Contract No. 226874

- Biodiversity of Freshwater Ecosystems: Status, Trends, Pressures, and Conservation Priorities

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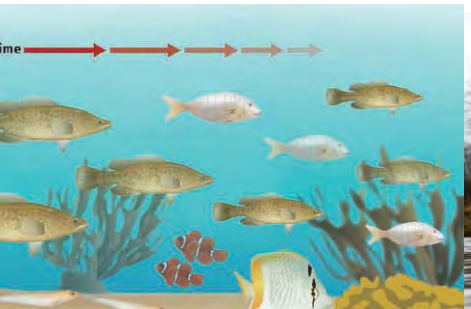
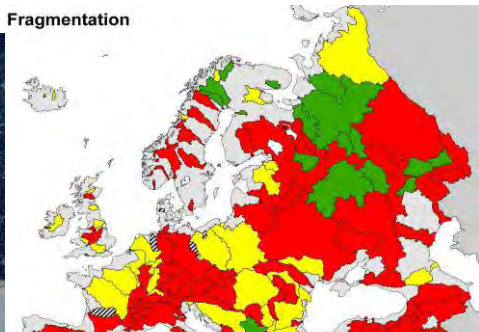
www.igb-berlin.de
www.freshwaterbiodiversity.eu





Freshwater biodiversity

Disproportionate high biodiversity:
Freshwaters cover 0.8% of the earth surface, but contain >10% of all animal species and ~1/3 of all vertebrate species

Key ecosystem services:
Freshwaters and wetlands provide valuable ecosystems services, in most cases more than any other ecosystem type

Pivotal landscape functions: E.g., freshwaters play a key role in the global C cycle

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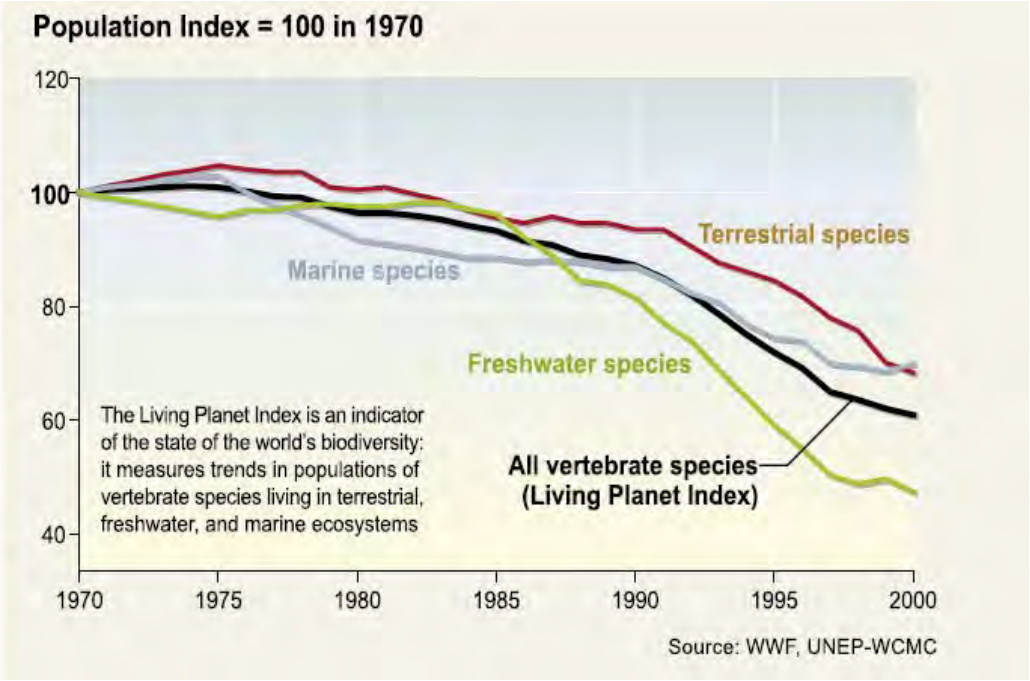
The hidden freshwater biodiversity crisis

Most threatened ecosystems:
Freshwater biodiversity decreases much faster than marine and terrestrial diversity



