

Edaphobase Data Policy

“Balancing Intellectual Property Rights with open-access Data Usage”

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Directory for user groups:

- Data providers → relevant Sections = I.A, II, III, IV, VI and VIII
- Data users → relevant Sections = I.B and V
- Those interested in legal details → Section V
- Those interested in how private data is handled → Section VI
- Those interested in the Edaphobase project/team → Section VII

i) Description of the data warehouse "Edaphobase"

The soil-biodiversity data warehouse Edaphobase combines data on soil organisms, their distribution and the habitat conditions of their sites of occurrence and makes this data available for comprehensive analyses. Data re-use by the scientific community and general public is an explicit objective. Edaphobase contains data from heterogenic sources such as scientific literature, museum collections, or “raw” project data. For information about which organism groups, which data variables, etc. are included in Edaphobase, please see <http://edaphobase.org>. While the initial geographic focus was Central Europe, Edaphobase now contains world-wide data on soil organisms. The data are recorded as accurately as possible, but made available online in various degrees of accuracy described below. The open-access Data-Query Portal (<https://portal.edaphobase.org>) allows data to be filtered, collated and downloaded, site-of-occurrence maps of individual taxa to be created, as well as information on the

biotic communities of specific areas, sites or habitat types to be complexly queried. It also provides basic data-analysis tools at both the species and community level.

The Edaphobase data warehouse is hosted and provided to the public by the **Senckenberg Society for Nature Research, Senckenberganlage 25, 60325 Frankfurt am Main, Germany** as a service provider according to § 12 TMG (German Telemedia Act, <https://germanlawarchive.iuscomp.org/?p=2832>). It is developed by, and run at, the Senckenberg Museum of Natural History in Görlitz, Germany.

Contact to Edaphobase is possible at any time via info@edaphobase.org.

ii) Definitions

Anonymised data: Data uploaded to Edaphobase, but not completely visible or assessable by the public. Such data can be used in Edaphobase internal analysis tools without it being visible to external users of the data warehouse. Usually used to protect sensitive sites (from which the data was collected) or to prevent misuse (i.e., copying a complete data set and publishing as "own data" by an external user).

Data provider: Person or institution providing data and metadata to Edaphobase. Ideally, the data provider is identical to the data owner; but a data provider may "only" be providing (uploading) data to Edaphobase created and owned by other persons (e.g., from his/her institution, or from a publication). This is the contact person for potential questions from Edaphobase. Where "data provider" is mentioned in this data policy, this applies to both the data provider and the data owner(s), even if these are different persons.

Data owner: Person or institution that has collected and compiled (= generated) the original data and thus has ownership (copyright) rights to the data and metadata. The data owner is not necessarily the data provider, but can make his/her data available to a data provider for uploading to Edaphobase. For instance, in data derived from publications, the author(s) of the publication is/are the data owner(s), and the person uploading the data is the data provider.

Data record¹: A linear collection of associated data fields (e.g., a species occurring in a sample/site with the associated quantities, methods and abiotic and biotic sample/site variables). Conceptually, this can be thought of as one line in an extended spreadsheet.

Data set: A collection of associated data records. Minimally, a combination of data record and associated metadata. Conceptually, this can be thought of as a (or multiple) spreadsheet table(s).

Data user: A person searching, using and/or downloading data stored in the Edaphobase data warehouse.

Edaphobase Data-Query Portal: The Query Portal is the publically available online browser-based software for querying and accessing data contained in the Edaphobase data warehouse, available at <https://portal.edaphobase.org>. The Query Portal contains tools for creating tables of queried data, downloading tables, mapping sites of occurrence as well as for basic species- and community-level analyses of the data.

Edaphobase Data-Upload Tool: Software specifically developed to upload data to the Edaphobase data warehouse. This software tool maps a data provider's data to the Edaphobase data structure and vocabularies, standardizes nomenclatures, performs first quality controls and prepares data for integration into Edaphobase's data base.

¹ "Data record" and "data set" are often used synonymously. Edaphobase uses these two terms for the two different concepts presented/defined here to avoid confusion.

Embargo period: A time period during which data uploaded to Edaphobase is not made available to the public. Usually to allow time for publication or finishing a thesis related to the data.

Metadata: Data describing a data set, such as who collected the data within which project/publication/collection on which taxa, with which methods, where, when and other necessary background information to the data. (In Edaphobase, biotic and abiotic habitat data – i.e. soil types, pH values - are usually considered to be true data and not necessarily metadata, since they are often available at a sample or plot level, and not only one value per data set.) Such descriptive information enable users to query specific data sets or to assess the usability of the data for his/her own purposes. In Edaphobase, metadata are stored within the data records themselves and therefore may be heterogenic within very large data sets.

iii) Subject and goals of this Data Policy

The availability (sharing) of research data is an essential basis for determining and understanding the distribution and drivers of soil biodiversity. The Edaphobase Data Warehouse for Soil Biodiversity offers a stable, long-lasting (sustainable) and strongly data-linked infrastructure for providing soil-biodiversity research and observational data to the scientific community, policy makers and the general public. It thus allows soil biodiversity to be assessed as well as significantly increases the scientific impact of research data.

This data policy governs the legal framework for the data contained in, as well as the use of, the Edaphobase Data Warehouse. It balances the public (open access) provision of soil-biodiversity data with the intellectual property rights of data providers and conforms to the European General Data Protection Regulations. This policy also represents the Data Sharing Agreement between Edaphobase and data providers. It is applicable between Edaphobase and its users (= data providers to Edaphobase as well as external users of Edaphobase via the Data-Query Portal).

This data policy explains and regulates how data is handled within Edaphobase, how data is provided to - and re-used from - Edaphobase, the rights and responsibilities both of Edaphobase and its users, as well as how copyrights, data and personal information are protected. The terms of use of Edaphobase and the data held therein, the intellectual property rights of the owners of the research data as well as data re-use regulations (including citation suggestions) are defined in this data policy. It furthermore outlines procedures used to assure data quality.

The use of the database is only permitted under observance of the following data policy, which serves as the general “terms of use” of Edaphobase. By registering with Edaphobase (either as a Data Provider via the Edaphobase Data-Upload Software or as an external user of Edaphobase via the Data-Query Portal [<https://portal.edaphobase.org>], see section V.2), the user explicitly agrees to these conditions and acknowledges that she/he has read and understood the terms of use. The user confirms his/her knowledge by checking the marks in the corresponding checkbox of the Edaphobase Data-Upload Tool or the Data-Query Portal or by signing a hardcopy of this policy.

