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Salmon and Sea Trout Populations and Rivers in Latvia

HELCOM assessment of salmon (*Salmo salar*) and sea trout (*Salmo trutta*) populations and habitats in rivers flowing to the Baltic Sea.



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1. Introduction

This Report gives a description of Latvian salmon and sea trout populations and rivers that empty into the Baltic Sea. The Report is based on the HELCOM SALAR Project that focused on the state of salmon (*Salmo salar*) and sea trout (*Salmo trutta*) populations in rivers flowing to the Baltic Sea.

The deliveries of the HELCOM SALAR Project include a General Report on Baltic salmon and sea trout populations and rivers (BSEP 126A) as well as reports with individual descriptions of populations and rivers separately for Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Russia and Sweden (BSEP 126B). The project also prepared a GIS map of salmon rivers as well as a database compiling information on salmon and sea trout populations and rivers.

The overall ecological state of the Baltic rivers and their fish populations has deteriorated from their pristine state. This is a consequence of direct anthropogenic impacts caused by many activities in the drainage area, in the rivers and in the Baltic Sea. In the rivers, the most detrimental activities have been damming, dredging and channelizing rivers to serve for hydropower production, log driving and agricultural purposes. Also indirect impacts of human activities such as nutrient and sediment loads from agriculture, forestry and sewage sources have had negative consequences on the ecological state of the Baltic rivers.

The General Report of the HELCOM SALAR Project presents an overview, inventory and classification of Baltic rivers with salmon and/or sea trout populations. In order to improve the status of these populations, the Report recommends measures for the restoration of river habitats and waters, for the opening of passage as well as for fisheries management in rivers. Furthermore, a prioritization of Baltic salmon and sea trout populations in need of urgent actions for their recovery is included. The recommendations and prioritizations form a basis for the development of international and national programs for the planning, funding and systematic realization of these actions.

The HELCOM SALAR Project was funded through a co-financing agreement between the European Commission (DG MARE) and HELCOM. It implements fisheries actions in the strategic HELCOM Baltic Sea Action Plan to radically reduce pollution to the sea and to restore the good ecological status of the marine environment by 2021.

The Reports have been prepared in co-operation with nominated salmonid and river habitat experts of the Baltic Sea countries as mentioned on the second page. The texts concerning salmonid populations and rivers in each country have been produced by the nominated experts and edited by the project staff in the HELCOM secretariat.

The General Report, the Reports with river descriptions and the GIS map are available at www.helcom.fi and the databank as an excel file at the institutions of the nominated experts.

2. Salmon and sea trout populations and rivers in Latvia

The River Barta-Bartuva

The River Barta-Bartuva is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 103 km totally accessible for salmonids in the Latvian territory
Size of the catchment area: 2,016 km² (980 km² in Lithuania/ 1,036 km² in Latvia)
Average flow: 11.1 m³ /s
Daily lowest flow: No information
Number of migration hindrances: 0

Habitat and water quality in River Barta-Bartuva

River Bartuva (Bārta in Latvian) is a river in western Lithuania and Latvia. It begins in the Plungė district, 3 km to the north of Lake Plateliai. Bartuva flows in northwestern direction, passing Skuodas district and Skuodas city, before entering the Latvian territory. River Bartuva flows into Lake Liepāja, which is connected with the Baltic Sea. In the upper courses Bartuva valley is deep and narrow, while in lower courses it becomes much wider.

Bartuva's main tributaries are Eiškūnas, Erla, Luoba, Apšē, Vārtāja. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Barta-Bartuva according to the Water Framework Directive

The name of the water management district is Venta River Basin District and the river type is 5 according to the Latvian classification system.

Natura 2000

The river does not belong to the Natura 2000 network.

River Barta-Bartuva salmon stock

There is no data on past and current status of stock. No restocking of hatchery reared salmon in the river Barta has been made.

Salmon population facts

Population category: 6
Reproduction area: 10 ha (rough estimate, no direct mapping)
Production capacity: 4,000 smolts (rough estimate)
Recent wild smolt production estimate: 2,000 smolts (rough estimate)

Fishing regulations in the River Barta-Bartuva

Fishing of salmon and sea trout is not allowed in the river.

Specific actions for the development of the salmonid populations

Water quality should be improved by establishing effective protection zones along the agricultural land by the river.

The recommendations in the general report of the HELCOM SALAR project concerning accessibility and river fisheries management are applicable for this river.

The River Daugava

The River Daugava is a salmon river flowing to the Gulf of Riga.

