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Edaphobase Data Policy

Intellectual Property Rights and Data Usage

Contents

i.   Description of the data warehouse "Edaphobase"

The soil-zoological data warehouse Edaphobase combines data on soil animals, their distribution and habitat parameters of their sites of occurrence and makes this data available to the public for comprehensive analyses. Edaphobase contains data from heterogenic sources such as scientific literature, museum collections, or project raw data. For information about which animal groups, which data variables etc. are included in Edaphobase, please see http://edaphobase.org. While the initial geographic focus was Central Europe (and thus the extent of most current Edaphobase data), Edaphobase now contains world-wide data on soil invertebrates. 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 the creation of site-of-occurrence maps of individual species, but also more complexly filtered queries about species' communities of specific areas, sites or habitat types. It also provides basic data-analysis tools at both the species and community level.

The Edaphobase database is provided to the public by the **Senckenberg Society for Nature Research, Senckenberganlage 25, 60325 Frankfurt am Main** as a service provider according to § 12 TMG. It is developed by, and run at, the Senckenberg Museum of Natural History in Görlitz.

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

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. Usually 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 data to Edaphobase owned by different persons (e.g., from his/her institution).

Data owner: Person or institution that has collected and compiled the 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. When "data provider" is mentioned in this data policy, both data provider and data owner are meant.

Data record[1]: 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.

Dataset: 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 (usually) external person searching, using and/or downloading data stored in the Edaphobase data warehouse.

Edaphobase 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.

Embargo: 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 dataset, 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 metadata, since they are often available at a sample or plot level, and not only one value per dataset.) 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 datasets.

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 animals offers a stable, long-lasting and strongly data-linked infrastructure for providing soil-zoological research data to the scientific community. It thus allows soil biodiversity to be assessed as well as significantly increasing 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 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 provides the rules for how data is handled within Edaphobase, the rights and responsibilities both of Edaphobase and its users, as well as how copyrights, data and personal

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

information are protected. It furthermore outlines procedures used to assure data-quality assurance. 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 citation suggestions are also defined in this data policy.

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-Import Wizard or as an external user of Edaphobase via the Data-Query Portal (https://portal.edaphobase.org), see section VI.2), the user explicitly agrees to these conditions and acknowledges that they have read and understood the terms of use. The user confirms their knowledge by checking the marks in the corresponding checkbox of the Edaphobase Data Import Tool (Data-Import Wizard) or the Data-Query Portal or by signing a hardcopy of this policy.

I.   Public Data Accessibility

Data contained in Edaphobase is, in principle, freely available to the public. However, to protect the rights of the original data provider or their data against misuse, the Edaphobase data-release management policy from the internal source database (= not publically available) to the publicly accessible Data-Query Portal staggers data availability in the Query Portal to external users by three different "data-access depths", which can be partly determined by the data provider:

1)   General, rather coarse queries (for example species lists, distribution maps) can be performed 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. The points are mapped and only 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 functions are not possible (these are only possible for registered users with a login; option 2, next).

2)   Full access to the data available via the Query-Portal, including the exact coordinates of the sites of occurrence and table views, is available to registered users. This is the "normal" case. **User registration** and the issuance of a password, etc., occur via automated processes (see Section VI.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 data.

3)   To protect data against misuse, the respective original data provider can specify a priori whether public access to some data sets be limited or entirely blocked (so-called "**anonymized data sets**"). Such data sets remain in Edaphobase (i.e. are available for internal analyses, for instance via the analysis tools), when moved to table views (of the external user-specific queries or analyses) the following attributes are **not** visible and are marked as "not visible to the public".

- Geographic coordinates of the sites (see point 1 for mapping sites),
- Site name/next town (only region [for example Northern Alps], natural landscape unit, etc. are displayed, but no detailed site data),
- Treatment, Plot and similar detailed characteristics of individual studies that might permit spatially precise identification.
- All attributes containing comments or citations

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 original investigation cannot be reproduced by external users.

