

<b>FISHERY COUNTRY PROFILE</b>	<b>Food and Agriculture Organization of the United Nations</b>	<b>FID/CP/GER</b>
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## THE FEDERAL REPUBLIC OF GERMANY

### 3 Fishery areas and main resources

German fishery mainly operates on high seas (mainly North Atlantic – herring, mackerel, blue whiting, horse mackerel / Greenland halibut, Sebastes redfish, saithe, cod), in the North Sea (Crangon shrimp, mussels, saithe, flat fish and many others), and Baltic Sea (herring, cod, flounder, sprat) and catches about 260 000 t per year. There are small scale inland fisheries in lakes and rivers, mostly open boats with one or two operators, with catches around 20 000 t per year, including sports fisheries. Aquaculture in natural or artificial ponds and lakes throughout the country produces around 40 000 t. Shellfish (blue mussels, oysters) are cultivated in the North Sea.

German fisheries catch areas and catches in tonnes, 2006: North Sea (98 203 t), Baltic Sea (73 200 t), Western British seas (57 724 t), Norwegian coast up to Spitzbergen (10 067 t), Greenland (5 715 t), North of Azores (2 592 t), Faeroe Islands (1 320 t), Iceland (632 t), others (32 739 t).

### 4 Fishery sector structure

#### 4.1 Overall fishery sector

With Germany having only a small coastal line and a high population density, neither fisheries nor fish farming play a major economic role. The total value of all fish harvest is less than 2 % of the total value of all agricultural harvest. The value of the total agricultural harvest is close to 1 % of the total GDP.

With 319 000 t, the own German fisheries and aquaculture contribute less than 20 % to the total fish market. More than 80 % (1 825 000 t) of all fish is imported. Germany exported 863 000 t of fishery products in 2006. With Germany still having some big-sized fish factories concentrating on frozen, canned, marinated and smoked fish, more value added fish is exported than imported while the import share of raw material is higher than their share in exports.

The German fisheries sector has big long-distance fishing boats, small and big (up to high seas size) cutters, coastal fishing boats, small inland waters fishing boats and aquaculture. Germany's sea fishery catches on quotas in the frame of the European Union's (EU) Common Fisheries Policy (CFP) in German and EU waters and in waters of third countries, with which the EU has signed fishery agreements.

9 long-distance fishing boats were registered at the end of 2006: 6 freezer trawlers and 3 special boats for pelagic fisheries (herring, blue whiting, mackerel, horse mackerel). 2008 cutters and open boats were registered at the end of 2006, among them 86 ships specialized on shellfish and 278 specialized on Crangon shrimp and flatfish. 1 050 enterprises have their main income from fisheries. Fishermen are landing their fish in German ports as well as in the ports of other countries.

Aquaculture had an output of 40 331 t in 2006 and concentrates on carp (14 231 t) and trout (20 591 t) while all other species (eel, sturgeon, turbot etc.) are farmed in rather small amounts. 1 050 enterprises were fully engaged in inland fisheries in 2006, 21 000 had their secondary income from fishing or farming. About 1.5 million people were registered as sport fishermen.

## **4.2 Marine sub-sector**

### **4.2.1.1 Means of fishing / production**

All common fishing methods, adjusted to the respective size of the ship, are in use by German fishermen except for longlining/trolling and bigger driftnets. Bigger ships work with trawls or purse seines. Flat fish and Crangon shrimp are caught with beam trawls. Blue mussels (juvenile are collected and brought out on restricted banks in the North Sea) are harvested with dredges. Small scale fisheries (in the Baltic Sea, brackish and inland waters) often work with gillnets (drift nets and set nets) and traps.

Of 261 070 t harvested by German marine fishing vessels in 2006, 100 870 t were landed in Germany, 160 200 t were landed abroad. While small fisheries landed 62 224 t in Germany and 70 639 t abroad, long-distance fisheries unloaded only 36 646 t in Germany but 89.561 t abroad, mainly in the Netherlands (76 250 t). This is due to the fact that 3 out of a total of 9 long-distance vessels have specialized in pelagic fish (herring, mackerel, horse mackerel, sardine). The owners are from the Netherlands and operate processing units in the Netherlands and in Germany. Foreign landings of the cutter fleet concentrate on Denmark (40 219 t), Sweden (21 540 t) and the Netherlands (8 157 t), mainly because the respective fishing harbour is the closest to the respective fishing ground and allows the marketing or forwarding of the fish.

