



This document supports the creation of metadata for geospatial datasets to be published in the UTU Geospatial data service. The instruction provides examples on how to fill in the metadata fields, as well as some additional resources. You may utilize this [Metadata template](#) to record your metadata.

The metadata structure of the service follows the **ISO 19115 metadata standard**.

Element	Instructions	Mandatory
Title	<p>The name of your dataset. Title should be simple but informative and give an understanding of the content of your dataset. You can include the theme, region and in the case of series of datasets the year of the dataset to the title.</p> <p>The title should not have words like "points", "polygon" or "lines", but rather for example "areas" (when talking about polygons) or "locations" (when talking about points).</p> <p><i>Example:</i> <i>Dar es Salaam Tree Species 2018; Zanzibar Land Use 2010</i></p>	YES
Abstract	<p>A brief narrative of your dataset that explains the content of the data, the project during the dataset was created, reasons why it was created, what it can be used for, and other relevant information, such as a brief summary of the attributes, or the spatial and temporal scale of your dataset. This is the text that users read first when interacting with your dataset, and therefore it's the most important piece of metadata.</p> <p><i>Example:</i> <i>This dataset contains information of the tree species in Dar es Salaam. Each tree was mapped manually as points, and family and species attributes were attached to them during the mapping activity. This dataset was produced under the project Tanzania Green Cities for research and urban planning purposes. Extent of this dataset is the district of Ilala, but the coverage of this data will be expanded during the following year to other districts as well. All trees in the district were mapped, excluding trees in restricted area, which are described in more detail in the section of Data quality.</i></p>	YES
Keywords	<p>List of keywords that describes your dataset. Keywords helps users to easily search for the dataset. Vocabularies from GEMET (General multilingual environmental thesaurus) is a helpful tool for choosing the keywords, available here: http://www.eionet.europa.eu/gemet/en/themes/</p> <p><i>Example:</i> <i>trees; species; family; urban ecology</i></p>	YES

Element	Instructions	Mandatory
Date	<p>The creation date of your dataset. If the specific date is not known, it can be estimated, and additional explanation can be given in the section of supplementary information. If your dataset is created during a time period, the period can be given in the section of temporal extent.</p> <p>However, this field should be filled in any case in the format of YYYY-MM-DD.</p> <p><i>Example:</i> 2018-01-08</p>	YES
Topic category	<p>Theme that describes your dataset. Choose one of these topic categories which are provided by the service in a drop-down menu (categories are separated with semicolon):</p> <p>Imagery, Base maps, Earth cover; Society; Economy; Utilities, Communication; Environment; Oceans; Biota; Heath; Elevation; Geoscientific information; Planning cadaster; Inland waters; Boundaries; Structure; Transportation; Intelligence, Military; Location; Climatology, Meteorology, Atmosphere; Farming; Population</p> <p>More detailed description of topics suitable for each category can be found e.g. here: https://apps.usgs.gov/thesaurus/thesaurus-full.php?thcode=15</p>	YES
Group	<p>Research project/group where the dataset was created. The service provides a drop-down list of existing research groups. NOTE: if the service does not yet have a profile for your research project, it must be created. E-mail to voaaal@utu.fi to request a new profile.</p> <p>If your dataset is a thesis dataset and it does not belong to any research projects,, choose group "Thesis dataset".</p> <p>If this is not relevant to your case, you may leave this section empty.</p>	
Language	<p>The language of the attributes used in your dataset.</p> <p><i>Example: English</i></p>	YES
License	<p>The license under which your data will be shared. License guides the data users on further data usage. Licenses are provided as a drop-down menu in the service. Choose the license from the list below according to your data sharing protocols. We highly recommend open licenses that allows the usage of the data without heavy restrictions, such as CC-BY 4.0 (using the data requires attribution).</p> <ol style="list-style-type: none"> 1. CC0 1.0 Universal 2. CC-BY 4.0 International 3. CC-BY-NC 4.0 International 4. CC-BY-NC-SA 4.0 International <p>(continues)</p>	YES

Element	Instructions	Mandatory
License	<p>(continues)</p> <ol style="list-style-type: none"> 5. Open Data Commons Open Database License / OpenStreetMap 6. Open Data Commons Open Database License 7. Closed (<i>NOTE: if you choose this option, you need to modify downloading permissions in the service so that potential data users are not able to download your data</i>) <p>If none of the options suite to your situation, you may write the license to metadata section "Restrictions other" and leave this field empty.</p>	YES
DOI	In case the dataset is related to a published article, the DOI can be added here.	
Region	<p>List of geographical region(s) your dataset covers. One or two regions is enough. The smallest administrative level available in the service is country.</p> <p><i>Example:</i> East Africa; United Republic of Tanzania</p>	YES
Data Quality Statement	<p>Information describing the quality of your data. This should include lineage of the dataset (history, evolution, validation, authenticity etc.), collection method (sampling etc.), and description of problems or inconsistencies. If your dataset has, for example, gaps or NULLs in the attribute table, you can state the reasons for those here. If you have executed error matrixes, or other similar quality indicators, you may provide the metrics here. Other quality information may include percentage of cloud coverage and image stripping in case of aerial imagery.</p> <p><i>Example:</i> Dataset was created during eight-month period in 2018. There is a possibility that during that time trees have been cut down and new has been planted, which means the point data is not thoroughly up to date. Data was not able to be collected from restricted areas, which means there are false negative observations in the dataset: the restricted areas does contain trees in them, but they are not visible in this dataset. Contact us to get the polygons of those restricted areas, if necessary. They are clearly visible in the dataset as empty areas, though.</p> <p><i>Dataset has been cleaned and quality checked by the project team. The dataset was evaluated against 2019 satellite imagery, and as a result the accuracy number is 95%. There was already some commission in the dataset, since not all trees are visible in the more recent satellite imagery. There are no empty cells or NAs in the attribute table. This dataset is consistent, complete and accurate enough to run tree cover or species analysis.</i></p>	YES

