



Project "Development, promotion and sustainable management of the Baltic Sea Region as a coastal fishing tourism destination"

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### REPORT

# ON THE ROLE OF FISHING TOURISM IN THE NATIONAL ECONOMY OF PROJECT PARTNER COUNTRIES: SWEDEN, FINLAND, POLAND, LITHUANIA, ESTONIA, LATVIA

Contracting Authority: Kurzeme Planning Region, Valguma iela 4a, Riga, LV-1048, Latvia

Executed by: Vidzeme University College Institute of social, economic and humanities research, Cēsu iela 4, Valmiera, LV-4201, Latvia

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### SUMMARY

Report on the role of fishing tourism in the project partner countries, i.e., in Sweden, Finland, Poland, Lithuania, Estonia and Latvia, benefited from various secondary data analysis; however, first, the terms used in recreational fishing and angling are defined. Next, a brief description of the angling settings, regulatory framework or activities are provided followed by an assessment of the comprehensiveness and accessibility of statistical data for the purpose of determining the role of fishing tourism. Taking into account that the role of fishing tourism in the economy of project partner countries' economies was limited due to the lack of data and studies, applied research, statistical and other types of secondary data and information were used to describe the situation, as applicable.

The role of fishing tourism in the project partner countries – Sweden, Finland, Poland, Lithuania, Estonia, Latvia – is significant and enormous; yet, it lacks proof of statistical data and data from historical studies.

### **TERMS AND DEFINITIONS**

This chapter includes definitions of terms such as recreation tourism, recreational coastal fishing tourism, leisure fishing industry, angling and fisherman. It provides an overview on impact of tourism on the regional economy, and explains the benefits generated by tourists due to coastal fishing and local angling.

● Tourism and recreation (leisure) (recreational tourism)- a type of tourism, the aim of which is to renew a person's physical and mental potential, making rational use of natural and artificial recreation and recuperation resources (Tourism Law, 1998: 1). It is aimed at active leisure, creation of well-being, restoring working abilities, maintenance and enhancement of health. Recreational tourism comprises various tourism activities, leisure, and sports. These are clearly defined, autonomous elements of tourism industry; they are interrelated, complement each other and thus serve for the needs of the modern society and individuals. As regards genesis of recreational tourism, it is further subdivided by resources as follows: (1) natural tourism resources; and (2) anthropogenic leisure and tourism resources (Gjorgievski, Kozuharov & Nakovski, 2012).<sup>1</sup>

Recreational fishing tourism – definition provided by the International Council for the Exploration of the Sea (ICES) in 2013 describes recreational fisheries as 'the capture or attempted capture of living aquatic resources mainly for leisure and/or personal consumption. And Article 55(2) of Regulation (EC) No 1224/2009 states that 'the marketing of catches from recreational fisheries shall be prohibited' (EP, A8-0191/2018).<sup>2</sup>

Recreational fisheries sector includes all the stakeholders involved in full or in part (e.g., ministries, NGOs, recreational tourism operators – such as boat rent businesses, fishing gear traders, catering and accommodation businesses, etc.).

Angling – the definitions vary; however, they contain two main features: (1) what kind of fishing gear is used for angling and (2) and how the catch is used. Industrial fleets use fishing gear to catch large quantities of fish (e.g., nets, traps). In angling, a fishing rod, spinning

<sup>&</sup>lt;sup>1</sup> Gjorgievski, M., Kozuharov, S. & Nakovski, D. (2013). Typology of recreational-tourism resources as an important element of the tourist offer. Special issue, *UTMS Journal of Economics* 4 (1): 53-60.

<sup>&</sup>lt;sup>2</sup> EP, Atpūtas zvejas stāvoklis Eiropas Savienībā, State of play of recreational fisheries in the EU. A8-0191/2018. Texts adopted: Tuesday, 12 June 2018 – Strasbourg. Retrieved: http:

<sup>//</sup>www.europarl.europa.eu/doceo/document/TA-8-2018-0243\_LV.html. Access: 22.06.2019

rod and other anglers' favourite tools to catch fish are used. Traditionally fish were caught for personal consumption, but nowadays angling has become more of an entertainment and the fish are released back into water after they have been caught. Besides recreational fishing there is also a different side of it – sport fishing. Angling is also subdivided by catch and angling site, the so-called big-game fishing, blue-water fishing which is a fishing type and includes fishing of large fish, such as tuna and marlins.

In most countries the term 'fishing' usually includes any type of catching fish, including angling. The Latvian Civil Law also stipulates only fishing rights and issues related to the exertion of these rights. Fishery Law has introduced the term 'amateur fishing - angling'. Relationship with the word *fishing* was necessary in order to make angling and the rights of anglers compatible with the Civil Law. In other countries, the situation in the legal terminology is quite similar and in the majority of cases angling is included within the term *fishing*. However, at official level countries most often use the English umbrella term *recreational fishing*. Unfortunately, in each country the same term stands for various activities. In Latvia, for example, this is deemed angling, in Finland and Sweden – both angling and recreational fishing with nets and fish-baskets, while in other countries – fishing for personal consumption using nets, fish-baskets, traps, and not to mention the conventional fishing rods. In Finland both the recreational fishing and angling definition are used, which make it difficult to assess the sector.

Besides the various definitions used in the report, it also refers to definition used by participating countries and their statistics. Given that at the EU level there is not a single, coherent and clear recreational fishing and angling definition, it is very difficult to monitor fishing, collate data about it and to assess its impact on fish stocks, the environment and national economy (UNEP& UNWTO, 2005)<sup>3</sup>.

<sup>&</sup>lt;sup>3</sup> UNEP&UNWTO (2005). Making Tourism More Sustainable - A Guide for Policy Makers, Paris CEDEX 15, p.11-12

### STUDY TASKS

- 1. To review secondary materials (publicly available studies, interviews, and other documents) on the role of angling tourism in the national economy of project partner countries, i.e., Sweden, Finland, Poland, Lithuania, Estonia, Latvia.
- 2. To study how accurately and completely official statistics reflect angling tourism within the overall tourism statistics.
- To prepare a report based on secondary materials on the role of angling tourism in the economy in project partner countries, i.e., in Sweden, Finland, Poland, Lithuania, Estonia, Latvia.

### RESULTS

#### 1. SWEDEN

Sweden is marketed as recreational fishing paradise with its nearly 100,000 lakes and a long coast between Haparanda and Strömstad. Five largest lakes – Lake Vänern, Vättern, Mälaren, Hjälmaren, and Storsjön – are available for recreational fishing free of charge. Fishing in other waters is subject to recreational fishing licenses which are available from nearly 2,000 Swedish recreational fishing area associations (Svenskt fritidsfiske och fisketurism 2020, 2013)<sup>4</sup>.

