



Metadata

Floodplain and river monitoring

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General information

name of the dataset:

full name of the dataset: *Floodplain and river monitoring*

type of dataset ([more information](#)): *others*

specify: *metadatabase*

data type: *descriptive data*

short description of the dataset/summary:

The database contains metadata of biological monitoring projects of rivers and their floodplains in Germany and gives a first overview about nationwide monitoring activities. More detailed information about single projects are given in the data entries UFO_11, UFO_12 and UFO_17 to UFO_24 of the Freshwater Metadatabase (<http://data.freshwaterbiodiversity.eu/metadb>). Metadata were collected in the national project 'Development of biodiversity in floodplains' funded by the Federal Agency of Conservation (BfN). Four institutions were involved: Departement of Aquatic Ecology, University of Duisburg-Essen; Institute of Geography and Geoecology, Karlsruhe Institute of Technology; Floodplain Institute Neuburg, University of Eichstätt-Ingolstadt; Department of Conservation Biology, Helmholtz Centre for Biological Research-UFZ.

science keywords according to [GCMD](#):

topic: *Biosphere, Terrestrial Hydrosphere*

ISO topic category according to [ISO 19115](#):

Biota, Inland Waters

Technical and administrative specifications

data format: *Excel*
operating system: *all Windows systems*
data language: *German*
current access level: *internal*

currently available through [GBIF](#): *no*

exchange planned: *no*

data in data repository: *no*

Do you plan to publish the data on the Freshwater Biodiversity Data Portal:

no

update level: *update planned*

documentation:

type: *internal description*

language: *German*

contact details:

metadata contact person:

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Intellectual property rights and citation

(if the dataset is already published):

dataset creator (data compiler):

contact name: *Kathrin Januschke*
contact email: *kathrin.januschke@uni-due.de*
contact institution: *Department of Aquatic Ecology, University of Duisburg-Essen, Germany*

data contributors to/owners of this dataset:

number: *multiple*
6

provider 1:

provider institute: *Department of Aquatic Ecology, University of Duisburg-Essen, Germany*
contact name: *Kathrin Januschke*
contact email: *kathrin.januschke@uni-due.de*
criteria for using the data in a publication/scientific analysis:
The dataset needs to be requested from dataset creator with specific conditions of use.

provider 2:

provider institute: *until 2015: Karlsruhe Institute of Geography and Geoecology, Rastatt, Germany*
contact name: *Gloria Ledesma-Krist*
contact email: *g.ledesma-krist@umwelt.saarland.de*
criteria for using the data in a publication/scientific analysis:
The dataset needs to be requested from dataset creator with specific conditions of use.
comments: *Current contact institution: Ministry of Environment and Consumer Protection - Saarland, Germany*

provider 3:

provider institute: *Department of Conservation Biology, Helmholtz Centre for Biological Research-UFZ*
contact name: *Mathias Scholz*
contact email: *mathias.scholz@ufz.de*
criteria for using the data in a publication/scientific analysis:
The dataset needs to be requested from dataset creator with specific conditions of use.

provider 4:

provider institute: *Floodplain Institute Neuburg, Cath. University of Eichstätt-Ingolstadt, Germany*
contact name: *Marion Gelhaus*
contact email: *marion.gelhaus@ku.de*
criteria for using the data in a publication/scientific analysis:
The dataset needs to be requested from dataset creator with specific conditions of use.

provider 5:

provider institute: *Floodplain Institute Neuburg, Cath. University of Eichstätt-Ingolstadt, Germany*
contact name: *Barbara Stammel*
contact email: *barbara.stammel@aueninstitut-neuburg.de*
criteria for using the data in a publication/scientific analysis:
The dataset needs to be requested from dataset creator with specific conditions of use.

provider 6:

provider institute: *Department of Aquatic Ecology, University of Duisburg-Essen, Germany*
contact name: *Daniel Hering*
contact email: *daniel.hering@uni-due.de*
criteria for using the data in a publication/scientific analysis:
The dataset needs to be requested from dataset creator with specific conditions of use.

citation of this dataset:

author(s): *Januschke, K., Ledesma-Krist, G., Scholz, M., Gelhaus, M., Stammel, B. & Hering, D.*
title: *Floodplain and river monitoring*
year: *2016*

citation of the metadata:

author(s): *Januschke K., Ledesma-Krist G., Scholz M., Gelhaus M., Stammel B. & Hering D.*
title and journal (name, number, pages):
Floodplain and river monitoring. Freshwater Metadata Journal 0: 0-0
year: *0000*
doi (if applicable): *<http://dx.doi.org/10.15504/fmj.0000.0>*

comments:

Articles mentioned as dataset related references will be published within 2016.

