



The German National Technical Programme on the conservation and sustainable use of aquatic genetic resources (AqGR)

Clemens Fieseler

Senior officer for aquatic genetic resources

Information and Coordination centre for Biological Diversity (IBV)

Federal Office for Agriculture and Food

Deichmannsaue 29

D-53179 Bonn

Germany

clemens.fieseler@ble.de



Overview

- Brief presentation of the Federal Office for Agriculture and Food (BLE) and the Information and Coordination Centre for Biological Diversity (IBV)
- Background, contents, implementation, data dissemination, future challenges of the German National Technical Programme on AqGR
- Elaboration of the National country report for the *SoWAqGR* in Germany



Bundesanstalt für
Landwirtschaft und Ernährung

INFORMATIONEN- UND
KOORDINATIONSZENTRUM

Biologische
Vielfalt

Federal Office for Agriculture and Food (BLE)

The BLE within the BMEL's scope of responsibility





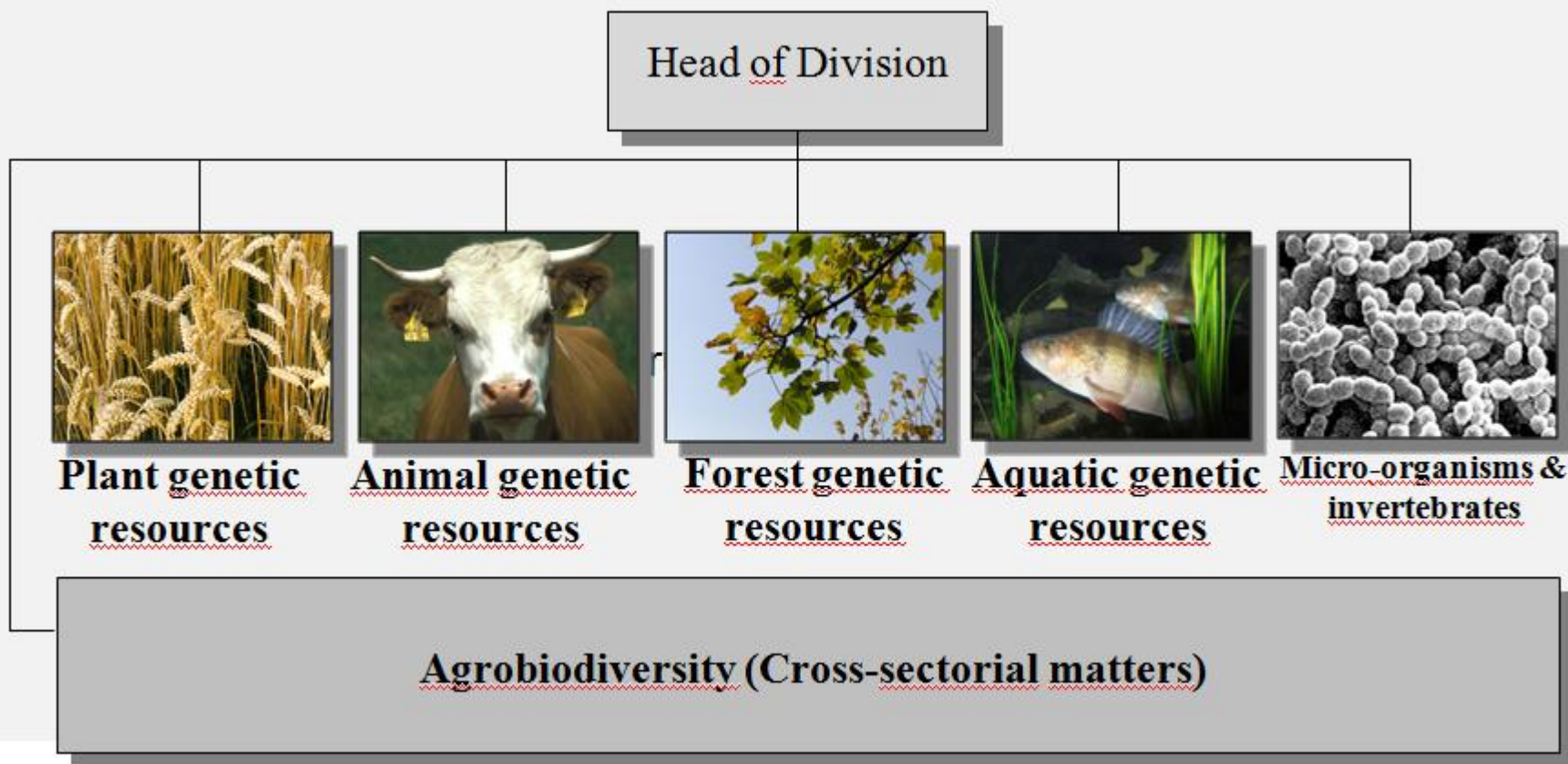
The BLE – Who are we?

