European Vegetation Archive

Data Request Form

To obtain data from the European Vegetation Archive (EVA), please first make an enquiry to 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:

  Coline Boonman

- Applicant's institutional address:

  Heyendaalseweg 135, 6525 AJ, Nijmegen, The Netherlands

- Applicant's e-mail:

  c.boonman@science.ru.nl

- Project title:

  Understanding functional diversity pattern across European grasslands

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

  - Plant functional diversity greatly differs spatially. The favorability hypothesis describes an increase in plant diversity at more favorable climates and a decrease with increasing environmental harshness. In benign environments, traits can diverse due to a low environmental filtering effect, leading to competition for resources and space, which, in turn, requires more trait divergence as to fill a specific niche (e.g.Weiher & Keddy, 1995). Contrastingly, in less favorable environments, plants require trait adaptations to survive thereby restricting the niche space and thus limiting trait variation. Contradicting this hypothesis, harsher environments are sometimes found to be more diverse due to the complementarity effect, where facilitation among species allows for more diversity in traits than expected from the environment alone (e.g. creation of microclimates). Without specifically disentangling the different aspects contributing to functional diversity, it is important to get a better understanding of functional diversity patterns, since functional diversity can enhance ecosystem resilience (e.g. Cadotte et al. 2001, Mori et al. 2012), which, in turn, can enable better predictions for ecosystem responses to climate change.
  - As a case study, we selected the highly diverse European grasslands (Habel et al. 2013). We want to combine vegetation survey data from EVA with trait data from TRY (1) to quantify the plant functional diversity, i.e. functional richness while accounting for species richness, across different gradients of environmental stress, and (2) to characterize the functional trait space of different types of grasslands to get an understanding of the variation in their size, their distinctness/overlap in trait space.
  - The environmental gradients we will be looking at are considered climatic stressors for plants (minimum and maximum temperature, and drought). We will make regressions with functional diversity as the response variable, and each of these climate variables as predictors. We are considering to also include soil variables (soil Cation Exchange Capacity), however, since the effect of soil variables itself dependent on climatic conditions we are not sure yet (as it might become to complicated to understand the model results).

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

  The data will mainly be edited and analysed by the applicant but as it is a PhD project the supervisors from Radboud University, Nijmegen, (Prof. Mark Huijbregts and Dr. Luca Santini) might also be involved.

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

  June 2020

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

  All plots located in Europe

- 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, plots need to be georeferenced. Minimum accuracy is 1km

- Vegetation types needed (syntaxa):

  Grassland

- Other data selection criteria:

  No

- Envisaged publications:

  One publication on the functional distinction between grasslandtypes and biogeographic patterns with environmental gradients.

- 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 – I will request the data in TRY myself

- 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. 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-

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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.

All participating databases will be appropriately cited. The custodians and deputy custodians of the received databases will be informed about the progress of the project. Once the final selection of plots has been made, each contributing database will be offered the opportunity to nominate one active coauthor. Such nominations will be accepted if the database contributed at least 5% of the data in the final dataset, while it is upon the discretion of the first author whether to accept nominations of databases that contribute less. Any nominated author will have to make an intellectual contribution until the given deadlines in order to be listed as co-author at submission stage.

- 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.

Jürgen Dengler, custodian of two EVA databases, supports this proposal

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 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.

[place, date]   Nijmegen 29-01-2020

[applicant's name]   Coline Boonman