The 6 long-distance freezers and fresh fish vessels trawl mainly for Greenland halibut (2006: 2 175 t), redfish (1 554 t), saithe (1 582 t) and cod (775 t) while the cutter and coastal fisheries catches herring (2006: 30 410 t), Crangon shrimp (13 170 t), cod (7 999 t), saithe (1 708 t), flounder (1 019 t), whiting (774 t), sprat (711 t) and a wide variety of other fish which are landed fresh in German and foreign fishing harbours.

### 4.3 Inland sub-sector

With few exceptions, inland fisheries are very small and sell their fish only regional. They catch freshwater fish in inland lakes and rivers and market the fish often directly to the consumer and small scale processors (mainly small smoke houses). Dragging/trawling nets are rarely in use and if, it is mainly in bigger rivers. Most inland fishermen work with passive methods like gillnets and traps. Pike, eel, pike perch, trout, roach and a variety of other species are among their catch. They are usually working with one man in a boat and fisheries are often only their second income.

Aquaculture concentrates on trout and carp. There are some farms working with circular systems and some that use net cages in lakes, but in general fish are farmed in ponds with water flowing into the pond and leaving it directly into a creek. The income structures vary as they do in inland fisheries. There are many enterprises that farm fish only as a second income and market the product in their region. Others produce on a professional scale of 100 t and more and supply smoke houses (trout) and the specialized wholesale trade that is selling the fish throughout Germany. The majority of the carp is sold fresh or alive and carp consumed mostly from October to January.

#### 4.3.1.1 Catch profile

#### Top 20 (weight) fish landings of all German fisheries 2006

Species	total landings (261 070 t, 215 042 000 €)		inland landings (100 871 t)	landings abroad (160 200 t)
	amount t	value '000 €	amount t	amount t
Herring	79 787	28 824	44 083	35 703
Blue Whiting	36 423	9 034	2 700	33 723
Sprat	30 797	3 620	740	30 056
Mackerel	16 653	15 130	11 447	5 206
Crangon shrimp	15 972	37 747	14 678	1 294
Horse mackerel	12 613	5 528	1 897	10 716
Saithe	12 337	14 762	2 244	10 094
Cod	12 308	32 627	9 012	3 297
Mussels	5 163	7 110	2 355	2 807
Plaice	3 655	7 426	567	3 088
Greenland halibut	3 235	13 420	1 059	2 176
Redfish (Sebastes)	3 112	8 904	1 399	1 713
Dab	1 537	1 274	557	980
Flounder	1 334	608	1 022	313
Various flatfish	1 198	3 995	765	433
Haddock	1 123	3 076	250	872

Whiting	1 024	971	779	245
Sardine	662	249	0,0	662
various crustaceans & cephalopods	656	4 281	33	622
Sole	496	6 390	15	481

### Top 20 (value) fish species in German cutter and coastal fisheries 2006

Species	value '000 €	amount t
Crangon shrimp	34 691	13 169
Cod	13 209	7 999
Herring	9 092	30 410
Blue mussels	1 610	2 334
Saithe	1 553	1 708
Plaice	910	565
Pike perch	814	207
Eel	812	112
Whiting	674	774
Dab	463	550
Flounder	419	1 019
Turbot	374	84
Various flatfish	372	654
Perch	315	195
Redfish (Sebastes)	302	147
Sole	157	14
Roach	130	447
Pike	101	59
Sprat	85	711
Salmon / Sea trout	62	28

## 5 Post harvest use

### 5.1 Fish utilisation

German fisheries contribute only a small proportion to the total demand of the German fish market. Most fish of all categories is imported.

The German long-distance fleet primarily lands frozen fish. The factory trawlers produce fillets which are block frozen or shatter packed. Of 2 437 t of fillets landed by them in Germany in 2006 were: cod 989 t, redfish 696 t, saithe 532 t, haddock 216 t. 1 430 t of head-off redfish (371 t) and Greenland halibut (1 059 t) were landed frozen inside Germany. 184 t of redfish were landed head-on. Pelagic fish landed in Germany by the long-distance pelagic ships were frozen, head-on: herring 13 114 t, mackerel: 11 438 t, blue whiting 2 445 t, horse mackerel 1 432 t. Other head-on frozen fish added up to 3 676 t.