I. Public Data Provision

Data contained in Edaphobase is, in principle, freely available to the public. Edaphobase follows the FAIR principles and the data contained therein is widely “open access”. However, since data providers can restrict public access to their data, Edaphobase does *not* provide “open data”.

A main concept behind data sharing concerns principles of “consent”. Ideally, data sharing involves *individual* (between a specific data provider and data user), *explicit* (for a specific purpose), *informed* (between the individual data provider and user for the specified purpose) consent. Since this is impracticable (if not impossible) in an open, publicly available data infrastructure, Edaphobase employs

general or *broad* (between all data providers and potential data users), *implicit* (assuming data re-use for diverse soil-biodiversity assessment and research purposes), *implied* (by uploading data and agreeing to this data policy and – therefore – to public re-use of their data) consent. This implied consent is dynamic (i.e., data providers can determine – and change – the level of public accessibility to their data). Individual, explicit consent is possible for restricted-access data (see Section 1.A).

A. Data provision to the data warehouse (data providers)

To protect the intellectual property rights of the original data providers, the Edaphobase data-release management policy (and software procedures) from the internal source database (which is not publically available) to the publicly accessible Data-Query Portal allows a staggered data availability in the Query Portal to external users by offering three different “data-access options”, which can be chosen by the data provider:

- (1) The default setting for data availability and re-use is “**open access**”. In this case, all data delivered by the data provider (with the exception of personal data, see Section VI) can be accessed, viewed and potentially downloaded (as stipulated in Section I.B) by users of the Edaphobase Data-Query Portal. This includes the soil-biodiversity data itself, data on the data source and name of the provider/owner, as well as environmental and methodological metadata. All of these data types are linked in the individual data records of a data set and – in open access - are freely available to the public.

Such data is also available for internal Edaphobase data-assessment and analyses tools (see Section I.B.ii) and the individual data records or data sets used in these analyses can be viewed by registered Query-Portal users.

- (2) To restrict public accessibility to data pertaining to research results that have not yet been published (for instance, in scientific journals, reports or theses), provided data may be conferred a priori with a **temporary embargo period** of three (3) years, during which public access to the data is prevented. Embargoed data is treated as totally anonymized data (the data exists in the database, but is “anonymous” to all external users). The embargo period automatically expires after the three-year period. After expiration of the embargo period, data is publically available at the level determined by the data provider (preferably freely available as open access). Data providers are automatically notified per e-mail four (4) weeks before an impending expiration of an embargo period. Any extension of the embargo period (for a further 3-year period) takes place only after a request by the data provider to Edaphobase, otherwise expiration occurs automatically. The embargo may be cancelled before the 3-year period at the request of the data provider.

Such data is also available for internal Edaphobase data-assessment and analyses tools (see Section I.B.ii). However, individual data records or the data sets used in these analyses cannot be viewed or downloaded by a Query-Portal user.

- (3) To, e.g., protect sensitive data and sites, or similar, the original data provider can specify a priori whether public access to their data sets be **permanently restricted** or blocked (= so-called “partially **anonymized data sets**”). The aim of such anonymized data sets is to render the *exact* localities, examination schemes (“sampling design”), etc. of such data unrecognizable, so that the sites of occurrence cannot be determined, or the original investigation cannot be reproduced, by external users.

Such data sets remain in Edaphobase and are available for internal Edaphobase data-assessment and analyses tools (see Section I.B.ii). However, when moved to table views (of the external-user-specific queries or analyses), the following data are *not* visible to external users and the corresponding data fields are marked as “data field restricted”, i.e. data exists, but is not publicly accessible.

- Geographic coordinates of the sites (see next paragraph for site-of-occurrence mapping procedures with anonymized data),
- Region, site and plot names or abbreviations are marked “data restricted” (only natural landscape unit [e.g., “Deciduous forest”], etc. are displayed, but not detailed site data),
- Treatment, plot and similar detailed habitat descriptions (free-text data fields) as well as characteristics of individual studies that might permit precise spatial identification,
- Sample numbers, volumes, etc., which may allow identification of the sampling design,
- Taxon quantities (absolute numbers, densities, etc.),
- All data fields containing remarks or original quotations.

At the same time, however, external users are provided the opportunity to use such data when researching or analyzing the distribution area of individual taxa (for which the center point of a topographic 1:25,000 map section or coordinates rounded to the second decimal position are deemed sufficient) as well as habitat preferences (“niche space”, for which taxon name, abundance and habitat parameters such as pH value, biotope type, etc. are necessary, but not the exact location or the location description). Furthermore, some data provided by the Query Portal, i.e. in contingency tables (“matrices”), are not primary data, but aggregated (e.g., sums, averages of data records; to allow cross-project data evaluations). Anonymized data are aggregated and provided in contingency tables, but the corresponding specific data records are not available to the external user.

Embargoed or anonymized data sets are *not* forwarded to networked databases, such as GBIF, the BonaRes Data Centre, or European and National Research-Data Infrastructures (see section IV).

Full access to embargoed or anonymized data sets by an external user (different from the data provider) can be granted only after a specific, personal request by the external user (which data, for which purpose, etc.) and subsequent referral of the request by Edaphobase to and approval by the respective original data provider. Raw data may then be provided to an external user only upon this direct request by the user to the Edaphobase scientist responsible for the respective animal group, who in turn consult the original data provider. Upon approval, access to the data is then provided only to the specific (= requesting) user and only for the requested taxa and only for a limited period of time. Thereby, in-depth research with detailed data views of “anonymized” data sets can only be performed after personal consultation with the person responsible for the respective organism group (named below), and Edaphobase is shown that “personal, explicit, informed consent” exists between data provider and data user. The Edaphobase team provides the possibility of sending a request to the responsible scientist and/or original data provider (contact: info@edaphobase.org).

- The scientists responsible for taxon-specific data at the Senckenberg Museum for Natural History Görlitz are Dr. Axel Christian (for Gamasina), Dr. Clément Schneider (for Collembola), Dr. Ricarda Lehmitz (for Oribatida), Dr. Karin Voigtländer (for Myriapoda), and Dr. Karin Hohberg (for Nematoda and Tardigrada); Dr. Daniel F. Marchan (for Lumbricidae) and Dr. Rüdiger Schmelz (for Enchytraeidae).

i. Persistent data identifiers (DOIs)

Data providers may request a persistent identifier (DOI: Digital Object Identifier) for each of their individual data sets, provided that they have generated the original data themselves. Thus, DOIs can only be given to the data “owners”. This DOI represents a “data publication” by the data owner. Edaphobase registers the DOI with the global non-profit DOI provider DataCite (<https://datacite.org/>) via its national partners. A DOI is requested by the data provider during the data-upload procedures in the Data-Upload upload software Tool, during which (potentially) further metadata required and recommended by DataCite is asked for. The DOI is given after all quality-control procedures during the data upload process (see next section) have been completed. The DOI also acts as a URL address,

which – when entered into a browser – leads to a “landing page” in the Edaphobase Data-Query Portal displaying information on the specific data set.