General data specifications

regional coverage of the dataset:

scale of the dataset: *national*
continents: *Europe*

spatial extent (bounding coordinates):

southernmost latitude [°]: *47.392186*
northernmost latitude [°]: *54.046898*
westernmost longitude [°]: *6.108089*
easternmost longitude [°]: *14.337918*
minimum altitude: *5 metres*
maximum altitude: *1120 metres*
countries: *Europe: Germany*

Site specifications

coordinate system/grid data:	<i>latitude/longitude projected</i>
datum (e.g. WGS84):	<i>WGS84</i>
grid data available:	<i>no</i>
other site classification parameters:	<i>Floodplain typology (Koenzen, 2005)</i>
site coding available:	<i>no numerical</i>
number of sites:	<i>100 - 1000</i>
exact number of sites:	<i>138</i>
comments:	<i>Number of sites means here: number of restoration projects with monitoring data.</i>

Climate and environmental data

climate related data: *no data available*
environmental data: *no parameter data per catchment available*
no parameter data per site available
physico-chemistry data: *no data available*

stressors influencing the sites:
 reference sites available: *no*

stressor	restored sites available	data before/after restoration available	stressor gradient available	comments
hydromorphological degradation	yes	yes	yes	some projects with before/after or time series
hydrologic stress (e.g. impoundment, flow velocity reduction, hydropeaking, water abstraction, flow velocity increase)	yes	yes	yes	some projects with before/after or time series
other stressors	yes	yes	yes	dam construction; some projects with before/after or time series

Biological data

biological data origin:

specify project:

from sampling

metadata collection from 138 projects focusing on biological monitoring in rivers and floodplains

organism group addressed:

mammals, water birds, amphibians, terrestrial invertebrates (Carabidae), fish, macro-invertebrates (Mollusca, Crayfish, Ephemeroptera, Odonata, Plecoptera, Coleoptera, Trichoptera, Chironomidae), (benthic) diatoms, macrophytes, angiosperms (riparian vegetation), other group(s): butterflies and moths (Lepidoptera)

Sample specifications/sample resolution

mammals:

sample information:

covered timeframe:

year from - to: 1996 - 2002

historical data: no

season: summer, autumn

temporal resolution/frequency of sampling:

differs between projects

time series data: yes

comments: 13 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 2 with one-time records.

taxonomic resolution:

species

percentage of species level data: 100

comments: Projects focused on *Lutra lutra*, *Castor fiber*, *Ondatra zibethicus*, *Myocastor coypus*.

taxonomic coding:

taxalist according to: *selected species only*

coding system: *no coding used*

sample specifications:

quantitative (abundance data)

replicate samples: yes

number of samples: 11

specification of method(s) used for sampling and sorting:

Information about sample methods is not available.

water birds:

sample information:

covered timeframe:

year from - to: 1988 - 2014

historical data: no

season: spring, summer, autumn

temporal resolution/frequency of sampling:

differs between projects

time series data: yes

comments: 21 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 4 projects with one-time records.

taxonomic resolution:

species

percentage of species level data: 100

taxonomic coding:

taxalist according to: *Barthel (1993, 2005)*

citation: *Barthel, P.H. (1993): Artenliste der Vögel Deutschlands. Journal für Ornithologie 134, 2: 113-135.*

Barthel, P.H. (2005): Bemerkungen zu den Kategorien, Einstufungen und Veränderungen in der Artenliste der Vögel Deutschlands. Limicola 19: 129-141.

coding system: *no coding used*

sample specifications:

quantitative (abundance data), presence/absence

replicate samples: yes

number of samples: 25

specification of method(s) used for sampling and sorting:

Predominantly the method according to Bibby et al. (1992) was used. The intensity and frequency of records differ between projects. Some projects only focus on selected bird species.

citation: *Bibby, C.J., Burgess, N.D. & Hill, D.A. (1992): Bird Census Techniques. Academic press, London.*

amphibians:

sample information:

covered timeframe:
 year from - to: 1989 - 2011
 historical data: no
 season: spring, summer
 temporal resolution/frequency of sampling:
differs between projects
 time series data: yes
 comments: 12 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 3 projects with one-time records.