Frozen fish blocks are processed by the frozen fish industry into various value added products, mainly fish fingers (small breaded portions) and Schlemmerfilet (a block of fish covered with sauce). Frozen single fillets (iqf or shatter packed) are re-packed into boxes or PE-bags and sold via retail (to the final consumer) or specialized catering wholesale (to professional cooks) nation-wide. Frozen Greenland halibut have smoke houses as their main destination. Herring and mackerel go to smoke houses as well as to the canning and marinating industry.

Cutter and coastal fisheries will gut the fish (exception small pelagics) when it comes out of the water and store the fish with ice in bulk or in boxes until it is landed. While, formerly, most of the fresh fish landed in Germany was sold via fish auctions in the major fishing ports (Bremerhaven, Cuxhaven, Hamburg, Kiel), auctions have lost their importance and most fish is sold directly to wholesale traders, filleting wholesalers (in fishing harbours) and processors or processed and sold by fishermen's

cooperative trade and filleting units (fish landed in Denmark or the Netherlands is often sold through auctions at the landing ports). Specialized wholesale traders sell this fresh fish nation-wide to caterers, stationary and mobile fish mongers and supermarkets equipped with fish counters. They are also selling part of the landed fish after it had been value added by processors to smoked or marinated products. Most of the whitefish landed is processed into fillets, because German consumers prefer these species to be filleted. There is also some direct marketing of round fish from the boat to the consumer.

Fresh whitefish (cod, saithe, redfish...), flatfish (plaice, sole...), shellfish (blue mussels) and crustaceans (cooked-on-board Crangon shrimp, Norway lobster, crab, some lobster) are mostly sold to the consumer/caterer without more processing being done than filleting/peeling. Pelagic fish, which is, for inland consumption, mainly herring and mackerel, predominantly go into further processing by smokehouses and the canning and marinating industry. A small market for pre-packed fresh fish fillets is developing.

German fishermen produce fish for human consumption, only. There are no landings aiming for fish meal and fish oil purposes. All fish meal produced in Germany derives from fish waste.

Fish harvested by farms (trout, cod) and inland fisheries mainly takes the same way from the water to the consumer as fresh fish from the cutter and coastal fisheries, with the proportion of direct sales from the producer to the consumer being higher. Trout and some regionally caught other fish are partly being smoked or frozen, while carp, some of the trout and other fish mainly go into the fresh fish channels towards catering and retail.

## 5.2 Fish markets

Fish consumption has considerably increased during the recent years and is now at 15.5 kg per capita and year, which is close to world average, now. Fish is sold either through retailers (supermarkets, stationary/mobile fish mongers) or caterers (restaurants, canteens etc.) to the final consumer. The share of direct marketing to the consumer is below 1 %. While retailers sell all types of fish (frozen, fresh, canned, marinated, smoked, salads), frozen and fresh fish is dominating in catering.

Frozen fish has a total market / consumption share (2006) of 36 %, fresh fish 10 %, canned and marinated fish 28 % (marinated and canned herring 16 %, canned tuna 10 %, canned sardines 2 %), crustaceans and molluscs 12 % (fresh, frozen, prepared), smoked fish 6 %, fish salads 3 %, others 5 %.

The market shares of fish species are (2006): Alaska pollock 25.9 %, herring 17.5 %, salmon 11.3 %, tuna 10.7 %, saithe 4.0 %, redfish 3.8 %, trout 3.8 %, hake 3.3 %, cod 2.8 %, mackerel 1.6 %, carp 1.2 %, plaice 0.9 %, monkfish 0.5 %, sardine 0.4 %, others 12.3 %. – Seawater fish has a share of 71.1 %, freshwater fish 20.3 % and crustaceans and molluscs 8.6 %. (official figures do not always match, even if they come from the same source)

In general, more fish is consumed in the northern states of Germany (at the coast or close by) than in the southern states (far away from the coast). But the difference is not too significant and there are some exceptions. Market research investigated figures on fish purchased by households (not individuals) in retail (i.e. without catering) by product weight (not catch weight). Thus these figures are not comparable to other figures in this report but give an impression on the geographical distribution of fish consumption in 2006 (total average 10.4 kg): Schleswig-Holstein (12.2 kg), Hamburg (11.5 kg), Saxony (11.4 kg), Lower Saxony (11.4 kg), Thuringia (11.3 kg), Brandenburg (11.3 kg), Sachsen-Anhalt (10.7), North Rhine-Westfalia (10.5 kg), Mecklenburg-Vorpommern (10.3 kg – coastal state but below average), Rhineland-Palatinate (10.3 kg), Bremen (10.1 kg), Bavaria (10.0 kg), Berlin (9.3 kg), Baden-Württemberg (9,3 kg), Saarland (9.3 kg), Hesse (9.1 kg).