Since angling is among the top leisure activities, in 2013 The Swedish Board of Agriculture together with The Marine and Water Authority elaborated the 'Swedish recreational fishing tourism strategy until 2020'. It was developed together with the key recreational and sports fishing stakeholders to regulate such aspects as accessibility, administration, law, marketing. It also governs the areas of co-operation between participants and institutions aiming to manage the fishing waters, in order to create the greatest possible social benefit with the lowest possible environmental cost. Since recreational fishing tourism is an important element to the Swedish hospitality sector, in 2015 Swedish Council for Fishing Tourism Business and Swedish Ecotourism Association adopted a decision on the elaboration of the 'Swedish fishing future tourism plan'. The plan provided for not only nature protection and sustainability activities, but the aim was also to strengthen businesses – their profitability, competitiveness and growth, thereby contributing to the creation of new jobs (Sveriges Fisketurismföretagare och Svenska Ekoturismföreningen, 2015).<sup>5</sup>

Recreational fishing tourism involves many (hundreds) businesses of different economic sectors, which contribute to local and regional development, the creation of new jobs, and generate export earnings. It was stressed that recreational fishing tourism has huge potential,

<sup>&</sup>lt;sup>4</sup> Jordbruksverket & Havs- och vattenmyndigheten (2013). Svenskt fritidsfiske och fisketurism 2020. (The Swedish leisure and fishing tourism in 2020). Retrieved:

http://www.landsbygdsnatverket.se/download/18.5bcea70915b1752a20f98b94/1490875853392/Svenskt+fritidsfisk e+och+fisketurism+2020\_webb.pdf. (In Swedish) Access: 14.08.2019.

<sup>&</sup>lt;sup>5</sup> Sveriges Fisketurismföretagare och Svenska Ekoturismföreningen (2015). Framtidsplan för svensk fisketurism

<sup>-</sup> dags att sätta värde på våra fiskevatten. (Swedish fishing future tourism plan – time to assess our fishing waters) Retrieved: http://www.ekoturism.org/illustrationer/fil\_20150615101432.pdf (In Swedish) Access: 14.08.2019.

which can help to maintain and ensure value increase of Swedish national economy. Since 2013 in Sweden, the recreational fisheries are monitored and statistical data are published on the Statistics of Sweden website (Sveriges Fisketurismföretagare och Svenska Ekoturismföreningen, 2015). The Swedish Statistics Office (*Statistiska centralbyrån*) (SCB) is in charge of statistics, while – the Maritime and Waters Board (*Havs- och vattenmyndigheten*) is in charge of the acquired data. Statistics are collected for five key areas:

- 1. Total number and the gender of recreational fishing participants;
- 2. Number of fishing days on lakes, rivers and seas;
- 3. Breakdown of recreational fishing participants by the fishing gear they use;
- 4. Catch per year by recreational fishing participants;
- 5. Costs of recreational fishing participants per year.

The number of recreational fishing participants is collated by corresponding age groups (16–30, 31–50, 51–80), and their place of residence is broken down by region, city or other area.

Catch by recreational fishing participants is broken down by catch site (lakes, rivers and the sea), which in turn is further broken down by fishing type (with/without a boat) and the particular recreational fishing region. Similar as in case of the first item, i.e., by age groups, by place of residence, city or other areas, the fishing areas are broken down by recreational fishing gear used particularly for active or passive fishing. But the catch per year in lakes and rivers (from 2018 onwards) is broken down by eight fish species: salmon, trout, grayling, perch, pike, pike-perch, shellfish and other species, in the sea – by 13 species: perch, pike, mackerel, herring, trout, cod, whitefish flatfish, crab, salmon, lobster, pike-perch, and other species.

Costs of recreational fishing are broken down by several sub-categories, such as fishing gear, travel costs, fishing licenses, guide/boat costs, fuel and other costs, e.g. food, accommodation, boat house, maintenance, etc., as well as common cost categories: short-term costs and long-term investments, e.g., boat, trailer, exclusive fishing gear. However, the heading "Other costs" did not provide sufficiently clear breakdown of costs, therefore since 2018 new sub-categories have been introduced: 'catering expenses at restaurants' and 'food costs' when a meal is being prepared independently (Sveriges officiella statistik, 2014, 2015, 2016, 2017, 2018)<sup>6;7;8; 9; 10</sup>

<sup>&</sup>lt;sup>6</sup> Sveriges officiella statistik (2014).Fritidsfiske I Sverige 2014. (Angling in Sweden 2014). Statistiska meddelanden JO 57 SM 1702. Retrieved:

https://www.scb.se/contentassets/2c6ec85374be494485d958847a1ff5ae/jo1104\_2014a01\_sm\_jo57sm1702.pdf (In Swedish) Access: 05.08.2019.

Number of respondents in 2013–2018 (approximately up to 20,000) is based on the Swedish population register (RTB). The margin of error is defined for a confidence level of 95%. For some categories, such as the sub-category "Guide/boat costs" in the category "Costs", the relative error exceeds 35%; therefore, it cannot be relied on in determining the total costs. All estimates are rounded to thousands, which may create inaccurate total sum calculations in tables (ibid).

Until 2018, questionnaires were distributed only by post, but since 2018 – also online. Questionnaires were sent to random permanent inhabitants of Sweden. The questionnaire was sent three times a year with questions relating to fishing activities in the last four months, in particular, in the period from May until January (ibid).

<u>Statistics does not include recreational fishing by Swedish visitors (tourists)</u>. Recreational fishing is defined as all the activities both at sea and along the coast, in lakes and rivers without commercial fishing licenses, i.e., fishing activities associated with leisure, tourism and sport (explanation: lake catches include also river catches). The survey includes recreational fishing, which is carried out in accordance with the Swedish Fisheries Law provisions on public fishing and individual fishing rights (ibid).

Swedish recreational fishing statistical analysis (Figure 1 and 3) 2013–2018 demonstrates an increasing number of fishing participants and a reduction in fishing days. The reduction accounts for both male and female representatives, however, in the period from 2013 to 2019, the number of men in recreational fishing has decreased by 28%, but the number of women – by 17.4 %.

The number of fishing days in thousands during this period decreased similarly regarding fishing in lakes and rivers, as well as at sea and along the coasts (Fig. 2) – around 28%, and only by 0.4 % more in the latter (Fig. 3)

<sup>&</sup>lt;sup>7</sup> Sveriges officiella statistik (2015).Fritidsfiske I Sverige 2015. (Angling in Sweden 2015). Statistiska meddelanden JO 57 SM 1702. Retrieved:

https://www.scb.se/contentassets/6eaa679f076f4244a8db2bba24e4ad9c/jo1104\_2015a01\_sm\_jo57sm1701.pdf. (In Swedish) Access: 05.08.2019

<sup>&</sup>lt;sup>8</sup> Sveriges officiella statistik (2016). Fritidsfiske I Sverige 2016. (Angling in Sweden 2016). Statistiska meddelanden JO 57 SM 1801 Retrieved:

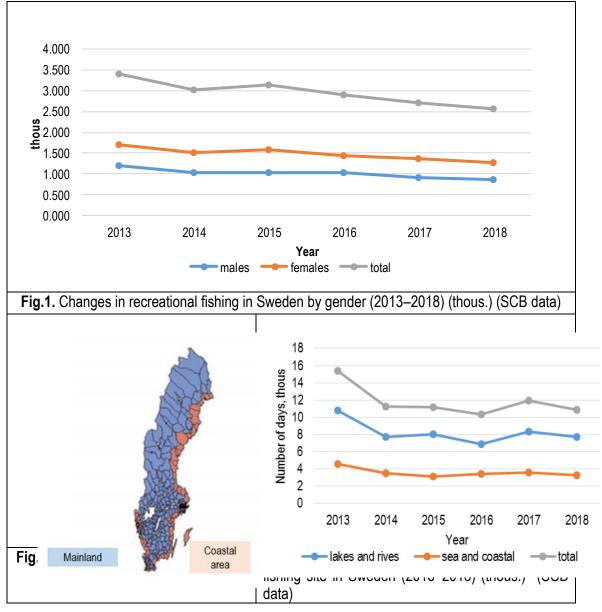
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<sup>&</sup>lt;sup>9</sup> Sveriges officiella statistik (2017).Fritidsfiske I Sverige 2016. (Angling in Sweden 2017). Statistiska meddelanden JO 57 SM 1801 Retrieved:

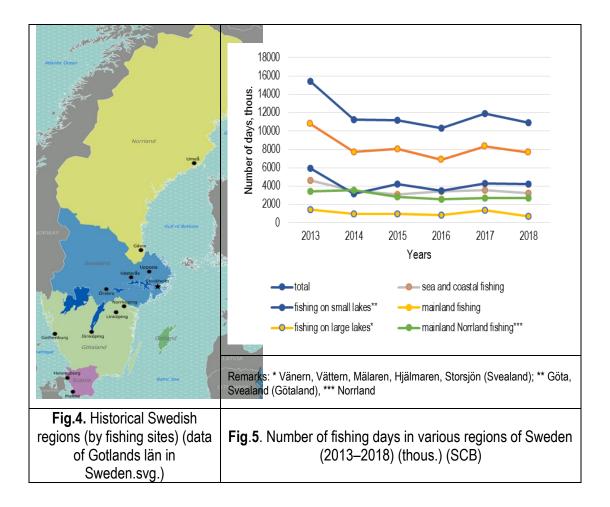
https://www.scb.se/contentassets/4f3a55d625d345e2a51e67493c298148/jo1104\_2016a01\_sm\_jo57sm1801.pdf (In Swedish) Access: 05.08.2019.

<sup>&</sup>lt;sup>10</sup> Sveriges officiella statistik (2018).Fritidsfiske I Sverige 2018. (Angling in Sweden 2018). Statistiska meddelanden JO 57 SM 1901 Retrieved:

https://www.scb.se/contentassets/cfbd2f4a6c8e4fb9b1f9293609b00c59/jo1104\_2018a01\_sm\_jo57sm1901.pdf (In Swedish) Access: 05.08.2019.

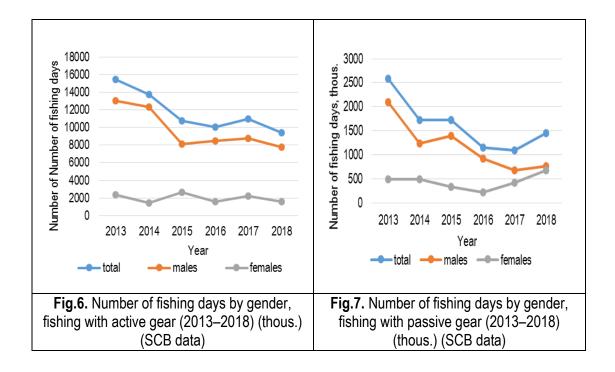


Recreational fishing in mainland Sweden has suitable water bodies in mainly three historical areas: Götaland, Svealand, and Norrland (Fig. 4).

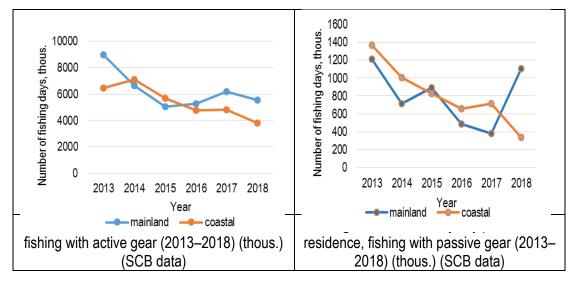


Gotland (Fig. 4) has the largest lakes in Sweden. Among those is Lake Vänern, which is the 3rd largest lake in Europe by area. The three largest lakes in Sweden were those, who faced the greatest reduction in recreational fishing days since 2013 – by 49.3%. The northern-located Norrland covers more than half of Sweden and is rich in lakes. The number of fishing days there has decreased by 718 thousand days in 2018, which is 20.8% less if compared with 2013. In total, the number of recreational fishing days in the small lakes of Sweden has decreased by 28.5% (Fig. 5).

Swedish recreational fishing statistics makes it possible to follow the changes in fishing days by angler's sex and type of fishing gear used. The number of recreational fishing days for both sexes counted together has decreased: with active gear – decrease by 39.1%, with passive gear – decrease by 44%. The number of women involved in the recreational fishing has dropped, but the number of fishing days is by 8.8% (fishing with active gear) to 82.1% (fishing with passive gears) higher than for men (Fig. 6, Fig. 7).



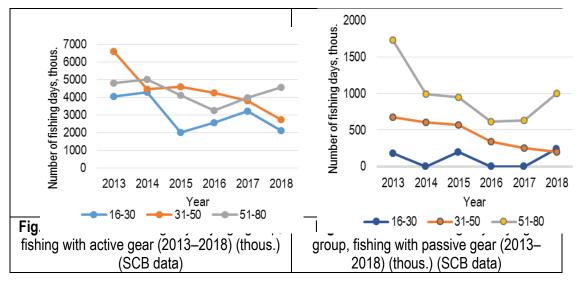
Regarding the period of study in question, changes in the number of fishing days by gender, depending on the place of residence of recreational fishermen (Fig.8 and Fig. 9), demonstrates an increased activity regarding mainland fishing.



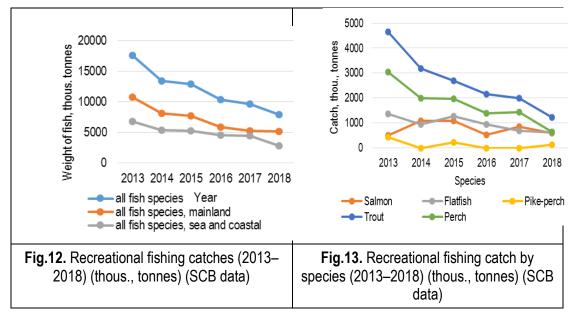
By place of residence, the number of fishing days of fishermen living in mainland, comparing 2018 with 2013, when fishing with active gear is by 2% higher than recreational fishing days of fishermen living in coastal areas, but with passive gears – even by 66.7% higher. When fishing with passive fishing gear, the recreational fishing days of mainland fishermen has faced a sharp increase since 2017 – by 732 thousand days (Fig. 9).

The analysis by age groups shows that Swedish recreational fishermen of the age group 51–80 fishing with active gear spend more days as compared to other age groups, in particular,

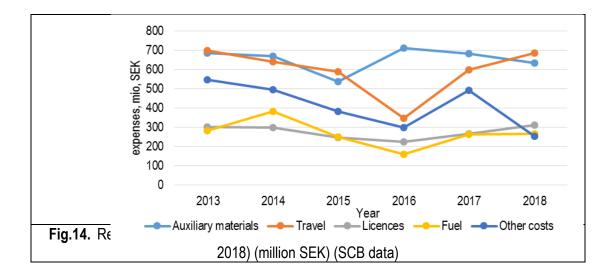
comparing 2017 with 2018 – by 40.5 % more than those aged 31–50 and by 47.3 % more than those aged 16–30 (Fig. 10). This age group, despite the 5.2% drop in the number of days in the period in question, from 2017 onwards shows an increase in the recreational fishing days by 37.5 %, fishing also with passive gear (Fig. 11).



Recreational fishing catches for all species in Sweden during the period from 2013 to 2018 has experienced a decrease: for all species – a drop by 55.2 %, in mainland waters – by 52.3 % and in the sea and along the coast – by 59.9 %. (Fig.12).



