

FISHERY COUNTRY PROFILE

**Food and Agriculture
Organization of the United
Nations**

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**PROFIL DE LA PÊCHE PAR
PAYS**

**Organisation des Nations
Unies pour l'alimentation et
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**RESUMEN INFORMATIVO
SOBRE
LA PESCA POR PAISES**

**Organización de las Naciones
Unidas para la Agricultura y
la Alimentación**

THE KINGDOM OF SWEDEN

GENERAL ECONOMIC DATA

Area:	449,750 km ²
Shelf area (to 200 m):	165,295 km ²
Length of coastline:	2,862 km
Population (2003):	9 million
GDP at producer price (2003):	US\$ 300.8 billion

FISHERIES DATA

Commodity balance (2003):

	Production	Import	Export	Total supply	Per caput supply
	tons live weight				kg/year
Fish for direct human consumption	68,331*	276,738	294,130	50,939	6.0
Fish for animal feed and other purposes	37,875	1,682	3,448	-	

*)fish landed in Sweden

Estimated employment (2003):	
Marine fisheries (licensed):	1,864
Marine fisheries (not licensed- est.):	684
Inland fisheries (licensed):	202
Inland fisheries (not licensed):	15
Aquaculture:	280
Processing (2002):	1,804
Gross value of fisheries output (Ex-vessel prices)(2003):	US\$ 120 million
Trade (2002):	
Value of imports:	US\$ 1,169,000,000
Value of exports:	US\$ 789,608,000

Exchange rate (October 2004): 1 SEK = US\$ 0.137

STRUCTURE AND CHARACTERISTICS OF THE FISHING INDUSTRY

Marine fisheries

The Swedish fishing fleet operates within an area stretching from the northeast Atlantic to the northern Gulf of Bothnia in the Baltic Sea.

Catch profile

In 2003, Swedish fishing vessels landed 280,000 tonnes of marine species valued at SEK 870 million (US\$ 119 million). 60%, or 174 000 tonnes, were landed abroad, mainly in Denmark. Volume and landings (preliminary) in the period 2003-2004, per coastal area are shown in table 1.

Table 1. Landings by Swedish vessels 2003-2004, per coastal area (preliminary).

2003

	Consumption		Reduction		Total	
	Ton	Tkr	Ton	Tkr	Ton	Tkr
West coast	28,615	297,762	27,060	31,393	55,675	329,155
South coast	24,540	182,080	3,909	3,668	28,449	185,748
East coast	15,178	67,487	6,710	7,265	21,888	74,752
Total	68,333	547,329	37,679	42,326	106,012	589,655

2004

	Consumption		Reduction		Total	
	Ton	Tkr	Ton	Tkr	Ton	Tkr
West coast	31,489	302,612	24,893	24,422	56,382	327,034
South coast	25,439	193,758	6,255	4,484	31,694	198,242
East coast	14,218	54,210	9,548	7,882	23,766	62,092
Total	71,146	550,580	40,696	36,788	111,842	587,368

The Baltic Sea is the most important fishing area with 45% of total national landings in volume. Other areas are the Skagerrak (15%), the Kattegat (6%), the North Sea (12%) and the North Atlantic (23%).

In terms of value, fishery for cod and fish for reduction purposes account for 24% each of landings, followed by herring and sprat for human consumption (18%), Nephrops (7%), and northern prawn (10%).

The fishing fleet

By the end of 2003, the marine fishing fleet included 1,714 vessels with a total capacity of 43,927 GT and 220,392 kW. From 2002 to 2003 the number of licensed vessels was reduced by 6%, while capacity, in terms of gross tonnage, decreased by 2%. In numbers, vessels <12 metres are predominant accounting for 69% of all vessels, but their share of total tonnage was only 14% in 2003.

Table 2. Fishing fleet structure 1999-2003

	1999	2000	2001	2002	2003
Number of vessels	1,968	1,954	1,851	1,818	1,714
Total GT	47,789	48,541	45,946	44,851	43,927
Total kW	230,567	239,437	228,395	224,601	220,392

The characteristics of the average vessel are shown in table 3 below.

Table 3. Characteristics of the average vessel in the Swedish fishing fleet

	1999	2000	2001	2002	2003
Tonnage (GT)	32	25	26	25	26
Engine power (kW)	112	122	124	124	129
Length (m)	10	10	10	10	10
Age (year)	25	21	22	23	24

Profitability

From 2001 to 2003, profitability went down in most fleet segments of the Swedish fishing fleet due to reduced quotas and falling prices of both fish and shellfish.