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European vertebrates extinct since 1700

Marine: ***Pinguinus impennis*** 1852

Terrestrial

Prolagus sardus about 1800

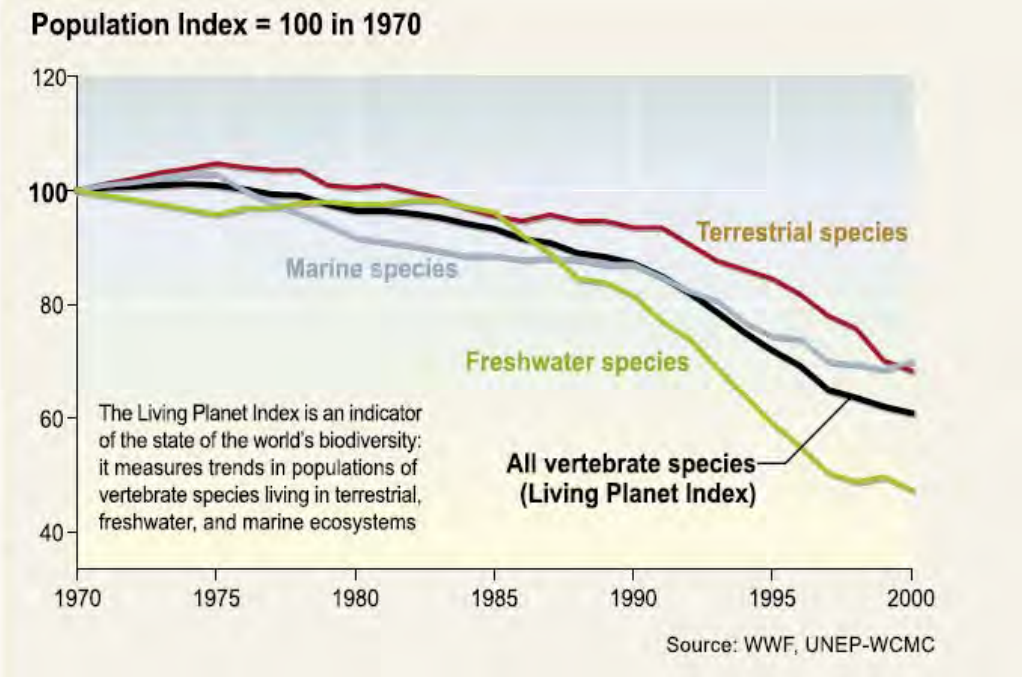
Haematopus meadewaldoi
about 1940

Freshwater

Eudontomyzon **sp. migratory**
Romanogobio antipai
Alburnus danubicus
Gasterosteus crenobiontus
Coregonus oxyrinchus
Coregonus bezola
Coregonus fera
Coregonus hiemalis
Coregonus restrictus
Coregonus gutturosus
Salmo schiefermuelleri
Salvelinus neocomensis
Salvelinus profundus
..... more

The hidden freshwater biodiversity crisis

Most threatened ecosystems:
Freshwater biodiversity decreases much faster than marine and terrestrial diversity



→ Up to now, freshwaters are almost completely neglected in global biodiversity research and policy

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Pontocaspian gobies in the Rhine

IDE, ARTIKEL, FAKTEN
len Themenseiten zu...
tz

ALLE THEMENSEITEN ▸▸

FOTOSTRECKE



Überfischung: Wie der Mensch die Weltmeere plündert

MEHR AUF SPIEGEL ONLINE

Abkommen: 91 Staaten wollen gegen illegalen Fischfang vorgehen (01.09.2009)

Nordsee: Schollen- und Kabeljau-Bestände erholen sich (31.07.2009)

Verfehlte EU-Politik: Regierung räumt katastrophale Überfischung ein (15.03.2009)

Uno-Report: Meere werden immer stärker überfischt (02.03.2009)

