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## **RADAR Metadata Kernel with attribute values and controlled vocabularies**

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Version 0.2

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funded by



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## Description:

A central feature of the RADAR project is a Metadata Kernel, which manages and characterizes all archived and published research data. The kernel aims to enhance the traceability and usability of research data by maintaining a discipline-agnostic character and simultaneously allowing a description of discipline-specific data. For this purpose, a set of generic parameters were chosen, which allow an accurate and consistent identification of a resource for citation and retrieval purposes and also meet the requirements of more discipline-specific datasets. Furthermore, the Kernel provides recommended use instructions along with appropriate examples on how to correctly describe research data.

The following metadata profile includes 9 mandatory fields which represent the general core of the scheme. These contain the main requirements for the DOI registration, in accordance with the DataCite Metadata Schema (v 3.1)<sup>1</sup> and must be supplied when submitting metadata to RADAR. Additionally, 12 optional metadata parameters serve the purpose of describing discipline-specific data. These were implemented with a combination of controlled-vocabularies and free-text entries, thereby covering heterogeneous data produced by a multitude of disciplines. The controlled-vocabulary entries were defined in accordance with established regulations in mind (for example, ISO standards for language and country of origin of the data). RADAR clients who wish to enhance the prospects of their metadata being found, cited and linked to original research are strongly encouraged to submit the optional as along with the mandatory set of properties.

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<sup>1</sup> <http://schema.datacite.org/meta/kernel-3>

**Document Status Sheet:**

<i>Version</i>	<i>Date</i>	<i>Comment</i>
0.1	04.08.2014	First draft, english
0.2	11.11.2014	Revision, with modification of properties 2. and 19.

## 1. Overview

### 9 Mandatory properties (Properties 1-4 are identical to DataCite mandatory properties):

ID	Element description	XML
1.	<b>identifier</b> (unique string which identifies a resource)	<identifier>
1.1	identifierType (Handle or DOI)	<identifierType>
2.	<b>creator</b> (persons involved in producing the data)	<creator>
2.1	creator name (name(s) of the creator(s))	<creatorName>
2.2	creator affiliation (e.g. institution, company)	<creatorAffiliation>
3.	<b>title</b>	<title>
4.	<b>publisher</b> (e.g. corporate/institutional or personal name)	<publisher>
5.	<b>production year</b> (year, in which data was created or refers to)	<productionYear>
6.	<b>subject area</b> (scientific fields appropriate for the resource)	<subjectArea>
6.1	subject area detail (additional information on the subject area)	<subjectAreaDetail>
7.	<b>resource</b> (information on the resource's content)	<resource>
7.1	resource type (type of the resource to be archived/published)	<resourceType>
8.	<b>rights</b> (provides a rights management statement)	<rights>
8.1	rights type (opportunity to further specify selected rights)	<rightsType>
9.	<b>rightsholder</b> (institution/person owning property rights)	<rightsholder>

### 12 Optional properties for discipline-specific data descriptions:

ID	Element description	XML
10.	<b>additional title</b> (complementary textual information)	<additionalTitle>
10.1	additional title type (e.g. translated title)	<additionalTitleType>
11.	<b>description</b> (further textual information)	<description>
11.1	description type (e.g. abstract)	<descriptionType>
12.	<b>keyword</b> (keyword(s) describing the subject focus of the data)	<keyword>
13.	<b>contributor</b> (institution/person associated to research/resource)	<contributor>
13.1	contributorType (e.g. funder)	<contributorType>
14.	<b>language</b>	<language>
15.	<b>alternate identifier</b> (e.g. local accession number)	<alternateIdentifier>
15.1	alternate identifier type	<alternateIdentifierType>
16.	<b>related identifier</b> (identifiers of related resources)	<relatedIdentifier>
16.1	related identifier type (e.g. DOI, ARK, ISBN)	<relatedIdentifierType>
16.2	relation type (description of relation, e.g. "is cited by")	<relationType>
17.	<b>geo location</b> (region/place where resource originated/refers to)	<geoLocation>
17.1	geo location country (country of origin)	<geoLocationCountry>
17.2	geo location region (region of resource)	<geoLocationRegion>
17.3	geo location point (single latitude-longitude pair)	<geoLocationPoint>
17.4	geo location box (box described by two latitude-longitude pairs)	<geoLocationBox>
18.	<b>data source</b> (information on data origin contained in resource)	<dataSource>
18.1	data source detail (e.g. instrument, observation, trial)	<dataSourceDetail>
19.	<b>software type</b> (specifies software used in the research process)	<softwareType>
19.1	software name (software description)	<softwareName>
19.1.1	software name version (software version)	<softwareNameVersion>
19.2	software alternative (description of software alternative(s))	<softwareAlternative>
19.2.1	software alternative version (version of software alternative(s))	<softwareAltVersion>
20.	<b>data processing</b> (specifies further processing, e.g. statistics)	<dataProcessing>
21.	<b>related information</b> (further information, e.g. database number)	<relatedInformation>
21.1	related information type (e.g. CAS registry number)	<relatedInformationType>

## Notes on following tables and abbreviations:

The following tables provide a detailed description of the mandatory and optional properties, together with their sub-properties and XML examples, respectively. In the third column an indicator of whether the property being described is an attribute (A) or a child (C) of the corresponding property that has preceded it is given. The forth column, Occurrence (Occ), indicates quantity constraints for the properties as follows:

0-n = optional and repeatable; 0-1 = optional, but not repeatable; 1-n = required and repeatable; 1 = required, but not repeatable.

## 2. Mandatory properties

ID	Element	Definition	A/C	Occ	Allowed values, examples, other constraints
1	<b>identifier</b>	The identifier is a unique string which identifies a resource. In RADAR Handles and DOIs are used as identifiers.		1	The assignment of identifiers is done in the work space area. Please note that different Persistent Identifiers (PIDs) are used in RADAR: - Handle for preservation only. - DOI for data publication & preservation.
1.1	<b>identifier type</b>	Handle or DOI.	A	1	Selection list: - Handle - DOI  <b>Handle:</b> A handle is an abstract reference to a resource. <u>Example:</u> <identifier identifierType="Handle"> <b>10013/epic.10033</b> </identifier>  <b>Digital Object Identifier:</b> A DOI is a character string used to uniquely identify an object. A DOI name is divided into two parts, a prefix and a suffix, separated by a slash.  <u>Example:</u> <identifier identifierType="DOI"> <b>10.0001/abcd</b> </identifier>
2	<b>creator</b>	The main researchers involved in producing the data, or the authors of the publication, in priority order.		1-n	Free-text field. May be a corporate/institutional or personal name.  <u>Example:</u> <creators> <creator> <creatorName> <b>Mustermann, Max</b> </creatorName> <creatorAffiliation> <b>ABC Institute</b> </creatorAffiliation> </creator> <creator> <creatorName> <b>Doe, Jane</b> </creatorName> <creatorAffiliation> <b>XYZ</b>