However, at the same time, external users are provided the opportunity to research and analyze 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) using these data (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, are not raw 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.

On request by the data provider, all data fields can be rendered "not visible to the public" (= **total anonymization**). Such data contained in query results are accordingly marked "not available to the public". External users thus can see that Edaphobase contains the data, but cannot see any aspect of the data itself.

Partly or totally anonymized data sets are not forwarded to networked databases, such as GBIF-D (see section V).

To temporarily protect data that pertain to research results that have not yet been published (for instance, in scientific journals, reports or theses), provided data may be conferred with an **embargo period** of typically three (3) years, during which public access to the data is prevented. Embargoed data is treated as totally anonymized data (as described above*;* the data remains available for internal Edaphobase meta-analysis tools); the difference being that an 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). 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 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.

Full access to anonymized or embargoed 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 call by Edaphobase to and approval by the respective original data provider. Raw data may be provided to an external user only upon a direct request by the user to the Edaphobase scientist responsible for the respective animal group, who in turn consult the original data provider. The scientists responsible at the Senckenberg Museum for Natural History Görlitz are Dr. Axel Christian (for Gamasina), Dr. Jürgen Schulz and Dr. Ulrich Burkhardt (for Collembola; *note: personal will change in the near future*), Dr. Ricarda Lehmitz (for Oribatida), Dr. Karin Voigtländer (for Myriapoda), and Dr. Karin Hohberg (for Nematoda); and at ECT Ecotoxicology GmbH Flörsheim Dr. Jörg Römbke (for Lumbricidae) and Dr. Rüdiger Schmelz (for Enchytraeidae). Upon approval, access to the data is then provided only to the specific (= requesting) user only for the requested taxa and only for a limited period of time. Thus, 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 animal group (named above). The Edaphobase team provides the possibility of sending a request to the responsible scientist and/or original data provider (contact info@edaphobase.org).

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 access depth to which their data will be made available (see Section I above): available for free, with limited public visibility

("anonymised"), only on 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), or temporarily blocked for release ("embargoed", e.g. until after publication in a scientific article). **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 to the public.

Data providers assume the sole responsibility for the correct and truthful representation as well as assure the quality (see Section IV) of the data they are providing. The data provider exempts SGN 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 tests). 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. The quality-control tests to be carried out within the Query Portal by the data provider will be provided by Edaphobase.

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. 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), unchanged (except for data harmonization steps; see item IV below), during the lifetime of Edaphobase; i.e. Edaphobase assumes the responsibility for data loss or degradation caused by staff or maintenance activities. However, Edaphobase accepts 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 guarantees 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 Sections I & IV).

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 VIII.).

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 package and the number of data packages provided to Edaphobase at any given time, an explicit definition of "timely" cannot be given. Confirmation of Receipt of a data package 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-package 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 VII) lies solely with the external user.

Edaphobase does 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 quality

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. This is performed via data-quality tests carried out during the data import process (when performed via the Edaphobase Data-Import Wizard; see http://edaphobase.org for details). The data provider is responsible for carrying out any data changes recommended by the import quality-control checks. After preliminary data upload, a further formal and taxonomic quality control is undertaken by the Edaphobase staff. 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 if semantical changes are necessary, as far as they are discovered during the internal review process. Further corrections recommended during this quality control are the responsibility of the data provider. 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. 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.

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:

(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., abundance 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 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 Privacy below) is maintained in the internal database.

V.   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 Centre for Soil Research [https://datenzentrum.bonares.de/], and GFBio [https://www.gfbio.org/]) and shares (uploads) data and metadata with these databases. Usually only a subset of the data records (i.e., 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 XIII), with the exception of the name of the data owners[2].

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-Import Wizard) as well as the appropriate boxes in the data-provision agreement (Section X). 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.