Eingewanderter Fisch

Allesfresser aus dem Osten erobert deutsche Flüsse

DDP / Frank Hartmann

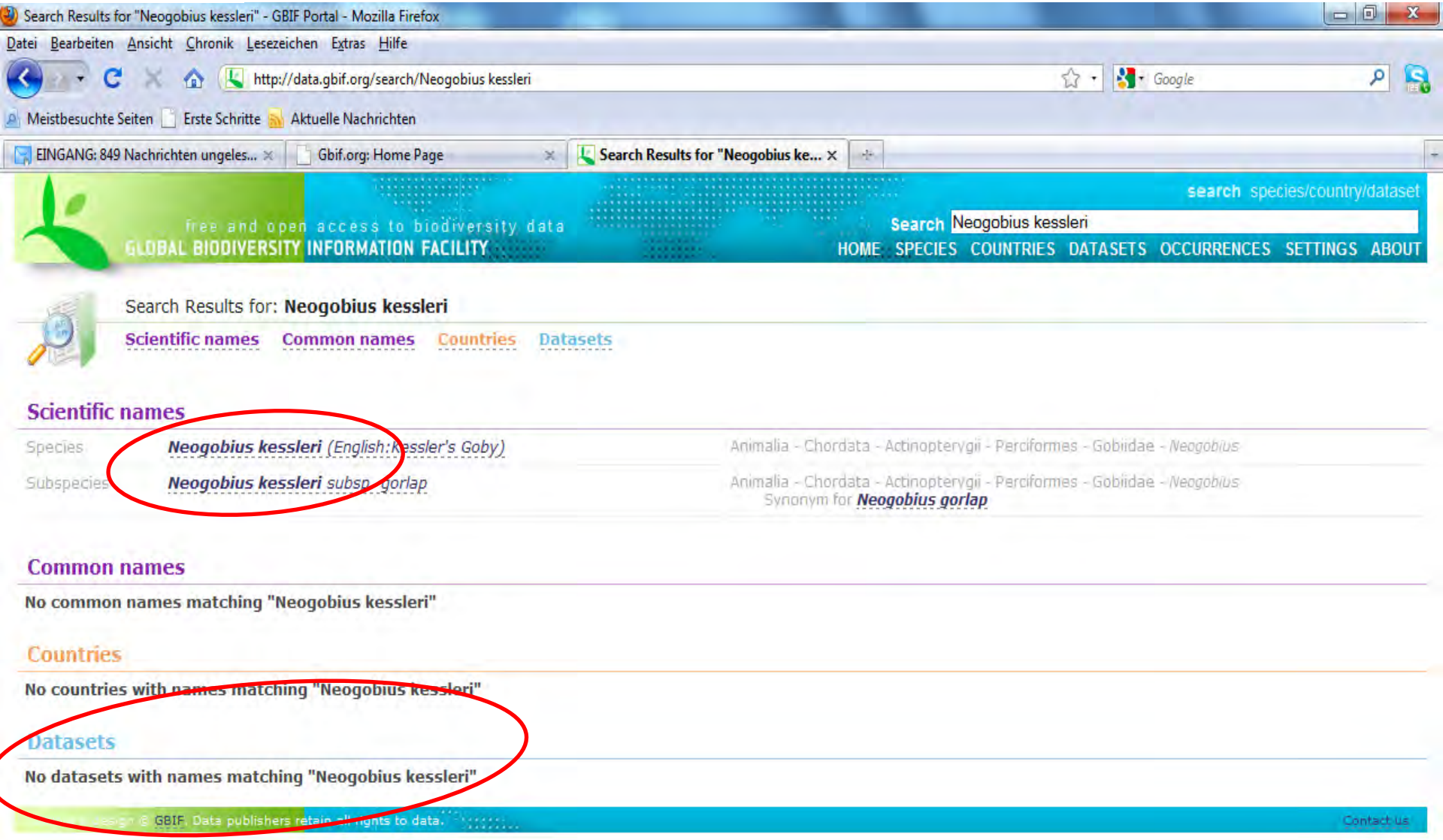
Neuankömmling im südlichen Rhein: Die Kesslergrundel

Überraschender Fang im südlichen Rhein: Die Kesslergrundel, eigentlich in Südosteuropa heimisch, breitet sich jetzt auch in deutschen Gewässern aus. Heimischen Fischen droht ein harter Konkurrenzkampf - und Anglern eine Plage.