					<b>Institute</b> </creatorAffiliation> <creator> </creators>
2.1	<b>creator name</b>	The name of the creator.	A	1	The personal name format may be: family, given. Non-roman names should be transliterated according to the ALA-LC schemes <sup>14</sup> : <a href="http://www.loc.gov/catdir/cpsso/roman.html">http://www.loc.gov/catdir/cpsso/roman.html</a>
2.2	<b>creator affiliation</b>	Organizational or institutional affiliation of the creator(s).	A	0-n	Optional free-text field.
3	<b>title</b>	A heading or caption by which a resource is well described.		1	Free-text field. For the resource title, unicode characters encoded within UTF-8 (UCS Transformation Format—8-bit) are allowed: <a href="http://www.utf-8.com/">http://www.utf-8.com/</a>  Example: <title> <b>Evaluation of the efficacy of Darbepoetin Alfa for the treatment of Anemia in patients with Myelodysplastic Syndrome, EudraCT Number: 2005-004737-17</b> </title>
4	<b>publisher</b>	The name of the entity that holds, archives, publishes, prints, distributes, releases, issues, or produces the data.		1-n	Free-text field. May be a corporate/institutional or personal name. The personal name format may be: family, given. Non-roman names should be transliterated according to the ALA-LC schemes <sup>14</sup> : <a href="http://www.loc.gov/catdir/cpsso/roman.html">http://www.loc.gov/catdir/cpsso/roman.html</a>  Example: <publisher> <b>World Data Center for Climate (WDCC)</b> </publisher>
5	<b>production year</b>	Year, in which the resource was created or the resource refers to.		1	Format: YYYY Alternative: unknown For year format, please refer to ISO-8601: <a href="http://www.w3.org/TR/NOTE-datetime">http://www.w3.org/TR/NOTE-datetime</a> Example: <productionYear> <b>2013</b> </productionYear>  If unsure or want to leave open, please use 'unknown'. In that case, only the publication year will be shown later on the information page about the resource (RADAR landing page). However, in order to ensure full comprehension of your resource, RADAR highly recommends that a production year is given.
6	<b>subject area</b>	RADAR specific list of scientific research areas. Please select		1-n	Selection list. Please assign one or more of the given list of scientific fields that are appropriate for your resource. Also consider that the

		appropriate field(s). Multiple selections are possible.			<p>subject area can be used as a filter system during data search.</p> <p>Selection list:</p> <ul style="list-style-type: none"> <li>- Agriculture</li> <li>- Architecture</li> <li>- Arts and Media</li> <li>- Astrophysics and Astronomy</li> <li>- Biochemistry</li> <li>- Biology</li> <li>- Behavioural Sciences</li> <li>- Chemistry</li> <li>- Computer Science</li> <li>- Economics</li> <li>- Engineering</li> <li>- Environmental Science and Ecology</li> <li>- Ethnology</li> <li>- Geological Science</li> <li>- Geography</li> <li>- History</li> <li>- Horticulture</li> <li>- Information Technology</li> <li>- Linguistics</li> <li>- Materials Science</li> <li>- Mathematics</li> <li>- Medicine</li> <li>- Philosophy</li> <li>- Physics</li> <li>- Psychology</li> <li>- Social Sciences</li> <li>- Software Technology</li> <li>- Sports</li> <li>- Theology</li> <li>- Veterinary Medicine</li> <li>- Other</li> </ul> <p>General example:</p> <pre>&lt;subjectAreas&gt; &lt;subjectArea&gt;<b>Agriculture</b> &lt;/subjectArea&gt; &lt;subjectArea&gt; <b>Geological Sciences</b> &lt;/subjectArea&gt; &lt;subjectAreaDetails&gt;<b>Soil Sciences</b> &lt;/subjectAreaDetails&gt; &lt;/subjectAreas&gt;</pre>
6.1	subject area detail	If given, please specify area to which the data relates.	C	0-n	Free-text field.
7	resource	General information on the resource's content.		1	Free-text field. A description which refers to the resource type.
7.1	resource type	Specifies the type of the resource to be archived/published.	A	1	Selection list. Please select one item which best fits your resource from the resource type list. After selection, a further free-text description of the resource type may be added.

				<p>Selection list:</p> <ul style="list-style-type: none"> <li>- Audiovisual</li> <li>- Collection</li> <li>- Dataset</li> <li>- Image</li> <li>- Model</li> <li>- Software</li> <li>- Sound</li> <li>- Text</li> <li>- Workflow</li> <li>- Other</li> </ul> <p>Definition of resource types:</p> <p><b>Audiovisual</b> - A series of visual representations imparting an impression of motion when shown in succession. May or may not include sound. <u>Example</u>: May be used for films, video, etc.</p> <p><b>Collection</b> - An aggregation of resources of various types. If a collection consists of a single type, please state the single type. <u>Example</u>: A collection of samples, or various files making up a report.</p> <p><b>Dataset</b> - Data encoded in a defined structure. <u>Example</u>: Data file or files.</p> <p><b>Image</b> - A visual representation other than text. <u>Example</u>: Digitized or born digital images, drawings or photographs.</p> <p><b>Model</b> - An abstract, conceptual, graphical, mathematical or visualization model that represents empirical objects, phenomena, or physical processes. <u>Example</u>: Modelled descriptions of different aspects of languages or a molecular biology chain reaction.</p> <p><b>Software</b> - A computer program in source code (text) or compiled form. <u>Example</u>: Software supporting research.</p> <p><b>Sound</b> - A resource primarily intended to be heard. <u>Example</u>: Audio recording.</p> <p><b>Text</b> - A resource consisting primarily of words for reading. <u>Example</u>: Grey literature, lab notes, accompanying materials.</p> <p><b>Workflow</b> - A structured series of steps which can be executed to produce a final outcome, allowing users a means to specify and enact their work in a more</p>
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				<p>reproducible manner. <u>Example:</u> Computational workflows involving sequential operations made on data by wrapped software and may be specified in a format belonging to a workflow management system, such as Taverna.</p> <p><b>Other</b> - If selected, please supply a value for resource type including your own description.</p> <p><u>General example:</u> &lt;resource resourceType="dataset"&gt; <b>This dataset is based on field observations obtained during atmospheric precipitation-measurements in the Austrian Alps</b> &lt;/resource&gt;</p>
8	rights	Provides a rights management statement (= data licence) for the resource uploaded to RADAR.	1	<p>Selection list. Please choose from the selection list an appropriate licence for your resource. The licence indicates, if, how and in which context others may use your resource. Note that within the RADAR service '<i>preservation</i>' the default setting is '<b>All rights reserved</b>'. For the service of '<i>data publication</i>', RADAR strongly recommends the use of the widely acknowledged Creative Commons 4.0 licences to give credit to the data provider and at the same time allow re-usability of published resources. Note that within the service '<i>data publication</i>' default setting is '<b>CC BY 4.0 Attribution</b>'. A detailed description of each licence is provided upon selection. If none of the provided licences seems appropriate, you may also include a different licence or specify rights - in the latter case please use the field '<b>other</b>'.</p> <p>Selection list:</p> <ul style="list-style-type: none"> <li>- CC BY 4.0 Attribution</li> <li>- CC BY-ND 4.0 Attribution-NoDerivs</li> <li>- CC BY-SA 4.0 Attribution-ShareAlike</li> <li>- CC BY-NC 4.0 Attribution-NonCommercial</li> <li>- CC BY-NC-SA 4.0 Attribution-NonCommercial-ShareAlike</li> <li>- CC BY-NC-ND 4.0 Attribution-NonCommercial-NoDerivs</li> <li>- CC0 1.0 Universal Public Domain Dedication</li> <li>- All rights reserved</li> <li>- Other</li> </ul> <p>Definition of rights: <b>CC BY 4.0 Attribution</b> - The data is licensed under</p>