The largest drop in catch is observed for pike-perch – by 78.7 %, perch – by 73.4 %, flatfish – by 68.8 %, trout – by 54.6 % and salmon – by 18.6 % (Fig. 13).



Costs related to recreational fishing, 2013 – 2017, are shown in Fig.14 (see next page). The category "Annual costs of a fisherman" of recreational fishing statistics includes recreational fishing total costs in respect of auxiliary materials, travel costs, fishing licenses,

fuel and other costs. The greatest increase in expenditure in 2018 (since the drop in 2016) was seen in respect of travel expenses (Fig. 13). The second highest cost item under "Fishing costs" accounts for auxiliary materials, while the lowest – other expenses (i.e., food, accommodation, mooring, maintenance costs, etc.).

It should be noted that short-term expenses are deemed costs for auxiliary materials (fishing lines, lures, baits, tackle, etc., travel expenses, fishing license, guide/excursion/boat, fuel and other (i.e., food, accommodation, mooring, maintenance costs, etc.).

Long-term expenses/investments are deemed more expensive fishing gear and boats, which is the largest cost item. If short-term costs are dominated by auxiliary materials, travel costs etc., the obtained data of which make it possible for statistics to produce reliable results, the margin of error for long-term costs tends to be relatively large and, therefore, statistical uncertainty is large. Since 2016, costs for purchasing a recreational fishing license in 2018 have increased by 43 million SEK (4.35 million EUR); however, they are only slightly, by 23 million SEK (2.33 million EUR), greater than in 2013 (Fig. 13).

It should be noted that from 2018, in terms of recreational fishing SCB separately registers costs for accommodation, dining in restaurants and purchase of food. Costs for 2015 included also the category "Guide/excursion/boat", which, unfortunately, was not recorded for future years.

The main premise of Swedish recreational fishing economy is that fish resources are limited. However, fish resource exhaustion is only one of the top issues the Swedish recreational fishing economy is facing. Recreational fishing enterprises have many challenges, partly due to the fact that it is a seasonal business and that the visitors and the demand change over time. Changes in demand require the entrepreneurs' to adapt swiftly and creates a need for knowledge of the market, which would not be possible without precise data on recreational fishing and recreational fishing tourism statistics.

Swedish water management principles are based on the EU Water Framework Directive. The central part of the directive focusses on the aim, public involvement in work with public administration. It is also assumed that the administration should be based on cost-benefit assessment, i.e., the socio-economic analysis (Directive 2000/60/EC).<sup>11</sup>

According to Lena Nerhagen (PhD), senior researcher at the Swedish National Road and Transport Research Institute, however, it is not a well-established methodology among the Swedish public administration institutions. Swedish researchers believe that the statistics of recreational fishing and recreational fishing tourism in Sweden and abroad are not sufficient, and that the existing lack of information is due to the insufficient number of studies, despite the fact that in Sweden studies are assigned and funded in various ways (Melin, 2018)<sup>12</sup>.

Swedish law *On Public Water Borders* (1950:595)<sup>13</sup> defines that all marine waters are public, unless they do not constitute part of private property, but if they fall into private property, then they are private waters. Maritime waters 300 m off mainland or an island, if they are private property and if the island is at least 100m long and coastline joins points which are not deeper than 3m, is also deemed private part (with the exception of Bohuslän). On Swedish south and east coast private property is deemed even 1km off the shore (excluding Gotland and Öland coast). While other Swedish waters, which are not maritime, are private. Exception is the largest Swedish lakes – Lake Vänern, Lake Vättern, Lake Hjälmaren, and Lake Storsjön, where private property border stretches 300 m off the bank. Each lake is managed by an association or society, reaching a total of around 50 of such organisations in Sweden, including river management. Association members are local authorities or private companies, which in

<sup>&</sup>lt;sup>11</sup> DIRECTIVE 2000/60/EC OF THE EUROPEAN PARLIAMENT AND OFTHE COUNCIL of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1) Retrieved: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0060:20090625:EN:PDF Access: 23.08.2019.

<sup>&</sup>lt;sup>12</sup> Melin, D. (2018). Rapportering från nationell konferens om hållbar svensk fisketurism (National reports. Conference on sustainable Swedish fishing tourism). Retrieved:

http://www.jordbruksverket.se/download/18.5e0ac3cf16743f52cc4e3ccc/1543401663147/Rapport\_Nationell\_konfe rens\_om\_ha%CC%8Allbar\_svensk\_fisketurism.pdf (In Swedish) Access: 23.08.2019.

<sup>&</sup>lt;sup>13</sup> Sveriges Rikstag (2019). Lag (1950:595) om gräns mot allmänt vattenområde. Retrieved:

https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-1950595-om-grans-motallmant-vattenomrade\_sfs-1950-595. Access: 23.08.2019.

cooperation with other organizations deal with recreational fishing issues (havochvatten.se, 2019).<sup>14</sup>

In Sweden there is a *public right of access* or right of every human being (allemansrätten) to move freely around and access recreational opportunities, whether or not a property is public or private. Right of access applies to any unit of land, except for protected areas. The right includes the opportunity to visit beaches and to launch non-powered boats to any waters.

#### **Fishing licenses**

Fishing permit (license) can be purchased both on the Internet, at fuel stations or from the administration at the fishing site. In exceptional cases, it can also be bought with a mobile phone by entering your name and property name (this can be done with a plus giro 26 68 46 - 5). Since each lake has a managing organisation, the license can be purchased there provided a valid fishing card (mandatory) is presented. Card fees for 2019:

Day card – SEK 83.20 (EUR 8.11) Day card (trolling) – SEK 189.52 (EUR 18.49) 3-days card – SEK 208.96 (EUR 20.38) Week card – SEK 209.73 (EUR 20.45) Month card – SEK 212.17 (EUR 20.69) Year card – SEK 363.32 (EUR 33.80) Year card (trolling) – SEK 681.54 (EUR 66.45) (ifiske.se, 2019).<sup>15</sup>

The licence prices differ depending on the time, place, fish species and fishing gear. According to iFiske statistics, the current average Swedish fishing license prices in 2019, for example, in Dalarnas län range between SEK 95.13 (EUR 9.28) to SEK 600 (EUR 58.51) (ifiske.se, 2019). Young people under the age of 16 years and those aged 65+ are exempt from the license fee. Young people hold teenagers' fishing cards, which are purchased on the website www.skelleftea.se/fiske or at Skellefteå tourist centre. The card is aimed to promote the interest of children and young people in fishing.

<sup>14</sup> havochvatten.se (2019). Havs- och vattenmyndighetens rapport 2019:5 Fritidsfiske i Sverige. En inblick i fritidsfiskets omfattning under åren 2013-2017. Retrieved:

https://www.havochvatten.se/download/18.1e418088169a2290786a7eb2/1554379181387/rapport-2019-5fritidsfisket-i-sverige.pdf Access: 23.08.2019.

<sup>&</sup>lt;sup>15</sup> Ifiske.se (2019). Priser på digitala fiskekort. Retrieved:

https://www.ifiske.se/index.php/information/fiskekortspriser Access: 23.08.2019.

#### 2. FINLAND

In terms of the number of natural water bodies, Finland is the richest country in the world. The Finnish coastline is 6,299 km long (excluding islands). The Finnish archipelago is the largest in Europe with more than 81,000 islands, 187,888 lakes, 647 rivers with their total length amounting to 25,000 kilometres. Coastal tourism is an important sector in certain regions in Finland, in particular the Åland Islands (FAO, 2005)<sup>16</sup>.