### Places of retail purchase of fish in 2006 (market shares in percent)

Preparation	Supermarkets, Hypermarkets	Discounting (cheap) retail	Fishmongers	Others

Fish total	36 %	49 %	6 %	9 %
Fresh fish	42 %	5 %	28 %	26 %
Smoked fish	35 %	45 %	12 %	9 %
Canned fish	35 %	63 %	0 %	3 %
Marinated fish	37 %	56 %	3 %	4 %
Frozen fish	35 %	57 %	0 %	9 %
Other preparations	35 %	50 %	7 %	8 %

## **6 Fishery sector performance**

### **6.1 *Economic role of fisheries in the national economy***

The share of fisheries in Germany's overall economy, employment and GFP is very little as described in other chapters: With the share of fisheries in total agriculture being 2 % and the share of total agriculture in total economy being at 1 %, the share in total GFP is about 2 thousandth.

### **6.2 Demand**

The demand for fish has been increasing during this decade, while the demand for meat has been slightly declining. Per capita consumption of fish has reached 15.5 kg in 2006.

### **6.3 Supply**

Germans spend an average of 13.9 % of their income on food, drinks and tobacco. Of this, 2.5 % is spent on fish and seafood, 17.3 % on meat and poultry and 11.7 % on dairy products and eggs.

German fisheries and farms contribute only 15 % to the total market supply of fish. 319 000 t were harvested in 2006 while 1 824 720 t were imported. The total value of imports was 2 787 million €. Of this, 986 million € was saltwater fish, 674 million € freshwater fish, 688 million € prepared fish and 393 million € crustaceans and molluscs. Exports were 862 849 t in 2006 worth 1 147 million € (saltwater fish 268 m €, freshwater fish 219 m €, prepared fish 498 m €, crustaceans and molluscs 135 m €). This shows that the trade balance in the fish sector is considerably negative.

The per capita consumption of meat of 60 kg product weight (90 kg slaughter weight) exceeds fish consumption by far. Poultry consumption per capita was at 8.3 kg product weight, 14.3 kg slaughter weight in 2006 with an import share of 53 %. Additionally 185 eggs per capita were consumed in 2006, 82 % from inland production. German self-reliance in meat production is 97 % in pork meat and 121 % in beef.

### **6.4 Trade**

Almost 40 % of all fish imports (value) come from or through other EU countries with Denmark (10.5 %) having the lead before Netherlands (8.8 %), Poland (8.2 %), France (2.3 %), UK (2.1 %), Spain (1.8 %), Italy (1.5 %), Belgium (1.4 %), Ireland (0.6 %) and other countries of the EU 25 (2.1 %). Of third countries (60 %), Norway contributes the highest share (10.8 %), followed by China (10.5 %), USA (5.4 %), Chile (4.0 %), Russia (3.9 %), Thailand (3.0 %), Iceland (2.7 %), Vietnam (2.3 %), Ecuador (1.8 %), Philippines (1.5 %), Indonesia (1.2 %), Morocco (1.1 %), Canada (1.1 %), India (0.9 %), Papua New Guinea (0.8 %), Kasachstan (0.7 %), Seychelles (0.6 %), Tanzania (0.6 %), Argentine (0.6 %), Bangladesh (0.5 %) and others (6.7 %).

### **6.5 Food security**

As a member of the EU, Germany's fish industry is obliged to fulfil all EU fish and food safety regulations.

## **6.6 Employment**

The German fish sector consists of processing industry (86 companies, 2 039 million € turnover), wholesale (209 companies, 1 485 m €), fishmongers including supermarket counters (9 650 companies, 485 m €), fish restaurants (650 companies, 275 m €), sea fisheries (1 017 companies, 215 m €), inland fisheries (22 000 companies, 178 m €).