Basic hydrological facts

River length: 1,020 km of which ~20 km accessible for salmon

Size of the catchment area: 87,900 km²

Average flow: 678 m³/s

Daily lowest flow: no information

Number of migration hindrances: 3

Habitat and water quality in River Daugava

The river Daugava is a river rising in the Valdai Hills, Russia, at 221 m above the sea level. It flows through Russia, Belarus, and Latvia, draining into the Gulf of Riga in Latvia. It was connected during the 19th century by a canal to the Berezina and Dnieper rivers. The Daugava forms part of the international border between Latvia and Belarus.

There are three hydroelectric dams on the Daugava River: Rīgas HES just upstream from Riga at 35 km from the mouth of the river, Ķegums HPP 70 km from the mouth, and Pļaviņas HPP 107 km from the mouth. A fourth one, Daugavpils HES, has been planned but has faced strong criticism. Belarus currently plans to build several hydroelectric dams on the Belarusian part of Daugava River.

River Daugava according to the Water Framework Directive

The name of the water management district is Daugava River Basin District and the river type is 6 according to the Latvian classification system.

Ecological status: No information

Biological status: No information

Physical & chemical status: No information

Hydrologic & morphological status: No information

Natura 2000

The river partially belongs to the Natura 2000 network.

River Daugava salmon stock

There has been a reared salmon stock in the river since 1974. Irregular small scale salmon reproduction occurs in the river Daugava, in the tributaries Liela Jugla and Maza Jugla. No data on the population status is available.

Salmon population facts

Population category: 7 (main river); 1 (tributaries)
Reproduction area: 20 ha (rough estimate, no direct mapping)
Production capacity: 9,000 smolts (rough estimate)
Recent wild smolt production estimate: 2,000 (rough estimate)

Fishing regulations in the River Daugava

The minimum legal size is for salmon is 60 cm. The types of fishing allowed are trap nets and angling tackle. There is a bag limit of one fish per angler per day.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning accessibility and river fisheries management are applicable for this river.

The River Gauja

The River Gauja is a salmon river flowing to the Gulf of Riga.

Basic hydrological facts

River length: 452 km of which ~200 km accessible for salmon
Size of the catchment area: 8,900 km²
Average flow: 73.6
Daily lowest flow: No information
Number of migration hindrances: 9

Habitat and water quality in River Gauja

The River Gauja is one of the longest rivers in Latvia. Its source is in the hills southeast of Cēsis. It first flows east and north and forms the border with Estonia for about 20 kilometers (12 mi). South of Valga and Valka, it turns west towards Valmiera, continuing southwest near Cēsis and Sigulda. The Gauja flows into the Baltic Sea northeast of Riga. Amata and Brasla are two of the tributaries that connect with the river.

There are nine small hydro power stations in the upper part of the river. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Gauja according to the Water Framework Directive

The name of the water management district is the Gauja River Basin District and the river type is 6.

Natura 2000

The river partially belongs to the Natura 2000 network. Also Gauja National Park and a nature reserve of Ziemeļgauja (North Gauja) are located in the catchment area.

River Gauja salmon stock

The salmon stock of the river Gauja is mixed with regular hatcheries reared parr and smolt restocking. The main salmon spawning and nursery habitats are situated in the Gauja National Park territory in the main river and in the tributaries of Amata and Brasla.

Salmon population facts

Population category: 4/5

Reproduction area: 50 ha (rough estimate)

Production capacity: 24,000 smolts (rough estimate)

Recent wild smolt production estimate: 7,000 smolts (rough estimate)

Fishing regulations in the River Gauja

Fishing of salmon and sea trout in the river Gauja is not allowed.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning accessibility and river fisheries management are applicable for this river.

The River Irbe

The River Irbe is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 32 km totally accessible for salmon

Size of the catchment area: 2000 km²

Average flow: 15.8 m³/s

Daily lowest flow: No information

Number of migration hindrances: 0

Habitat and water quality in River Irbe

The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Irbe according to the Water Framework Directive

The name of the water management district is the Venta River Basin District and the river type is 6.

Natura 2000

The river partially belongs to the Natura 2000 network with the nature reserve of "Ances purvi un meži", (Boogs and woods at Ance).

River Irbe salmon stock

No data on past and current status of stock is available. There has been no restocking of salmon and sea trout in the river.

Salmon population facts

Population category: 3
Reproduction area: 10 ha (rough estimate, no direct mapping)
Production capacity: 5,000 smolts (rough estimate)
Recent wild smolt production estimate: 4,000 (rough estimate)

Fishing regulations in the River Irbe

Fishing of salmon and sea trout in the river Irbe is not allowed.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning river fisheries management are applicable for this river.

The River Peterupe

The River Peterupe is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 46 km totally accessible for salmon
Size of the catchment area: 155 km²
Average flow: 1.55 m³/s
Daily lowest flow: No information
Number of migration hindrances: 0

Habitat and water quality in River Peterupe

The river Peterupe is a typical medium size the Gulf of Riga catchment river salmon and sea trout river. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Peterupe according to the Water Framework Directive

The name of the water management district is the Gauja River Basin District and the river type is 3.

