



EVA Annual report (2025)

Dear EVA friends,

This is the 9th annual report of the European Vegetation Archive (EVA), summarizing the status of our database consortium, projects, and publications.

In March 2025, our consortium contained 108 [EVA databases](#) with **2,086,610 vegetation plots**, of which 90% were georeferenced. Of these plots, 82% may be accessed under the semi-restricted regime and 15% under the restricted regime, while the other 3% are open access.

The EVA database focusing on resurveyed plots, called [ResurveyEurope](#), included 507 individual datasets with **439,663 observations**. We are open to new datasets covering resurvey projects, especially from southern Europe and other underrepresented regions.

In total, EVA data have been made available for **241 research projects** (see the full list [here](#)).

Since the last report, EVA members have produced **7 new journal publications** based on the combination of vegetation data from two or more European countries. We want to highlight the study by [Kambach et al. \(2024\)](#) to understand climate regulation processes on plant functional diversity across European habitats. This is one of the few studies making use of massive EVA data (1.7 million plots) together with TRY-related trait data and the assignment of plots to EUNIS habitat types, demonstrating the potential of EVA data to respond to broad ecological questions with plant community data. Similarly, a study by [Rosa et al. \(2024\)](#) used functional metrics extracted from EVA and TRY to assess the impact of land use on European vegetation, revealing the effects of anthropogenic land use on plant functional richness. In the framework of European EUNIS classification, we also highlight the study by [Leblanc et al. \(2025\)](#) that developed deep-learning tools for habitat identification with species composition. Another study used 12,869 EVA plots to analyze the impact of historical land-use changes on grassland vegetation in the border area between Austria and the Czech Republic ([Midolo et al. 2025](#)). Other studies used EVA data to develop new methods for the imputation of Ellenberg Indicator Values in southeastern Europe ([Leccese et al. 2024](#)), to quantify nitrogen deposition across habitats in the Atlantic regions of Europe ([Wamelink et al. 2024](#)) and to evaluate the geographical distribution of alpine willow species in a phylogenetic study ([Pittet et al. 2025](#)).

EVA data has been also used for 22 conference presentations, two Master theses and several reports and pre-print publications. For an updated list of all publications, please visit the [EVA website](#).

We congratulate project leaders and all data contributors for these achievements.

Borja Jiménez-Alfaro, Ilona Knollová and the EVA Coordinating Board

April 2025



EVA projects FINISHED in the last year

- Estimation of Ellenberg Indicator Values for SE Europe from vegetation data (EVA project 16) – Fabio Attorre and Michele De Sanctis
- Past, Present and Future Weeds (EVA project 91) – Michael Glaser
- Phylogeographic analysis of the *Biscutella laevigata* complex (EVA project 106) – Theofania-Sotiria Patsiou
- Life cycle assessment methodology for assessing land use impacts on functional plant diversity (EVA project 174) – Francesca Rosa
- Genomic evidence for deciduous forest refugia in the Alps, Carpathians and northern Apennines (EVA project 175) – Pau Carnicero Campmany
- Ecological niche and accompanying vegetation of *Eryngium alpinum* in Vorarlberg and Liechtenstein (Master thesis) (EVA project 192) – Felix Wetzel
- The ecological niche of *Inula helvetica* (EVA project 203) – Jürgen Dengler and Marco Thoma

EVA projects CANCELLED in the last year

- Formalized typology of plant-diversity patterns in European salt-affected grasslands (EVA project 121) – Ricarda Pätsch and Milan Chytrý
- Phytosociology of *Dactylorhiza majalis* agg. in Central Europe (EVA project 131) – Sebastian Schmidtlein and Jürgen Dengler
- Survival of the smartest: is learning a key for rapid adaptation to the reduction and fragmentation of natural habitats? (EVA project 139) – Matteo Marcantonio (data not used)
- Trait-based and compositional delimitations of habitats and the effect of including clonal traits for rhizomatous species (EVA project 169) – Timothy Harris
- The interrelationship between below- and aboveground biodiversity (EVA project 177) – Leonore Jungandreas

