



European Vegetation Archive Data Request Form



To obtain data from the European Vegetation Archive (EVA), including the ReSurveyEurope Database, please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data that meet your needs are available. If they are, please fill in the form below and submit it to Ilona or another member of the EVA Coordinating Board (or ReSurveyEurope Board if you ask for data from the ReSurveyEurope Database).

- Applicant's name:

Marja-Liisa Soone

- Applicant's institutional address:

Tallinn Technical University (TalTech), Ehitajate tee 5, 19086 Tallinn Estonia

- Applicant's e-mail:

Marja-liisa.soone@outlook.com

- Project title:

Earth Observation-based Ecological Site Characterisation for Urban Nature-based Solutions Using European Vegetation Plot Data

- Are you asking for core EVA data (non-repeated vegetation surveys) or for ReSurveyEurope data (repeated vegetation surveys)?

Core EVA data (non-repeated vegetation surveys)

- Brief description of the aims and methods of the study:

The objective of this project is to develop and validate a methodology for characterising ecological site conditions in urban environments by integrating vegetation plot data from the European Vegetation Archive (EVA), Earth Observation (EO), GIS and plant ecological characteristics.

Urban Nature-based Solutions (NBS) require plant species that are ecologically suited to highly heterogeneous environmental conditions, including variations in soil moisture, soil reaction (pH), nutrient availability, light availability and local temperature. However, these environmental variables are difficult to measure consistently across large urban areas.

The study will investigate whether remotely sensed environmental variables derived from Sentinel-1, Sentinel-2 and complementary GIS datasets can be calibrated against vegetation-plot-derived ecological indicator values calculated from EVA species composition data. Community-weighted ecological indicator values will serve as ecological reference observations for developing predictive models describing site environmental conditions.



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The resulting methodology will be evaluated for its applicability to urban Nature-based Solution planning, supporting scalable ecological site assessment and evidence-based plant selection for climate adaptation, biodiversity enhancement and ecosystem restoration.

The study forms a part of Smart City Challenge solution proposal made by researchers from TalTech. See further: <https://finestcentre.eu/challenge-proposal/rainwater-harvesting-in-the-city/adaptive-nature-based-solution-planner/>

- Will someone else be involved in data editing or analysis in addition to the applicant?

Yes. The project will be conducted jointly by researchers and software developers from TalTech contributing to data processing, geospatial analysis and statistical modelling.

Any collaborators contributing intellectually to the analyses or publications will be appropriately acknowledged or included as co-authors in accordance with EVA guidelines.

- Estimated time of delivery of results (e.g., manuscript submission):

Initial methodological results: Q2 2027. Manuscript submission: Q3–Q4 2027

- Geographic area needed (e.g., countries or range of geographic coordinates):

Baltic region (Estonia, Latvia and Lithuania), with additional plots from neighbouring Nordic countries (Poland, Finland and Sweden) where available.

- Do you need plots to be georeferenced? If so, what is the minimum accuracy of plot location (in metres or kilometres) needed for your project?

Yes. Geographic coordinates are required to extract corresponding Earth Observation and GIS variables. Plot locations with an accuracy of approximately 100 metres or better are sufficient for the planned analyses because predictor variables will be aggregated to spatial resolutions appropriate for satellite observations (typically 10–30 m).

- Vegetation types needed (syntaxa):

No restriction to specific syntaxa. The study requires a broad representation of vegetation communities spanning the major environmental gradients (soil moisture, soil reaction, nutrient availability, light and temperature) within the study region. The objective is to maximise environmental variation for calibration of EO- and GIS-derived ecological indicators rather than to analyse any specific vegetation type.

- Other data selection criteria:



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Georeferenced vegetation plots suitable for linkage with Earth Observation and GIS datasets.

Complete vascular plant species lists, with species abundance or cover estimates where available, to enable the calculation of community-weighted ecological indicator values.

Availability of the survey year, preferably for surveys conducted from 2000 onwards, to improve temporal correspondence with Earth Observation data.

One survey per plot location to avoid pseudo-replication during model calibration.

Broad representation of environmental gradients, including soil moisture, soil reaction (pH), nutrient availability, light availability and temperature, to support robust calibration across diverse ecological conditions.

Preference for natural and semi-natural terrestrial vegetation plots representing a wide range of environmental conditions, including different levels of disturbance and management where relevant, rather than plots belonging only to specific vegetation types. This is intended to maximise the robustness and transferability of the EO-based calibration models.

- Envisaged publications:

One methodological manuscript describing the calibration of EO-derived ecological indicators using vegetation plot data.

Additional publications may investigate applications of the developed methodology for ecological site assessment and nature-based solution planning.