In 2006, 42 584 people were employed in branches directly involved with fish (without secondary incomes). About 900 000 people are employed in the agricultural sector in total, of about 36 million people being employed in Germany. These figures show the small share of fisheries in total and agricultural employment. Employment in detail was:

Long-distance fisheries including staff on-land: 3 750 people  
Cutter and coastal fisheries (without second income enterprises): 4 400 people  
Fish markets and import: 780 people  
Fish processing: 8 524 people  
Fish wholesale: 3 630 people  
Fishmongers (including fish counters in supermarkets): 17 800 people  
Fish restaurants: 3 700 people

## **6.7 Rural development**

Do fisheries play a social role such as maintaining populations in their native places or in assisting in the development of remote parts of the country?

Seeing the influence on economy in total, fisheries do not contribute to rural development in Germany. Seeing it locally, it does have some relevance in certain areas where aquaculture may take part in structural and/or rural development.

With an output of about 40 000 tonnes per year, fish farms give income to several, mostly small scale entrepreneurs with a limited number of employees per farm. There is a comparatively high share of fish farm output in the eastern German states where unemployment is generally higher than in most western states. But even there, the influence of the fish industry on overall economy and agriculture is very small. Some farmers earn additional income with fish farming, mainly in the very north (Schleswig-Holstein) and very south (Bavaria, Baden-Württemberg) of Germany and this farming helps their farms to survive.

## **7 Fishery sector development**

### **7.1 Development prospects/strategies**

#### **7.1.1 Main areas for opportunities / Main constraints to development**

The German fisheries sector is not likely to expand. The opportunities and shares in EU quotas of sea fisheries are limited by the comparatively short coastline of only about 1 000 km and the overall stagnation in fisheries worldwide. The North Sea is not very suitable for aquaculture and there are hardly any efforts to expand aquaculture in the German Baltic Sea. Inland fisheries will not expand much due to a lack of adequate water bodies and high production cost compared to competing fish farms in other countries. Anyhow, there are some research farm projects that offer export opportunities, especially for know-how.

### **7.2 Research**

Federal research:

The Bundesforschungsanstalt für Fischerei (Federal Research Centre for Fisheries – [www.bfa-fish.de](http://www.bfa-fish.de)) is subdivided into four divisions, three of which are placed in Hamburg and one in Rostock.

Hamburg: Institut für Seefischerei (ISH Institute for Sea Fisheries), Institut für Fischereiökologie (IFÖ – Institute for Fisheries Ecology), Institut für Fischereitechnik und Fischereiökonomie (IFF – Institute for Fishery Technology and Fishery Economics) and, in Rostock, the Institut für Ostseefischerei (IOR – Institute for Baltic Sea Fisheries in Rostock).

Bundesforschungsanstalt für Fischerei  
Palmaille 9  
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Tel. +49 40 38905 113  
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Institut für Ostseefischerei  
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State research (freshwater)

Fischereiforschungsstelle des Landes Baden-Württemberg (Fishery Research of Baden-Württemberg)  
bei der Staatl. Lehr- und Versuchsanstalt Aulendorf  
Untere Seestraße 81  
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Tel.: +49 7543/9308-0 Fax: +49 7543/9308-20  
E-mail: FFS@lvvg.bwl.de  
Internet: www. lvvg.bwl.de

- and institutes in various universities

### **7.3 Education**

Scientific

Fishery biology (Hamburg University, [www.uni-hamburg.de/ihf/](http://www.uni-hamburg.de/ihf/)) and MSc Fishery Science and Aquaculture (Berlin, Humboldt University, [www.agrar.hu-berlin.de/studium/mfw/index.html](http://www.agrar.hu-berlin.de/studium/mfw/index.html)).

