Database on environmental conditions and biodiversity in shallow lakes in Belgium and the Netherlands

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Keywords
shallow lakes, Belgium, The Netherlands, plankton, fish, macrophytes, macro-invertebrates

Short description of the dataset/summary

The BIOMAN dataset comprises local environmental data and community data of different organism groups (bacterioplankton, zooplankton, ciliates, phytoplankton, macro-invertebrates, fish, protists and aquatic vegetation) from 98 shallow lakes covering three geographic regions in Europe sampled in 2000-2001. The database BIOMAN-Belgium is a subset of the overall BIOMAN dataset and includes data from 39 shallow lakes located in Belgium and the Netherlands.

General information

<table>
<thead>
<tr>
<th>dataset entry ID:</th>
<th>SF_23</th>
</tr>
</thead>
<tbody>
<tr>
<td>name of the dataset:</td>
<td>BIOMAN-Belgium, biodiversity in shallow lakes in Belgium and the Netherlands</td>
</tr>
<tr>
<td>full name of the dataset:</td>
<td>BIOMAN-Belgium</td>
</tr>
<tr>
<td>dataset short name:</td>
<td>BIOMAN-Belgium</td>
</tr>
<tr>
<td>type of dataset:</td>
<td>species (taxonomic group) per site database including environmental information</td>
</tr>
<tr>
<td>data type:</td>
<td>point data/observation data</td>
</tr>
</tbody>
</table>
science keywords according to **GCMD**:
- topic: Biosphere, Biological Classification, Terrestrial Hydrosphere

ISO topic category according to **ISO 19115**:
- own science keywords: Biota, Environment, Inland Waters
- related project: shallow lakes, Belgium, the Netherlands, plankton, fish, macro-invertebrates, macrophytes
- funding: The dataset generation was funded by the EU-project BIOMAN (EVK2-CT-1999-00046).

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### Technical and administrative specifications

**data format:** Excel

**operating system:** all Windows systems

**data language:** English

**current access level:** web (public)
- web address: [https://www.gbif.org/dataset/9575ab07-e816-4cd6-aa99-483343a825e6](https://www.gbif.org/dataset/9575ab07-e816-4cd6-aa99-483343a825e6)
- currently available through **GBIF:** yes
- exchange planned: no
- data in data repository: no

**Do you plan to publish the data on the Freshwater Biodiversity Data Portal:**
- update level: completed

**documentation:**
- type: scientific paper
- language: English

**contact details:**
- metadata contact person:
  - first, last name: Luc De Meester
  - email: luc.demeester@kuleuven.be
  - institution: KU Leuven
  - address: Charles Deberiotstraat 32
  - postal code, city: 3000 Leuven
  - country: Belgium
- technical contact person:
  - first, last name: Luc De Meester
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- scientific contact person:
  - first, last name: Luc De Meester
  - email: luc.demeester@kuleuven.be

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### Intellectual property rights and citation

**dataset publisher:** Pieter Lemmens

**dataset creator (data compiler):** Pieter Lemmens
Database on environmental conditions and biodiversity in shallow lakes in Belgium and the Netherlands

contact email: pieter.lemmens@kuleuven.be
contact institution: KU Leuven

data contributors to/owners of this dataset:
multiple

number: 6

data contributor/owner 1:
contact name: Steven Declerck
contact email: s.declerck@nioo.knaw.nl
contact institute: Centre for Limnology, Netherlands Institute of Ecology (NIOO-KNAW)
criteria for using this part of the dataset: The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

data contributor/owner 2:
contact name: Wouter Rommens
contact email: luc.demeester@kuleuven.be
contact institute: KU Leuven
criteria for using this part of the dataset: The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

data contributor/owner 3:
contact name: Koenraad Muylaert
contact email: koenraad.muylaert@kuleuven.be
contact institute: KU Leuven
criteria for using this part of the dataset: The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

data contributor/owner 4:
contact name: Jochen Vandekerkhove
contact email: luc.demeester@kuleuven.be
contact institute: KU Leuven
criteria for using this part of the dataset: The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

data contributor/owner 5:
contact name: Katleen Van der Gucht
contact email: luc.demeester@kuleuven.be
contact institute: Ghent University
criteria for using this part of the dataset: The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

data contributor/owner 6:
contact name: Gabriel Zwart
contact email: zwart@cl.nioo.knaw.nl
contact institute: Centre for Limnology, Netherlands Institute of Ecology (NIOO-KNAW)
criteria for using this part of the dataset: The dataset is publicly available (data portal, data archive) and can be used
without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

citation of this dataset:


title and journal (name, number, pages): bioman_belgium, BioFresh. Sampling event dataset.

year: 2018
version: 1.3
doi: https://doi.org/10.15468/duzvog

citation of the metadata:


title and journal (name, number, pages): Database on environmental conditions and biodiversity in shallow lakes in Belgium and the Netherlands. Freshwater Metadata Journal 29: 1-9

year: 2018
doi: https://doi.org/10.15504/fmj.2018.29

dataset related references:

reference 1:


year: 2005

General data specifications

regional coverage of the dataset:

spatial extent of the dataset: national
continents: Europe
countries: Europe: Belgium, Netherlands

world climatic regions according to Köppen:

Group C: temperate/mesothermal climates

freshwater ecoregions of the world (FEOW) according to WWF:

Europe: Central & Western Europe

European ecoregions according to Illies (WFD):

Western Plains (ER13)

ecosystem type: lakes/ponds

covered timeframe: 2000 - 2001

Site specifications

coordinate system/grid data: latitude/longitude, format: DM
datum (e.g. WGS84): WGS84
grid data available: no

site coding:
site coding available: yes, alphanumerical
number of digits: 4
example: GAV, KP
number of sites: <100
exact number of sites: 39