- Central implementing authority, independent federal institution under public law,
- Tasks in these sectors:
 - Agribusiness
 - Fisheries
 - Food
 - Health-oriented consumer protection
- 1,200 staff members
 - Head office in Bonn
 - Three external offices
 - Five additional locations
 - 200 crew members (including international vessels)



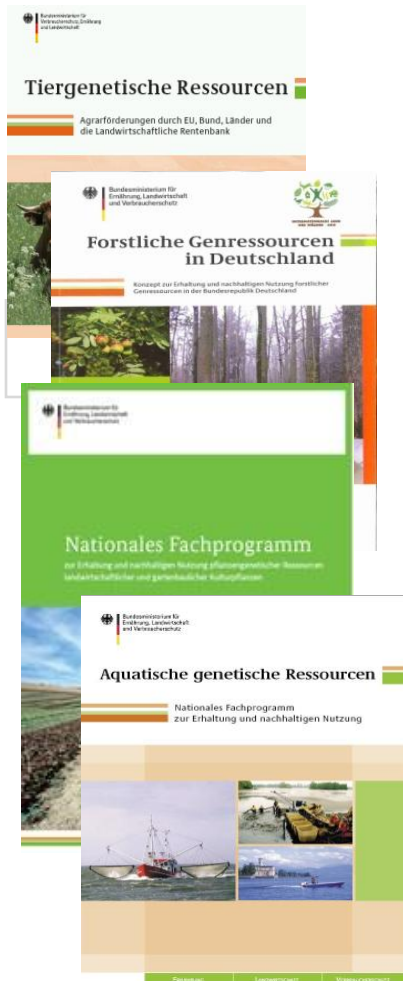


Information and Coordination Centre for Biological Diversity (IBV)





German National Technical Programmes on the Conservation and Sustainable Use for Genetic Resources



- Plant Genetic Resources for Food and Agriculture (new version 2012)
- Animal Genetic Resources (new edition 2008)
- Forest Genetic Resources (new edition 2010)
- Aquatic Genetic Resources (new edition 2010)
- Microorganisms and invertebrates (is currently being prepared, publication planned for 2015)



Federal Ministry of
Food, Agriculture
and Consumer Protection

Aquatic Genetic Resources

German National Technical Programme on the Conservation
and Sustainable Use of Aquatic Genetic Resources



Legal basis:

Convention on Biological Diversity

National concept on the conservation and sustainable use of genetic resources for food, agriculture and forestry developed by the Federal Ministry of Food, Agriculture and consumer Protection (BMELV) in 1999

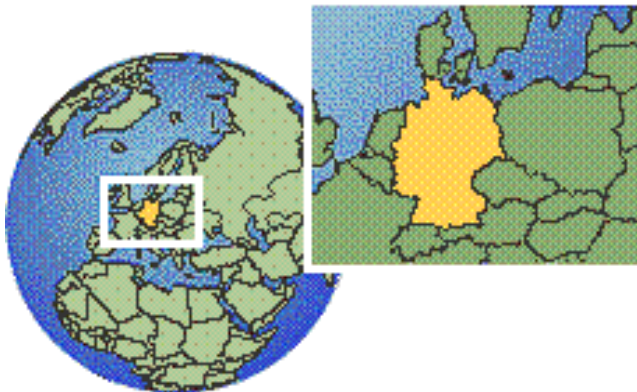
Expert group composed of representatives from the fisheries administration, research and fisheries associations

National Programme AqGR approved in 2005



Structure of the fisheries sector in Germany

- **Coastal and Offshore fisheries** (North- and Baltic Sea)
- **Inland fisheries** (Lake and river fisheries)
- **Aquaculture** (Common carp and trout farming)



The current programme is structured into the following sections:

- *Importance and vulnerability of aquatic genetic resources*
- *Legal and political framework conditions*
- *Current conservation and support schemes*
- *Aims of the technical programme*
- *Future measures for conservation and use*
- *Organization and implementation*



Expert Committee on AqGR

- Providing advice on technical issues
- Assessment of measures for the conservation of AqGR
- New proposals for actions to be taken or to improve technical programme
- Coordination of measures with relevant actors
- Evaluation of reports on the implementation and results of the programme
- Exchange of information and experience