Natura 2000

The river does not belong to the Natura 2000 network.

River Peterupe salmon stock

There is no data on past and current status of the Peterupe salmon stock. Reproduction of salmon in the river seems to be irregular. No restocking of salmon and sea trout in the river has been made.

Salmon population facts

Population category: 3
Reproduction area: 5 ha (rough estimate, no direct mapping)
Production capacity: 5,000 smolts (rough estimate)
Recent wild smolt production estimate: 2,000 (rough estimate)

Fishing regulations in the River Peterupe

Fishing of salmon and sea trout is not allowed in the river.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning river fisheries management are applicable for this river.

The River Saka

The River Saka is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 6 km totally accessible for salmon
Size of the catchment area: 1,110 km²
Average flow: >10 m³/s
Daily lowest flow: No information
Number of migration hindrances: 0

Habitat and water quality in River Saka

The river Saka forms from two medium-sized rivers: the river Tebra and the river Durbe. Sea trout and salmon spawning and nursery areas are mainly situated in the river Tebra. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Saka according to the Water Framework Directive

The name of the water management district is the Venta River Basin District and the river type is 6.

Natura 2000

The river does not belong to the Natura 2000 network.

River Saka salmon stock

There is no data on the past and current status of stock. No restocking of salmon and sea trout in the river has been made.

Salmon population facts

Population category: 3

Reproduction area: 20 ha (rough estimate, no direct mapping)

Production capacity: 7,000 smolts (rough estimate)

Recent wild smolt production estimate: 1,000 (rough estimate)

Fishing regulations in the River Saka

Fishing of salmon and sea trout is not allowed in the river.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning river fisheries management are applicable for this river.

The River Salaca

The River Salaca is a salmon river flowing to the Gulf of Riga.

Basic hydrological facts

River length: 90 km of which 45 km accessible for salmon

Size of the catchment area: 3,421 km²

Average flow: 25 m³/s.

Daily lowest flow: no information

Number of migration hindrances: 1 (partial)

Habitat and water quality in River Salaca

The river Salaca flows from Lake Burtnieks in Vidzeme, 42 m above the sea level, to the Gulf of Riga. The river flows through three towns, Mazsalaca, Staicele and Salacgrīva. The riverbanks feature Devonian red sandstone cliffs, and many caves and rapids as well.

The main salmon spawning and nursery habitats are situated in the lower and middle part of the river Salaca and tributary Jaunupe. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Salaca according to the Water Framework Directive

The name of the water management district is the Gauja River Basin District and the river type is 6.

Natura 2000

The river belongs to the Natura 2000 network. There is the reserve of North Vidzeme Biosphere in the catchment area.

River Salaca salmon stock

Wild salmon restocking closed since 1996. Small scale sea trout fry and parr occurred in the river.

Salmon population facts

Population category: 1

Reproduction area: 30–35 ha (direct mapping)

Production capacity: 30,000 smolts (count, mark- recapture estimate)

Recent wild smolt production estimate: 20,000 (15.000- 28.000)

Fishing regulations in the River Salaca

Fishing in the river is allowed with a special fee. The bag limit is one salmon or sea trout per fisher per day. The closed season is all year, except from December 20 – May 15. Minimum legal size for salmon is 60 cm and for sea trout 50 cm. The type of fishing allowed is angling.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning accessibility and river fisheries management are applicable for this river.

The River Venta

The River Venta is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 346 km of which 178 km in Latvian territory accessible for salmon

Size of the catchment area: 11,800 km²

Average flow: 44 m³/s

Daily lowest flow: No information

Number of migration hindrances: 0

Habitat and water quality in River Venta

The River Venta is a river in north-western Lithuania and western Latvia. Its source is near Kuršėnai in the Lithuanian Šiauliai County. It flows into the Baltic Sea at Ventspils in Latvia.

Cities along the Venta include Mažeikiai (Lithuania), Kuldīga and Ventspils (Latvia). It has only one tributary, River Abava, which is longer than 100 km. Tributary Virvyčia at 99.7 km is just shy from 100 km mark. Another tributary Varduva is 96 km long and flows into Venta at the Lithuanian-Latvian border.

The main salmon spawning and nursery habitats are situated in the middle part of the river Venta below the waterfall Ventas Rumba.

River Venta according to the Water Framework Directive

The name of the water management district is the Venta River Basin District and the river type is 6.

Natura 2000

The river partially belongs to the Natura 2000 network. There are 2 nature reserves in the river: "Ventas ieleja" (The river Venta valley) and "Ventas un Skerveļa ieleja" (The rivers Venta and Skervele valleys).