As DOIs are permanent identifiers, data sets with DOIs may no longer be changed (corrected, added to, or otherwise amended). If the need for amendments nonetheless arises, procedures exist for providing an amended or secondary DOI. (The primary DOI is archived so that it remains publically available, i.e. via the internet. However, this earlier data set is no longer available in the general Edaphobase data basis; only the amended data set is provided in the Query Portal.) In this case, please contact info@edaphobase.org for further information and requirements of the data provider.

ii. Data quality (control)

The responsibility for the correctness and completeness of the data lies with the data owners. The rules of good scientific practice apply (e.g., <http://doi.org/10.1002/9783527679188.oth1>).

Edaphobase does not assume responsibility for the accuracy of the data. Edaphobase assumes responsibility for entering the data provided by data owners into the database and transferring said data to the Query Portal as accurately as possible.

Edaphobase supports the data provider in ensuring data quality in a three-step process. (1) This is initially performed via data-quality tests carried out during the data-upload process (within the Edaphobase Data-Upload Software tool; “pre-import control”, see <http://edaphobase.org> for details). The data provider is responsible for carrying out any data changes recommended by these quality-control checks. (2) After initial data upload, a further formal technical (in form and content) and taxonomic quality control is undertaken by the Edaphobase staff and an international Data-Review Board (analogous to the review of a manuscript submitted to a journal; “peri-import control”). Edaphobase will change the formats of data if necessary as well as – where applicable – add a link to a currently valid taxonomic name (while retaining the older synonym given by the data provider); such changes do not need acknowledgement of the data owner. Edaphobase will notify the data provider to obtain authorization if other semantical changes are necessary, as far as they are discovered during this internal review process. Such corrections recommended or required during this quality control are the responsibility of the data provider. Data import into Edaphobase ensues first after quality issues arising during this review have been clarified with the data provider. (3) After final data import, a last quality-control check (standardized data query and data-use tests in the Query Portal) must be undertaken by the data provider (“post-import control”). A browser link is sent to the data provider, which leads to a “guided tour” through his/her data in the Date-Query Portal. This ensures that the data has been imported to the data warehouse correctly, the determination of which is the responsibility of the data provider. Only after these tests have been carried out and approved by the data provider, are data made visible to the public via the Query Portal (according to the data-access option chosen by the data provider, see Section I.A).

iii. Data harmonization

Data providers recognize that during the transfer from the internal database to the public Query Portal (updated daily) a number of data harmonization steps are automatically carried out to allow the largest possible data comparisons (data re-usability). These steps include (but may not be limited to):

- (1) converting original numerical values into other units to provide (international) standard-compliant data (e.g. SI-units) (where possible);
- (2) calculating missing values from original data - i.e., density values from absolute individual numbers (provided that sample sizes, number of samples, exposition times etc. are provided); C_{org} , N_{tot} or C/N (if two of these three values are provided); dominance values and dominance classes; soil-texture types from soil particle-size distributions; and similar;

- (3) translating national habitat, land-use and soil types to international standard designations (where possible);
- (4) for unclear site designations, creating site IDs (based on unique geocoordinates, habitat type, and soil types). This is carried out since the basic spatial level of comparison of Edaphobase data is the "site" (as opposed to "sample", "plot" or "region"), so that all data requires a site designation;
- (5) if data for sites are contained at a plot or sample level, average values are calculated for the display of site-level data (i.e., in contingency tables). The basis for this calculation is not the data records, but rather the samples (or plots).

Edaphobase strives to maintain the highest possible accuracy in all conversion and data harmonization steps, but cannot guarantee absolute correctness. All original data provided by the data owners (except personal data; see Section VI "Privacy") is maintained in the internal non-public database.

B. Data provision from the data warehouse (data users)

To protect against data misuse, the data-release policy in the publicly accessible Edaphobase Data-Query Portal uses a general two-stage data availability to external users with different "data-access depths":

- (1) **All users** can perform general, rather coarse queries (for example species lists, distribution maps) without registration in the database (= anonymously). For example, a taxon's sites of occurrence may be represented on a map differentiated by pH value, biotope type, etc. However, the points are only mapped and displayed in a generalized, "unfocussed" manner (= center point of a topographic 1:25,000 map section or 10x10 km quadrats). A table view is not possible; deeper queries with analysis options and, especially, data-export (download) functions are not possible (these are only possible for registered users with a login; option 2, next).
- (2) Full access to the publicly available data via the Query-Portal, including the exact coordinates of the sites of occurrence and table views, is available to **registered users**. This represents the "normal" case. User registration and the issuance of a password, etc., occur via automated processes (see Section V.2). A password is assigned by the user him/herself. Registered users can see precisely mapped data and individual data records in a table. The production of contingency tables is allowed. In the table views ("record-list tables" or contingency tables), all (queried) data records are visible in the normal case. Exception: in museum-collection data, the attribute "collector" is never shown. Only registered users can export (download) data.

The main functionality of data (re-)use in Edaphobase is to filter (query) a data extract from the current data pool in the Data-Query Portal. Subsequent use of this data extract usually entails mapping the sites of occurrence, viewing the data in table views (the columns of such tables can be user defined), creating contingency tables (matrices) for this data extract, and/or using internal data-analysis tools (Section I.B.ii). Any and all use of these products requires the acknowledgement by the user that the data was derived from Edaphobase and visualizations (maps, graphs) were created by the Edaphobase software.

Created data tables or contingency tables can be exported (downloaded) from the Query Portal by registered users (subsequent to the data-access options determined by the individual data providers, described above), to be used by the user in his/her own analyses. ***It is prohibited to further disseminate this data in other databases, repositories or public/private data collections. Distribution of this data to other individual cooperating researchers/persons automatically and explicitly transfers the rights and requirements detailed in this data policy to that person, who is thereafter also considered an Edaphobase data user with the same obligation to follow the requirements of this data policy.*** All data downloads include the terms of use of the downloaded data (= relevant extracts from this data policy), metadata on the data query used to create data extracts (for reproducing the query, or use in Methods

sections of publications or reports) as well as the data itself. The first columns of data tables provide the information necessary for the correct citation of data providers (i.e., the correct citation of the publication / project / collection from which the data derives, data collection dates, name of author / PI / data provider, any available data DOIs). Use of the downloaded data in publications or reports, including if “only” for the creation of overview graphics and similar, requires the correct citation of the original data providers in the publication/report, as described in the following section.