				<p>a Creative Commons Attribution 4.0 International license. The data user must give appropriate credit, provide a link to the license, and indicate if changes were made. <u>Details &amp; further information:</u> <a href="http://creativecommons.org/licenses/">http://creativecommons.org/licenses/</a></p> <p><b>CC BY-ND 4.0</b> <b>Attribution-NoDerivs</b> - The data is licensed under a Creative Commons Attribution-NoDerivatives 4.0 International license. The data user must give appropriate credit, provide a link to the license, and indicate if changes were made. If the data user remixes, transforms, or builds upon the material, they may not distribute the modified material. <u>Details &amp; further information:</u> <a href="http://creativecommons.org/licenses/">http://creativecommons.org/licenses/</a></p> <p><b>CC BY-SA 4.0</b> <b>Attribution-ShareAlike</b> - The data is licensed under a Creative Commons Attribution-ShareAlike 4.0 International license. The data user must give appropriate credit, provide a link to the license, and indicate if changes were made. If the data user remixes, transforms, or builds upon the material, they must distribute the respective contributions under the same license as the original. <u>Details &amp; further information:</u> <a href="http://creativecommons.org/licenses/">http://creativecommons.org/licenses/</a></p> <p><b>CC BY-NC 4.0</b> <b>Attribution-NonCommercial</b> - The data is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license. The data user must give appropriate credit, provide a link to the license, and indicate if changes were made. The data user may not use the material for commercial purposes. <u>Details &amp; further information:</u> <a href="http://creativecommons.org/licenses/">http://creativecommons.org/licenses/</a></p> <p><b>CC BY-NC-SA 4.0</b> <b>Attribution-NonCommercial-ShareAlike</b> - The data is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International license. The data user must give appropriate credit, provide a link to the license, and indicate if changes were made. The data user may not use the material for commercial purposes. If the data user remixes, transforms, or builds upon the material, they must distribute the respective contributions under the</p>
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8.1	rights type	Provides an opportunity to further specify the previously selected rights management	A	0-n	<p>Free-text field. If selected, please state further details regarding the licence/rights management statement chosen for your resource.</p>

		statement (= data licence) for the resource uploaded to RADAR.			
9	<b>rightsholder</b>	The institution or person owning or managing property rights, including intellectual property rights, utilization rights and/or exploitation rights over the resource uploaded to RADAR.		1-n	<p>Free-text field. Please state one or several institution(s) and/or person(s) owning or managing property rights, including intellectual property rights, utilization rights and/or exploitation rights over the resource. The personal name format should be: family, given. Non-roman names should be transliterated according to the ALA-LC schemes: <a href="http://www.loc.gov/catdir/cpsd/roman.html">http://www.loc.gov/catdir/cpsd/roman.html</a></p> <p><u>Example:</u> &lt;rightsholder&gt; <b>FIZ Karlsruhe Leibniz-Institut für Informationsinfrastruktur</b> &lt;/rightsholder&gt;</p>

## 3. Optional properties

ID	Element	Definition	A/C	Occ	Allowed values, examples, other constraints
10	additional title	Complement-ary textual information to the main title of the resource.		0-n	Free-text field. A caption which refers to the additional title type.
10.1	additional title type	Specifies the type of additional title.	A	1	<p>Selection list. Please choose from the selection list the additional title type appropriate for giving details about your resource.</p> <p>Selection list:</p> <ul style="list-style-type: none"> <li>- Subtitle</li> <li>- TranslatedTitle</li> <li>- AlternativeTitle</li> </ul> <p><b>Subtitle</b> - A subtitle complements your main heading or caption and provides additional information on the resource.</p> <p><b>TranslatedTitle</b> - A translated title provides the main title of the resource in a different language.</p> <p><b>AlternativeTitle</b> - An alternative title might be used as a substitute to the main title associated to your resource.</p> <p><u>General example:</u>  &lt;additionalTitles&gt;  &lt;additionalTitle  additionalTitleType="Subtitle"&gt;  <b>Water temperature effects appearing in several regions in the Atlantic Ocean</b>  &lt;/additionalTitle&gt;  &lt;additionalTitle  additionalTitleType="TranslatedTitle"&gt;  <b>Regionenübergreifende Veränderungen der Wassertemperatur im Atlantischen Ozean</b>  &lt;/additionalTitle&gt;  &lt;additionalTitle additionalTitleType="AlternativeTitle"&gt;  <b>Climate-related changes of water temperature across different regions of the Atlantic</b>  &lt;/additionalTitle&gt;  &lt;/additionalTitles&gt;</p>
11	description	A textual description containing additional		0-n	Free-text field. Please state the context within the description type.

		information about resource (English is strongly recommended as primary language).			
11.1	<b>description type</b>	Specifies the type of text introduced to describe the resource.	A	1	<p>Selection list. Please choose from the selection list a description type appropriate for giving details about your resource.</p> <p>Selection list:</p> <ul style="list-style-type: none"> <li>- Abstract</li> <li>- TableOfContents</li> <li>- TechnicalRemarks</li> <li>- Object</li> <li>- Method</li> <li>- Other</li> </ul> <p><b>Abstract</b> - A short description of the resource which highlights the context in which the resource was created. The provision of an abstract is highly recommended for discovery. <u>Example:</u> <a href="http://data.datacite.org/10.1594/PANGAEA.771774">http://data.datacite.org/10.1594/PANGAEA.771774</a></p> <p><b>Method</b> - A description of the methodology used to obtain the resource; recommended for discovery. <u>Example:</u> Section "Sampling, Processing and Quality Control Methods" in the following dataset record: <a href="http://kn.b.ecoinformatics.org/knb/metadata?action=read&amp;qformat=kn&amp;sessionid=0&amp;docid=knb-lter-gce.275.16">http://kn.b.ecoinformatics.org/knb/metadata?action=read&amp;qformat=kn&amp;sessionid=0&amp;docid=knb-lter-gce.275.16</a></p> <p><b>Object</b> - By choosing the descriptionType "Object" you may state a specific sample name or subject of research which specifically describes your resource. <u>Example:</u> &lt;description descriptionType="Object"&gt; <b>Arabidopsis Thaliana</b> &lt;/description&gt;</p> <p><b>TableOfContents</b> - A listing of the Table of Contents. <u>Example:</u> <a href="http://data.datacite.org/10.5678/LCRS/FOR816.CIT.1031">http://data.datacite.org/10.5678/LCRS/FOR816.CIT.1031</a></p> <p><b>TechnicalRemarks</b> - A description of technical aspects which particularly</p>