taxonomic resolution:

percentage of species level data: 100

taxonomic coding:

taxalist according to: *Stresemann (1987), Nöllert (1992), Günther (1996), Berninghausen (2007)*
 citation: *Stresemann, E.(1987): Exkursionsfauna - Wirbeltiere Bd. 3, 10. Aufl., 370 p.*
Nöllert, A. & Nöllert, C. (1992): Die Amphibien Europas. Bestimmung - Gefährdung - Schutz. Kosmos Naturführer, Kosmos Verlag GmbH, Stuttgart, 382 p.
Günther, R. (Editor) (1996): Die Amphibien und Reptilien Deutschlands. - Gustav Fischer Verlag, Jena 1996. 824 p.
Berninghausen, F. (2007): Feldbestimmungsschlüssel für Amphibien. Naturschutzbund Deutschlands, Landesverband Niedersachsen e.V., Hannover, 40 p.

coding system: no coding used

sample specifications:

quantitative (abundance data), presence/absence
 replicate samples: yes
 number of samples: 61
 specification of method(s) used for sampling and sorting:
Methods differ between projects.

terrestrial invertebrates:

sample information:

covered timeframe:
 year from - to: 1972 - 2014
 historical data: no
 season: spring, summer, autumn
 temporal resolution/frequency of sampling:
differs between projects
 comments: 53 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 70 projects with one-time sampling.

taxonomic resolution:

percentage of species level data: 80
 comments: 87 (of 123) projects focused on ground beetles (species level). The other

projects differ strongly in investigated organism groups: single investigations of e.g. bugs (Heteroptera), millipedes (Isopoda, Diplopoda), ants (Formicidae), rove beetles (Staphylinidae), longhorn beetles (Cerambycidae) or beetle families in general.

taxonomic coding:

taxalist according to:
citation:

Fauna Europaea, Trautner et al. (1997), Müller-Motzfeld (2004)
Fauna Europaea: Coleoptera 2; <http://bdj.pensoft.net/articles.php?id=4750>
Trautner, J., Müller-Motzfeld, G.M. & Bräunicke, M. (1997): *Rote Liste der Sandlaufkäfer und Laufkäfer Deutschlands (Coleoptera: Cicindelidae et Carabidae). 2. Fassung, Stand Dezember 1996. Naturschutz und Landschaftsplanung 29, 261-273.*
Müller-Motzfeld, G. (2004): *Adephaga 1: Carabidae (Laufkäfer)*. In: Freude, H., Harde, K.W., Lohse, G.A. & Klausnitzer, B. (Eds.), *Die Käfer Mitteleuropas Bd. 2. Spektrum Verlag Heidelberg/Berlin. 521 p.*

coding system:

no coding used

sample specifications:

replicate samples:

yes

number of samples:

281

specification of method(s) used for sampling and sorting:

Predominantly pitfall traps (Barber, 1931) and hand sampling (Trautner, 1996) were used, but intensity and frequency of sampling strongly differ between projects. In some projects light traps, strip nets, sweeping off the upper soils or sieving methods have been used.

citation:

Barber, H.S. (1931): *Traps for cave inhabiting insects. Journal of the Mitchell Society 46, 259-266.*
Trautner, J. (1999): *Handfänge als effektive und vergleichbare Methode zur Laufkäfer-Erfassung an Fließgewässern? Ergebnisse eines Tests an der Aich (Baden-Württemberg). Angewandte Carabidologie, Supplement 1, 139-144.*

fish:**sample information:**

covered timeframe:

year from - to:

1991 - 2014

historical data:

no

palaeo data:

no

season:

spring, summer, autumn

temporal resolution/frequency of sampling:

differs between projects

time series data:

yes

comments:

32 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 35 projects with one-time records.

taxonomic resolution:

percentage of species level data:

100

taxonomic coding:

taxalist according to:

Diekmann et al., 2005, Mauch (2003-2011)

citation:

Diekmann, M., Dußling, U. & Berg, R. (2005): Handbuch zum fischbasierten Bewertungssystem für Fließgewässer (FIBS). Fischereiforschungsstelle Baden-Württemberg, Langenargen. 71 p.
Mauch, E., Maetze, A. & Schmedtje, U. (2003-2011): Taxaliste der Gewässerorganismen Deutschlands zur Erfassung und Kodierung