Needs for Action in German aquaculture

Common carp and trout farming

- Measures aimed to preserve existing breeding strains should be supported
- Breeding activities should be fostered and intensified
- National inventory and genetic characterization of existing breeding strains should be carried out
- Cooperation of breeding activities at federal and international level should be promoted
- Suitability/necessity of sperm cryobank should be evaluated





Implementation of the programme by BLE research funding concerning biodiversity in aquaculture:

Examples 1: “**Inventory of cultivated AqGR**” focusing on the major species on the pond culture and production of salmonids in Germany (2005-2008)

Example 2: “**Documentation, analysis and aquaculture potential of wild AqGR: Populations of arctic char (*Salvelinus umbla*) in Germany**”
(completed 2010)

Example 3: “**Cryopreservation of AqGR**”: Building an advanced cell bank for carp strains (2012-2015)





Documentation and dissemination of data



GENRES

Informationssystem Genetische Ressourcen



Agrobiodiversity

Cultivated and wild plants

Domestic and farm animals

Forest plants

Aquatic genetic resources

Key figures

Endangerment

Regulatory framework

Conservation & sustainable
utilization

Research

Monitoring & national inventory

Funding instruments

International cooperation

Startseite ► Aquatic genetic resources

Aquatic Genetic Resources

Aquatic genetic resources include all genetic resources living in water. By that we understand fish, cyclostomes, mussels, decapods, marine mammals, aquatic plants and all other waterdwelling organisms that populate marine, coastal or inland waters, or are kept in aquaculture.



Haul from the North Sea © BLE

and the related branches of production guarantee the income of a large part of coastal communities.

Sea-water and freshwater fish, but also crustaceans, mussels and other seafood belong to the most important sources of protein for human consumption worldwide. As the basis of the fishing industry, they play, at the same time, a major role in socioeconomic terms. Particularly in developing countries local fishing

Searchterm



CONTACT

• Clemens Fieseler

SELECTED LINKS

- German National Technical Program on the Conservation and Sustainable Use of aquatic Genetic Resources (PDF file)
- Factsheet Aquatic Genetic Ressources (German only) (PDF file)
- Expert Committee Aquatic Genetic Ressources (AGR) (German only)
- EU Fisheries Policy and Marine Conservation
- Fisheries in Germany (German



National Inventory *AGRDEU*



Meer

[Information](#)
[Artenliste](#)
[Suchformular](#)

Süßwasser

[Information](#)
[Artenliste](#)
[Suchformular](#)

Aquakultur

[Information](#)
[Alle Datensätze](#)
[Suchformular](#)

Stichwortsuche

- ☒ Meer + Süßwasser
☐ Meer
☐ Süßwasser

Startseite

AGRDEU - Aquatische Genetische Ressourcen in Deutschland

Die Datenbank AGRDEU hat die Zielsetzung als nationales Arteninventar die in Deutschland vorkommenden Fische, Rundmäuler, Muscheln und zehnfüßigen Krebse zu dokumentieren. Sie wird vom Informations- und Koordinationszentrum für biologische Vielfalt (IBV) der Bundesanstalt für Landwirtschaft und Ernährung (BLE) gepflegt und dient als ein Instrument der Umsetzung des [nationalen Fachprogramms zur Erhaltung und nachhaltigen Nutzung der aquatischen genetischen Ressourcen](#).

Gemäß ihres Vorkommens in natürlichen limnischen oder marinen Habitaten oder in Aquakultur sind die aquatischen genetischen Ressourcen getrennt in den Teildatenbanken Süßwasser, Meer und Aquakultur dokumentiert. Für die natürlichen Habitats werden die vorkommenden Arten mit taxonomischen Angaben gelistet, sowie deren Vorkommen und Gefährdungsgrade angegeben. Der Bereich Aquakultur beschreibt Stämme, die im Projekt "Erfassung und Dokumentation der genetischen Vielfalt der Zuchtkarpfen sowie der Nebenfische der Karpfenteichwirtschaft, der Zuchtsalmoniden sowie der Nebenfische der Salmonidenhaltung und der weiteren in Aquakultur gehaltenen Arten in Deutschland" erfasst wurden.

Diese Version ist noch nicht barrierefrei.