Vessels targeting cod were affected by the cod crisis in the Baltic Sea and the North Sea. Total cod quota available for Swedish vessels was reduced from 2001 to 2003 by 25%, and, in 2003, prices for cod also went down significantly, giving lower profitability than in previous years. The shellfish vessels experienced lower prices for Nephrops and northern prawn in 2003, which affected profitability negatively. For large pelagic vessels (≥ 24 metres) profitability has gone down markedly since a peak in 2001. Prices for herring and sprat for human consumption as well as for mackerel have gone down, while prices for reduction purposes went up slightly in 2002, but was followed by a downturn in 2003. The large pelagic vessels accounted for more than 40% of the total national landings in terms of value and close to 90% of the landed volume in 2003.

There are a large number of landing sites in Sweden. The most important ones are the harbours of Träslövsläge, Göteborg, Ängholmen, Smögen, and Strömstad on the west coast; and Trelleborg, Simrishamn, Karlskrona, Nordersund, Västervik, and Oxelösund in the Baltic. Several Danish harbours, such as Skagen and Hanstholm, are also important for landing Swedish catches. For freshwater fisheries, the harbour of Spiken in Lake Vänern is most important.

Resource status

The resource status, as defined by ICES, for the most important stocks in the Swedish commercial fishery, are as follows.

In the Baltic Sea, the Herring stock in the northern parts are at an acceptable level; in the main basin, ICES classifies the stock to be at risk of being harvested unsustainably; the spring spawners in the western area have increased slightly over a number of years. For the two cod stocks in the Baltic Sea, ICES classifies the eastern stock to be at risk of being harvested unsustainably and the western stock has a high exploitation rate and is therefore highly dependent on the strength of incoming year classes. The sprat stock is being harvested sustainably and the stock is predicted to increase exceptionally under the present management plan.

The herring fisheries in the Skagerrak/Kattegatt area exploit both autumn-spawning herring from the North Sea and spring-spawning herring from the Baltic Sea. The North Sea herring for the moment is in a very good state. The cod stock in the Kattegatt area is in a poor state and is by ICES considered to be harvested unsustainably. The fishery is

dependent on the strength of the incoming year classes. The shrimp (northern prawn) and Nephrops stocks are considered to be stable but ICES recommends that the fishery should not exceed the present levels.

The cod stock in the Skagerrak and the North Sea is at present in a poor state and a recovery plan has been agreed for this stock. The mackerel stock is at the moment considered as being harvested unsustainably; the spawning stock is estimated to be just below the precautionary level.

Inland fisheries

Sweden has a large number of inland waters, with around 90,000 lakes over 1 hectare, and 300,000 km of watercourses, providing significant potential for inland fisheries. Freshwater catches from lakes in 2004 amounted to 1,319 tonnes, with a value of SEK 44.7 million. This was a slight decrease compared to 2003 when the total catch was 1,490 tonnes.

There are four major lakes in the south of Sweden. The largest, accounting for around 50 per cent of the total catch from freshwater fishing by volume and 37 per cent by value, is lake Vänern. The other major lakes are Hjälmaren, Mälaren and Vättern.

The major species targeted in inland waters are pikeperch, vendace, perch, pike, whitefish and eel. Pikeperch represents 30 per cent of the total catch by volume and 38 per cent by value. Vendace and vendace roe account for almost 23 per cent of the catch by volume and represent approximately 34 per cent of the value. Vendace roe is the highest value product in the fishery.

The inland commercial fishery is licensed and there were 192 full time fishermen in operation in 2004. Inland fishing is normally pursued with small-meshed passive gear.

Recreational fishery

Recreational fishing is defined as subsistence fishing on the one hand and sport-fishing on the other. Following this definition, sport-fishing implies fishing with rod, hook and line for recreational purposes, and the catch is intended for use in the household. Subsistence fishing is normally carried out with multi-catch equipment (for example a net), but the catch is also (primarily) consumed within the household. Neither subsistence fishing or sport-fishing (hand-gear) is included in the Swedish right of public access. However, sport-fishing is freely permitted along the marine coastline and in Sweden's five largest lakes - Vänern, Vättern, Mälaren, Hjälmaren and Storsjön, as is fishing for subsistence use along the west and south coast. In other waters, recreational fishing is not allowed without a licence or some other form of authorization.

The Swedish law includes regulations concerning sport-fishing. It is, for example, forbidden to fish closer than 100 metres within stationary professional fishing equipment. Anyone caught breaking these fishing regulations may forfeit both catch and equipment. Sport-fishing licences and information on regulations can often be obtained at tourist information offices.

Fishing for subsistence use is permitted on public waters, normally beyond 300 m from the shore (including the five largest lakes), Public waters also include the water surrounding islands of less than 100 m in length. There are numerous regulations as regards the fishing

for subsistence use, both concerning permitted fishing grounds and the gear used, e.g. limits on the net length and the number of pots that can be set. There are also restrictions concerning the sale of catches; sales of more than 10 kg must be reported to the National Board of Fisheries. Technical regulations such as, mesh size, time and area closure, also apply to recreational fishing.