Fisheries:

Fischereischule Rendsburg der Landwirtschaftskammer Schleswig-Holstein, Am Kamp 13, 24768 Rendsburg Tel. +49 4331 840694, Fax: +49 4331 840695 [www.landwirtschaftsschule.de](http://www.landwirtschaftsschule.de)  
also via: Landwirtschaftskammer Schleswig-Holstein, Fischereireferat, Wischhofstr. 1-3, 24148 Kiel, Tel.: +49 431 7193960, Fax: +49 431 7193965, [www.lwk-sh.de/](http://www.lwk-sh.de/)

Fischfarming:

Sächsische Landesanstalt für Landwirtschaft, Fachbereich Tierische Erzeugung, Gutsstr. 1, 02699 Königswartha, Tel: +49 35931 29-645, Fax: +49 35931 29-611, [www.smul.sachsen.de/lfi](http://www.smul.sachsen.de/lfi)

## **8 Fishery sector institutions**

Ministry responsible for fisheries on state level: Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz (Federal Ministry for Food, Agriculture and consumer protection) – [www.bmelv.de](http://www.bmelv.de)  
– working through and being consulted by the Bundesanstalt für Landwirtschaft und Ernährung – [www.ble.de](http://www.ble.de)

Additionally, there are ministries responsible for sea fisheries (in the coastal states Schleswig-Holstein, Hamburg, Bremen, Lower Saxony, Mecklenburg-Vorpommern), in-land fisheries and aquaculture in every one of the 16 German states

The main scientific advice centre is the Bundesanstalt für Fischerei (refer to 7.2) [www.bfa-fish.de](http://www.bfa-fish.de) who is also the home of the international fishery research network ICES in Germany.

Companies are organized in associations of industry & wholesale, importers, fishmongers, sea fisheries, inland fisheries, sport fisheries and others.

## **9 General legal frameworks**

German fisheries policy and management act under the umbrella of the Common Fisheries Policy (CFP) of the EU. Key EU legislation includes:

Council Regulation (EC) No 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy (<http://europa.eu/scadplus/leg/en/lvb/l66006.htm>)

Commission Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms (as amended) (<http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:1998:125:SOM:EN:HTML>)

Council Regulation (EC) No 2369/2002 amending Regulation (EC) No 2792/1999 laying down the detailed rules and arrangements regarding Community structural assistance in the fisheries sector (<http://europa.eu/scadplus/leg/en/lvb/l66005.htm>)

## **10 Management applied to the main fisheries**

### **10.1 *Main goals/objectives***

Since 1983, German fisheries policy is totally integrated into the Common Fisheries Policy (CFP) of the EU. The German fish industry –fishing, processing and trade – is therefore subject to common rules and regulations that are binding for all EU member states. It is the goal of the CFP to secure the exploitation of aquatic resources under sustainable economical, ecological and social conditions. Regulations from CFP focus on remaining the fish stocks, promoting a competitive fish industry and stabilizing the markets for fish products. Restructuring measures are co-financed by the EU. Fishing rights within the economic zones of other EU members and third countries are commonly negotiated (and regulated with TACs and quotas) as well as measures to re-structure, modernize and, where applicable, reduce the fleet. – Germany participates in the EU fishery research with its own institutions (Bundesforschungsanstalt für Fischerei) and research vessels and controls fisheries with its own control ships.

### **10.2 *Institutional arrangements***

Germany's policy takes influence on fisheries by quotas and catch limitations (closed areas and closed periods) as well as by technical measures (net sizes...) – including control measures – and by subsidies granted for investments or the lay up of ships.

## **11 Recreational sub-sector**

There is no federal sport fishing regulation in Germany. Every state has its own laws. In all but one state a fishing licence (Fischereischein), received only after an exam, is required to be allowed to fish and usually a fee must be paid to receive the licence. With a licence a sport fisher can apply by the owner or tenant of a water body to fish in it. Tenants are usually local angler's associations. Local associations are organized in state associations which are organized in a federal association (Verband Deutscher Sportfischer) and, additionally, in coalition together with professional fishermen and fish farmers in the umbrella association Deutscher Fischereiverband (German fisheries' association) in Hamburg. Sport fishermen are usually anglers, some use fish traps. They catch for their private supply, the fish does not go into the market. By bringing in juvenile fish into lakes and streams and

ecological measures, sport fishing does not only exploit fish stocks but also tries to ensure sustainability.

## **12 Aquaculture sub-sector**

Within the frame of European fisheries and economic policies, aquaculture receives a structural promotion in German regions of low economic output and some enforcement as a means of rural development. Anyhow, due to reason explained above (limited land / water, costs) aquaculture is not likely to expand much in Germany.

## **13 Fishing communities**

Most German fishermen are organized in associations. In most coastal states and many inland states, professional fishermen and sport fishermen each have their associations. These associations are organized in national umbrella federations that negotiate with German and EU authorities.