The Finnish recreational fishing statistics has five key items:

- 1. Total number and the gender of recreational fishing fishermen;
- Number of recreational fishermen households, which use various fishing gear, and their share among households and fishermen;
- 3. Breakdown of recreational fishermen by used fishing gear in different age groups;
- 4. Recreational fishing catches by fishing areas;
- 5. Recreational fishing catches by fishing gear (LUKE, 2017a).<sup>17</sup>

Breakdown of recreational fishing by used fishing gear is broken down by different types of baskets, spinning rods, fly-fishing rods and other fishing-rods, trolling equipment, etc. Breakdown of recreational fishing by used fishing gear is also grouped by age groups of recreational fishing fishermen (<10; 10–17; 18–24; 25–44; 45–64; 64> years). Recreational fishing catches by mainland fishing areas is subdivided by cardinal directions – Southern Finland, Western Finland, etc., as well as Lapland. Fishing at sea is observed in the Gulf of Finland, Gulf of Bothnia, Archipelago and the Åland islands. The allowed catch by fish species depends on each fishing area. Statistics is available for the period from 1998 to 2016. From 2000 to 2016, statistics is available for catch by fish species depending on the applied fishing gear (LUKE, 2017a).

Information is based on a biennial survey, which selects a certain number of respondents based on the number of people in the national register. For example, in 2016 these were 7,500 people who live in different parts of Finland and whose names were obtained from the Population Register. At the beginning of the year they are sent questionnaires, and persons who did not reply to the questionnaire are interviewed on the phone (LUKE, 2017a).

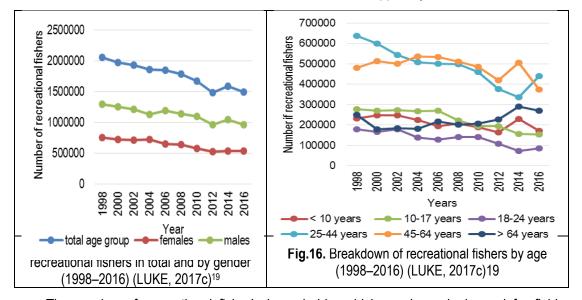
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<sup>&</sup>lt;sup>16</sup> FAO (Food and Agriculture Organization of United Nation) (2005). Fishery and Aquaculture Country Profiles the Republic of Finland. Fisheries and Aquaculture Department. Retrieved: http://www.fao.org/fishery/facp/FIN/en Access: 23.08.2019

<sup>&</sup>lt;sup>17</sup> LUKE (Natural resources institutes Finland) (2017a). Statistics database.

Recreational fishing in Finland is widespread, since approximately 28% of the population (approximately 1.5 million) were engaged in recreational fishing in 2016 (every third men in Finland is an angler, while nearly 20% of women engage in fishing (LUKE, 2017b<sup>18</sup>).

The number of recreational fisherwoman faced rapid growth (Fig. 14, Fig. 15) in the age group 10-17 – by 17 thousand, in the group 25-44 – even by 57 thousand, and in the age group 64+ – by 11 thousand. The number of recreational fishermen in 2016 decreased by a total of 20 thousand. The number of recreational fishers of both sexes in the age group 25-44 years, which show the largest income, faced a decrease by 47 thousand. The total number of recreational fishers of both sexes, from 1998 to 2016, has dropped by more than half a million.

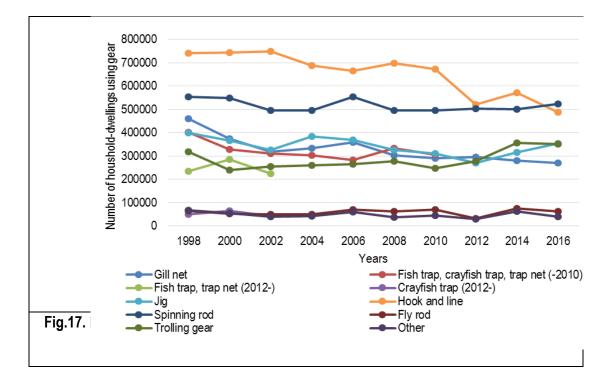


The number of recreational fisher's households, which used a spinning-rod for fishing, demonstrates the most stable pattern – since 1998, their number has decreased by only 32,000. However, gillnets (Fig. 16) face the largest drop in terms of used fishing gear, i.e., in 2016, 189,000 households less than in 1998 used it for recreational fishing. Fishing with a *jiggerspin* in 2016 faced an ever-growing popularity – it was used by 83,000 more households than before. If compared to 2012, the use of trolling equipment by households for recreational fishing faced a sharp increase – by 74,000 – 78,000.

<sup>&</sup>lt;sup>18</sup> LUKE (Natural resources institutes Finland) (2017b). Recreational fishing 2016. Headlines. Retrieved: https://stat.luke.fi/en/recreational-fishing-2016\_en Access: 26.08.2019

<sup>&</sup>lt;sup>19</sup> LUKE (Natural resources institutes Finland) (2017c). Number of recreational fishermen. Statistics database. Retrieved:

http://statdb.luke.fi/PXWeb/pxweb/en/LUKE/LUKE\_\_06%20Kala%20ja%20riista\_\_02%20Rakenne%20ja%20tuota nto\_\_06%20Vapaa-ajankalastus/1\_Vapaa-ajankalastajat.px/?rxid=dc711a9e-de6d-454b-82c2-74ff79a3a5e0 Access: 26.08.2019



It should be noted changes in statistical records have been introduced: since 2012, the joined item "Fish-baskets, crayfish traps, trap net" has been removed, replacing it with individual items "Seine fishing nets" and "Shellfish traps (baskets)", which made it possible to establish a more precise share in the use of recreational fishing gear (Table 1).

Consequently, it was found that the tools "Shellfish traps (baskets)" and "Fly-fishing rods" both in 2015 and in 2016 accounted for only 5% of all the used fishing gear (Table 1). Most common fishing gear used by Finnish recreational fishing participants are as follows: jiggerspin, hooks and multiple hook, and spinning-rod. The use of the latter increased by 8%, while the trolling gear by 5%.

Table 1

<sup>&</sup>lt;sup>20</sup> LUKE (Natural resources institutes Finland) (2017d). Number of households and persons using different gear types, and their proportions of fishing households and fishermen. (Breakdown of recreational fishing households by fishing gear). Retrieved:

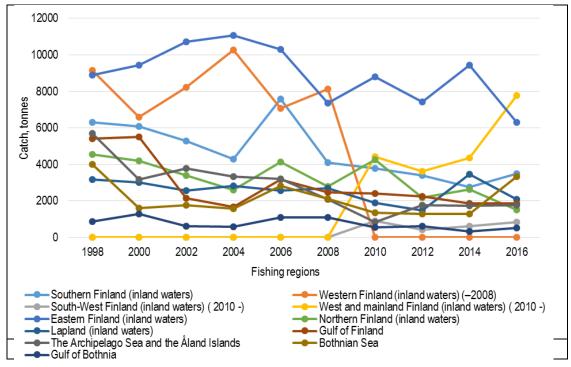
http://statdb.luke.fi/PXWeb/pxweb/en/LUKE/LUKE\_\_06%20Kala%20ja%20riista\_\_02%20Rakenne%20ja%20tuota nto\_\_06%20Vapaa-ajankalastus/1e\_Vapaa-ajankalastajat\_pyydys\_kaytto.px/?rxid=dc711a9e-de6d-454b-82c2-74ff79a3a5e0 Access: 26.08.2019.

