

The MyDiv Experiment - Data sharing and publication policy

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The MyDiv Experiment represents a collaborative research platform to investigate the role of mycorrhiza in tree diversity effects on ecosystem functioning. All participating researchers use the same experimental plots and the respective plot IDs for their measurements. The MyDiv Experiment has been designed with a long-term perspective and in the spirit of scientific collaboration. As a project of international visibility, the experiment requires careful data documentation and, thus, agreements on the documentation, quality, sharing, and publication of data obtained. Therefore, the following data sharing and publication policy will be adopted.

Members of the MyDiv Experiment comprise the principal investigator (PI), the scientific coordinator, the site manager, the data curator and all PhD students and postdocs conducting research at MyDiv and being supervised by one of the former and affiliated researchers in the Experimental Interaction Ecology group at iDiv. Collaborators are all researchers working in the MyDiv Experiment and not being supervised and affiliated with the Experimental Interaction Ecology group at iDiv. In case of fixed-term contracts, such as for postdocs and PhD students, membership ends one year after the end of the contract.

1 General definitions

Generally, the following terms are used in the MyDiv Experiment database and this policy.

- 1.1 **Metadata Creator:** The person who created the dataset by filling out the first version of the metadata. The metadata creator has *read*, *write* and *grant* permissions on the datasets.
- 1.2 **Data Creator:** Main researcher(s) involved in producing the primary data. The data creator has *read* and *write* permissions.
- 1.3 **Data Collector:** Person(s) responsible for gathering/collecting data under the guidelines of the data creator or project leader. The collector and creator can be the same person. In

internal assembled datasets, data collector(s) are the contact person(s) of the dataset(s) contributing data to the new dataset. The data collector has no permission.

- 1.4 **Project Leader:** Person responsible for the dataset (on a long-term perspective), usually the PI of the project / collaborator. The project leader has *read*, *write*, and *grant* permissions.
- 1.5 **Contact Person:** The person managing and granting access to the dataset. In general, the contact person is the project leader or a person designated by the project leader (most often the data creator). The contact person receives dataset access requests and controls the decision. The contact person is responsible to communicate to project leaders, data creators, and collectors where necessary. The contact person is the place to go for troubleshooting or questions related to the dataset. The contact person has *read*, *write*, and *grant* permissions on the dataset.
- 1.6 **Data Owner / Rights Holder:** the university/research institution the data creator is affiliated with. It is represented by the respective PI. The PI has to ensure that people in her/his group are appropriately considered.

2 Definitions for synthesis datasets

For synthesis datasets, the following definitions are specified.

- 2.1 **Project Leader:** include the PI of the group who assembled the dataset, as well as owners of all datasets who have contributed significantly to the content of the assembled dataset.
- 2.2 **Data Creators:** are all researchers of the synthesis team who created the new dataset.
- 2.3 **Data Collectors:** the contact persons from all individual datasets contributing to the new datasets.
- 2.4 **Contact person:** typically, the project leader or the main data creator who assembled the dataset.

3 Dataset creation, upload, and quality control

- 3.1 All data collected or produced within the MyDiv Experiment will be deposited in a central database (<https://mydivdata.idiv.de>) managed by the data curator. In case of large datasets, such as molecular datasets (e.g. microbial sequences, chemical compounds) and photo/video material, the detailed metadata with a link to the full data in discipline-specific databases should be created in the database.

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- 3.2 Data deposited in the database should be meaningful, with complete metadata and should be understandable for others. Unprocessed data directly from data loggers etc. should not be deposited.
 - 3.3 Metadata has to be written very carefully and should be as informative and comprehensive as possible. Primary data quality should be carefully checked. The data curator will check the dataset quality and the metadata/data creator should follow the guides of the data curator.
 - 3.4 Processed and quality-checked data has to be uploaded as soon as possible, but not later than one year after the data collection or data assembly event and needs to be authorized by the project leader.
 - 3.5 Quality control of data is primarily the duty of the data creators. The ultimate responsibility for data quality lies with the project leader.