Commercial use of data downloaded from Edaphobase is explicitly prohibited, unless the data user has obtained the expressed permission of the individual data providers. It is the responsibility of the data user to obtain this permission. Edaphobase and Senckenberg accept no responsibility for commercial (mis-)use of downloaded data.

iv. Citation regulations for Edaphobase

In using Edaphobase information and data sets in scientific or other texts and publications, the respective copyright of the original data provider to the database must be stated and the database named. Following the citation rules of printed publications, author, title, year, and the internet address are to be cited. Furthermore, the last access date must be specified in the citation. In individual cases, where a copyright statement is impossible, data users should contact the original data providers.

Citing data providers

Data users are required to acknowledge all original data providers of any and all data used in analyses and results presented in a publication, report or similar public texts. This acknowledgement shall ensue by at least one of the following three options:

- Co-authorship

The fairest and most cooperative manner for recognizing the provision of data used in analyses and assessments is to offer data providers co-authorship of the publication, which is therefore the primary method. This shall especially apply for all “substantial” (e.g., comprising >5% of all analyzed data), unique or novel data sets affording important or significant results to the overall analysis or assessment.

- Citation

If co-authorship is not or cannot be offered to data providers, then their data set shall be cited in the reference list of the publication. For data sets with a DOI, the metadata of the DOI provides the formal citation. For other data sets, the name of the data provider, the year of submission to Edaphobase, and the title of the data set are provided for all data records in the data download, from which a citation can be created. Instead of a journal name etc., the citation should end with “downloaded from Edaphobase (<https://portal.edaphobase.org>) on [date of data access and download]”

- Acknowledgements

In all cases where co-authorship or citation are not possible, the data providers are to be thanked by name in the Acknowledgements of the publication. Data providers’ names are given (and associated with the corresponding data records) in the first column of data downloads.

Contact information for the original data providers are *not* provided publicly or in the data downloads. Contact information must be requested from Edaphobase via info@edaphobase.org.

Acknowledging Edaphobase-created visualizations

All visualizations (i.e., maps and graphs) created with the Edaphobase Data-Query Portal and used in a publication must be clearly and explicitly marked as originating from Edaphobase. This can ensue by, e.g., adding to the map/graph or in the legend thereof “created with Edaphobase on [*date of creation of the visualization*]”.

Suggested citation for Edaphobase in general:

Burkhardt, U., Russell, D.J., Decker, P., Döhler, M., Höfer, H., Römbke, J., Trog, C., Vorwald, J., Wurst, E., Xyländer, W.E.R. (2014): The Edaphobase project of GBIF-Germany – A new online soil-organism zoological data warehouse. *Applied Soil Ecology*, **83**, 3-12.

Suggested general citation for downloaded data from Edaphobase:

Edaphobase data warehouse for soil organisms. Accessed via the Edaphobase Data-Query Portal, <https://portal.edaphobase.org>, on [*yyyy-mm-dd*].

Some of the data providers to **Edaphobase** have partially limited the further use of their data or subject them to specific conditions (e.g., anonymized data). Please note the metadata in such data sets.

v. Edaphobase-internal data-analysis tools

All data uploaded to Edaphobase can be used in internal data-analysis tools. Such tools include, but are not limited to:

- mapping sites of occurrence
- data aggregations in contingency tables
- aggregating data into species (ecological, functional) groups
- regressions of a taxon’s density to environmental (numerical) parameters
- frequency bar-graphs of a taxon’s frequency in environmental (categorical) parameters
- 2-D scatterplots of a taxon’s occurrence related to environmental (numerical) parameters
- taxa’s occurrence frequencies under specified environmental conditions

Future developments may increase the number of available data-assessment and –analysis tools. Embargoed or restricted data are also included in the internal algorithms of these tools. However, as stated in Section I.A, the individual data records of embargoed or restricted data used in these tools are not available to the data user. Any use of the results or visualizations of these tools in publications, reports or similar are to be correctly cited as described in the section above.

II. Rights and responsibilities of data owners (= original data providers)

Data providers retain the rights to their data while acknowledging that data uploaded to Edaphobase are in principle open access. Data providers recognize and acknowledge that public and free searches of data are generally possible via the Edaphobase Data-Query Portal (<https://portal.edaphobase.org>). To prevent data misuse, the data provider of the original data can specify a priori the type of access with which their data will be made available (see Section I.A above): available in open access, temporarily blocked from public availability (“embargoed”, e.g. until after publication in a scientific article), or with permanent limited public visibility (“anonymised”). Temporarily embargoed or permanently anonymized are only made available upon request by the user to the original data provider (and subsequent release of this data by the original provider with visibility of all details only to the requesting user). **However, it is requested that data providers only ask for such access limitations in exceptional circumstances.** If overused, the administration effort of managing external requests for access to such limited-access data could exceed staff possibilities and render Edaphobase unmanageable. Data providers should acknowledge that they are sharing data with the public.

Data providers assume the sole responsibility for the correct and truthful representation as well as assure the quality (see Section I.A.ii) of the data they are providing. The data provider exempts Senckenberg from all claims of third parties. The indemnity order includes the costs of legal defense and /or legal prosecution.

Data providers ensure the timely and accurate quality correction after being informed of the Edaphobase review and quality-control results (see <http://edaphobase.org> for a description of the quality control reviews). A timely and accurate review and quality-control test after preliminary provision (“upload”) of data in the Data-Query Portal will be carried out by data providers after being informed of the data upload by the Edaphobase staff.

Data providers do not assume any responsibility or liability for changes or misrepresentations of their data caused by the Edaphobase staff or software.

Data providers assure that they (the provider) have the rights to the data and thus the legal capacity to share the data with Edaphobase (and thereby the public) as well as that no copyrights or other legal rights or potential interests of third parties have been infringed upon.

- Data providers retain the right to withdraw (remove) their data from Edaphobase at any time, with the exception of data that has been provided a permanent digital identifier (DOI; being “permanent” and registered internationally, this data must remain publicly available under the terms and conditions of DataCite). The Edaphobase staff will remove the data within two (2) weeks after confirming the removal request.