biologischer Erhebungen im und am Gewaesser. Bayerisches Landesamt für Wasserwirtschaft, München. Informationsberichte des Bayerischen Landesamtes für Wasserwirtschaft 1/03: 1-388.
 coding system: *no coding used*
sample specifications: *quantitative (abundance data), semi-quantitative*
 replicate samples: *yes*
 number of samples: *177*
 specification of method(s) used for sampling and sorting: *Method following the Water Framework Directive (Diekmann et al., 2005).*
 citation: *Diekmann, M., Dußling, U. & Berg, R. (2005): Handbuch zum fischbasierten Bewertungssystem für Fließgewässer (FIBS). Fischereiforschungsstelle Baden-Württemberg, Langenargen. 71 p.*

macro-invertebrates:

sample information:

covered timeframe:
 year from - to: *1987 - 2014*
 historical data: *no*
 palaeo data: *no*
 season: *spring, summer, autumn*
 temporal resolution/frequency of sampling: *differs between projects*
 time series data: *yes*
 comments: *Investigations of benthic macro-invertebrates: 38 projects with replicate samplings (continous time-series with yearly samplings or selected years) and 34 projects with one-time records.*
Investigations of aquatic (and terrestrial) molluscs: 10 projects with replicate samplings (continous time-series with yearly samplings or selected years) and 2 projects with one-time records.
Investigations of adult dragon- and damselflies: 13 projects with replicate samplings (continous time-series with yearly samplings or selected years) and 3 projects with one-time records.
Investigations of adult, winged macro-invertebrates: 4 projects with replicate samplings (continous time-series with yearly samplings or selected years).

taxonomic resolution:

percentage of species level data: *family, genus, species*

taxonomic coding:

taxalist according to: *differs between organism groups (see below)*
 citation: *Benthic invertebrates:*
Meier, C., Böhmer, J., Biss, R., Feld, C., Haase, P., Lorenz, A., Rawer-Jost, C., Rolaufts, P., Schindehütte, K., Schöll, F., Sundermann, A., Zenker, A. & Hering, D. (2006): Weiterentwicklung und Anpassung des nationalen Bewertungssystems für Makrozoobenthos an neue internationale Vorgaben. Abschlussbericht im Auftrag des Umweltbundesamtes. <http://www.fliesssgewaesserbewertung.de> [Stand Juni 2006].

Aquatic (and terrestrial) molluscs:
Fechter, R. & Falkner, G. (1990): Weichtiere. Europäische Meeres- und Binnenmollusken. Steinbachs Naturführer 10. München, 287 p.

Glöer, P. (2002): *Mollusca I. Süßwassergastropoden Nord- und Mitteleuropas. Bestimmungsschlüssel, Lebensweise, Verbreitung*. 2. Aufl., 327 p.

Glöer, P. & Meier-Brook, C. (2003): *Süßwassermollusken. Ein Bestimmungsschlüssel für die Bundesrepublik Deutschland*. Deutscher Jugendbund für Naturbeobachtung (DJN), Hamburg. 13. Aufl., 134 p.

Adult dragon- and damselflies:

Dreyer, W. (1986): *Die Libellen: Das umfassende Handbuch zur Biologie und Ökologie aller mitteleuropäischen Arten mit Bestimmungsschlüsseln für Imagines und Larven*. Gerstenberg Verlag, 1. Auflage. 219 p.

Wendler, A. & Nüß, J.-H. (1991): *Libellen*. Deutscher Jugendbund für Naturbeobachtung (DJN), Hamburg. 130 p.

Buchwald, R. & Sternberg, K. [Hrsg.] (1999): *Die Libellen Baden-Württembergs. Band 1: Allgemeiner Teil. Kleinlibellen (Zygoptera)*. Verlag Eugen Ullmer, Stuttgart. 468 p.

Jurzitza, G. (2000): *Der Kosmos Libellenführer - Die Arten Mittel- und Südeuropas*. Franckh-Kosmos Verlag. 191 p.

Adult, winged macro-invertebrates:

Mauch, E., Schmedtje, U., Maetze, A. & Fischer, F. (2003): *Taxaliste der Gewässerorganismen Deutschlands. Informationsberichte des Bayerischen Landesamtes für Wasserwirtschaft 01/03*. 388 p.

no coding used

coding system:

sample specifications:

quantitative (abundance data), semi-quantitative

replicate samples:

yes

number of samples:

330

specification of method(s) used for sampling and sorting:

Benthic invertebrates:

Multihabitat-sampling according to Meier et al. (2006) was predominantly used. In some projects substrate-specific samplings were applied. In 4 projects light traps for sampling of adult, winged macro-invertebrates were installed.