VI.   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 of data-providers could occur for some data due to data-provision effort from state agencies. These data are generally marked (anonymized, see Section I 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 portal for external users is staggered in various stages of different "data-access depths" (for further details see above in Section I). General queries (for example species list, 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

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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.

allowed. Furthermore, only registered users may locally save "projects" (complex queries) and export data (*.csv) as a text file.

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), 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 item IV.1 of this data policy, the user is required to register via a log-on mask and the transmission of user data (see Section VIII). 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 thus 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. The information may only be used for personal use and may be printed and saved for purposes of science and research.

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 VII). 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/SGN has the right to terminate the access of the user to Edaphobase with immediate 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.de). 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.

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.

VII. 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 date of creation or last modification and 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.

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., Xylander, 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 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.

VIII. 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 at the Senckenberg Museum of Natural History Görlitz (see Section IX). 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 V) occurs only with the express approval of the data provider and does not include personal data of the data provider (see Section V),

with the exception of the data owner's name[3]. 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 retrieve 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-Import Wizard, 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). It is not made available or passed on elsewhere (see point 2, below). This data remains stored in the internal 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.de. User data of inactive users can be purged 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:

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

- 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 check

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. 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

If you use certain features of the 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 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 revoke this consent. 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 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 Jan-Henning Fahnster (SGN justice council / data protection: jan-henning-fahnster@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 the change the privacy policy at any time with effect for the future. We recommend that you reread the current privacy policy from time to time.

IX.   About us

Edaphobase is a product of the Senckenberg Museum of Natural History (SMNG), ECT Oekotoxikologie GmbH Flörsheim am Main, State Museum of Natural History Karlsruhe (SMNK), RWTH Aachen - Institute for Environmental Research (Biologie 5), gaiac – Research Institute for Ecosystem Analysis and Assessment e.V., and the Botanical Garden / Botanical Museum of the FU Berlin, Research Group Biodiversity Informatics (BGBM). Funding for the development of Edaphobase was provided by the German Ministry for Education and Research (funding numbers 01LO0901 and 01LI1301). 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, Prof. Dr. W. Xylander (SMNG), Dr. J. Römbke (ECT), Dr. H. Höfer (SMNK), Dr. M. Roß–Nickoll (RWTH), Dr. A. Toschki (gaiac) and A. Güntsch (BGBM)

Software: S. Lesch, S. Rick, S. Dillan (SMNG)

Analysis tools: Dr. R. Ottermanns, Dr. B. Scholz-Starke, Dipl. Gyml. J. Hausen (RWTH)

Contact with Edaphobase and its developers is possible at any time via info@edaphobase.de. 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 / data protection: jan-henning.fahnster@senckenberg.de).

X.   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.

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 the data owners) agrees to all terms listed above in data policy above. In particular, the degree of anonymization of provided data, any embargo period of the data as well as allowing the data to be shared 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 the 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 dataset:

_____

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, page 3.

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 is available for internal Edaphobase meta-analysis tools.

☐ **Partial anonymization of the data**, i.e. to prohibit that study sites may be publically exactly identified or that datasets may be copied and published by external uses as "own work". The following data fields are requested to not be made publically available (= anonymized):

_____

_____

_____

The data provider understands that the data is simply not visible to the public or may not be downloaded by external users; the data is available for Edaphobase meta-analysis tools.

☐ **Total anonymization of the data**, i.e. to prohibit that data is visible and accessible to public users for data-protection or study site-protection reasons. Data may be made available to external users only with the express permission 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 is available for Edaphobase meta-analysis tools.

☐ **Do NOT share data with GBIF**. (Data is excluded from data sharing with GBIF.)

☐ **Do NOT share data with GFBio**. (Data is excluded from data sharing with GFBio.)

☐ **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).

_____, _____   _____
Location, Date   Data Provider

_____, _____   _____
Location, Date   Edaphobase, SGN
                                             Prof. Dr. Dr. Volker Mosbrugger , Director
                                             General

_____, _____   _____
Location, Date   Edaphobase, SGN,
                                             Member of the Board of Directors