Climate and environmental data

climate related data: no climate data available
environmental data: no environmental data per catchment available
no environmental data per site available

comments: Data on land use around each lake was estimated as percentage coverage as described in:

physico-chemical data: total P, ortho P, nitrate, nitrite, total N, water temperature, conductivity, chlorophyll, Secchi disc depth, suspended solids
other physico-chemical parameters: silica concentration
availability of physico-chemical data, if there is more than one sample per site: per sample
stressors influencing the sites: no stressor data available
reference sites available: no

Biological data

biological data origin: from sampling, BIOMAN
organism group addressed: fish, macro-invertebrates (Mollusca, Crayfish, Ephemeroptera, Coleoptera, Trichoptera, Chironomidae), zooplankton, phytoplankton, macrophytes, other group(s): bacterioplankton, ciliates, protists

Sample specifications/sample resolution

fish:

sample information:
covered timeframe: 2000 - 2001
historical data: no
palaeo data: no
season: autumn
| **temporal resolution/frequency of sampling:** | either in 2000 or in 2001 |
| **time series data:** | no |
| **comments:** | Please refer to Declerck et al. (2005) for more details. |

**taxonomic resolution:**
- **level:** species
- **comments:** Please refer to Declerck et al. (2005) for more details.

**taxonomic coding:**
- **reference(s):** Please refer to Declerck et al. (2005) for more details.

**sample specifications:**
- **type:** quantitative (abundance data)
- **replicate samples:** no
- **specification of method(s) used for sampling and sorting:** Please refer to Declerck et al. (2005) for more details.

**macro-invertebrates:**

**sample information:**
- **covered timeframe:** 2000 - 2001
- **historical data:** no
- **palaeo data:** no
- **season:** summer
- **temporal resolution/frequency of sampling:** either in 2000 or in 2001
- **time series data:** no
- **comments:** Please refer to Declerck et al. (2005) for more details.

**taxonomic resolution:**
- **level:** family
- **comments:** Please refer to Declerck et al. (2005) for more details.

**taxonomic coding:**
- **reference(s):** Please refer to Declerck et al. (2005) for more details.

**sample specifications:**
- **type:** quantitative (abundance data)
- **replicate samples:** no
- **number of samples:** 39
- **specification of method(s) used for sampling and sorting:** Please refer to Declerck et al. (2005) for more details.

**zooplankton:**

**sample information:**
- **covered timeframe:** 2000 - 2001
- **historical data:** no
- **palaeo data:** no
season: spring, summer, autumn
temporal resolution/frequency of sampling: monthly either in 2000 or in 2001; samples from different sampling occasions were pooled
time series data: no
comments: Please refer to Declerck et al. (2005) for more details.
taxonomic resolution: level: species
percentage of species level data: 100
comments: Please refer to Declerck et al. (2005) for more details.
taxonomic coding: reference(s): Please refer to Declerck et al. (2005) for more details.
sample specifications: type: quantitative (abundance data)
replicate samples: no
number of samples: 39
specification of method(s) used for sampling and sorting: Please refer to Declerck et al. (2005) for more details.

phytoplankton:
historical data: no
season: spring, summer, autumn
temporal resolution/frequency of sampling:
monthly during the growing season (May-October) either in 2000 or 2001; samples from different sampling occasions were pooled
comments: Please refer to Declerck et al. (2005) for more details.
taxonomic resolution: level: genus
taxonomic coding: reference(s): Please refer to Declerck et al. (2005) for more details.
sample specifications: type: quantitative (abundance data)
replicate samples: no
number of samples: 39
specification of method(s) used for sampling and sorting: Please refer to Declerck et al. (2005) for more details.

macrophytes:
| historical data | no |
| palaeo data | no |
| season | summer |
| temporal resolution/frequency of sampling | per year |
| comments | Please refer to Declerck et al. (2005) for more details. |

**taxonomic resolution:**
- **level:** species
- **percentage of species level data:** 100%
- **comments:** Please refer to Declerck et al. (2005) for more details.

**sample specifications:**
- **type:** quantitative (abundance data)
- **replicate samples:** no
- **number of samples:** 39
- **specification of method(s) used for sampling and sorting:**
  - Please refer to Declerck et al. (2005) for more details.
  - **reference(s):**

**other group(s):**

**sample information:**
- **covered timeframe:** 2000 - 2001
- **historical data:** no
- **season:** spring, summer, autumn
- **temporal resolution/frequency of sampling:** per year
- **time series data:** no
- **comments:** Please refer to Declerck et al. (2005) for more details.

**taxonomic resolution:**
- **level:**
- **other taxonomic levels:**
  - protists & bacteria: DGGE
  - ciliates: species level
- **comments:** Please refer to Declerck et al. (2005) for more details.

**taxonomic coding:**
- **reference(s):**
  - Please refer to Declerck et al. (2005) for more details.

**sample specifications:**
- **type:** quantitative (abundance data)
- **replicate samples:** no
- **specification of method(s) used for sampling and sorting:**
  - Please refer to Declerck et al. (2005) for more details.
  - **reference(s):**
Other specifications

availability of photos: no
availability of maps: no

quality control procedures:
  Were any quality control procedures applied to your dataset? yes
  quality control protocols and comments:
    Species names were checked using the GBIF species list.

Acknowledgements

The BIOMAN database has been collected as part of the EU funded BIOMAN project (EVK-CT-1999-00046). The authors acknowledge the funding of the SAFRED project (Saving freshwater biodiversity research data - 2015-2018) that allowed processing and publishing the BIOMAN data, amongst others.

References