring web site

* + - * 1. Individual

*Name*: Name of the person responsible for the creation and maintenance of the metadata

*Position name*: Position of the individual in an organisation

* + 1. Type of resource

*Resource scope*: list of scopes that identifies the type of resources

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Applies to** |
| attribute | information applies to the attribute value |  |
| attributeType | information applies to the characteristic of a feature |  |
| collectionHardware | information applies to the collection hardware class | sensor, instrument |
| collectionSession | information applies to the collection session |  |
| dataset | information applies to the dataset | file |
| series | information applies to the series | a set of files |
| nonGeographicDataset | information applies to non-geographic data | space weather data |
| dimensionGroup | information applies to a dimension group |  |
| feature | information applies to a feature |  |
| featureType | information applies to a feature type |  |
| propertyType | information applies to a property type |  |
| fieldSession | information applies to a field session | cruise |
| software | information applies to a computer program or routine |  |
| service | information applies to a capability which a service provider entity makes available to a service user entity through a set of interfaces that define a behaviour, such as a use case | WMS |
| model | information applies to a copy or imitation of an existing or hypothetical object |  |
| tile | information applies to a tile, a spatial subset of geographic data |  |
| metadata | information applies to metadata |  |
| initiative | information applies to an initiative |  |
| sample | information applies to a sample |  |
| document | information applies to a document |  |
| repository | information applies to a repository |  |
| aggregate | information applies to an aggregate resource |  |
| product | metadata describing an ISO 19131 data product specification |  |
| collection | information applies to an unstructured set |  |
| coverage | information applies to a coverage |  |
| application | information resource hosted on a specific set of hardware and accessible over a network |  |

*Name*: description of the scope

* + 1. Alternative metadata reference

Unique Identifier and onlineResource for alternative metadata

*Title*: Alternative name by which the resource is known

* + 1. Metadata linkage

*Linkage*: online location where the metadata is available

*Function*: function performed by the resource.

Entries available:

|  |  |  |
| --- | --- | --- |
| **Entry** | **Description** | **Applies to** |
| download | online instructions for transferring data from one storage device or system to another | an FTP site or downloadable zip file |
| information | online information about the resource | URLs with descriptive details about the resource |
| offlineAccess | online instructions for requesting the resource from the provider |  |
| order | online order process for obtening the resource | an interface for requesting the resource |
| search | online search interface for seeking out information about the resource | map viewers, search interfaces |
| browseGraphic | browse graphic provided |  |
| browsing | online browsing provided |  |
| completeMetadata | complete metadata provided |  |
| emailService | online email service provided |  |
| fileAccess | online file access provided |  |
| upload | online resource upload capability provided |  |

* + 1. Metadata standard

Citation for the standards to which the metadata conforms

*Title*: Here should be mentioned the standard ISO 19115-3