Im südlichen Rhein ist offenbar eine neue Fischart eingezogen. Südlich von Mannheim sei eine Kesslergrundel (Neogobius kessleri) ins Netz gegangen, sagt der Fischereireferent Frank Hartmann von der Abteilung Landwirtschaft des Regierungspräsidiums Karlsruhe. Durch den zugewanderten Fisch, der im Rhein nicht heimisch sei, drohten erhebliche ökologische Konsequenzen.

Rund 50 Fischarten leben im Rhein. Mancher droht nun ein harter Konkurrenzkampf mit dem Neuankömmling. Hartmann geht davon aus, dass sich die

How to find (reliable) data?



Biodiversity of Freshwater Ecosystems: Status, Trends, Pressures, and Conservation Priorities

FP7-EU-Collaborative Project - Large-scale integrating project

BioFresh is the largest international project to explicitly focus on freshwater biodiversity

SEVENTH FRAMEWORK PROGRAMME

Contract No. 226874

Biodiversity of Freshwater Ecosystems: Status, Trends, Pressures, and Conservation Priorities

FP7-EU-Collaborative Project - Large-scale integrating project

Duration:	4.5 years (start: 1 Nov. 2009)
Coordinator:	Klement Tockner (IGB, Germany)
Partners:	19 Institutes and Organisations
Endorsed:	FreshwaterBiodiversity (DIVERSITAS)
Stakeholders:	GWSP, GBIF, WWF, TNC, PESI, FAO, Geo-Bon, Wetlands International, LifeWatch, and more...

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SEVENTH FRAMEWORK PROGRAMME


IGB


IUCN


UMR 5023
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Hydrosystèmes Fluviaux


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Institut de recherche
pour le développement


eco
logic


Naturhistoriska
riksmuseet


UNIVERSITÄT
DUISBURG
ESSEN


eawag
aquatic research

Objectives

Improve capacity to protect and manage freshwater biodiversity in the face of ongoing changes to global climate and socioeconomics.

This will be achieved by:

(i) building a **freshwater information platform** as a gateway to scientific information on freshwater biodiversity,
(ii) **predicting the responses** of freshwater biodiversity and its services to multiple stressors at global, European and local scale,
(iii) **increasing the awareness** on the urgency for freshwater biodiversity conservation among scientists, policy makers and the public,
and thereby improving present conservation strategies and supporting the work of the EU and of international environmental agreements.

Focus

Scale	Grain	BD-component
1. Global	1. Ecoregion	1. Ecosystem diversity
2. European	2. Catchment	(rivers, lakes, wetlands, GW)
3. Danube/ Elbe/Ebro	3. Point	2. Species diversity (spatial, temporal trends)

Emerging components:

Functional diversity

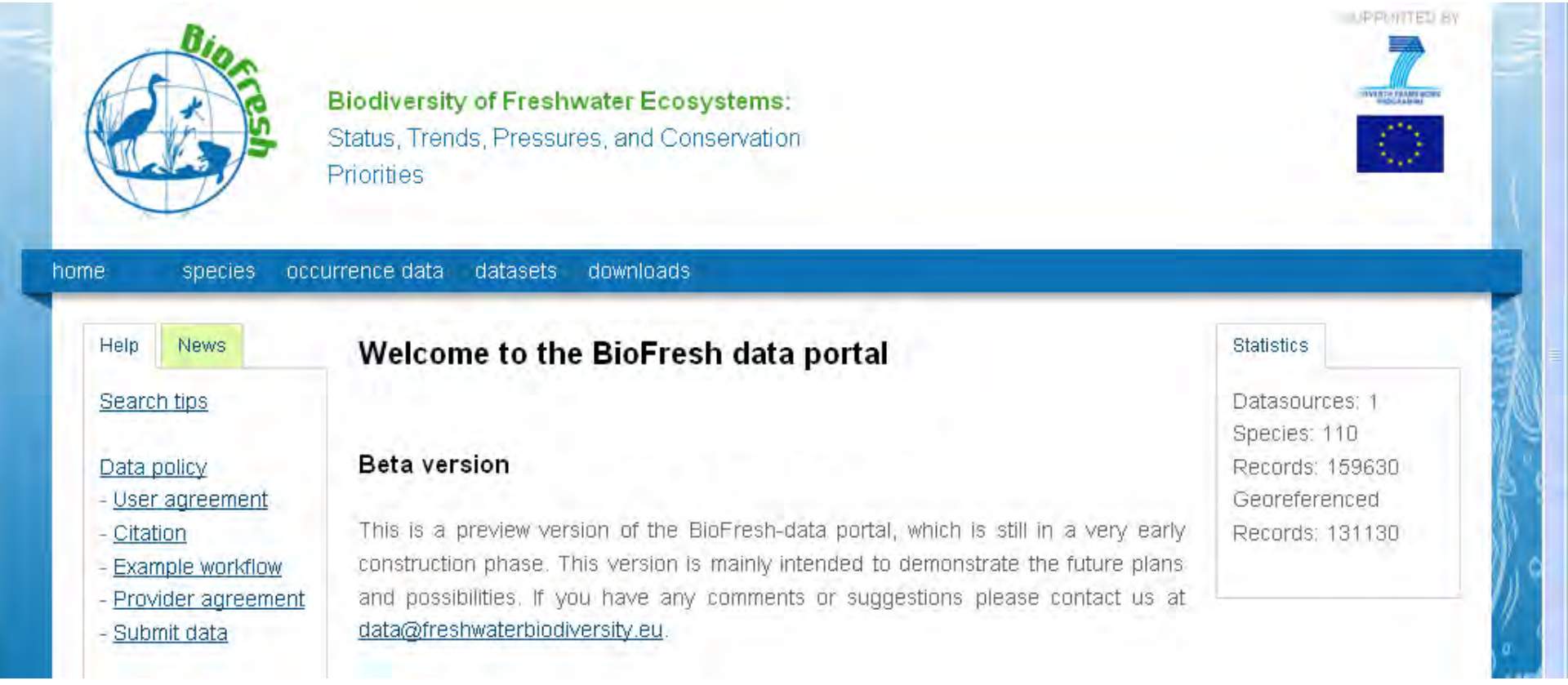
Genetic diversity

Key products

1. Freshwater Biodiversity Portal

Currently data is widely dispersed and for the most part inaccessible

→ **open access freshwater biodiversity data portal** that connects global and regional data bases



Biodiversity of Freshwater Ecosystems:
Status, Trends, Pressures, and Conservation Priorities

results
data portal
metadatabase
deliverables

Metadatabase

More than other research projects, BioFresh largely relies on the quality and quantity of the data that will be included into the BioFresh data portal. BioFresh will make use of all kind of freshwater biodiversity data and will provide free and universal access to information that has been collected within numerous European and worldwide research initiatives, projects and campaigns.

General information that describes each of the background databases of the BioFresh data portal will be stored in a so called metadatabase. This includes information about the data provider and the related intellectual property issues, as well as characterising parameters as regional coverage and spatial extend. To supplement the BioFresh science workpackages the general metadata will be complemented with information about environmental and climate related parameters.

