Systematic Survey Metadata template instructions

Overview

Use this template to record systematic survey metadata; that is metadata relating to a Systematic Survey dataset or datasets.

This Systematic Survey Metadata template must be used in combination with the Systematic Survey Occurrence template and, in some cases, the Systematic Survey Site template.

Templates have been provided to facilitate integration of your data into the Biodiversity Data Repository database. Not all types of data have been catered for in the available templates at this stage; therefore, if you are unable to find a suitable template, please contact bdr-support@gaiaresources.com.au to make us aware of your data needs.

NEED TO KNOW:

For data validation, you will need your data file to:

- be the correct **file format**,
- have **matching template fields** to the template downloaded with provision to add extra fields (do not remove, or change the order of fields),
- have values in **mandatory fields** (see Table 1), and
- comply with data **value constraints** for example the geographic coordinates are consistent with a spatialCoverageGeodeticDatum type of the four available options.

File format

The systematic survey metadata template is a **UTF-8** encoded comma separated value (csv) file (not Microsoft Excel Spreadsheet (xlsx)). Be sure to save this file with your data as a .csv (UTF-8) otherwise it will not pass the in-browser csv validation step upon upload. **Do not include empty rows**.

Template fields

The template file contains the field names in the top row. Table 1 will assist you in transferring your data to the template with the information:

- **Field name** in the template (and an external link to the Darwin Core standard for that field where available);
- **Description** of the field;
- **Required** whether the field is **mandatory or optional**;
- **Format** (datatype) required for the data values for example text (string), number (integer, float), or date; and
- **Example** of an entry for that field.
- **Vocabulary** links within this document (for example pick list values) where relevant. The fields that have suggested values are highlighted in Table 1 and the options for those fields are listed in Table 2 in alphabetical order of field name.

Table 1: Systematic Survey Metadata template fields with descriptions, conditions, datatype format, and examples.

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
projectID	The identifier for the project that this survey belongs to. Important if more than one survey belongs to the project.	**Optional**	String	IBSA-2021-0118
projectTitleOrName	Project Title/Name	**Mandatory**	String	Reconnaissance and Targeted survey conducted for Shire of Augusta Margaret River, for the Reconstruction of Cowaramup Bay Road project.
purpose	Brief summary of the project which led to the establishment of the dataset. A 1 or 2 sentence description of the aims and objectives of the survey/study/project/data collection. Is the project described part of a larger research activity?	**Optional**	String	Native vegetation clearing permit
temporalCoverageStartDate	The date data collection commenced.	**Optional**	Timestamp	23/09/2020
temporalCoverageEndDate	The data collection completion date.	**Optional**	Timestamp	23/09/2020
taxonomicCoverage	The range of biological taxa covered by the survey. Multiple terms are allowed, separated by a vertical bar aka pipe |	**Optional**	String	Coleoptera | Insecta

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
spatialCoverageWKT	Well Known Text (WKT) expression of the geographic coordinates that describe the survey's spatial extent.	**Optional**	WKT	POLYGON ((146.363 -33.826, 148.499 -33.826, 148.499 -34.411, 146.363 -33.826)) (WKT notes)
spatialCoverageGeodeticDatum	The geodetic datum upon which the geographic coordinates in the Spatial coverage (WKT) are based.	**Optional**	String	AGD84 (Vocabulary link)
surveyMethodBibliographicReferences	Bibliographic references of survey methods used.	**Optional**	List	Ng, K., Barton, P.S., Blanchard, W. et al. Disentangling the effects of farmland use, habitat edges, and vegetation structure on ground beetle morphological traits. Oecologia 188, 645–657 (2018). https://doi.org/10.1007/s00442-018-4180-9

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
surveyMethodDescription	Free text description of the survey method used.	**Optional**	String	Our experimental design consisted of four 400 m transects running from inside each woodland patch out into four adjoining farmland uses (crop, rested, woody debris application, revegetation plantings). To quantify potential edge efects on beetle species traits, we sampled beetles at five locations along each transect: 200 and 20 m inside woodlands, 200 and 20 m inside farmlands, and at the woodland–farmland edge (0 m). Each sampling location comprised a pair of wet invertebrate pitfall traps. separated by a drift fence (60 cm long x 10 cm high) to help direct arthropods into traps. We opened a total of 220 pairs of traps for 14 days during spring (Oct–Nov 2014), and repeated sampling during summer (January–February 2015). Beetle samples from each pitfall trap pair, and across the two time periods, were pooled to provide one sample per sampling location.
surveyMethodURL	A DOI or link to the reference about the survey method, if available.	**Optional**	List	https://biocollect.ala.org.au/document/download/2022-01/202201%20CBR%20Flora%20and%20Vegetation%20report_draftv1.pdf

Field name	Description	Mandatory / Optional	Datatype Format	Examples / Vocabulary
keywords	Terms, phrases or descriptors that highlight the key attributes of the study. Multiple terms are allowed, separated by a vertical bar aka pipe |	**Optional**	String	ground beetle | habitat | morphology | traits | farmland | woodland | remnant vegetation | split-plot study

Vocabulary lists

Apart from geodeticDatum, the data validation does not require adherence to the below vocabularies for each of the fields indicated as having vocabularies. These vocabularies are provided as a means of assistance in developing consistent language within the database. New terms can be added to more appropriately describe your data that goes beyond the current list. Table 2 provides some suggested values from existing sources such as: Biodiversity Information Standard (TDWG), EPSG.io Coordinate systems worldwide, the Global Biodiversity Information Facility, and Open Nomenclature in the biodiversity era.

Table 2: Suggested values for controlled vocabulary fields in the template. Each term has a preferred label with a definition to aid understanding of its meaning. For some terms, alternative labels are provided that mean the same sort of thing. Note: **geodeticDatum value must come from one of the four options in this table**.

Template field name	Preferred label	Definition	Alternate label
spatialCoverage GeodeticDatum	AGD84	Australian Geodetic Datum 1984	EPSG:4203
	GDA2020	Geocentric Datum of Australia 2020	EPSG:7844
	GDA94	Geocentric Datum of Australia 1994	EPSG:4283
	WGS84	World Geodetic System 1984, used in GPS	EPSG:4326

Well Known Text (WKT) notes

The length of a WKT string or of its components is not prescribed. However the following maximum lengths are recommended for implementations writing CRS WKT strings:

- The total length of a keyword should not exceed 24 characters.
- The total length of a <name> should not exceed 80 characters.
- The total length of a <quoted Latin text> string should not exceed 255 characters.
- The total length of a <quoted Unicode text> string should not exceed 255 characters.
- The total length of a CRS WKT string should not exceed 4096 characters.

- Furthermore, MS Excel has a 32,767 (32K) character limit on individual cells in a spreadsheet.
- It is possible to edit CSV files outside of Excel in order to include more than 32K characters.

For assistance, please contact: bdr-support@gaiaresources.com.au