Marine and inland fisheries species

Meer

[Information](#)
[Artenliste](#)
[Suchformular](#)

Süßwasser

[Information](#)
[Artenliste](#)
[Suchformular](#)

Aquakultur

[Information](#)
[Alle Datensätze](#)
[Suchformular](#)

Stichwortsuche

- ☒ Meer + Süßwasser
☐ Meer
☐ Süßwasser

© BLE

[Startseite](#) > [Süßwasser](#) > [Artenliste](#) > [Detailansicht](#)

Sibirischer Stör

Beschreibung

Der Sibirischer Stör (*Acipenser baerii baerii*) kann bis zu 200 cm groß werden. Er lebt über Sand- und Schlammgrund. Der Körper ist haiförmig, hat keine Schuppen aber auffällige Knochenplatten in 5 Reihen, dazwischen sternförmige Knochenplättchen. Der Rücken ist braungrau bis schwarz, der Bauch weiß bis gelb. Sein spitzes, lang gestrecktes Maul hat eine ovale Maulöffnung mit 4 davor liegenden leicht gefranzte Bartfäden in einer Querreihe. Charakteristisch ist die heterocerke Schwanzflosse (verlängerter Oberlappen). Der Sibirischer Stör ist ein anadromer Wanderfisch, lebt im Meer oder Brackwasser, zieht zum Laichen ins Süßwasser. Vorkommen: nordöstl. Ostsee, Nordmeer, Flüsse in Russland und Asien

Quelle: [Unterwasser-Welt Ostsee](#) (2008).

Verbreitung, Ökologie und Gefährdung

Sibirischer Stör



Bildquelle: Wikipedia.org, Autor: User:Lone Guardian

Systematik

Stamm: [Chordata](#) (Chordatiere)
Klasse: [Actinopterygii](#) (Strahlenflosser-Knochenfische)
Ordnung: [Acipenseriformes](#) (Störartige)
Familie: [Acipenseridae](#) (Störe)

Wissenschaftlicher Name

Acipenser baerii baerii Brandt, 1869
Quelle: [FishBase](#)



Farmed species, e.g. Rainbow trout in aquaculture



Meer

Information
Artenliste
Suchformular

Süßwasser

Information
Artenliste
Suchformular

Aquakultur

Information
Alle Datensätze
Suchformular

Stichwortsuche

☒ Meer + Süßwasser

☐ Meer

☐ Süßwasser

© BLE

[Startseite](#) > [Aquakultur](#) > [Suchformular](#)

Suchformular Aquakulturdaten

Verknüpfung der
Suchbegriffe

☒ UND ☐ ODER

Fischart

Regenbogenforelle [75]

Wissenschaftliche
Artbezeichnung

Oncorhynchus mykiss [75]

Bestand wird im
Betrieb gehalten seit
etwa

21-40 Jahren [143]

Bestandsführung

geschlossen [103]

Effektive

Populationsgröße

21-50 Tiere [30]

Selektionsintensität

hoch [85]

Nutzungsdauer

lang [30]

% Standardlänge:

Von: (83,640) Bis: (93,760)

% Kopflänge:

Von: (16,130) Bis: (32,050)

% Höhe max:

Von: (15,730) Bis: (39,300)

% Höhe min:

Von: (6,440) Bis: (14,250)

% Prädorsaler

Abstand:

Von: (28,980) Bis: (50,330)

Korpulenzfaktor:

Von: (1,040) Bis: (3,840)

max Allelzahl pro

Von: (4 000) Bis: (21 000)



Approach to the completion of the questionnaire

IBV worked out a first draft chapter by chapter and jointly agreed upon the draft with the expert committee on AqGR.

The focus was mainly on the most important commercial farmed aquatic species expert judgement is preferred to complex surveys.



**For the German country report on AqGR we tried to
adjust FAO questionnaire to our national conditions
as far as possible**



Thank you for your attention!

An English version of the “German Technical Programme on the Conservation and Sustainable Use of AqGR” is available at the website on aquatic genetic resources of the GENRES Information System:

<http://www.genres.de/en/aquatic-genetic-resources/>





Bundesanstalt für
Landwirtschaft und Ernährung





The six major aims of the programme:

- Preserving the diversity of AqGR in the long-term *in-situ* and *ex-situ*
- Fostering the introduction of extinct fish species eg. Atlantic salmon, sturgeons
- Making a contribution to conservation rehabilitation of aquatic ecosystems
- Supporting all activities for the conservation and sustainable use of AqGR
- Establishing more transparency in the allocated responsibilities and competencies of the Federal Government, states and municipalities as well as among the persons, organizations and institutions working in this field
- Using and promoting synergies that may arise for increased collaboration at national, regional and international levels

