



European Vegetation Archive Data Request Form

To obtain data from the European Vegetation Archive (EVA), please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data meeting 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.

- Applicant's name:

Hanne De Kort

- Applicant's institutional address:

Kasteelpark Arenberg 31, 3001 Leuven, Belgium

- Applicant's e-mail:

Hanne.dekort@kuleuven.be

- Project title:

Transposing biodiversity conservation – transposable elements as drivers of genetic diversity

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

As part of an ERC project proposal, I would like to study genetic diversity near transposable elements in the genomes of ten grassland species. My main hypothesis is that small and isolated populations (with increased inbreeding) may still have high evolutionary potential through active transposable elements that increase nearby mutation rates. Such increased mutation rates near functional genes may boost evolution in the absence of ample genome-wide genetic diversity. To calculate genetic diversity and inbreeding, genetic material will be collected following Nagoya protocols through sampling one or two leaves per plant, and this for 30 plants in each of 30 locations. To facilitate localization of populations, georeferenced plot information is important. I also aim to perform species distribution modelling using geographical information of the list of species provided below, to study whether the evolutionary potential provided by transposable elements can mitigate the impacts of climate change and landscape reconfiguration on future species distributions. This too requires the availability of georeferenced data points.

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

Three scientists will be employed to assist with data sampling and analysis, including two PhD students and a postdoctoral scientist.

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

ERC proposal submission: April 2021; Start of project (if approved): September 2022;
Publications: January 2024-2030.

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

Europe, including Macaronesia, Turkey and European Russia



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- 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, georeferencing is required. Minimum accuracy of 500 m, as well as plots with undefined precision.

- Vegetation types needed (syntaxa):

All

- Other data selection criteria:

Plots should be restricted to surveys younger than 2000.

Each plot should contain one or more of the species listed below. If possible, all European locations where each of the species has been recorded are provided:

Papaver rhoeas

Diploaxis muralis

Erysimum cheiranthoides

Tripleurospermum maritimum

Anagallis arvensis

Cardamine hirsuta

Arenaria serpyllifolia

Linum catharticum

Papaver rhoeas

Erophila verna

Galeopsis tetrahit

Galium aparine

Geranium columbinum

Geranium molle

Geranium robertianum

Lapsana communis

Sonchus asper

Stellaria media

- Envisaged publications:

Between 10 and 15 (At least two each year; ERC = 5 years)

- **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.



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From all the locations provided by the EVA database, a selection will be made of 20 to 30 locations per species for genetic diversity assessment. Only this very limited set of locations will be deposited. For the species distribution modelling papers, only a non-georeferenced map of a reduced set of locations will be deposited (so no table with coordinates).

- 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 for 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 from 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.

No

- 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: <http://iavs.org/Governance/Code-of-Professional-Ethics.aspx>). 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.

Given that the provisioning of accurate data points is vital to the project, I am happy to offer co-authorship to an EVA representative. I will ask Els De Bie (the custodian) if she is interested to contribute to one or more of the papers, or if she could recommend an EVA representative with knowhow on genetic diversity and epigenetics (if possible transposable elements in particular).

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

Els De Bie

- 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>).
- In any result obtained based on this data, I will cite the EVA report paper (Chytrý et al. 2016; <https://doi.org/10.1111/avsc.12191>). 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).



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- 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.

Leuven (Belgium), March 15th 2021

Hanne De Kort