Aquatic (and terrestrial) molluscs:

'Biocoenometer'-method according to Mühlenberg (1993) and Krebs (1999), 'soil-grabber-method' according to Schwörbel (1994). Intensity and frequency of samplings differ strongly between projects.

Adult dragon- and damselflies:

Sight observations and dip net catches. Intensity and frequency of samplings differ strongly between projects.

citation:

Benthic invertebrates:

Meier, C., Böhmer, J., Biss, R., Feld, C., Haase, P., Lorenz, A., Rawer-Jost, C., Rolaufts, P., Schindehütte, K., Schöll, F., Sundermann, A., Zenker, A. & Hering, D. (2006): Weiterentwicklung und Anpassung des nationalen Bewertungssystems für Makrozoobenthos an neue internationale Vorgaben. Abschlussbericht im Auftrag des Umweltbundesamtes. <http://www.fliessgewaesserbewertung.de> [Stand Juni 2006].

Aquatic (and terrestrial) molluscs:

Mühlenberg, M. (1993): *Freilandökologie*. 3. Auflage. Quelle & Meyer, Heidelberg. UTB 595. 512 p.

Krebs, C.J. (1999): *Ecological Methodology*. 2nd edition. Menlo Park: Addison-Wesley Educational. 624 p.

Schwörbel, J. (1994): *Methoden der Hydrobiologie - Süßwasserbiologie*. 4., neubearbeitete Auflage. Gustav Fischer Verlag, Jena, Stuttgart. Serie UTB für Wissenschaft/Uni-Taschenbücher, 979. 368 p.

Adult dragon- and damselflies:

Buchwald, R. & Sternberg, K. [Hrsg.] (1999): *Die Libellen Baden-Württembergs. Band 1: Allgemeiner Teil. Kleinlibellen (Zygoptera)*. Verlag Eugen Ullmer, Stuttgart. 468 p.

(benthic) diatoms:

sample information:

covered timeframe:

year from - to: 2005 - 2010

historical data: no

palaeo data: no

season: spring, summer

temporal resolution/frequency of sampling:

differs between projects

time series data: yes

comments: 6 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 3 projects with on-time records.

taxonomic resolution:

species

percentage of species level data: 70

comments: Detailed information about the percentage of species level data is not available.

taxonomic coding:

taxalist according to: Schaumburg et al. (2004)

citation: Schaumburg, J., Schranz, C., Foerster, J., Gutowski, A., Hofmann, G., Meilinger, P., Schneider, S. & Schmedtje, U. (2004): *Ecological classification of macrophytes and phytobenthos for rivers in Germany according to the water framework directive*. *Limnologica* 34, 283-301.

coding system: no coding used

sample specifications:

quantitative (abundance data)

replicate samples: yes

number of samples: 15

specification of method(s) used for sampling and sorting:

Method following the Water Framework Directive (Schaumburg et al., 2006).

citation: Schaumburg, J.S., Schranz, C., Stelzer, D., Hofmann, G., Gutowski, A. & Förster, J. (2006): *Handlungsanweisung für die ökologische Bewertung von Fließgewässern zur Umsetzung der EU-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos, Stand Januar 2006.*

macrophytes:

sample information:

covered timeframe:
year from - to: 1978 - 2014
historical data: no
palaeo data: no
season: summer, autumn
temporal resolution/frequency of sampling:
differs between projects
time series data: yes
comments: 21 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 35 projects with one-time records.
taxonomic resolution: genus, species
percentage of species level data: 80

taxonomic coding:
taxalist according to: Van de Weyer & Schmidt (2007)
citation: Van de Weyer, K. & Schmidt, C. (2007): *Bestimmungsschlüssel für die aquatischen Makrophyten (Gefäßpflanzen, Armleuchteralgen und Moose) in Deutschland*. 128 p.
coding system: no coding used
sample specifications: quantitative (abundance data)
replicate samples: yes
number of samples: 96
specification of method(s) used for sampling and sorting:
Method following the Water Framework Directive (Schaumburg et al., 2006).
citation: Schaumburg, J.S., Schranz, C., Stelzer, D., Hofmann, G., Gutowski, A. & Förster, J. (2006): *Handlungsanweisung für die ökologische Bewertung von Fließgewässern zur Umsetzung der EU-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos, Stand Januar 2006*.

angiosperms:

sample information:
covered timeframe:
year from - to: 1938 - 2010
historical data: no
season: spring, summer, autumn
temporal resolution/frequency of sampling:
differs between projects
time series data: yes
comments: Projects focused predominantly on riparian vegetation.
52 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 30 projects with one-time records.
taxonomic resolution: species, other
other taxonomic levels: vegetation units
percentage of species level data: 90
comments: Vegetation units after Oberdorfer (1992), Ellenberg (1996).
taxonomic coding:
taxalist according to: differs between projects
citation: Oberdorfer, E. (1983, 1992). *Süddeutsche Pflanzengesellschaften. Teil I-III*. Fischer, Stuttgart, Germany.
Pott, R. (1995): *Die Pflanzengesellschaften Deutschlands*. 2. Aufl. Stuttgart. 622 p.