- **Data deposition.** Some journals require data used for the analysis to be stored in a public repository to ensure the repeatability of the analysis. According to EVA Rules, you are not allowed to store the original vegetation-plot data obtained from EVA. However, if you plan to publish in such a journal, you may deposit a reduced EVA-derived dataset that (1) would make it possible to repeat the analysis published in the paper and (2) does not contain any information not used in the analysis. For example, such a dataset can contain only a subset of species (e.g., only angiosperms or only neophytes), or replace species names with codes, or replace species cover values with presences/absences, or remove all the header data, or replace the exact plot coordinates by coarse grid-cell coordinates etc. If you plan to deposit reduced information from vegetation plots, please describe here what might be deposited. If the project developed so that you needed to deposit more information than specified here, you would need to ask specific permission from the Custodians of the EVA databases used in your analysis before the dataset is deposited.

The original EVA vegetation-plot data will not be deposited.

If required, only a reduced derived dataset necessary for reproducing the published analyses will be deposited. Such a dataset may include: derived community-weighted ecological indicator values, extracted EO and GIS predictor variables, anonymised plot identifiers, coarse spatial references (e.g. aggregated grid cells instead of exact coordinates), statistical model outputs.

No original vegetation species lists or precise plot coordinates from EVA will be made publicly available.



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- Plant trait data from the TRY consortium. If you plan to combine your analysis of vegetation-plot data with plant trait data, you can also request a dataset of 18 gap-filled traits for a large number of plant taxa prepared by the TRY consortium. These traits include Leaf area, Specific leaf area, Leaf fresh mass, Leaf dry matter content, Leaf C, Leaf N, Leaf P, Leaf N per area, Leaf N:P ratio, Leaf delta15N, Seed mass, Seed length, Seed number per reproductive unit, Dispersal unit length, Plant height, Stem specific density, Stem conduit density, and Conduit element length. This dataset can be provided to you by the EVA manager together with the vegetation-plot data. If you use this dataset, you must inform about your project the TRY data contributors who might be potentially interested and invite them as potential co-authors, assuming they will make an intellectual contribution to your paper. The list of the TRY data contributors will be sent to you together with the gap-filled trait dataset.

Yes

- Specification of the co-authorship arrangements in publications based on the requested data. Note that the EVA Rules recommend that co-authorship is offered to a representative of each database providing data that are particularly important for the project (e.g., a relatively large proportion of the final dataset used in the analyses or data from unique vegetation types or under-represented geographic areas). This database representative should be an expert in the topic of the project (not necessarily the custodian or deputy custodian), and this person should contribute to the project more than just by providing the existing data, e.g. by intellectual contribution to the concept of the paper, preparation of new data, or helping with data analysis, interpretation of the results or writing parts of the paper (see the IAVS Code of Professional Ethics: https://www.iavs.org/page/governance_code-of-professional-ethics). The project leader should enable active participation by regularly informing potential co-authors about the progress of the project from its early stage. The project leader should also make final co-authorship arrangements based on the real input of the individual contributors.

The project will duly follow the EVA Rules regarding co-authorship.

Representatives of databases providing substantial or unique data will be invited to participate as collaborators where their scientific contribution extends beyond data provision. Potential collaborators will be informed about project progress from an early stage and offered co-authorship based on their intellectual contribution to study design, data preparation, interpretation of results and manuscript preparation, in accordance with IAVS ethical guidelines.

- Eligibility of the applicant to receive EVA or ReSurveyEurope data. Specify to which EVA or ReSurveyEurope database the applicant has contributed; if the applicant is not the custodian or deputy custodian of an EVA or ReSurveyEurope database, give a name of a custodian or deputy custodian who supports this data request.

The applicant has not contributed data directly to an EVA database.

This request is submitted for a scientific methodological study. The applicant would appreciate support from an appropriate EVA database custodian or deputy custodian and is committed to fully complying with the EVA Data Use Agreement and collaboration principles.

The applicants project is supported by Jonathan Lenoir ([EU-00-018](#) The Nordic Vegetation Database) and Jens-Christian Svenning ([EU-00-018](#) The Nordic Vegetation Database).



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- I agree with the terms of EVA Data Property and Governance Rules as approved on 26 May 2012 (<http://euroveg.org/download/eva-rules.pdf>).
- If I ask for ReSurveyEurope data, I agree with the terms of ReSurveyEurope Data Property and Governance Rules as approved on 6 April 2022 (<http://euroveg.org/download/resurveyeurope-rules.pdf>).
- In any result obtained based on EVA core data (non-repeated vegetation surveys), I will cite the EVA report article (Chytrý et al. 2016; <https://doi.org/10.1111/avsc.12191>). In any result obtained based on the ReSurveyEurope data (repeated vegetation surveys), I will cite the ReSurveyEurope report article as soon as it is published. In addition, I will cite individual source databases used in my project (if possible, in the list of References; if not possible, at least as a list of databases in the electronic supplementary material).
- If I ask for the plant trait data from TRY, I agree to invite to my project the TRY data contributors following the list received from the EVA database manager.

Marja-Liisa Soone

Tallinn, Estonia

16 October 2026