Fishing Gear	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016
Gillnets	34	26	23	24	26	23	25	27	23	23
Fish-baskets, crayfish cages, trap net (–2010)	30	23	23	23	21	26	26	0	0	0
Seine fishing nets	0	0	0	0	0	0	0	23	28	19
Crayfish traps (baskets)	0	0	0	0	0	0	0	4	5	5
Jiggerspin	34	31	30	34	33	29	28	28	32	35
Hooks and multiple hook	67	66	70	67	63	70	68	59	61	58
Spinning-rod	41	40	41	40	45	41	41	48	43	51
Fly-fishing rod	4	3	3	3	4	4	5	3	5	5
Trolling accessories	24	17	19	20	19	23	21	26	29	34
Other	5	4	3	3	4	3	3	2	4	3

Breakdown of recreational fishing households and individuals by share of used

fishing gear (1998–2016) (LUKE, 2017d)

See total recreational fishing catch statistics by regions in Figure 18.



Total recreational fishing catch statistics by region (Fig. 18) shows that the main fishing region is mainland Eastern Finland. As for the period 1998–2008, the second top fishing area by recreational fishing catch was mainland Western Finland; but since 2010 the catch statistics

<sup>&</sup>lt;sup>21</sup> LUKE (Natural resources institutes Finland) (2017e). Catch by recreational fishermen by Fishing area, Species and Year. Retrieved:

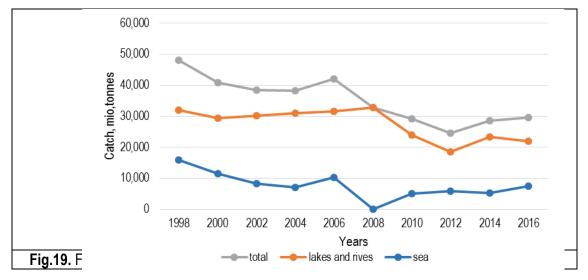
http://statdb.luke.fi/PXWeb/pxweb/en/LUKE/LUKE\_\_06%20Kala%20ja%20riista\_\_02%20Rakenne%20ja%20tuota nto\_\_06%20Vapaa-ajankalastus/3\_Vapaa-ajankalastuksen\_saalis\_alue.px/?rxid=dc711a9e-de6d-454b-82c2-74ff79a3a5e0 Access: 26.08.2019.

was subdivided in two regions: South-West Finland and Western Finland, and Finland's mainland waters. In 2016, recreational fishing catches reached its maximum – 7,781 tons of fish.

In 2016, the catch in inland waters of Eastern Finland reached 6,318 tons of fish, while the catch in Archipelago Sea and the Åland Islands region was the smallest – 533 tonnes.

The following fish accounted for the largest increase in tonnes of catch, compared to the year before (2015, see Annex): sea salmon (+112), burbot (+116), roach (+383), whitefish (+670), other fish (+716), compared to catch numbers of 1998 (+751), while the pike-perch demonstrated even +1209. Other fish catch shows a declining trend. Compared to 2015, in 2016 the following fish were caught less: perch (-727), pike (-482), bream (-342), vendace (-211), etc.

At the same time, the overall fishing catch in 2016 (Fig. 19) has slightly increased, in particular at sea, by about 2,258 million tonnes, compared to the previous year. On the other hand, the catch in lakes and rivers has decreased by 1,233 million tonnes (LUKE, 2017c)<sup>22</sup>.



Consequently, the most popular fishing areas is the Finnish Lakeland and the Kainuu mainland waters; among maritime waters – south-west coastal areas. The most widespread fishing techniques include fishing with hooks and lines, ice fishing and angling with a spinning-rod. Although the proportion of net fishing is decreasing, it still constitutes a major part of the catch (LUKE, 2016)<sup>23</sup>.

https://www.luke.fi/en/news/number-recreational-fishermen-decreased-catch-increased-little/ Access: 26.08.2019. LUKE (Natural resources institutes Finland) (2016).<sup>23</sup>Recreational fishing. Retrieved:

<sup>&</sup>lt;sup>22</sup> LUKE (Natural resources institutes Finland) (2017c). The number of recreational fishermen decreased – catch increased little Retrieved:

https://www.luke.fi/en/natural-resources/fish-and-the-fishing-industry/recreational-fishing/ Access: 14.08.2019.

Fishing plays a crucial role in providing people with healthy food. Around half of all fish used for food is caught by anglers. The mainland catch consists mainly of freshwater fish, which are common in coastal and inland waters; the most important species are perch and pike, the catch of which in 2016, compared to the year before, increased by half a million tonnes, as well as freshwater white fish – by 0.665 million tonnes. However, compared to 1998, the catch of 2016 was by 1.275 million tonnes less. This means that the declining fish stocks account for the decreased economic value of the available catch.

LUKE not only forms statistics, but undertakes social studies to collect data. For example, regarding salmon fishing on River Tana and in other fishing areas. Data on recreational fishing is relevant for decision-makers, which adopt decisions, at national and regional level, on the use of nature for leisure, as well as for owners, who are responsible for fishing water management, fisheries regions, for researchers and also for the anglers. Research findings are necessary to monitor the developments in fisheries and fish population, to assess the impact of recreational fishing on regions, or to predict or consider legal consequences. Data are also necessary if, for example, the social role of fishing or impact of environmental changes on angling and use of nature for leisure are assessed (LUKE, 2019).<sup>24</sup>

As was the case for Sweden, also in Finland the statistics does not include data on foreign travellers' (tourists') fishing in Finland. In contrast to Sweden, Finnish statistics does not collect data on costs by fishermen; there are no official data on the number of fishing days on lakes, rivers and seas, which makes it difficult to estimate the contribution of fishing to national economy. Besides, as compared to Sweden, Finland's statistical data are published with a delay of 2–3 years, which is a complicating factor in assessing the importance of fishing tourism in national economy.

In Finland also *public access rights* or the right of every human being to recreational opportunities in nature are stipulated by law. Fishing and hunting rights belong to land or water owners. Those aged up to 18 years or over the age of 64 are allowed fishing with one fishing-rod free of charge. Other anglers shall pay an angling fee. If a person wishes to go angling with several fishing-rods and lines or to go fishing with nets or fish-baskets, he/she shall obtain a permit from the water owners, who hold fishing and angling rights. Angling is limited also in riffles, during fish migration, as well as in protected areas.

#### Angling licenses and card

Finland has a three-level licensing system:

<sup>&</sup>lt;sup>24</sup>LUKE (2019). Recreational fishing. Retrieved: https://stat.luke.fi/en/recreational-fishing Access: 14.08.2019.

1. Recreational fishing – angling with a fishing-rod and ice fishing is free of charge. The exception is designated lakes or other specific fishing sites to catch rainbow trout.

2. To engage in other types of fishing and catching crayfish, a fisher aged 18–64 will need the following:

(a) paid-up national fishing fee - card;

(b) fishing license.

The statutory fee of recreational fishing with a spinning-rod entitles a person to angling with one fishing-rod and a wobbler in all regions, while fishing in rapids is subject to a specific permit.