4 Data sharing

- 4.1 Data collected within the framework of the MyDiv Experiment are shared among members of the MyDiv Experiment. Data will be shared with collaborators upon request and acceptance by the project leader and the data owner (if different).
- 4.2 Interest in data use should be requested in the database, clearly stating the intended analysis. The contact person will receive an email and he/she will communicate with the other data owners to decide whether to accept or decline the data request.
- 4.3 When the contact person received a data request for a synthesis dataset, a (synthesis) project proposal has to be requested and then circulated among all the data collectors. Once all data collectors have agreed, the contact person grants the dataset access via the database. If one or more dataset collector(s) disagree with the request, the data creators can exclude these single dataset(s).
- 4.4 Requests should be answered within 2 weeks. Afterwards, the request is implicitly granted. Contact persons' absence (e.g. indicated by automatic mail reply) is considered and extends the period of time. If access is granted, the contact person and the request person will be informed by the database. All requests and permissions sent via the database will be copied to the data curator.
- 4.5 Data shared among members/collaborators can only be used for the analysis indicated and by the persons in the initial written request. Any further analysis or involvement of other researchers requires a new data request.

4.6 Data may not be given to third parties including other members/collaborators.

5 Publication agreement

Under this agreement, “publications” refers to any peer-reviewed scientific publication or technical report in journals, books, or other media. The agreement is not obligatory for abstracts, conference proceedings, posters, or other short or non-scientific publications (e.g. brochures), although the general “spirit” should always be respected.

- 5.1 Any participant that plans to publish a paper from data of the MyDiv Experiment has to send a paper proposal to the PI and Scientific Coordinator of the MyDiv Experiment. This paper proposal should be sent at an early stage of the intended publication, i.e., at a time when the main idea is consolidated. In this way, everybody is given the chance to contribute to the work or raise objections. A template can be downloaded from the MyDiv website (section Collaboration Guidelines).
- 5.2 Before submission, the full manuscript needs to be circulated among all data owners, to the MyDiv Experiment PI, and the scientific coordinator for at least two weeks. Any objections to the planned publication shall be made in a written form within those two weeks. If no objection is made within the time limit stated above, the publication is permitted.
- 5.3 Very clear and early communication between all parties involved is indispensable. The form of credit to an involved person has to be discussed before a paper is written.
- 5.4 Following the Authorship Guidelines of the [Experimental Interaction Ecology](#) group (which is based on the recommendations by the German Research Foundation), potential co-authors should have contributed to at least two (out of eight) of the following aspects of the study. Lead authors should invite the respective people who contributed to become co-authors.

i. CONCEPT & COORDINATION

- (1) developed/framed research question
- (2) acquired the respective research funds
- (3) does important coordination work

ii. PRACTICAL REALIZATION

(4) problem solving in practical/programming work or development of methods, data contribution

(5) contributed to generation and processing of critical data and/or its analysis

iii. INTERPRETATION & WRITING

(6) contributed to interpretation of results

(7) wrote the paper

(8) contributed to paper writing

5.5 Final approval of and accountability of all (co-)authors for the manuscript is mandatory.

5.6 For the sequence of authors, the FLAE (First and Last Author Emphasis) and SDC (Sequence Determines Credit) concept are applied (but modifications are possible and need to be discussed, if there are any reasons why a different approach should be chosen):

- First author gets most credit

- Senior author is main PI (developed the research idea with first author)

- other authors are listed according to declining contribution and/or alphabetical order if differences in contributions are impossible to define

5.7 To credit the efforts in setting up the experiment, maintaining the plots, and delivering infrastructure, co-authorship to former and present researchers leading these (mostly the PI and scientific coordinator[s]) should be offered. In many cases, the PI may also contribute directly to the corresponding data analyses due to the in-depth knowledge of the site. In any case, co-authorship is only warranted when a true contribution to the paper can be made.

5.8 All publications arising from data collected within the MyDiv Experiment infrastructure should make reference to its design paper (in the main text of the publication, see [Ferlian et al., 2018](#)) and to iDiv (in the Acknowledgements, e.g., "...support came from the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, funded by the German Research Foundation (FZT 118, 202548816)..."). Moreover, the technical staff of the MyDiv Experiment should be acknowledged, e.g., "...we thank the previous and current technical staff (Ulrich Pruschitzki and Julius Quosh) who established and maintained the field site of the MyDiv Experiment."

5.9 Open access publishing of papers, data, and code is recommended. Exceptions should be discussed with the PI.

I accept the terms and conditions of this Data Sharing and Publication Policy:

Date:

Name:

Signature:

Please scan this signed document and return it to the data curator (Dr. Yuanyuan Huang, yuanyuan.huang@idiv.de). In case of further questions, don't hesitate to contact us: Olga Ferlian, Phone: +49 341 97 33173, olga.ferlian@idiv.de.