					<p>describes/refers to the resource. <u>Example:</u> &lt;description descriptionType="TechnicalRemarks"&gt; <b>The sample was prepared by methanol extraction from high-vacuum dried Arabidopsis Thaliana leaves.</b> &lt;/description&gt;</p> <p><b>Other</b> - Information that does not fit into an existing category. If selected, please supply an appropriate value for description type.</p> <p><u>General example:</u> &lt;descriptions&gt; &lt;description descriptionType="Abstract"&gt; <b>This is a really short test abstract.</b> &lt;/description&gt; &lt;description descriptionType="Method"&gt; <sup>13</sup><b>C-NMR</b>&lt;/description&gt; &lt;/descriptions&gt;</p>
12	<b>keyword</b>	Keyword(s) describing the subject focus of the resource (English is strongly recommended as primary language).		0-n	<p>Free-text field. Please select one or more keyword(s) which describe the context/content of your resource; note that using the English language is highly recommended to increase discovery.</p>
13	<b>contributor</b>	The institution or person responsible for collecting, managing, distributing, or otherwise contributing to the development or creation of the resource.		0-n	<p>Free-text field. Please state the name(s) of the contributor (institution(s)/persons(s)). The personal name format should be: family, given. Non-roman names should be transliterated according to the ALA-LC schemes: <a href="http://www.loc.gov/catdir/cpsol/roman.html">http://www.loc.gov/catdir/cpsol/roman.html</a></p>
13.1	<b>contributor type</b>	Specifies the origin of the contributor.	A	1	<p>Selection list. Please choose from the selection list the contributor type who participated in the creation/development of your resource.</p> <p>Selection list: - ContactPerson - DataCollector - DataCurator</p>

				<ul style="list-style-type: none"> <li>- DataManager</li> <li>- Distributor</li> <li>- Editor</li> <li>- Funder</li> <li>- HostingInstitution</li> <li>- Producer</li> <li>- ProjectLeader</li> <li>- ProjectManager</li> <li>- ProjectMember</li> <li>- RegistrationAgency</li> <li>- RegistrationAuthority</li> <li>- RelatedPerson</li> <li>- Researcher</li> <li>- ResearchGroup</li> <li>- Sponsor</li> <li>- WorkPackageLeader</li> <li>- Other</li> </ul> <p><b>ContactPerson</b> - Person with knowledge of how to access, troubleshoot, or otherwise treat issues related to the resource. May also be the "Point of Contact" in the organization that is responsible for the data upload to RADAR.</p> <p><b>DataCollector</b> - Person/Institution responsible for finding, gathering/collecting data under the guidelines of the author(s) or Principal Investigator (PI). Can also be used to credit survey conductors, interviewers, event or condition observers, or person responsible for monitoring key instrument data.</p> <p><b>DataCurator</b> - Person who curates data in one/several of the following ways: enhancing, reviewing, cleaning, standardizing metadata and associated data, in order to prepare the data for storage, use, and maintenance within a data center or a repository.</p> <p><b>DataManager</b> - Person (or organization with a staff of data managers) responsible for maintaining the resource. The stated person/organization is responsible for:</p> <ul style="list-style-type: none"> <li>- keeping the resource up-to-date in terms of software/hardware support</li> <li>- the provision of appropriate access levels</li> <li>- the storage in accordance with industry standards and</li> <li>- a secure handling in accordance with the applicable management requirements</li> </ul> <p>before the resource was uploaded to RADAR.</p>
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				<p><b>Distributor</b> - Institution tasked with responsibility to generate/disseminate copies of the resource in either electronic or print form. Data stored in more than one archive/repository may credit each as a distributor.</p> <p><b>Editor</b> - Person who oversees the details related to the publication format of the resource.</p> <p><b>Funder</b> - Institution that provided financial support for the development of the data/resource/project. Includes organizations that provide funding via regular budget allocations, through grants or awards. <b>This entry is especially recommended for discovery of the resource.</b></p> <p><b>HostingInstitution</b> - Organization allowing the resource to be available online through the provision of its hardware/software/operating support. May also be used for an organization that stores the data offline. Often a data center (if that data center is not the “publisher” of the resource).</p> <p><b>Producer</b> - Person/Organization responsible for the artistry and form of a media product. In the data industry, this may be a company “producing” media products such as DVDs that package data for future dissemination by a distributor.</p> <p><b>ProjectLeader</b> - Person officially designated as head of project team or sub-project team instrumental in the work necessary to development of the resource. The Project Leader is not “removed” from the work that resulted in the resource; they remain intimately involved throughout the life of the particular project team.</p> <p><b>ProjectManager</b> - Person officially designated as manager of a project. A project may consist of one or many project teams and sub-teams. The manager of a project often has more administrative responsibility than actual work involvement.</p> <p><b>RegistrationAgency</b> - Institution/organization officially appointed by a Registration Authority to handle specific tasks within a</p>
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				<p>defined area of responsibility.</p> <p><b>RegistrationAuthority</b> - A standards-setting body from which Registration Agencies obtain official recognition and guidance. Example: the IDF serves as the Registration Authority for the International Standards Organization (ISO) in the domain of Digital Object Identifiers.</p> <p><b>RelatedPerson</b> - A person without a specifically defined role in the development of the resource, but who is someone the author wishes to acknowledge. This person could be an author's intellectual mentor, a person providing intellectual leadership in the discipline or subject domain, etc.</p> <p><b>Researcher</b> - A person involved in analyzing data or the results of an experiment or formal study. May indicate an intern or assistant to one of the authors who helped with research but who was not so "key" as to be listed as (co-)author(s). Should be a person, not an institution. Note that a person involved in the gathering of data would fall under the contributorType "DataCollector." The researcher may find additional data online and correlate it to the data collected for the experiment or study, for example.</p> <p><b>ResearchGroup</b> - A group of individuals/scientists with a lab, department, or division; the group has a particular, defined focus of activity. May operate at a narrower level of scope; may or may not hold less administrative responsibility than a project team.</p> <p><b>Sponsor</b> - Person/Organization that issued a contract or under the auspices of which a work has been conducted, written, printed, published, developed, etc. Includes organizations that provide in-kind support, through donation, provision of people or a facility or instrumentation necessary for the development of the resource, etc.</p> <p><b>WorkPackageLeader</b> - A Work Package is a recognized data product, not all of which is included in publication. The package, instead, may include notes, discarded</p>
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					<p>documents, etc. The Work Package Leader is responsible for ensuring the comprehensive contents, versioning, and availability of the Work Package during the development of the resource.</p> <p><b>Other</b> - Any person or institution making a significant contribution to the development and/or maintenance of the resource, but whose contribution does not “fit” other controlled vocabulary for contributor type. If selected, please supply a value for contributor type. <u>Examples:</u> Could be a photographer, artist, or writer whose contribution helped to publicize the resource (as opposed to creating it), a reviewer of the resource, someone providing administrative services to the author (such as depositing updates into an online repository, analysing usage, etc.), or one of many other roles.</p> <p><u>General example:</u>  <code>&lt;contributors&gt;</code>  <code>&lt;contributor</code>  <code>contributorType=“Distributor”&gt;</code>  <b>Doe, John</b><code>&lt;/contributor&gt;</code>  <code>&lt;contributor</code>  <code>contributorType=“Producer”&gt;</code>  <b>Meier, Michael</b><code>&lt;/contributor&gt;</code>  <code>&lt;contributor</code>  <code>contributorType=“RelatedPerson”&gt;</code>  <b>Kelly, Nicolas</b><code>&lt;/contributor&gt;</code>  <code>&lt;contributor</code>  <code>contributorType=“Funder”&gt;</code>  <b>DFG (German Research Foundation)</b><code>&lt;/contributor&gt;</code>  <code>&lt;/contributors&gt;</code> </p>
14	language	Main language used or relevant to the resource.		0-1	<p>Selection list: ISO-639-3; <a href="http://www.sil.org/iso639-3/codes.asp">http://www.sil.org/iso639-3/codes.asp</a> Example: eng, fre, ger</p>
15	alternate identifier	An identifier or identifiers other than the primary Identifier applied to the resource being registered.		0-n	<p>Free-text field. This may be any alphanumeric string which is unique within its domain of issue. May be used for local identifiers; an alternate identifier should be used for another identifier of the same instance (same location, same file).</p> <p><u>General example:</u>  <code>&lt;alternateIdentifiers&gt;</code>  <code>&lt;alternateIdentifier</code>  <code>alternateIdentifierType=“local</code>  <b>accession number”&gt;</b> </p>