3. Persons under the age of 18 years and over the age of 65 are exempt from the statutory fee on recreational fishing. They are entitled to angling with one fishing-rod and a wobbler. The exception is fishing in rapids and specific protected areas. Other types of fishing require a fishing license (Kalapaikka.net, 2019)<sup>25</sup>

National fishing fee is paid:

1) Via online store at http://www.eraluvat.fi/se;

2) By phone – hotline 020 69 2424 (working days from 8am–4pm);

 At R-kioski or the National Forest Management, Environmental Board (Eräluvat-kauppa, 2019).<sup>26</sup>

The fishing fee amounts to 45 euro for 1 year, 15 euro for 7 days and 6 euro for 1 day.

The fishing fee is always dependent on the calendar day of the month or calendar year, but one may buy a week permit valid from a particular day of the week. Prices listed in the Fisheries Law are stipulated by the Riksdag.

Fishing fee is personal, but an individual may receive it also in the name of a third person. In such case, the name, contact information and date of birth (instead of the personal ID code) shall be provided regarding the other person. Metsähallitus is in charge of the fishing fee register (Eräluvat.fi, 2019).<sup>27</sup>

Metsähallitus makes monthly transfers of the funds on the account of the Ministry of Agriculture and Forestry. The collected funds are being used to preserve fishing opportunities and care for the water bodies. Funds are allocated to fishing areas in order to plan a sustainable exploitation and sustainable management of fish resources, for basin owners as

<sup>&</sup>lt;sup>25</sup>Kalapaikka.net-COMMERCIAL LICENCES (2019). COMMERCIAL LICENCES. Retrieved: https://kalastusluvat.kalapaikka.net/tarvittavat-kalastusluvat/#perhokalastus Access: 14.08.2019.

<sup>&</sup>lt;sup>26</sup>Eräluvat-kauppa (2019). KALASTONHOITOMAKSU. Retrieved: https://verkkokauppa.eraluvat.fi/en/fisheriesmanagement-fee/. Access: 14.08.2019.

<sup>&</sup>lt;sup>27</sup>Eräluvat.fi (2019). INFORMATION OM FISKEVÅRDSAVGIFT Retrieved: https://www.eraluvat.fi/se/fiske/fiskevardsavgift.html Access: 14.08.2019.

compensation for use of the waters for fishing, for fisheries advisory bodies and fisheries monitoring organisations, and for various participants for the purpose of implementing projects aimed at improvement of the living conditions of fishermen (Eräluvat.fi, 2019).

#### 3. POLAND

In Poland, there are 9,000 lakes, the majority of whom are small. The largest lake is *Lake Śniardwy* with 113 km<sup>2</sup> area. The largest number of lakes is in the Masuria region. The territory of Poland is crossed by the following rivers – Wisła with its tributaries San, Wieprz, and Bug; Odera with its tributaries Noteć, Warta and Odra (LIAA, 2010)<sup>28</sup>. The Polish coastline is 3,511 km long (O Zapytaj, 2019).<sup>29</sup>

The Polish national statistics only followed the total catch of freshwater fish from all type of fishing for the period from 2010 to 2017, during which it experienced an increase – 8.2 million tonnes (Statistics Poland, 2019).<sup>30</sup> These data were prepared by the Ministry of Agriculture and Rural Development of Poland and it did not include aquaculture. Unfortunately, a similar statistical information about fishing tourism as is provided by the Swedish and Finnish national statistical bodies is not available for Poland.

Little information is provided by the Organization for Economic Cooperation and Development (OECD).

Like mainland fishing, coastal recreational fishing has a huge potential. This applies to both the number of people involved in this leisure type and the range of fish that are caught. Comparing the data of OECD for the Baltic Sea basin countries regarding coastal and marine fishing in the Baltic Sea during the period from 2004 to 2014, it can be concluded that on average the data show higher catch from recreational fishing (coastal and mainland) than from coastal fishing. The Polish national data in these OECD materials are as follows: coastal and marine fishing involved 2,485 (966 – *marine fisheries* 1,519 – *small-scale fisheries*) fishermen, while the recreational fishing (angling) – 630,000 persons on average in the period 2004–2014. Whereas, if their effect is compared – coastal fishing catch is similar to that of recreational fishing, i.e., 12,763 and 12,430 thousand tons respectively (Mickiewicz, Brocki, 2018; OECD-FAO, 2019).<sup>31; 32</sup>

<sup>&</sup>lt;sup>28</sup> LIAA (2010). Poland, general information. Retrieved:

http://www.liaa.gov.lv/files/liaa/attachments/vispariga\_informacija\_polija.pdf Access: 22.08.2019.

<sup>&</sup>lt;sup>29</sup> O Zapytaj! (2019). Ģeografia. Ile linia brzegowa polski ma kilometrów. Retrieved:

https://zapytaj.onet.pl/Category/006,009/2,12417212,Ile\_linia\_brzegowa\_polski\_ma\_kilometrow.html Access: 22.08.2019. (In Polish)

 <sup>&</sup>lt;sup>30</sup> Statistics Poland (2019). Fishing for sea and freshwater fish (2010-2019). Retrieved: https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/rybolowstwo/polowy-ryb-morskich-i-slodkowodnych,1,1.html Access: 22.08.2019.
 <sup>31</sup> Mickiewicz, A., Brocki, W. (2018). Conflicts in Baltic Fisheries. In: Proceedings of the 6th NJF Congress: Agriculture for the Next 100 Years, 27-29 of June, 2018. DOI: 10.15544/njfcongress.2018.14.

<sup>&</sup>lt;sup>32</sup> OECD-FAO (2019). Agricultural Outlook 2016-2025, https://www.oecd-ilibrary.org/docserver/agr\_outlook-2016en.pdf?expires=1522969081&id=id&accname=guest&checksum=E54EB22F5C62C955F7C7E2A6B61D2709 Access: 10.08.2019.

Professional organisations play a crucial role in fishing and angling activities. The key fishing organisation in Poland is the Polish Fishing Association (PFA) (Polski Zwiazek *Wedkarski*) (PZW), which has 600,000 members (PZW, n.d.).<sup>33</sup> The Polish angling regulations stipulate that PFA controls 85% of publicly available inland waters' fish resources in Poland. Besides PFA, the water resources in Poland are controlled by other authorities as well: Land Reclamation Agency (Agencia rekultywacji terenu) and the Polish Association for Small Hydropower Development (Male Stowarzyszenie Rozwoju HPP), along with several natural entities who own private waters. This means that water and fish, opposite to global practice, as a resource – nature and fish as a natural resource – are seen as independent units. And, the PFA activities are related to fish farms, whose income compensates for the damage by small hydropower plants. PFA does not pay a rent fee for the public waters to the state; moreover, it receives assignments to farm salmon, sturgeon, and eels, and it collects additional licence fee from anglers for angling/fishing in its waters. The anglers are not happy with this, because each Polish angler shall thus buy the so-called "White Card" at the price of approx. PLN 50 or EUR 14 per year. Unlike PFA members, who are subject to a discount licence fee, foreigners and others willing to go fishing have to pay a higher fee, which differs in Polish regions. The greatest issue of conflict between fishermen and PFA refers to deterioration of fish stocks both in terms of quality and quantity (size and condition of fish). PFA gets reprimanded particularly because of the latter, because the organisation focusses on the economy of fish resource catch overlooking these changes. There is a range of other fishing organisations, but their impact in Poland is low (Birkovs, 2011)<sup>34</sup>.

