Supplementary information

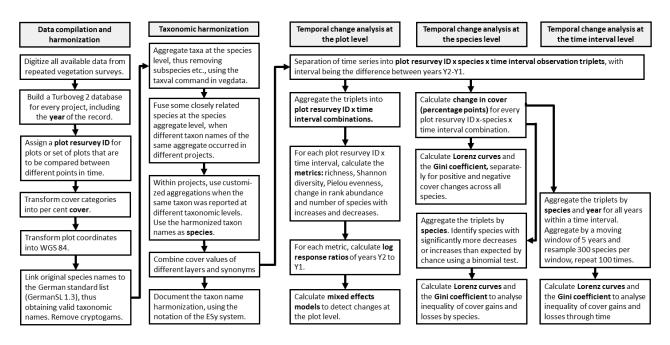
More losses than gains during one century of plant biodiversity change in Germany

In the format provided by the authors and unedited

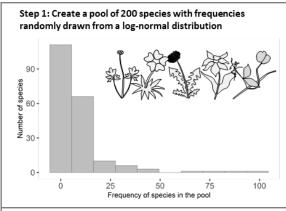
Supplementary Methods

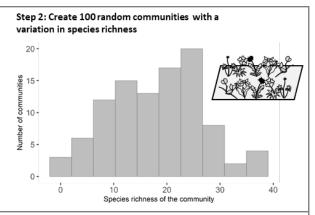
Jandt, U., Bruelheide, H., Jansen, J., Bonn, A., Grescho, V., Klenke, R., Sabatini, F.M., Bernhardt-Römermann, M., Blüml, V., Dengler, J., Diekmann, M., Dörfler, I., Döring, U., Dullinger, S., Haider, S., Heinken, T., Horchler, P., Kuhn, G., Lindner, M., Metze, K., Müller, N., Naaf, T., Peppler-Lisbach, C., Poschlod, P., Roscher, C., Rosenthal, G., Rumpf, S., Schmidt, W., Schrautzer, W., Schwabe, A., Schwartze, P., Sperle, T., Stanik, N., Storm, C., Voigt, W., Wegener, U., Wesche, K., Wittig, B., Wulf, M. (2022): More losers than winners over one century plant diversity change in Germany. – Nature

Suppplementary Methods 1 | Steps of data preparation and analysis. The main steps were data compilation and harmonization, taxonomic harmonization and the analyses, which were done aggregating by plot (plot resurvey ID x time interval combinations, species (across all plot resurvey IDs and intervals) and by observation interval (plot resurvey ID x species x time interval combinations).



Suppplementary Methods 2 | Illustration of the null model scenarios.



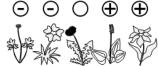


Step 3: Introduce random change according to three scenarios which correspond to the three hypotheses, testing whether the divergence in the distribution between cover losses and gains is driven by ...

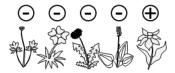
- i) ... the proportion of species that undergo changes (to simulate different turnover in community composition)
- a) Let 2 out of 5 species in a community change cover (proportion of species with cover changes 0.4)



b) Let 4 out of 5 species in a community change cover (proportion of species with cover changes 0.8)



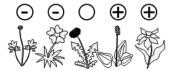
- ii) ...the ratio of increasing to decreasing species (to simulate differences in the distribution of losses and gains, irrespective of species)
- a) Let 1 out of 5 species increase (Proportion of increases in all changes 0.2)



b) Let 4 out of 5 species increase (Proportion of increases in all changes 0.8)



- iii) ...the degree to which cover losses are concentrated on a specific subset of species (to simulate that some species suffer more from losses than others)
- a) Concentrate losses and gains on randomly chosen species (Random species selection)



b) Concentrate losses on specific species (Directed species selection)