III. Rights and responsibilities of Edaphobase

Edaphobase ensures that data provided to Edaphobase is available (at the access level determined by the data provider, see Section I.A), unchanged (except for data harmonization steps; see section I.A.iii), during the lifetime of Edaphobase; i.e. Edaphobase assumes the responsibility for data loss or degradation caused by staff or maintenance activities. However, Edaphobase and Senckenberg accept no liability (financial or otherwise) for data loss or degradation due to electronic failures during data transfer or in the server technologies. If, for any reason, Edaphobase discontinues its services in the future, data providers will be notified by e-mail (provided the current e-mail addresses are known to Edaphobase) of the closing down of Edaphobase.

Edaphobase assures the correct and complete input of provided data into the internal data base as well as its correct and complete transfer to the publically available Data-Query Portal, including any access limitations determined by the data provider (see Section I.A).

- Edaphobase assures that data determined by the data provider to have only limited public access (“anonymized”, “embargoed”) are not available to the public via the Edaphobase Query Portal. Edaphobase will not provide access to such limited-access data without the express written approval of the data provider. An e-mail designating approval is deemed to be adequate written approval. Edaphobase will provide the data provider with the contact data of the external user requesting access and use of limited-access data. On the other hand, Edaphobase will **not** provide an external user with contact information of data providers, unless specifically requested to do so by the data provider.

Edaphobase insures the privacy of all data providers and Query-Portal users (see Section VI.).

Edaphobase insures the timely and accurate review and quality control and the subsequent public provision (“publication”) of data via the Data-Query Portal (<https://portal.edaphobase.org>). Since the exact time period for review and quality control depends on the size of the data set and the number of data sets provided to Edaphobase at any given time, an explicit definition of “timely” cannot be given. Confirmation of Receipt of a data set will occur within days. If review and quality control take longer

than six (6) weeks, the data provider will be informed. Data requested to receive a DOI will be given priority in the case of a review-process data-set queue.

Edaphobase does not assume any responsibility for incorrect data provided by external data owners.

Edaphobase does not assume responsibility for external users not acknowledging the use of data accessed via the Edaphobase Query Portal. The responsibility for acknowledging the use of data accessed from Edaphobase (see Section I.B.i) lies solely with the external user. Nonetheless, Edaphobase strictly adheres to the ethical standards of data sharing and will support the legal and fair use of provided data.

Edaphobase and Senckenberg do not accept liability for any misuse of data or financial loss of data providers due to disregard of this data policy by external users or due to unauthorized hacking of the data base by external persons.

Edaphobase implements all state-of-the-art technologies to prevent hacking of the database or the Data-Query Portal. All data connections and accesses are secured by state-of-the-art encryption methods and software-access controls.

IV. Data sharing with networked databases

Edaphobase is networked with other biodiversity and/or soil-science databases (presently this includes GBIF [<https://www.gbif.org/>], the BonaRes Data Centre for Soil Research [<https://datenzentrum.bonares.de/>], and the National Research Data Infrastructure of Germany [NFDI, <https://www.nfdi.de/>; in particular the consortia NFDI4Biodiversity (<https://www.nfdi4biodiversity.org>) and FAIRagro (<https://www.fairagro.net>)] and shares (uploads) data and metadata with these databases. Usually only a subset of the data records (i.e., metadata on the data set, species and their sites of occurrence with geocoordinates, sometimes habitat parameters of the sites of occurrence) is uploaded to these databases. Anonymised or embargoed data are NOT uploaded. Personal data of the data providers (including e-mail addresses) are NOT shared (see section VI), with the exception of the name of the data owners².

Furthermore, Edaphobase is linked to specialized databases for specific organism groups, i.e. MycoBank (<https://www.mycobank.org/>) and Unite (<https://unite.ut.ee/>) for Fungi, and the BacDive system (<https://bacdive.dsmz.de/>) for Prokaryotes. Currently, networking with these databases involves their application as a data layer for the (curated, up-to-date) taxonomy of those organisms as well as physiological or morphological characteristics of the respective taxa. The same holds true for Edaphobase networking of trait data with the soil-faunal trait databases BETSI (<https://portail.betsi.cnrs.fr/>) and EcoTaxonomy (<http://ecotaxonomy.org/>). However, a bidirectional data-exchange in the future cannot be excluded, in which case the policy for the networked biodiversity databases listed above will also apply.

Data is not shared with other databases only after explicit refusal by the data providers. Denial is given by checking the appropriate data fields (i.e., in the Edaphobase Data-Upload Software tool) as well as the appropriate boxes in the data-provision agreement (Section VIII).

Data infrastructures are rapidly evolving in Europe and globally. In particular, infrastructures linking different databases as data layers in distributed data networks are developing faster than this data policy can be updated. Should Edaphobase cooperate and network with other databases or data centers in the future (i.e. to other systems not mentioned in the current data-provision agreement), data is shared with these systems unless the data provider explicitly checks the “general data-sharing ban” box in the data-provision agreement.

² Necessary in order for external users to give credit to data owners, when appropriate. For data extracted from published literature, this includes the names of authors, the article title and journal name.

While shared data is subject to the legal regulations of the respective partner database, and Edaphobase has no authority to override partner databases' data policies, Edaphobase strives to limit networking with other systems only to those systems where the intellectual property rights of data providers are as protected and acknowledged as in this data policy (however, without a guarantee being given for external data infrastructures). Edaphobase and Senckenberg do not assume responsibility or accept liability for any misuse of data by external, networked data infrastructures.

V. Terms of use of the data base

(1) Scope of service

Data research with the Edaphobase Data-Query Portal in the framework of scientific research is fundamentally open to the public (via <https://portal.edaphobase.org>). The Senckenberg Society for Nature Research (SGN) provides the contents of the database at no charge. However, administrative fees required by individual data-providers could occur for some data due to their data-provision effort, i.e., from state agencies. These data are generally marked ("anonymized", see Section I.A above). Any such fees required for granting access to limited-access data are the sole responsibility of the data provider and are not shared with or involve the Senckenberg Society for Nature Research or Edaphobase.

To protect the rights of the original data providers and their data against misuse, the online access to the Edaphobase Data-Query Portal for external users is staggered in various stages of different "data-access depths" (for further details see above in Section I.B). General queries (for example species list, coarse distribution maps) can take place without registration in the database (anonymously). The occurrence points are mapped only in an "unfocussed", generalized manner (= center point of a TK 25 map section or 10x10km quadrats). A table view is not possible. Advanced data research with analysis options, table view, and data export functions can only be performed by registered users after a login. Only registered users have access to stored data in the Portal database, including the exact coordinates of the sites of occurrence and a table view. Registered users can see precisely mapped data and individual data records in a table. The generation of contingency tables is allowed. Furthermore, only registered users may locally save "projects" (= complex queries) and export data.