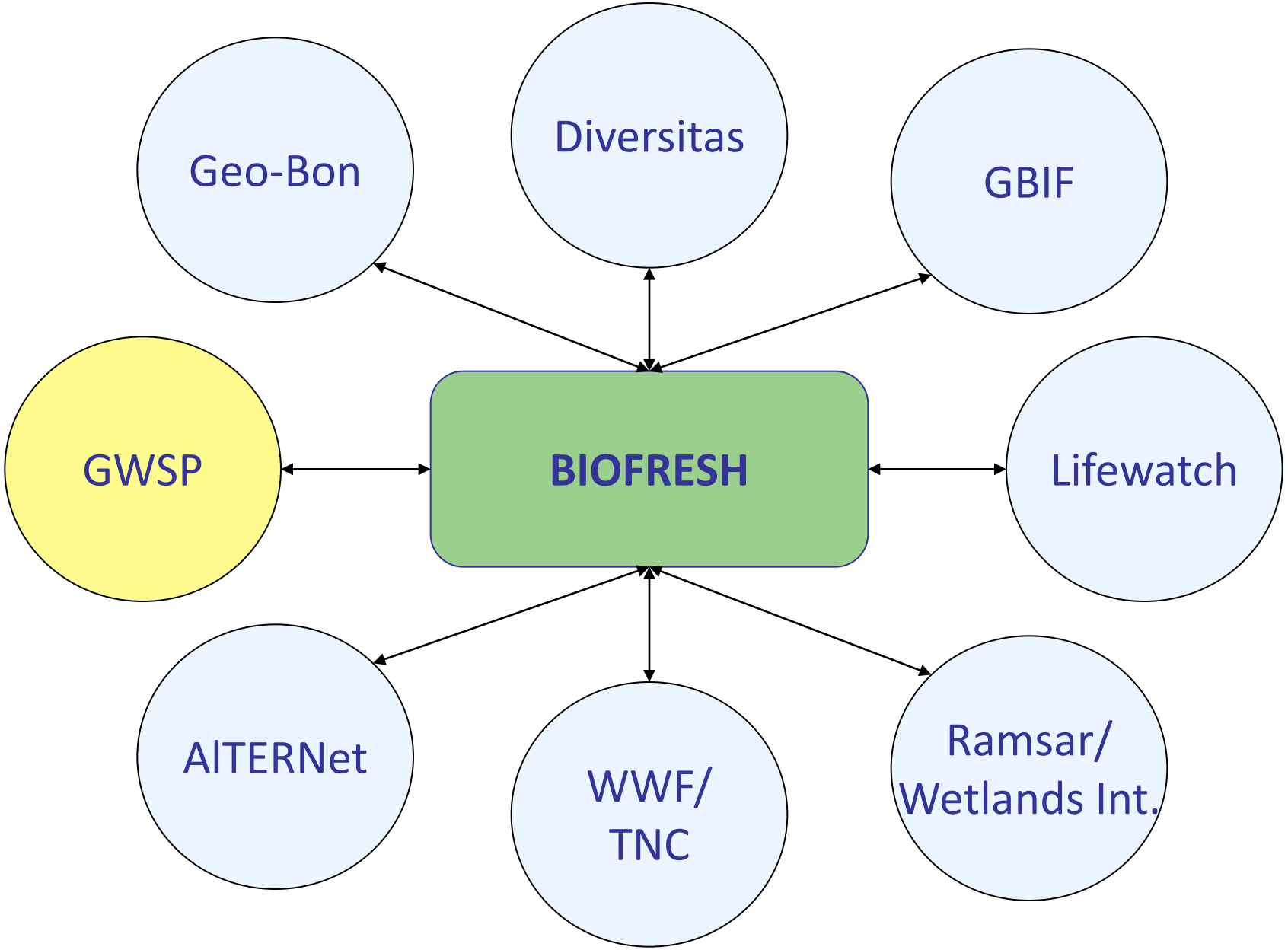
The establishment of the metadatabase started in January 2010. Regarding the collection of the relevant metadata a questionnaire for internal and external data holders was developed. To prioritise data entry, fields are marked as mandatory/conditional, recommended or optional. In terms of clearness and user friendliness fold-out sections as well as tooltips for further data field explanations are on-hand.

Currently - in its latest version - the metadatabase holds meta information from about 40 background databases. If you are interested to publish your data through the BioFresh data portal and therefore - as a first step - want to submit your metadata to the BioFresh metadatabase, please do not hesitate to contact Astrid Schmidt-Kloiber (BOKU).