					<b>E-GEOD-34814</b> </alternateIdentifier> </alternateIdentifiers>
15.1	<b>alternate identifier type</b>	The type of the alternate identifier given for the resource.	A	1	Free-text field. Please state here the type/description of the alternate identifier which is also used, e.g. within your institute or field of research, to refer to the resource.  <u>Example:</u> local accession number: XFD_20061131
16	<b>related identifier</b>	Identifiers of related resources. These must be globally unique identifiers.		0-n	Free-text field. The value of the appropriate related identifier type(s).
16.1	<b>related identifier type</b>	Identifies the type of the related identifier.	A	1	Selection list. Please choose from the selection list which type of the related identifier is given.  Selection list: - ARK - arXiv - bibcode - DOI - EAN13 - EISSN - Handle - ISBN - ISSN - ISTC - LISSN - LSID - PMID - PURL - UPC - URL - URN  <b>ARK</b> - Archival Resource Key; URL designed to support long-term access to information objects. <u>Example:</u> <relatedIdentifier relatedIdentifierType=" <b>ARK</b> " relationType="IsCitedBy"> <b>ark:/13030/tqb3kh97gh8w</b> </relatedIdentifier>  <b>arXiv</b> - arXiv identifier used in the arXiv.org repository. Used for preprints of scientific papers from the fields of mathematics, physics, astronomy, computer science, quantitative biology, statistics and quantitative finance. <u>Example:</u>

				<p>&lt;relatedIdentifier relatedIdentifierType="arXiv" relationType="IsCitedBy"&gt; <b>arXiv:0706.0001</b> &lt;/relatedIdentifier&gt;</p> <p><b>bibcode</b> - Astrophysics Data System bibliographic codes; a 19 character identifier according to the syntax yyyjjjjvvvmppppa. Further description: <a href="http://info-uri.info/registry/OAIHandler?verb=GetRecord&amp;metadataPrefix=reg&amp;identifier=info:bibcode/">http://info-uri.info/registry/OAIHandler?verb=GetRecord&amp;metadataPrefix=reg&amp;identifier=info:bibcode/</a> <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="bibcode" relationType="IsCitedBy"&gt; <b>2014Wthr...69...72C</b> &lt;/relatedIdentifier&gt;</p> <p><b>DOI</b> - Digital Object Identifier; a character string used to uniquely identify an object. A DOI name is divided into two parts, a prefix and a suffix, separated by a slash. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="IsSupplementTo"&gt; <b>10.1016/j.epsl.2011.11.037</b> &lt;/relatedIdentifier&gt;</p> <p><b>EAN13</b> - European Article Number, now renamed International Article Number, but retaining the original acronym, is a 13-digit barcoding standard which is a superset of the original 12-digit Universal Product Code (UPC) system. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="EAN13" relationType="Cites"&gt; <b>9783468111242</b> &lt;/relatedIdentifier&gt;</p> <p><b>EISSN</b> - Electronic International Standard Serial Number; ISSN used to identify periodicals in electronic form (also eISSN or e-ISSN). <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="eISSN" relationType="Cites"&gt;<b>1562-6865</b> &lt;/relatedIdentifier&gt;</p> <p><b>Handle</b> - A handle is an abstract reference to a resource. <u>Example:</u> &lt;relatedIdentifier</p>
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				<p>relatedIdentifierType="<b>Handle</b>" relationType="References"&gt;<b>4263537/4000</b>&lt;/relatedIdentifier&gt;</p> <p><b>ISBN</b> - International Standard Book Number; a unique numeric book identifier. There are 2 formats: a 10-digit ISBN format and a 13-digit ISBN. <u>Example 10-digit ISBN:</u> &lt;relatedIdentifier&gt;&lt;relatedIdentifierType="<b>ISBN</b>" relationType="IsPartOf"&gt;<b>3-88053-108-0</b>&lt;/relatedIdentifier&gt;</p> <p><b>ISSN</b> - International Standard Serial Number; a unique 8-digit number used to identify a print or electronic periodical publication. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>ISSN</b>" relationType="IsPartOf"&gt;<b>0361-526X</b>&lt;/relatedIdentifier&gt;</p> <p><b>ISTC</b> - International Standard Text Code; a unique "number" assigned to a textual work. An ISTC consists of 16 numbers and/or letters. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>ISTC</b>" relationType="Cites"&gt;<b>0A9 2002 12B4A105 7</b>&lt;/relatedIdentifier&gt;</p> <p><b>LISSN</b> - The linking ISSN or ISSN-L enables collocation or linking among different media versions of a continuing resource. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>LISSN</b>" relationType="Cites"&gt;<b>1188-1534</b>&lt;/relatedIdentifier&gt;</p> <p><b>LSID</b> - Life Science Identifiers; a unique identifier for data in the Life Science domain. Format: urn:lsid:authority:namespace:identifier:revision <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>LSID</b>" relationType="Cites"&gt;<b>urn:lsid:ubio.org:namebank:11815</b>&lt;/relatedIdentifier&gt;</p> <p><b>PMID</b> - PubMed identifier; a unique number assigned to each PubMed record. <u>Example:</u> &lt;relatedIdentifier</p>
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					<p>relatedIdentifierType="<b>PMID</b>" relationType="IsReferencedBy"&gt; <b>12082125</b>&lt;/relatedIdentifier&gt;</p> <p><b>PURL</b> - Persistent Uniform Resource Locator. A PURL has three parts: (1) a protocol, (2) a resolver address, and (3) a name. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>PURL</b>" relationType="Cites"&gt; <b>http://purl.oclc.org/foo/bar</b>&lt;/relatedIdentifier&gt;</p> <p><b>UPC</b> - Universal Product Code is a barcode symbology used for tracking trade items in stores. Its most common form, the UPC-A, consists of 12 numerical digits. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>UPC</b>" relationType="Cites"&gt; <b>123456789999</b>&lt;/relatedIdentifier&gt;</p> <p><b>URL</b> - Uniform Resource Locator, also known as web address, is a specific character string that constitutes a reference to a resource. The syntax is: scheme://domain:port/path?query_string#fragment_id <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>URL</b>" relationType="IsCitedBy"&gt;<b>http://www.heatflow.und.edu/index2.html</b>&lt;/relatedIdentifier&gt;</p> <p><b>URN</b> - Uniform Resource Name; is a unique and persistent identifier of an electronic document. The syntax is: urn:&lt; NID&gt;:&lt;NSS&gt; The leading urn: sequence is case-insensitive, &lt;NID&gt; is the namespace identifier, &lt;NSS&gt; is the namespace-specific string. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="<b>URN</b>" relationType="IsSupplementTo"&gt;<b>urn:nbn:de:101:1-201102033592</b>&lt;/relatedIdentifier&gt;</p>
16.2	relation type	Description of the relationship of the resource being registered ( <b>A</b> ) and the related	A	1	<p>Selection list:</p> <ul style="list-style-type: none"> <li>- IsCitedBy</li> <li>- Cites</li> <li>- IsSupplementTo</li> <li>- IsSupplementedBy</li> <li>- IsContinuedBy</li> <li>- Continues</li> <li>- HasMetadata</li> <li>- Is MetadataFor</li> </ul>