River Venta salmon stock

Salmon population facts

Population category: 4/5

Reproduction area: 30 ha (estimate, partially mapped)

Production capacity: 14,000 smolts (estimate)

Recent wild smolt production estimate: 8,000 (estimate)

Fishing regulations in the River Venta

Fishing in the river is allowed with a special fee. Salmon and sea trout angling is only allowed from February 1 – June 15. There is a bag limit of one fish per angler per day. Small scale brood stock fisheries exist in the river. The fisheries effort is regulated by number of gear (1 trap), number of

fishing days and the limited number of salmon and sea trout caught. Minimum legal size is 60 cm for salmon and 50 cm for sea trout cm.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning river fisheries management are applicable for this river.

The River Vitrupe

The River Vitrupe is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 36 km totally accessible for salmon
Size of the catchment area: 197 km²
Average flow: 2.1 m³/s
Daily lowest flow: No information
Number of migration hindrances: 0

Habitat and water quality in River Vitrupe

The river Vitrupe is typical medium sized river entering the Gulf of Riga. The salmon and sea trout spawning and nursery habitat are situated in the lower and middle part of the river. There are no migration obstacles in the River Vitrupe. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

There are no artificial migration obstacles, but there is one natural waterfall that allows for species that are good swimmers.

River Vitrupe according to the Water Framework Directive

The name of the water management district is Gauja River Basin District and the river type is 5.

Natura 2000

The river partially belongs to the Natura 2000 network. There is a reserve of "Vitrupe ieļēja" (Valley of Vitrupe).

River Vitrupe salmon stock

There is no data on past and current status of the stock. No restocking of salmon and sea trout in the river has been made.

Salmon population facts

Population category: 3
Reproduction area: 5 ha (rough estimate, no direct mapping)
Production capacity: 4,000 smolts (rough estimate)
Recent wild smolt production estimate: 2,000 (rough estimate)

Fishing regulations in the River Vitrupe

Fishing of salmon and sea trout is not allowed in the river.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning river fisheries management are applicable for this river.

The River Uzava

The River Uzava is a salmon river flowing to the Main Basin.

Basic hydrological facts

River length: 67 km totally accessible for salmon
Size of the catchment area: 601 km²
Average flow: 5.7 m³/s
Daily lowest flow: No information
Number of migration hindrances: 0

Habitat and water quality in River Uzava

There are no migration obstacles in the River Uzava. The river is included in the rivers list where construction and/or restoration of dams or other obstacles are not allowed (Cabinet regulation N.27).

River Uzava according to the Water Framework Directive

The name of the water management district is the Venta River Basin District and the river type is 6.

Ecological status: No information
Biological status: No information
Physical& chemical status: No information
Hydrologic& morphological status: No information

Natura 2000

The river partially belongs to the Natura 2000 network. A part of the salmon and sea trout habitat is included in reserve "Užavas lejtece" (Lower reaches of the river Uzava).

River Uzava salmon stock

There is no data on past and current status of the stock. No restocking of salmon and sea trout in the river has been made.

Salmon population facts

Population category: 3

Reproduction area: 5 ha (rough estimate, no direct mapping)

Production capacity: 4,000 smolts (rough estimate)

Recent wild smolt production estimate: 2,000 (rough estimate)

Fishing regulations in the River Uzava

Fishing of salmon and sea trout is not allowed in the river.

Specific actions for the development of the salmonid populations

The recommendations in the general report of the HELCOM SALAR project concerning river fisheries management are applicable for this river.

3. Other sea trout populations and rivers in Latvia

There are at least 30 rivers/river basins discharging into the Gulf of Riga and the Main Basin. Data on the largest rivers from North to South are summarized in the table below.

River name	Length (km)	Watershed (km ²)	Discharge (m ³ /s)	No. of tributaries	Population category
Salaca	95	3,420	~30	95	4
Svētupe	48	475	4,4	6	4
Vitrupe	36	197	2,1	No data	4
Aģe	39	212	1,9	3	4
Pēterupe	46	155	1,6	No data	4
Gauja	452	8,900	~70	292	4
Roja	78	478	3,4	12	4
Irbe	32	2,000	15,8	No data	4
Venta	346	11,800	~65	22	4
Užava	67	601	5,7	8	4
Rīva	53	226	2,4	5	4
Saka*	6	1,110	No data	0	4
Bārta**	98	1,280	19,8	10	4

Saka*- no reproduction in the river Saka, spawning and nursery habitats are situated in tributaries Tebra and Durbe.

Bārta** Largest part of reproduction and nursery areas are situated in Lithuania.

The production of wild sea trout smolts is estimated to be 100 000. The quality of the waters in these rivers ranges from good to fair.

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