Contributing vegetation-plot databases to sPlot

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What data can be contributed to sPlot?

sPlot database is a collection of vegetation datasets. Owners or custodians of large collections of vegetation-plot datasets may contribute data to sPlot. A vegetation-plot is a contiguous areas (normally 10-1,000 m^2) for which information on plant species composition and relative abundance or cover is available.

Plots with **full species composition** are strongly preferred. If no such records are available we also accept plots with incomplete composition, as long as the sampling approach is clearly indicated in the metadata. **Percentage cover** (or any abundance or **importance value,** like Braun-Blanquet cover-abundance scale, that can be transformed into % cover) are preferred. In specific cases we may also accept other measures, such as basal area (m²/ha) or presence-absence.

Only contiguous areas are acceptable in sPlots. In case of "virtual plots" (e.g. collections of several not directly adjacent subplots), we ask you to provide the data of individual, contiguous sampling units (e.g., subplots of virtual plots). In case **vegetation layers were sampled on differently sized areas**, you should discuss the suitability of your data and how to provide them prior to data provision with sPlot Coordinator. In case of very large plots (e.g., **1- to 50-ha plots of individual-based forest inventories**, as they are often used in the tropics), is preferable to **partition these plots into subplots of 400–1000 m²** size, and code the subplots in a way that allows re-aggregation.

Any contribution to sPlot, must include 1. Metadata and 2. Vegetation and header data

1. Metadata required per vegetation-plot database

Please provide the following information as metadata accompanying any datasets contributed to sPlot. sPlot requires the previous registration to the **Global Index of Vegetation Plot Databases** (www.givd.info)

1. Official name of your database
2. Specification of a custodian and possibly deputy custodian representing the database in the sPlot Consortium (see point 4b of the sPlot Rules)
3. Contact data (email address) of custodian and deputy custodians
4. GIVD number

5. Ownership of the database
6. Description of sampling approach and scope of the database
7. Taxonomic reference list for species (which source(s) did you use? if you work with Turboveg: which species.dbf are you using?)
8. Brief description of each header field (if available)

2. Vegetation and header data

Datasets contributed to sPlot should provide for each plot a set of required fields (A - below) and, ideally, additional information (B – below).

(A) Required fields

1. Plot unique ID
2. **Full species list with cover, abundance or importance values** (see metadata) per species
3. **Geographic coordinates**: latitude and longitude (decimal degrees)
4. Indication of which **cover, abundance or importance scale** was used (e.g. Br.-Bl., % cover, m²/ha, presence/absence)
5. Information on **which species groups** were recorded (e.g. "Complete vegetation", i.e. including bryophytes and lichens; "Only vascular plants"; "Woody plants >= 10 cm dbh")
6. **Precision of the geographic coordinates** (in meters, i.e. the radius of a circle around the given coordinate in which the plot most likely is located; in case of grid-based data the size of the grid; if no information is available for an individual plot please provide a reasonable estimate)
7. **Naturalness** (one of the following)
   - UNKNOWN OR NOT ASSESSED
   1. NATURAL: vegetation belongs to the same formation and vegetation type that would occupy the site without human interference. This includes near-natural stands, e.g. forests with sporadic timber/firewood extraction or natural grasslands that are grazed by livestock at such low intensity that there are only slight shifts in species dominance but essentially the community is still the same
   2. SEMI-NATURAL: vegetation that belongs to a different formation than would occupy the site naturally, subject to sporadic or continuous low intensity human interference. E.g., forest regrowth, shrublands or grasslands that replace natural forests (either unmanaged or grazed/mown at low intensity without fertilizer input). Includes also planted forests of native species developing +/- naturally
   3. ANTHROPOGENIC: any vegetation that is shaped by intensive and repeated human interference, including segetal and ruderal communities and fertilized & intensively utilised pastures and meadows

8. **Formation** assigned to one of the following 5 categories. There should be the following five fields **filled with 0 or 1**; if all five categories are 0, this means that formation has not been assessed/is unknown. Transitions can be marked as combination of categories: e.g. savanna = forest + grassland.
   1. FOREST
   2. SHRUBLAND
   3. GRASSLAND
   4. SPARSE_VEG (e.g., deserts, screes and highly disturbed places)
   5. WETLAND
9. **Plot size** (m²)
10. **Date of recording** (day or year or even less precise)

► If points 4–10 are identical for all the plots, indicate it in the cover letter and leave fields blank

(B) Desirable additional information

1. Country (or ISO country code)
2. Slope inclination (°) and aspect (°)
3. Altitude (m a.s.l.)
4. Height of vegetation (of the highest layer) (m)
5. Total cover of vegetation(%)
6. Description of the type and frequency of land use (e.g. mowing, grazing, burning, wood extraction)
7. Vegetation type and[1]/or syntaxon
8. Formation according to Faber-Langendoen D et al. (2012)[1]. Please contact sPlot coordinator for support
9. Name of contributing person
10. Type of contribution (own unpublished, own published, digitized from literature)
11. Bibliographic reference if the data come from a published source

Any other header data associated with your plots, such as soil data, management data, structural data, in the format of the database, may be also contributed to sPlot.

► If you have any of these data but format or measurement units different from indicated, please indicate it clearly and provide the necessary information for transformation.

3. Format and procedure of data contribution

How to join sPlot – Please contact the sPlot coordinator, and provide an overview of the data you would like to contribute, the completeness of the information listed at the points (A) and (B), and the 'database format'. Please note that if a database from your region is already part of the sPlot consortium, you may be asked to join this database.

How to contribute data - Once you have agreed to contribute a dataset, we will discuss on the most efficient (and least time consuming for you) way of doing so. The best formats for us are either a single **Turboveg 2 database** (export as .xml, together with the species.dbf), or **"flat" table(s)** (i.e., a spreadsheet with all information or two separate spreadsheets, one for the header data and one for the species data). Please note, that sPlot can provide technical support on the preparation of the data, and that other formats can also be handled.

Please send any **species checklist** used for the construction of your dataset!

After contributing data – We will used Turboveg 2 for harmonizing your data to sPlot standards. Turboveg 2 is the most-used format for vegetation-plot data worldwide and improves data accessibility. **You will receive a Turboveg 2 copy of your data** which can be used for future handling of the data, as it will facilitate future communication, including updates.

Updating data – **Data updates** can periodically be sent to sPlot at regular intervals (every 1-2 years). It will greatly facilitate our work if the same format is maintained across different versions of your dataset, and plot unique IDs remain unchanged.

• If you additionally wish to contribute **trait data**, these will be handled via TRY (see http://www.try-db.org/TryWeb/Submission.php). sPlot Coordinator is available for facilitating the communication and transmission of data to TRY Coordinator's Jens Kattge.

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[1] Faber-Langendoen D, Keeler-Wolf T, Meidinger D et al. (2012) Classification and description of world formation types. In: Gen. Tech. Rep. RMRS-GTR-346. pp Page, Fort Collins, CO, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.