		resource ( <b>B</b> ).		<ul style="list-style-type: none"> <li>- IsNewVersionOf</li> <li>- IsPreviousVersionOf</li> <li>- IsPartOf</li> <li>- HasPart</li> <li>- IsReferencedBy</li> <li>- References</li> <li>- IsDocumentedBy</li> <li>- Documents</li> <li>- IsCompiledBy</li> <li>- Compiles</li> <li>- IsVariantFormOf</li> <li>- IsOriginalFormOf</li> <li>- IsIdenticalTo</li> <li>- IsReviewedBy</li> <li>- Reviews</li> <li>- IsDerivedFrom</li> <li>- IsSourceOf</li> </ul> <p><b>IsCitedBy</b> - Indicates that <b>B</b> includes <b>A</b> in a citation. <b>Recommended for discovery.</b>  <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="DOI"  relationType="<b>IsCitedBy</b>"&gt;  10.4232/10.ASEAS-5.2-1  &lt;/relatedIdentifier&gt;</p> <p><b>Cites</b> - Indicates that <b>A</b> includes <b>B</b> in a citation.  <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="ISBN"  relationType="<b>Cites</b>"&gt;  0761964312  &lt;/relatedIdentifier&gt;</p> <p><b>IsSupplementTo</b> - Indicates that <b>A</b> is a supplement to <b>B</b>.  <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="URN"  relationType="<b>IsSupplementTo</b>"&gt;  http://nbn-resolving.de/urn:nbn:de:0168-ssoar-13172  &lt;/relatedIdentifier&gt;</p> <p><b>IsSupplementedBy</b> - Indicates that <b>B</b> is a supplement to <b>A</b>.  <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="PMID"  relationType="<b>IsSupplementedBy</b>"&gt;  16911322/  &lt;/relatedIdentifier&gt;</p> <p><b>IsContinuedBy</b> - Indicates <b>A</b> is continued by the work <b>B</b>.  <u>Example:</u>  &lt;relatedIdentifier</p>
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				<p>relatedIdentifierType="URN" relationType="IsContinuedBy"&gt; http://nbn-resolving.de/urn:nbn:de:bsz:21-opus-4967 &lt;/relatedIdentifier&gt;</p> <p><b>Continues</b> - Indicates <b>A</b> is a continuation of the work <b>B</b>. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="URN" relationType="Continues"&gt; http://nbn-resolving.de/urn:nbn:de:bsz:21-opus-4966 &lt;/relatedIdentifier&gt;</p> <p><b>HasMetadata</b> - Indicates resource <b>A</b> has additional metadata <b>B</b>. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="HasMetadata" relatedMetadataScheme="DDI-L" schemeURI="http://www.ddialliance.org/Specification/DDI-Lifecycle/3.1/XMLSchema/instance.xsd"&gt;10.1234/567890 &lt;/relatedIdentifier&gt;</p> <p><b>IsMetadataFor</b> - Indicates additional metadata <b>A</b> for a resource <b>B</b>. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="IsMetadataFor" relatedMetadataScheme="DDI-L" schemeURI="http://www.ddialliance.org/Specification/DDI-Lifecycle/3.1/XMLSchema/instance.xsd"&gt;10.1234/567891&lt;/relatedIdentifier&gt;</p> <p><b>IsNewVersionOf</b> - Indicates <b>A</b> is a new edition of <b>B</b>, where the new edition has been modified or updated. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="IsNewVersionOf"&gt; 10.5438/0005 &lt;/relatedIdentifier&gt;</p> <p><b>IsPreviousVersionOf</b> - Indicates <b>A</b> is a previous edition of <b>B</b>. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="IsPreviousVersionOf"&gt; 10.5438/0007</p>
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				<p>&lt;/relatedIdentifier&gt;</p> <p><b>IsPartOf</b> - Indicates <b>A</b> is a portion of <b>B</b>; may be used for elements of a series. <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="ISBN"  relationType="IsPartOf"&gt;  0-486-27557-4  &lt;/relatedIdentifier&gt;</p> <p><b>HasPart</b> - Indicates <b>A</b> includes the part <b>B</b>. <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="DOI"  relationType="HasPart"&gt;  10.1234/7894  &lt;/relatedIdentifier&gt;</p> <p><b>IsReferencedBy</b> - Indicates <b>A</b> is used as a source of information by <b>B</b>. <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="URL"  relationType="IsReferencedBy"&gt;  http://www.testpubl.de  &lt;/relatedIdentifier&gt;</p> <p><b>References</b> - Indicates <b>B</b> is used as a source of information for <b>A</b>. <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="URN"  relationType="References"&gt;  http://nbn-resolving.de/urn:nbn:de:bsz:21-opus-963  &lt;/relatedIdentifier&gt;</p> <p><b>IsDocumentedBy</b> - Indicates <b>B</b> is documentation about/explaining <b>A</b>. <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="URL"  relationType="IsDocumentedBy"&gt;  http://tobias-lib.uni-tuebingen.de/volltexte/2000/96/  &lt;/relatedIdentifier&gt;</p> <p><b>Documents</b> - Indicates <b>A</b> is documentation about/explaining <b>B</b>. <u>Example:</u>  &lt;relatedIdentifier  relatedIdentifierType="DOI"  relationType="Documents"&gt;  10.1234/7836  &lt;/relatedIdentifier&gt;</p> <p><b>IsCompliedBy</b> - Indicates <b>B</b> is used</p>
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				<p>to compile or create <b>A</b>. <u>Example:</u>  <code>&lt;relatedIdentifier  relatedIdentifierType="URL"  relationType="IsCompiledBy"&gt;  http://d-nb.info/gnd/4513749-3  &lt;/relatedIdentifier&gt;</code></p> <p><b>Complies</b> - Indicates <b>B</b> is the result of a compile or creation event using <b>A</b>. <u>Example:</u>  <code>&lt;relatedIdentifier  relatedIdentifierType="URN"  relationType="Compiles"&gt;  http://nbn-resolving.de/urn:nbn:de:bsz:21-opus-963  &lt;/relatedIdentifier&gt;</code></p> <p><b>IsVariantFormOf</b> - Indicates <b>A</b> is a variant or different form of <b>B</b>, e.g. calculated or calibrated form or different packaging. <u>Example:</u>  <code>&lt;relatedIdentifier  relatedIdentifierType="DOI"  relationType="IsVariantFormOf"&gt;  10.1234/8675  &lt;/relatedIdentifier&gt;</code></p> <p><b>IsOriginalFormOf</b> - Indicates <b>A</b> is the original form of <b>B</b>. <u>Example:</u>  <code>&lt;relatedIdentifier  relatedIdentifierType="DOI"  relationType="IsOriginalFormOf"&gt;  10.1234/9035  &lt;/relatedIdentifier&gt;</code></p> <p><b>IsIdenticalTo</b> - Indicates that <b>A</b> is identical to <b>B</b>, for use when there is a need to register two separate instances of the same resource. IsIdenticalTo should be used for a resource that is the same as the registered resource but is saved on another location, maybe another institution. <u>Example:</u>  <code>&lt;relatedIdentifier  relatedIdentifierType="URL"  relationType="IsIdenticalTo"&gt;  http://oac.cdlib.org/findaid/ark:/13030/c8r78fzq  &lt;/relatedIdentifier&gt;</code></p> <p><b>IsReviewedBy</b> - Indicates that <b>A</b> is reviewed by <b>B</b>. <u>Example:</u>  <code>&lt;relatedIdentifier  relatedIdentifierType="DOI"</code></p>
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					<p>relationType="IsReviewedBy"&gt; 10.5256/F1000RESEARCH.4288.R4745 &lt;/relatedIdentifier&gt;</p> <p><b>Reviews</b> - Indicates that <b>A</b> is a review of <b>B</b>. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="Reviews"&gt; 10.12688/F1000RESEARCH.4001.1 &lt;/relatedIdentifier&gt;</p> <p><b>IsDerivedFrom</b> - Indicates that <b>B</b> is a source upon which <b>A</b> is based, for example a derivative of an original resource. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="DOI" relationType="IsDerivedFrom"&gt; 10.6078/M7DZ067C &lt;/relatedIdentifier&gt;</p> <p><b>IsSourceOf</b> - Indicates that <b>A</b> is a source upon which <b>B</b> is based. It describes the original resource from which a derivative was created. <u>Example:</u> &lt;relatedIdentifier relatedIdentifierType="URL" relationType="IsSourceOf"&gt; http://opencontext.org/projects/81204AF8-127C-4686-E9B0-1202C3A47959 &lt;/relatedIdentifier&gt;</p>
17	geo location	Spatial region or place where the resource was originated or which the resource refers to.		0-n	If the resource can be geo-referenced, please provide the appropriate description in the following fields. You may repeat this property to indicate several different locations.
17.1	geo location country	Country of resource origin or the country, which the resource refers to.	C	0-1	<p>English country code of data origin: ISO 3166; <a href="ftp://ftp.fu-berlin.de/doc/iso/iso3166-countrycodes.txt">ftp://ftp.fu-berlin.de/doc/iso/iso3166-countrycodes.txt</a></p> <p><u>Example:</u> &lt;geoLocationCountry&gt; <b>GERMANY</b> &lt;/geoLocationCountry&gt;</p>
17.2	geo location region	Region of resource origin or the region, which the resource	C	0-1	<p>Free-text field. Please use to describe a geographic location.</p> <p><u>Example:</u> &lt;geoLocationRegion&gt;</p>