Registered users may download data for analyses within their own scientific questions. However, a re-analysis of specific data sets and publication of the results as "own" research without the express approval of the data provider is prohibited and will be considered plagiarism (with the appropriate legal repercussions). Edaphobase and the Senckenberg Society for Nature Research assume no liability for plagiarized data. Any fundamental changes to the content of downloaded data (besides that necessary for harmonizing data for an analysis) without the express approval of the data provider is prohibited.

Any commercial use of data downloaded from Edaphobase requires the prior approval of the original data providers listed in the metadata of the respective data sets.

If limited access to anonymized data sets is granted after a personal request (see Section I.A), sharing or further dissemination of such data is only possible with the express approval of the original data provider.

(2) Registration

For a complete utilization of existing services in accordance with Section V.1 of this data policy, the user is required to register via a log-on mask and the transmission of user data (see Section VI). A password is chosen by the user during the registration process. The user subsequently receives an e-mail confirming the registration at the e-mail address provided during registration. In this e-mail a link is given with which the registration can be activated and thereby be successfully completed.

The access to the database is only possible with the individual password given by the user during the initial registration. To prevent misuse, the password must be carefully kept by the user and must not be disclosed to third parties.

Edaphobase reserves the right to refuse registration without stating reasons.

All statements and declarations made via the access of the user will be attributed to that user. The user is liable for any misuse by a third party unless s/he furnishes proof that s/he bears no fault thereto.

(3) Use authorization

The database and its contents are protected by copyright regulations under German jurisdiction. The information may only be used for personal use and may be printed and saved for purposes of science, research or (public) education.

A systematic download of information or query results, especially by robots, is prohibited.

Information from the database may neither be shared electronically or in printed form nor given gratuitously to third parties. For users it is forbidden to change articles and texts from the database, to cut, edit, and otherwise to sublicense, sell, transfer, divide or distribute them.

On demand from the website operator, the user will immediately terminate the use of the information and articles within. This applies in particular if copyright claims or property rights are asserted against the operator or user.

The user will inform the website operator immediately if a third party asserts copyright claims or property rights.

The unlawful use, duplication, dissemination, or publication of contents of the database is subject to civil and, if need be, criminal prosecution.

(4) Copyright wording and source disclosures

The Edaphobase database is a database with various digital documents that are protected by copyright. The publicly visible data records are linked to a citable source and are thus assigned to the originator's (author's) copyright of the respective data.

In case of the use of the information and data sets in scientific or other texts, the respective copyright of the original data provider to the database must be stated and the database named (see Section I.B.i). Following the citation rules of printed publications, author, title, year, and the internet address are to be cited. Furthermore, the date of creation or last modification and last access date must be specified in the citation.

(5) Database rights

The retrievable data and documents in Edaphobase represent in total a copyrighted database. It is forbidden to copy or change the database and its structure in parts or in total without the explicit approval of the Senckenberg Society for Nature Research (SGN).

(6) Availability

The operator can change the contents of the database at any time and edit or delete any or all content. The user has no claim to the provision of certain content. The website operator can close the database without stating reasons at any time, especially to carry out maintenance and implement technical changes.

There is no contractual entitlement to the permanent availability of the database.

(7) Liability

According to the state of technology, it is not possible to produce software so that it can be applied error-free in all its variants and combinations. For this reason, the operator accepts no liability for the flawlessness of the software or any damage arising therewith. In particular, no guarantee is given that the application will be sufficient for the requirements and purposes of the user. The operator is also not liable for indirect damages or consequential damages, especially not for lost profit.

The liability of the website operator and its agents and assistants for breach of contractual obligations and from tort is limited to intent and gross negligence. This does not apply to injury of life, body, and health; it also does not apply if essential contractual obligations are affected.

(8) User lockouts

In the event of breach of the data policy and especially the terms of use therein, Edaphobase/Senckenberg has the right to terminate the access of the user to Edaphobase with immediate and permanent effect. A blocked member is prohibited from re-registering under a different user profile or from using Edaphobase in any other fashion. Edaphobase reserves the right to initiate legal action and to make claims (including claims for damages) asserted against the user.

(9) Termination

The access to the Edaphobase database remains at the user's disposal for an indefinite time. It may be cancelled at any time either by the operator, especially for non-compliance against the data policy and terms of use therein, or by the user. Cancellation of a user registration by the external user him-/herself is performed by an according e-mail to the Edaphobase staff (info@edaphobase.org). If a user registration is cancelled by Edaphobase, the user will be informed of the action per e-mail.

(10) Final provisions

This data policy and the terms of use therein are subject exclusively to the laws of the Federal Republic of Germany, inasmuch as they conform with European directives.

The municipal of the city of Frankfurt am Main holds jurisdiction for all disputes arising from or in connection with these terms of use. Any party may, however, also be sued in its general place of jurisdiction.

Should any clause of this data policy and especially the terms of use therein be or become invalid, the effectiveness of the remaining provisions shall not be affected thereby. The invalid specifications will be replaced by a single control that comes as close as possible to the intended purpose of the invalid specifications. The same applies if the terms of use contain a regulatory gap.

VI. Privacy and security statement

We take the protection of the personal data of data providers and external Query-Portal users very seriously. Except for the names of the data providers/owners/authors, the personal data of data providers (including e-mail addresses, telephone numbers, postal addresses, etc.) are neither uploaded to the publically available Data-Query Portal nor made accessible to the public in any form nor given to requesting individuals without prior approval by the data provider. Personal data of Data-Query users are never provided to third parties. Personal data of data providers is collected by Edaphobase solely for internal use to ascertain exact data ownership and allow contact (if necessary) with data providers and can only be accessed and viewed by a small group of Edaphobase administrators (project management and software developers) at the Senckenberg Museum of Natural History Görlitz (see Section VII). Personal data of Data-Query Portal users is never passed on to third parties (see point (2) below)

The Senckenberg Society for Nature Research will keep your data safe. For this technical and organizational security measures are used to protect stored personal data against accidental or intentional manipulation, loss, destruction, or access by unauthorized persons. Our security procedures are continually enhanced as new technology develops.