Of the about 6.3 million people aged between 16 to 74 living in Sweden, 1.7 million claim to have engaged in recreational fishing at least once a year in recent years. The total number of days spent fishing was estimated to be 35 million. This and other statistics suggest that fishing is a very important recreational activity for Swedes. There are, however, many other important and competing uses of the water resource. Hydropower, for example, is crucial for Sweden's electricity supply but has a significant impact on fish stocks and water areas.

Traditionally, fisheries management in Sweden has focused on the commercial side, with less attention being directed to recreational fishing. Hence, less is known about the recreational fishing and its impact on stocks. The National Board of Fisheries is developing methods for an elaborated collection of recreational data, such as catch, effort, costs and benefits.

AQUACULTURE

The yield of Swedish aquaculture in 2003 was 6,512 tonnes (live weight) which is an increase of 8% compared to 2002. 5,404 tonnes was intended for direct human consumption, food fish, and 1,108 tonnes was fish for stocking purposes. Rainbow accounts for some 90% of the production of food fish. Other species cultivated are arctic char and eel. 77% of the food fish production is located in freshwater. Further, 1,742 tonnes of mussels were cultivated and 7 tonnes of crayfish.

The main species cultivated for stocking was also rainbow with 699 tonnes. Sea trout production amounted to 214 tonnes and arctic char was estimated at 163 tonnes. The total value of the aquaculture production of fish for stocking amounted to SEK 76 million.

In 2003, there were 122 facilities producing fish for direct human consumption and 99 facilities producing for stocking purposes. In 2000, the corresponding numbers were 140 and 84 respectively, indicating that more companies turn to the more profitable production for stocking purposes (including for put-and-take fishing). The total value of the production of food fish amounted to SEK 151 million. Between 1996 and 2003, the value of this production has varied between SEK 124 million (1998) and SEK 162 million (2001).

For compensatory purposes, 2.7 million fry of salmon and sea trout were released, mainly in rivers running into the Baltic. Another restocking programme is carried out with imported eel larvae released mainly in the Baltic.

FISH PROCESSING

In 2002, the fish processing industry in Sweden was dominated by a small number of large companies located on the Swedish west coast and there were a total of 182 companies in operation. Many Swedish companies have been bought by or merged with Norwegian or

Icelandic companies. This development has increased the availability of raw material to the Swedish industry, and has also been a way for Norwegian and Icelandic companies to get access to the EU market.

Total employment in the industry in 2002 was 1,804 employees, a decrease of 16 per cent compared with 2001. Swedish fish processing companies import about 80 per cent of their raw material. Their main output is herring and cod products, but they also produce prawn, salmon, mackerel and haddock products. The majority of imports come from Norway and Denmark.

FISHERY SECTOR PERFORMANCE

Economic role

The fishery sector (catching and processing) in Sweden plays a very small economic role in relative terms, and in 2003 the sector contributed with 0.2 per cent to the national Gross Domestic Product (GDP). However, as in particular the processing industry is concentrated to a few regions, the importance to some local economies is high.

Supply and demand

In 1999, consumption of fish and fish products in Sweden amounted to 155,000 tonnes with a value of approximately SEK 9,226 million. The fish product most preferred by consumers is fresh or chilled salmon, followed by prepared fish products like prefabricated food and fish quenelles. Though the amount of fresh fish consumed per capita in Sweden is reducing, the amount of ready-made products consumed is increasing with the result that the demand for fish products is fairly stable. The demand for eco-labelled foodstuffs is growing.

Fish accounts for approximately 9.6 per cent of the average daily protein intake of Swedes (10.2 g per day per capita). This is less than that provided by meat (26.1 g per day per capita), milk (29.5 g per day per capita) and cereal (excluding beer, 24 g per day per capita).

Trade

Both imports and exports of fish and fish products increased over the period 1997 – 2003. In 2003, Sweden's import amounted to 278,420 tonnes (US\$ 1,170,000). The most important item was fresh and chilled fish with 132 267 tonnes, of which 80 per cent was imported from Norway. Exports, in total 297 578 tonnes, also consisted mainly of fresh and chilled fish (50% calculated in value), but there is also a big share of processed products. The main markets are found within the EU.

Employment

A little more than 4,000 people were employed in the fisheries sector in 2003. Of these, about 2,000 were employed in the catching sector, 300 in aquaculture (full-time equivalents), and 1,800 in the processing industry. Employment in the sector has decreased from 2002.