Key products

1. Freshwater Biodiversity Portal
2. Digital Freshwater Biodiversity Atlas
3. PhD theses, publications, reviews
4. Improved predictive models
5. Methods, analytical protocols, indicators, standards for BD monitoring
6. Outreach activity products
7. Guidelines for future BD conservation planning (e.g. KBA)
8. BD collaborative networks
9. Nucleus for mutual projects

Linkages & Synergies (selected partners)



KBioFresh <-> GWSP

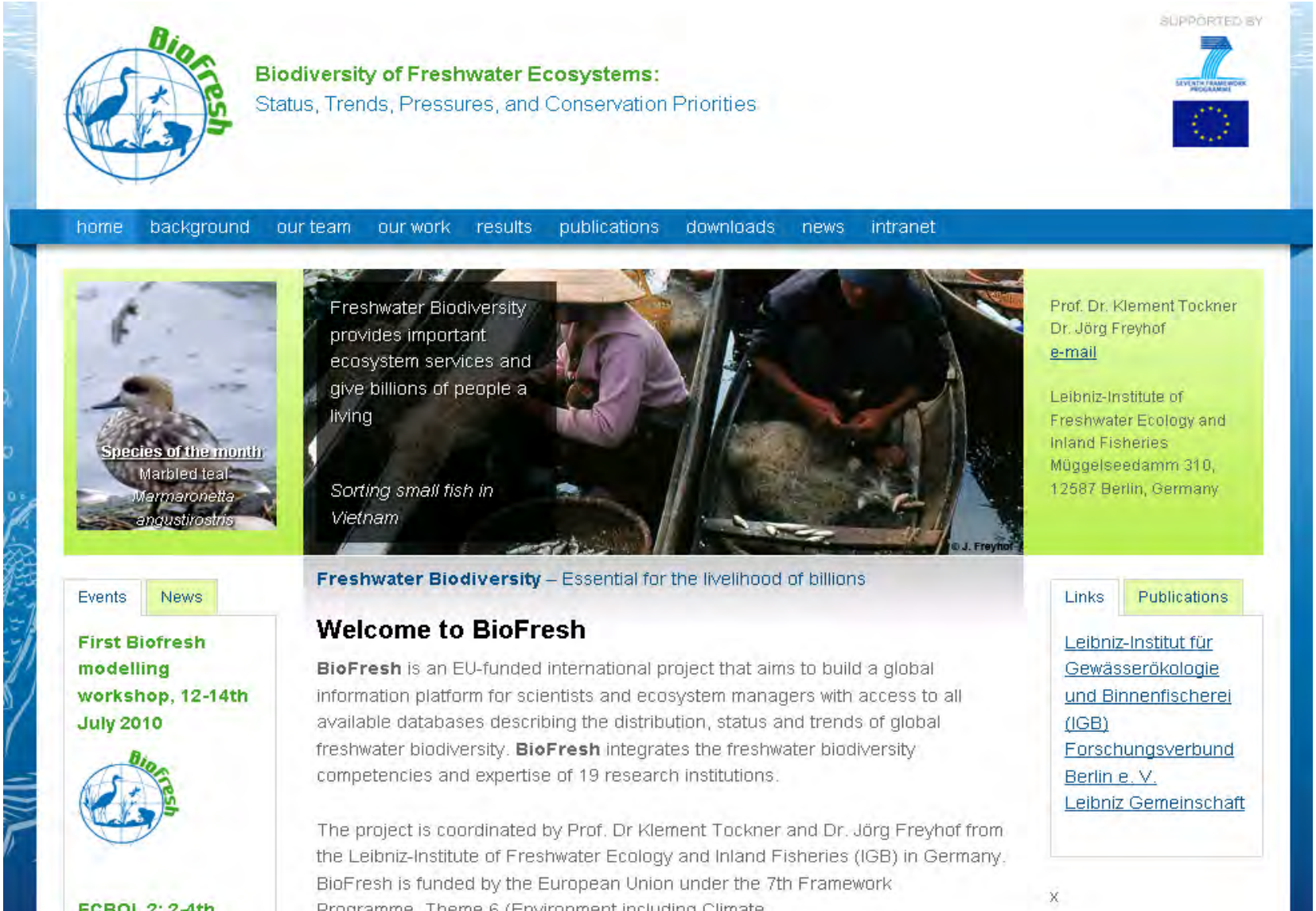
Vörösmarty et al.

Strengthen the links of BioFresh to other institutions

Global Water Atlas (hydrology, scales)

Visit us:

www.freshwaterbiodiversity.eu



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