Edaphobase does NOT participate in the internet or data economy. No data or information regarding data providers or data users is sold to, shared with, or in any form passed on to third parties. Data sharing with other biodiversity databases (as listed in Section IV) occurs only with the express approval of the data provider and does not include personal data of the data provider (see Section IV), with the exception of the data owner's name³. Edaphobase and the Senckenberg Society for Nature Research (in operating Edaphobase) have no financial interests in operating Edaphobase. No paid advertisements occur in Edaphobase or are passed on to users.

Within the Edaphobase Query Portal, we collect and use the personal data of external users only for internal management reasons and in accordance with the provisions of the Federal Data Protection Act of the Federal Republic of Germany. In the following, the type, scope, and purpose of the collection and use of all personal data are listed. You can view the following information at any time from the Edaphobase website (<http://edaphobase.org>).

(1) Collection and processing of http-log files as well as internal user recognition

If you visit the Data-Query Portal websites or use the desktop software (i.e., Edaphobase Data-Upload tool), the web servers temporarily collect each access in a log file. The following data are collected and stored - until automatic deletion after seven (7) days - for **all users** accessing the portal:

- IP address of the requesting computer
- Date and hour of the access
- URL of the internet resource
- Report if the retrieval was successful
- Data identifying the browser and operating system
- Website from which the access takes place

This data is processed for the purpose of enabling the use of the website (connection setup), for system security, for technical administration of the network infrastructure, and to improve the website. It is not possible to map this data to a specific person. The IP address is used to log the number and map the distribution of users of the Edaphobase Query Portal, without identifying the specific IPs. The IP address can be evaluated in the case of attacks on the network infrastructure of Edaphobase.

For **registered users**, the following data is also collected and stored:

- First name
- Surname
- Institute (or “private”)
- Username (given by the user him/herself)
- E-Mail address
- Password (stored as a “salted blowfish-Hash value”)

This data is collected and stored for the sole use of enabling a personal user connection to the Data-Query Portal and Data-Upload software, for compiling internal reports, to avoid misuse of additional Edaphobase functions activated for registered users, and to allow the opportunity to grant specific users access to otherwise restricted data sets (see Section I.A). It is not made available or passed on elsewhere (see point (2), below). This data remains stored in the internal

³ Necessary in order for external users to give credit to data owners, when appropriate.

Edaphobase administration modules until the user demands to have his/her account deleted, whereby the data listed here is also irretrievably deleted. Deleting a user account can be requested by contacting the Edaphobase developers at info@edaphobase.org. User data of inactive users can be purged by Edaphobase after an inactive period of 3 years.

During the log-in procedure, a cookie with information regarding user identification is stored in order to allow an automatic re-log-in after leaving the website (Session Cookie). This cookie is no longer valid after logging out of the Query Portal or after 24 hours.

Furthermore, for **data providers**, the following data regarding the data owners is also stored in the *internal* Edaphobase administration modules:

- Telephone number
- Institute (or private) address
- User identification
- Date and hour of the access / data provision
- File name
- Project identification
- The data sent
- Results of the data quality-control review and any undertaken revisions

This data is collected in order to allow contact with the data provider/owner if and when necessary, as well as to create a protocol of the origin and transmission of the provided data. It is *never* passed on to the browser-based Data-Query Portal or to any third parties. This data is only deleted upon request of the data provider by contacting the Edaphobase developers at info@edaphobase.org, at which point the provided data is also deleted.

(2) Use of personal data

Personal data management is in compliance with applicable German and EU legislation, such as the Bundesdatenschutzgesetz (BDSG) and the General Data Protection Regulation (GDPR). If you use certain features of the Data-Query Portal, Edaphobase collects personal data when necessary for this purpose. Personal data is only collected and only to the extent that the user provides this information. The use of certain parts of the Data-Query Portal requires prior registration and the processing of personal data, such as longer-term storage of e-mail addresses, user IDs, and passwords. Such data is only used if you have provided it and have given prior consent for its use. All use of personal data is limited to the indicated purposes and to the attainment necessary for these purposes. Disclosure to third parties will not occur. The user always maintains the right to informally revoke this consent at any time. Personal data is transmitted to state institutions and authorities only when required by federal legislation or in the case of attacks on our network infrastructure when disclosure is required to take legal action. Disclosure for other purposes will *not* occur. At the request of the user, all of his/her data can be viewed by the user, changed, amended or deleted (see point (5) below).

(3) Cookies

Cookies are data that are sent from the web server to the web browser of the user and stored for later retrieval. Edaphobase uses only one (1) cookie at log in (“session cookie”, see point (1) above). The records do not contain personal information. A compilation of any personal data provided by the user will not occur. Whether cookies are collected may be decided by the user him/herself by setting his/her browser so that they are notified before a cookie is saved, which is then stored only if you explicitly accept this. However, this might limit the functional scope of Edaphobase.

(4) Links to websites of other providers

The Query-Portal and Edaphobase desktop Data-Upload software may contain links to websites of other data providers as well as project partners. Please note that the privacy policy stated here only

applies for the Edaphobase Query-Portal and desktop software. We have no influence on and cannot monitor whether other providers comply with the applicable data-protection regulations. We embed data from other data websites in the Query Portal (i.e. Open Street Map, Google Maps, maps-for-free.com and similar); the data-protection policies of these sites apply (e.g., these sites may log your personal IP data).

(5) Right to Access Information

Stored personal data can be deleted when the statutory or contractual retention period has expired. You have the right at any time to obtain the information of the data stored about your person, including the origin and host of your data. At the request of the user, all of his/her data can be viewed by the user, changed, amended, inaccurate data corrected, or existing data blocked or deleted. If you wish to obtain access to your personal data, to correct or delete it or have further questions about the use of your given personal data, please contact: info@edaphobase.org or Senckenberg's data protection officer via datenschutz@senckenberg.de.

(6) Inclusion, validity, and timeliness of privacy

By using the Query-Portal website, you consent to the data use specified above. The privacy policy is current as of 18.06.2014. Through the further development of the Query-Portal website or the implementation of new technologies, it may be necessary to amend this privacy policy. The Senckenberg Society for Nature Research (SGN) reserves the right to change the privacy policy at any time with effect for the future. We recommend that you re-read the current privacy policy from time to time.

VII. About us

Edaphobase is a product of the Senckenberg Museum of Natural History (SMNG), Görlitz, Germany.