Reference list of new EVA publications

- Kambach S., Attorre F., Axmanová I., Bergamini A., Biurrun I., Bonari G., Carranza M. L., Chiarucci A., Chytrý M., Dengler J., Garbolino E., Golub V., Hickler T., Jandt U., Jansen J., Jiménez-Alfaro B., Karger D. N., Lososová Z., Rašomavičius V., Rüşna S., Sieber P., Stanisci A., Thuiller W., Welk E., Zimmermann N.E. & Bruehlheide, H. 2024. Climate regulation processes are linked to the functional composition of plant communities in European forests, shrublands, and grasslands. *Global Change Biology*, 30: e17189. <https://doi.org/...11/gcb.17189>
- Leblanc C., Bonnet P., Servajean M., Chytrý M., Aćić S., Argagnon O., Bergamini A., Biurrun I., Bonari G., Campos J.A., Čarni A., Čušterevska R., De Sanctis M., Dengler J., Garbolino E., Golub V., Jandt U., Jansen F., Lebedeva M., Lenoir J., Moeslund J.E., Haase, A., Pielech R., Šibík J., Stančić, Z., Stanisci A., Swacha G., Uogintas D., Vassilev K., Wohlgemuth T. & Joly A. 2024. A deep-learning framework for enhancing habitat

- identification based on species composition. *Applied Vegetation Science*, 27: e12802. <https://doi.org/...1/avsc.12802>
- Leccese L., Fanelli G., Cambria V. E., Massimi M., Attorre F., Alfò M., Ačić S., Bergmeier E., Čarni A., Čuk M., Čušterevska R., Dimopoulos P., Hoda P., Mullaj A., Šilc U., Škvorc Ž., Stančić Z., Stevanović Z.D., Tzonev R., Vassilev K., Malatesta L. & De Sanctis M. 2024. Estimation of missing Ellenberg Indicator Values for tree species in South-eastern Europe: a comparison of methods. *Ecological Indicators*, 160: 111851. <https://doi.org/...2024.111851>
- Midolo G., Skokanová H., Clark A.T., Vymazalová M., Chytrý M., Dullinger S., Essl F., Šibík J. & Keil P. 2025. Nineteenth-century land use shapes the current occurrence of some plant species, but weakly affects the richness and total composition of Central European grasslands. *Landscape Ecology*, 40: 22. <https://doi.org/10.1007/s10980-024-02016-6>
- Pittet L., Marinček P., Kosiński P., Wagner N.D. & Hörandl E. 2025. Hybrid zones in the European Alps impact the phylogeography of alpine vicariant willow species (*Salix* L.). *Frontiers in Plant Science*, 16: 1507275. <https://doi.org/...2025.1507275>
- Rosa F., van Bodegom P.M., Hellweg S., Pfister S., Biurrun I., Boch S., Chytrý M., Čušterevska R., Dalle Fratte M.D., Damasceno G., Garbolino E., Lenoir J., Ozinga W.A., Penuelas J., Sabatini F.M., Schrodte F., Uogintas D., Byun C., Dolezal, J., Dziuba T., Hérault B., Martín-Forés I., Niinemets Ü., Peyre G. & Scherer L. 2025. Land-Use Impacts on Plant Functional Diversity Throughout Europe. *Global Ecology and Biogeography*, 34: e13947. <https://doi.org/...11/geb.13947>
- Wamelink G.W.W., Goedhart P.W., Roelofsen H.D., Bobbink R., Posch M., van Dobben H.F., Biurrun I., Bonari G., Dengler J., Dítě D., Garbolino E., Jansen J., Jašková A.K., Lenoir J. & Peterka T. 2024. A novel method to estimate the response of habitat types to nitrogen deposition. *Environmental Pollution* 349: 123844. <https://doi.org/...2024.123844>