Ellenberg, H. (1996): *Vegetation Mitteleuropas mit den Alpen in ökologischer, dynamischer und historischer Sicht*. 5. Auflage, Ulmer-Verlag, Stuttgart. 1095 p.

Raabe, U., Foerster, E., Schumacher, W. & Wolff-Straub, R. (1996): *Florenliste von Nordrhein-Westfalen*, 3. Aufl.- LÖBF-Schriftenreihe (Recklinghausen) 10: 196 p.

Wisskirchen, R. & Haeupler, H. (1998): *Standardliste der Farn- und Bluetenpflanzen Deutschlands*. Verlag Eugen Ulmer, Stuttgart. 765 p.

Scheuerer, M. & Ahlmer, W. (2003): *Rote Liste gefährdeter Gefäßpflanzen Bayerns mit regionalisierter Florenliste*. In: *Schriftenreihe des Bayerischen Landesamtes für Umweltschutz*. Bd. 165, Augsburg, 1-372.

coding system:

no coding used

sample specifications:

quantitative (abundance data), qualitative, presence/absence

replicate samples:

yes

number of samples:

81

specification of method(s) used for sampling and sorting:

Methods differ between projects: e.g. method according to Barkmann et al. (1964), Braun-Blanquet (1964), transect-based records of vegetation units with species records on sample plots according to Jähnig et al. (2009) and Januschke et al. (2011).

citation:

Barkmann, J.J., Doing, H. & Segal, S. (1964): *Kritische Bemerkungen und Vorschläge zur quantitativen Vegetationsanalyse*. *Acta Bot. Neerlandica* 13: 394-419.

Braun-Blanquet, J. (1964): *Pflanzensoziologie, Grundzüge der Vegetationskunde*. 3. Auflage. Springer Verlag, Wien. 865 p.

Jähnig, S.C., Brunzel, S., Gacek, S., Lorenz, A.W. & Hering, D. (2009): *Effects of re-braiding measures on hydromorphology, floodplain vegetation, ground beetles and benthic invertebrates in mountain rivers*. *Journal of Applied Ecology* 46, 406-416.

Januschke, K., Brunzel, S., Haase, P. & Hering, D. (2011): *Effects of stream restorations on riparian mesohabitats, vegetation and carabid beetles*. *Biodiversity and Conservation* 20, 3147-3164.

other group(s):

sample information:

covered timeframe:

year from - to:

1992 - 2014

historical data:

no

season:

spring, summer, autumn

temporal resolution/frequency of sampling:

differs between projects

time series data:

yes

comments:

Lepidoptera sample information: 7 projects with replicate samplings (continuous time-series with yearly samplings or selected years), 1 project with one-time records.

taxonomic resolution:

species

percentage of species level data:

100

taxonomic coding:

taxalist according to:

Karlsholt & Razowski (1996), Settele et al. (1999)

citation:

Karlsholt, O. & Razowski, J. (1996): *The Lepidoptera of Europe, A Distributinal Checklist*. Apollo Books, Stenstrup. 380 p.

	<i>Settele, J., Feldmann, R. & Reinhardt, R. [Hrsg.] (1999): Die Tagfalter Deutschlands - Ein Handbuch für Freilandökologen, Umweltplaner und Naturschützer. Ulmer Verlag, Stuttgart. 452 p.</i>
coding system:	<i>no coding used</i>
sample specifications:	<i>quantitative (abundance data), presence/absence</i>
replicate samples:	<i>yes</i>
number of samples:	<i>30</i>
specification of method(s) used for sampling and sorting:	<i>Sight observations, light traps, dip net catches. Intensity and frequency strongly differ between projects.</i>
citation:	<i>No information available.</i>

Other specifications

GIS layers, shapes related to the dataset:

no data available

availability of photos: *yes*

availability of maps: *no*

quality control procedures:

Were any quality control procedures applied to your dataset?

yes

quality control protocols and comments:

Quality control was made after data input by checking the input table for inconsistencies.