FISHERY SECTOR STATUS AND DEVELOPMENT

State of the fishing industry

Professional fisheries in Sweden include marine (offshore and inshore) and inland fisheries as well as aquaculture. The size of the Swedish fishing industry has decreased steadily, which is reflected in landings, vessel numbers and the number of fishermen, but also

measured in terms of profitability. However, both exports and imports of fish and fishery products have increased. The employment in the processing industry increased after the Swedish accession to the EU in 1995 and peaked in 2002 but is now declining again. The aquaculture sector is facing hard competition from above all Norway in its production of salmonoids, and several companies have turned to producing fish for stocking, for which there is a demand both for restocking purposes and for put-and-take fishing.

Profitability in the pelagic sector peaked in 2001, due to comparatively high prices but has since then rapidly decreased due to lower prices and reduced catches in combination with an increased vessel capacity. As for the demersal fishery, both prices and catches went down in 2003, making the economic situation difficult for the fleet segments concerned.

New EU rules governing the highest allowable level of dioxin in food entered into force on 1 July 2002. Sweden has an exemption from these rules relating to fish from the Baltic sold for human consumption, implying that products whose dioxin levels exceed these limits can be placed on the Swedish market. This derogation is currently in place until the end of 2006. The limits restrict the sale to other countries of e.g. larger salmon as well as herring from certain parts of the Baltic. Also having an impact on the salmon fishery in the Baltic is a recent piece of EU legislation for the purposes of reducing the harbour porpoise by-catch, implying that the salmon driftnet fishery will be phased over the period 2005 - 2007.

The poor water quality in the Baltic Sea may be another threat to the Swedish fishing industry. Alongside natural stresses to the marine environment, such as anoxia, nutrient pollution has led to eutrophication in the Baltic Sea. Other issues are closely linked to shipping, such as discharges of oil or oily ballast waters and minor spills take their toll on the marine environment. The Baltic Sea also has long periods of up to over 16 years of stagnation and low flow rates, resulting in large changes in salinity and oxygen content in the deep-water areas.

Fisheries management

Since 1 January 1995, when Sweden joined the EU, its resource management policies have been harmonised with the Common Fisheries Policy (CFP). Bilateral agreements on access to resources in national exclusive economic zones in the Baltic were originally negotiated annually with third countries. Until the end of 2004, Sweden was represented by the EU in the International Baltic Sea Fisheries Commission (IBSFC), through which management and quota allocations were decided. However, following EU enlargement in May 2004, the IBSFC has become superfluous and is due to be replaced by bi-lateral agreements between Russia and the EU.

The management of Sweden's fisheries resources is mainly the responsibility of the National Board of Fisheries (NBF), 'Fiskeriverket', which operates within the framework and guidelines set by the Government and the EU. Sweden has sole responsibility for regulating freshwater fisheries and for certain fisheries along the Swedish coastline (sea trout in the Baltic and lobster in the Kattegat-Skagerrak for example). Monitoring and enforcement activities are joint responsibilities of the NBF and the Coast Guard.

Commercial fishing normally requires an individual licence. The NBF grants these licences taking into consideration the availability of fish, the need for regional development and regeneration of the fishing sector. The NBF may restrict a license to certain types of fishing. Persons not in possession of a professional licence are restricted as regards both

the amount and type of gear they can use, except when fishing in private waters. In principle, all water within 300 m of the coast and islands is private property.

Commercial catch levels are controlled mainly through TACs set annually within the EU. Additional, national, rules regulate the use of some of the quotas allocated to Sweden, for example by means of weekly vessel quotas for the cod fishery in the Baltic. In addition, technical conservation measures are used to regulate the fishery – both within the EU and at a national level.

Financial support is provided within the framework of the CFP. EU-funding is matched by national, public funding. In most cases, additional private funding is required. Grants are given to all sectors of the industry, including the catching sector - both for modernisation and decommissioning - and to the aquaculture and processing sectors. The costs of fisheries administration and research are publicly funded. Furthermore, fishers may participate in the general unemployment scheme supported by the Swedish Government.

Research

The National Board of Fisheries is the central managing authority for fisheries in Sweden and is also working for a sustainable development of the marine environment as well as to conserve biodiversity. The National Board of Fisheries has three research units: the Institute of Marine Research based in Lysekil on the west coast, the Institute of Coastal Research in Öregrund on the Baltic coast, and the Institute of Freshwater Research in Drottningholm, close to Stockholm. In addition, there are a number of university marine stations, which undertake research in relation to the marine environment as a whole and also to fisheries.

INTERNET LINKS

Directorate of Fisheries <http://www.fiskeriverket.se/>

Statistics Sweden <http://www.scb.se/>

EU Fisheries Directorate General http://europa.eu.int/comm/dgs/fisheries/index_en.htm

Earthtrends – Environmental Information Portal of the World Resources Institute <http://earthtrends.wri.org/text/>