Element	Instructions	Mandatory
Restrictions	<p>Description of the conditions under which the dataset can or cannot be used. If your data is shared under a license and no other restrictions are needed, choose option number 3 “license”.</p> <ol style="list-style-type: none"> 1. 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 2. Intellectual Property Rights: Rights to financial benefit from and control of distribution of non-tangible property that is a result of creativity 3. License: Formal permission to do something 5. Patent: Government has granted exclusive right to make, sell, use or license an invention or discovery 6. Patent Pending: Produced or sold information awaiting a patent 7. Restricted: Withheld from general circulation or disclosure 8. Trademark: A name, symbol, or other device identifying a product, officially registered and legally restricted to the use of the owner or manufacturer 	YES
Restrictions other	<p>If the license suitable for your dataset is not available in the license list, you may specify the license and conditions for data usage in this section.</p> <p>If there are some restrictions for data usage in addition to a license, you may describe them in more detail here.</p> <p>If this is not relevant, you may leave this section empty.</p>	
Edition	<p>The edition or version of the dataset, if it belongs to a series of datasets or is frequently updated. Edition can be given for example as a year with a month or a consecutive number. If this is not relevant in the case of your dataset, you may leave this section empty.</p> <p><i>Example:</i> 5/2020</p>	
Purpose	<p>A few sentences’ summary of the intentions of why your dataset was created. This helps the user to understand the background of your dataset and what your dataset can be used for in the future.</p> <p><i>Example:</i> This dataset was created due to lack of information of tree cover and tree species in Dar es Salaam. Tree species information is used to assess the usefulness of green areas in cities to evaluate the ecological structure of green urban areas, and to help plan the city’s green areas more efficiently.</p>	

Element	Instructions	Mandatory
Supplemental information	<p>Raster data: Explain the meaning of values, units and the value range of your data. If your data is classified, provide here the information about the classes, their names and values that corresponds to them. If your data is an elevation model, provide also the range of Z values.</p> <p>Vector and raster data: This can contain any information about the dataset you want to share with the potential users. Recommended information is e.g. geographical reference system of the dataset, spatial resolution, scale or minimum mapping unit, additional reference to the area covered by the dataset and place names.</p> <p><i>Example:</i> WGS84, EPSG: 4326 MMU: Point data doesn't have minimum mapping unit. Ilala is an administrative district in Dar es Salaam.</p>	In case of raster data: YES
Temporal extent	<p>Time period between the start and completion of your data creation. In the service, this information is given in the form of: Start-date YYYY/MM/DD HH/MM; End-date YYYY/MM/DD HH/MM.</p> <p><i>Example:</i> 2020-01-07 12:00 pm; 2020-05-25 12:00 pm</p>	
Maintenance frequency	<p>If your dataset is updated periodically choose one of the options 1-11. If this is not relevant for your dataset, choose option "There are no plans to update the data".</p> <ol style="list-style-type: none"> 1. There are no plans to update the data 2. Frequency of updating for the data is not known 3. Data is repeatedly and frequently updated 4. Data is updated each day 5. Data is updated every year 6. Data is updated as deemed necessary 7. Data is updated each month 8. Data is updated every two weeks 9. Data is updated in intervals that are uneven in duration 10. Data is updated on a weekly basis 11. Data is updated twice each year 12. Data is updated every three months 	

Element	Instructions	Mandatory
Spatial representation type	<p>The spatial representation of your dataset, or in other words, the data format. Choose one of the following options:</p> <ol style="list-style-type: none"> 1. Grid data is used to describe geographical data (raster data) 2. Three-dimensional view formed by the intersecting homologous rays of an overlapping pair of images 3. Textual of tabular data is used to describe geographical data 4. Triangulated irregular network 5. Vector data is used to describe geographical data 6. Scene for a video recording 	
Responsible parties	<p>Link the profiles of responsible parties to the metadata. If the responsible parties do not have a profile in the service, they must be created first. Remember to add current contact information to the profiles.</p> <div> <div> <p>Responsible Parties</p> <p>Point of Contact</p> <p>Venla x ▾</p> </div> <div> <p>Responsible and Permissions</p> <p>Owner</p> <p>Venla x ▾</p> <p>Metadata Author</p> <p>Venla x ▾</p> </div> </div>	YES
Metadata about the attributes	<p>Attribute metadata for vector datasets is provided in an additional table where you may fill in</p> <ol style="list-style-type: none"> 1. Attribute name 2. Attribute label 3. Description <p>In case you want to give some additional information about the attributes, you may utilize the “Supplemental information” metadata section.</p>	In case of vector dataset: YES