		refers to.			<b>Eifel</b> </geoLocationRegion>
17.3	<b>geo location point</b>	A point location on earth.	C	0-1	<p>Point contains a single latitude-longitude pair, separated by whitespace - according to the WGS 84 (World Geodetic System):  <a href="http://spatialreference.org/ref/epsg/wgs-84/">http://spatialreference.org/ref/epsg/wgs-84/</a>  and  <a href="http://earth-info.nga.mil/GandG/publications/tr8350.2/wgs84fin.pdf">http://earth-info.nga.mil/GandG/publications/tr8350.2/wgs84fin.pdf</a></p> <p>Please use WGS 84 coordinates. Use only decimal numbers for coordinates. Longitudes are -180 to 180 (0 is Greenwich, negative numbers are west, positive numbers are east), Latitudes are -90 to 90 (0 is the equator; negative numbers are south, positive numbers north).</p> <p><u>Example:</u>  &lt;geoLocationPoint&gt;  <b>50.390 6.870</b>  &lt;/geoLocationPoint&gt;</p>
17.4	<b>geo location box</b>	The spatial limits of a place on earth.	C	0-1	<p>A box contains two white space separated latitude-longitude pairs, with each pair separated by whitespace. The first pair is the lower corner, the second is the upper corner - according to the WGS 84 (World Geodetic System):  <a href="http://spatialreference.org/ref/epsg/wgs-84/">http://spatialreference.org/ref/epsg/wgs-84/</a>  and  <a href="http://earth-info.nga.mil/GandG/publications/tr8350.2/wgs84fin.pdf">http://earth-info.nga.mil/GandG/publications/tr8350.2/wgs84fin.pdf</a></p> <p>Please use WGS 84 coordinates. Use only decimal numbers for coordinates. Longitudes are -180 to 180 (0 is Greenwich, negative numbers are west, positive numbers are east), Latitudes are -90 to 90 (0 is the equator; negative numbers are south, positive numbers north).</p> <p><u>Example:</u>  &lt;geoLocationBox&gt;  <b>50.900 5.800 50.100 6.910</b>  &lt;/geoLocationBox&gt;</p>
18	<b>data source</b>	Specifies the origin of the data contained in the resource.		0-n	Free-text field.
18.1	<b>data source detail</b>	Specifies the type of data source.	A	1	<p>Selection list.</p> <p>If a data source is given, please state the details of its origin.</p>