Initial, primary development of Edaphobase (2009 – 2018) took place with the partners ECT Oekotoxikologie GmbH Flörsheim am Main (Dr. J. Römbke, Dr. S. Jäntsche), State Museum of Natural History Karlsruhe (SMNK; Dr. H. Höfer), RWTH Aachen - Institute for Environmental Research (Biologie 5; Dr. M. Roß-Nickoll), gaiac – Research Institute for Ecosystem Analysis and Assessment e.V. (Dr. A. Toschki), and the Botanical Garden / Botanical Museum of the FU Berlin, Research Group Biodiversity Informatics (BGBM; A. Güntsch). Funding during this development phase of Edaphobase was provided by the German Ministry for Education and Research (funding numbers 01LO0901 and 01LI1301).

As of October 2019 (until March 2024), further development of Edaphobase took place within the framework of the EU COST Action “EUdaphobase - European Soil-Biology Data Warehouse for Soil Protection” (CA18237), supported by the COST Association (European Cooperation in Science and Technology). This cooperation was funded by the European Union. For details of these activities and leading persons, see <https://www.cost.eu/actions/CA18237/> or <https://www.eudaphobase.eu/>.

Sole responsibility for the Edaphobase software and public data accessibility lies with the Senckenberg Society for Nature Research (SGN) as the parent company of the SMNG.

Project management: Dr. D. J. Russell, Dr. R. Lehmitz, Dr. K. Hohberg, Dr. C. Schneider (all SMNG)

Software: S. Lesch, S. Rick (in earlier development phases: A. Franzke, S. Dillan) (all SMNG)

Analysis tools (“EdaphoStat”): Dr. R. Ottermanns, Dr. B. Scholz-Starke, Dipl. Gynl. J. Hausen (RWTH)

Contact with Edaphobase and its developers is possible at any time via info@edaphobase.org. The principle scientific contact person within the Edaphobase team is Dr. David Russell (david.russell@senckenberg.de). For legal questions, the principle contact within the Senckenberg Society of Nature Research is Jan-Henning Fahnster (SGN justice council: jan-henning.fahnster@senckenberg.de).

VIII. Data-Sharing Agreement for data uploads (provision) to Edaphobase

This data policy serves as the legally binding agreement between data providers and the Senckenberg Society for Nature Research (= SGN; as the operator of Edaphobase).

The data provider assures with his/her signature below that all persons and institutes listed in the metadata as (co-)data owners have been informed that the data has been provided to Edaphobase as well as of all points of this data policy & agreement, and that all data owners agree to this data policy & agreement.

Please note: For data upload using the Edaphobase Data-Upload Software, the data provider agrees to this data-sharing agreement and the provisions therein by marking the corresponding checkboxes before clicking the “Send” button. With the final checkbox agreeing to this data-sharing agreement, the corresponding signatures of the Senckenberg board of directors is implicit.

The data provider will inform the SGN and the Edaphobase operators of all changes in data ownership, so that this data-provision agreement can be accordingly adapted.

With the signature below, the data provider (if applicable: in the name of all data owners) agrees to all terms listed above in data policy above. In particular, requesting anonymization or an embargo period of provided data as well as allowing the data to be shared (or not) with other biodiversity databases are explicitly agreed upon (or excluded) by the signature below.

The data provider further insures (1) that he/she alone (if applicable: in the name of all data owners) is authorized to dispose over the rights of use of the uploaded data, (2) that with the provision of the data no copyrights or other legal rights of third parties have been infringed upon and (3) that hitherto no other legal concessions regarding the data have been made. If copyrights for and/or rights of use of the data are (also) owned by the employer of the data provider, then the data provider will submit to the SGN a written and signed confirmation by his/her employer, wherein these rights are transferred to the data provider with the explicit permission for the use of the data within Edaphobase. The data provider furthermore guarantees that no other agreements or disposals have been made that contradict the herein agreed rights of use of the provided data in Edaphobase.

The data provider releases the SGN and the operators of Edaphobase from all third-party claims to the data as well as from all liabilities related to the data, including all possibly related costs for attorneys, legal and court preparation.

The herein granted rights of use of the provided data is subject to the laws of the Federal Republic of Germany. The English-language version is binding. Amendments and changes to this agreement must be made in writing.

The data provider explicitly agrees that, after all data-quality checks have been carried out by the Edaphobase staff and the data provider, data provided to Edaphobase will be publically available via the Edaphobase Data-Query Portal (<https://portal.edaphobase.org>) and other publically available biodiversity databases (if not explicitly excluded below).

Name of data set:

Name of data provider:

Exceptions or limitations to public data access are requested as follows (empty checkboxes mean that the exclusions or limitations are NOT requested):

- Embargo period of three (3) years**, i.e. to ensure that results ensuing from the data may be published (for instance, in scientific journals, reports or theses) prior to public data access. See section I.A(2), page 4.

The data provider understands that the embargo period agreed upon here will expire after three (3) years. Although an automatic reminder e-mail will be sent to the data provider one (1) month prior to expiration, it is the responsibility of the data provider to request any extension of the embargo period. The SGN or the Edaphobase staff will not decline an extension without due cause. The embargo may be cancelled prior to the 3-year period at the request of the data provider. The data provider understands that the data is simply not visible to the public or may not be downloaded by external users; the data remains available for internal Edaphobase meta-analysis tools (see section I.B.v., page 9).

- Permanent (partial) anonymization of the data**, i.e. to prohibit that study sites may be publically exactly identified or that data sets may be copied and published by external uses as “own work” (see section I.A(3), page 4).

The anonymization of data may be cancelled at any time at the request of the data provider. The data provider understands that the data is simply not visible to the public or may not be downloaded by external users; the data remains available for Edaphobase meta-analysis tools (see section I.B.v., page 9).

Data sharing with external databases (see section IV, page 11):

- Do NOT share data with GBIF**. (Data is excluded from data sharing with GBIF.)
- Do NOT share data with NFDI**. (Data is excluded from data sharing with German NFDI.)
- Do NOT share data with BonaRes**. (Data is excluded from data sharing with the BonaRes Data Centre.)
- Do NOT share data with other databases**, data repositories or data providers (general ban should a cooperation of Edaphobase with further biodiversity data centers arise in the future).

The data provider has the right to withdraw data and/or his or her consent to process personal data (see section VI, page 14ff) at any time without giving reasons, e.g. by informal e-mail to info@edaphobase.org. Withdrawal of consent shall not affect the lawfulness of Edaphobase data processing carried out on the basis of the provided consent up until the time of withdrawal.

_____, _____
Location, Date

Data Provider

_____, _____
Location, Date

Edaphobase, SGN
Prof. Dr. Klement Tockner, Director General

_____, _____
Location, Date

Edaphobase, SGN,
Member of the Board of Directors