					<p>Selection list:</p> <ul style="list-style-type: none"> <li>- Instrument</li> <li>- Media</li> <li>- Observation</li> <li>- Trial</li> <li>- Organism</li> <li>- Tissue</li> <li>- Other</li> </ul> <p><b>Instrument</b> - An analytical instrument used for the creation of the resource. <u>Example:</u> &lt;dataSource dataSourceDetail="Instrument"&gt; <b>Bruker-NMR Spectrometer</b> &lt;/dataSource&gt;</p> <p><b>Media</b> - A media type that was used for the creation of the resource. <u>Example:</u> &lt;dataSource dataSourceDetail="Media"&gt; <b>World Wide Web Consortium (W3C), Twitter, Inc.</b> &lt;/dataSource&gt;</p> <p><b>Observation</b> - A non-persistent, time-based occurrence/event which describes the origin of the resource. <u>Example:</u> &lt;dataSource dataSourceDetail="Observation"&gt; <b>Visitors during the Olympic Games - Sochi 2014</b> &lt;/dataSource&gt;</p> <p><b>Trial</b> - A controlled, planned study carried out within a specific time-frame which describes the origin of the resource. <u>Example:</u> &lt;dataSource dataSourceDetail="Trial"&gt; <b>Evaluation of the efficacy of Darbepoetin Alfa for the treatment of Anemia in patients with Myelodysplastic Syndrome, EudraCT Number: 2005-004737-17</b> &lt;/dataSource&gt;</p> <p><b>Other</b> - If none of the stated devices can be applied for your resource description, please supply a value for data source detail, including a description. <u>Example:</u> Could be a unique testing system exclusively developed for your kind of study/experiment.</p>
19	software type	Specifies the software		0-n	Please state how the software was used and provide a description of the

		used during the research process and its role in respect to the data in the resource.			<p>software, including the version which was used. Selection list:</p> <ul style="list-style-type: none"> <li>- Resource Production</li> <li>- Resource Processing</li> <li>- Resource Viewing</li> <li>- Other</li> </ul> <p><b>Resource Production</b> - Software used to produce the resource.</p> <p><b>Resource Processing</b> - Software used to process or modify the resource.</p> <p><b>Resource Viewing</b> - Software used to view the resource.</p> <p><b>Other</b> - If none of the stated can be applied for your software type, please supply a value for the software type, including a description.</p> <p>You may repeat this property to indicate several software applications related to the resource. You may also specify software alternatives that could be used to produce, process, view or otherwise utilize the resource.</p> <p><u>General example:</u>  <code>&lt;SoftwareTypes&gt;</code>  <code>&lt;SoftwareType&gt;</code>  Production  <code>&lt;SoftwareName</code>  SoftwareNameVersion="2007"&gt;  <b>Microsoft Word</b>  <code>&lt;/SoftwareName&gt;</code>  <code>&lt;SoftwareAlternative</code>  SoftwareAltVersion="2003 and above"&gt;  <b>Open Office</b>  <code>&lt;/SoftwareAlternative&gt;</code>  <code>&lt;/SoftwareType&gt;</code>  <code>&lt;/SoftwareTypes&gt;</code></p>
19.1.	<b>software name</b>	Specifies the name of the software used in the production, processing, viewing or another kind of utilization of the resource.	C	1-n	<p>Free-text field. Please state software used to produce, process, view or otherwise utilize the resource.</p> <p><u>Example:</u>  <code>&lt;SoftwareName</code>  SoftwareNameVersion="0.9.0.1-13254"&gt;  <b>MestReNova</b>  <code>&lt;/SoftwareName&gt;</code></p>
19.1.1	<b>software name version</b>	Specifies the respective version of the software.	A	1	<p>Free-text field. Please state the version(s) of the software specified. Please state 'unknown' when unsure.</p>

					<p><u>Example:</u> &lt;SoftwareName SoftwareNameVersion="<b>0.9.0.1-13254</b>"&gt; <b>MestReNova</b> &lt;/SoftwareName&gt;</p>
19.2	<b>software alternative</b>	Specifies the name of software that could be alternatively used to produces, process, view or otherwise utilize the resource.	C	0-n	<p>Free-text field. You may also state and describe software that could be used as alternative software, e.g. open source software, to produce, process, view or otherwise utilize the resource.</p> <p><u>Example:</u> &lt;SoftwareAlternative SoftwareAltVersion="<b>0. 4</b>"&gt; <b>NMR-Glue</b> &lt;/SoftwareAlternative&gt;</p>
19.2.1	<b>software alternative version</b>	Specifies the version of the software alternative.	A	1	<p>Free-text field. Please state the version of the software that could be used as alternative software, e.g. open source software, to produce, process, view or otherwise utilize the resource. Please state 'unknown' when unsure.</p> <p><u>Example:</u> &lt;SoftwareAlternative SoftwareAltVersion="<b>0. 4</b>"&gt; <b>NMR-Glue</b> &lt;/SoftwareAlternative&gt;</p>
20	<b>data processing</b>	Specifies the data processing instructions, used for creating the data in the digital resource.		0-n	<p>Free-text field. If applicable, please describe the data processing applied to the raw data (e.g. statistics) and, if applicable, how information thereof was be extracted.</p>
21	<b>related information</b>	Specifies relevant information on the sample used to produce the digital data in the resource.		0-n	<p>Free-text field. Please indicate relevant information on the sample used to produce the digital data in the resource, for example database or serial number of the sample, sample components, substance or system under study.</p>
21.1	<b>related information type</b>	Specifies the database type of related information relevant information on the sample used to produce the digital data in the	C	0-n	<p>Free-text field.</p> <p><u>Examples:</u> &lt;relatedInformations&gt; &lt;relatedInformation relatedInformationType="<b>Database ID</b>"&gt; <b>L-Glutamic acid monosodium salt hydrate Sigma Aldrich</b>&lt;/relatedInformation&gt; &lt;relatedInformation relatedInformationType="<b>CAS</b></p>



		resource.		<b>registry number"&gt;</b> <b>142-47-2&lt;/relatedInformation&gt;</b> <b>&lt;relatedInformation</b> <b>relatedInformationType="PubChem"&gt;</b> <b>24895069&lt;/relatedInformation &gt;</b> <b>&lt;relatedInformation</b> <b>relatedInformationType="Molecular</b> <b>Formula"&gt;</b> <b>C5H8NNaO4 •</b> <b>xH2O&lt;/relatedInformation&gt;</b> <b>&lt;/relatedInformations&gt;</b>
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