However, in the case of Poland it is not prohibited to go fishing/angling in specially protected areas-reserves, national parks and elsewhere. For example, in Wigry National Park, which is one of the largest in Poland. The Park has its own fish farm, which regularly supplements the Park's lakes and rivers with a large variety of fish: brown trout, river trout, whitefish, vendace, catfish, pike, carpfish. Subject to purchasing a special licence, it is allowed to go fishing nearly everywhere in the Park; along with the licence, the person is handed over extended angling regulations, which are revised on an annual basis. Some fish species is limited in catch (i.e., number of fish), while other – minimum fish length; in principle, all fish may

<sup>&</sup>lt;sup>33</sup> PZW (Polski Zwiazek Wedkarski) (n.d.). Polskie Stowarzyszenie Wędkarskie - największe stowarzyszenie polskich wędkarzy. (The Polish Fishing Association – the largest Polish fishermen association) (in Polish) Retrieved: http://www.pzw.org.pl/home/cms/89/fishing\_regulations\_in\_poland access: 22.08.2019.
<sup>34</sup> Birkays A (20111) Anglers' interests. Betrieved: http://dzivajsurdens.lv/pdf/makskernieku-intereses-5.pdf

<sup>&</sup>lt;sup>34</sup> Birkavs, A. (20111). Anglers' interests. Retrieved: http://dzivaisudens.lv/pdf/makskernieku-intereses-5.pdf Access: 22.08.2019.

be caught in one or another season with limitations, even the specially protected and artificially farmed brown trout.

To ensure public access to a bank from lake, fences or enclosures shall not be built closer than 1.5 km from the bank. A breach of these conditions results in a fine. The worsening of biological conditions in the Baltic Sea is also associated with overfishing, which is especially true for the most valuable species (e.g., cod and salmon). Increasing competition in the use of Baltic fish stocks has caused conflicts between the various fishing types: coastal fishing, maritime fishing, and recreational fishing. At present, Polish fishing situation is far from the desire, i.e., sustainable fishing economy.

#### Fishing card; obtaining a fishing card

Initially, a fee amounting to PLN 30 (EUR 7) shall be transferred to PFA's account, if one will go fishing in PFA waters. Data shall be compared to data provided on the particular PFA district's website. Following the transfer, visit the nearest fishing club's headquarters with a wire transfer confirmation, which entitles to passing an exam for a fishing card. The fishing card examination is a single-selection question design with 10 questions. If the exam is passed, a certificate is issued. The office charges another PLN 10 (EUR 2.30) and requires a 30x35 mm photo.

Having submitted an application for a fishing card, the card is issued approximately within 2–3 business days (wedkarsky.com, 2019)<sup>35</sup>.

For example, fishing contributions in Szczecin region in 2019:

Membership fee PLN 90 (EUR 21.14); reduced membership fee 50%: PLN 45 (EUR 10.57)

1) Pupils and students aged between 16 and 24 years;

Members holding a Polish fishing associations' silver gold badge;

3) Men aged over 65 years, provided they have been members for at least 10 years;

4) Women aged over 60 years, provided they have been members for at least 10 years. Reduced membership fee 75%: PLN 22 (EUR 5.17)

1) Members under 16 years of age.

2) Members awarded a PFA gold badge.

The mere holding of a fishing card does not entitle a person to go fishing/angling in PFA's waters. To receive your ID card, a fishing card and a 30x35 mm photo is required. Fee for the acquisition of the PFA's (Polish – PZW) issued ID amounts to PLN 5 (EUR 1.17). If the person

<sup>&</sup>lt;sup>35</sup> wedkarsky.com (2019). JAK WYROBIĆ KARTĘ WĘDKARSKĄ? Retrieved: http://oplatypzw.pl/ Access: 22.08.2019.

does not hold a permit for the calendar year, the price of which is approximately PLN 75 (EUR 17.61), the annual contribution to water protection and management amounts to ca. PLN 60 (EUR 14.09), and the person shall visit the fishing club, where it made the contributions during the previous years, but if the permit is bought for the first time, an entrance fee of PLN 25 (EUR 5.87) is charged (zpw.pl., 2019; gdybyryby.pl, 2019).<sup>36,37</sup>

 <sup>&</sup>lt;sup>36</sup> zpw.pl. (2019). Contributions Szczecin County 2019 - Annual Contribution Table. ZPW - West Pomeranian Fishing Portal Retrieved: https://www.zpw.pl/skladki-okreg-szczecin-2019/ Access: 22.08.2019.
 <sup>37</sup>gdybyryby.pl (2019). Jak zdobyć kartę wędkarską. Retrieved:https://gdybyryby.pl/jak-zdobyc-karte-wedkarska/ Access: 22.08.2019.

#### 4. LITHUANIA

In the northern part of the Lithuanian Baltic Sea, the seabed is mainly composed out of rocks in combination with sand, whereas the southern part has a more homogenous sand-dominated seabed structure. Both the sea coast, the lakes and rivers are suitable for angling. The Curonian Lagoon is a freshwater lagoon; the Curonian Spit separates the Lagoon from the Baltic Sea. The length of the coastline of the Lagoon in Lithuanian territory is about 413 km. The Nemunas River provides the main water inflow into the Curonian lagoon, which forms a delta with multiple tributaries important to breeding fish (Fishing South Baltic, 2018a).<sup>38</sup>

Target fish species for coastal and mainland angling: cod, salmon, Baltic herring, flounder, brown trout, turbot, perch, roach, pike-perch, crucian carp, pike, carp, bream, silver Prussian carp, tench, vimba, catfish, etc. The main angling season differs according to fish species, but also depends on the region (ibid).

Types of angling: The Klaipėda region offers a variety of angling methods, ranging from spin fishing, trolling, float fishing, ledgering and fishing with floating handlines from a boat to methods of shore fishing, such as spin fishing, fly fishing and float fishing (ibid).

Anglers aged 16 to 65 years are required to hold an angling permit both for angling in sea and in freshwater. This applies to fishing at sea, the Curonian Sea, rivers (excluding Nemunas delta and Merkys) and the majority of lakes and ponds in Lithuania. Some lakes and ponds require a licence. This is required to go fishing in leased water bodies, and within the territory of Nemunas Regional Park, in the River Merkys and a number of ponds and lakes. Fishing permits are available at all "Perla" terminals from biggest shops, and at "Tiketa" box-offices and via its website. Licenses may be purchased online via the environmental permit information system ALIS website or directly from fishing clubs or their members. The price for one year is 14 euro, 5 euro – for 1 month, 1.4 euro for two days, while a day licence, depending on the location may cost from 2.5 euros to several euros (Fishing South Baltic, 2018b).<sup>39</sup>

The main target group (customers) are persons aged 14 to 65 years. The customers of coastal angling in the Klaipėda region are residents and tourists who are travelling for angling purposes or visiting the area for other reasons, but make use of angling as one of their leisure activities (Fishing South Baltic, 2018a).

<sup>38</sup>Fishing Baltic (2018a Region, Lithuania. Retrieved: South Case Study: Klaipeda http://www.fishingsouthbaltic.eu/lithuania/ Access: 25.08.2019 Fishing South Baltic (2018b). Fishing rules and regulation. Retrieved: https://www.fishingsouthbaltic.eu/lithuaniafl/ Access: 25.08.2019

According to the statistics data, there are registered 160,000–200,000 anglers in Lithuania (2013) (Coalition Clean Baltic, 2017c).<sup>40</sup>

The available fishing infrastructure is similar to those in the rest of the world, i.e., tourism information centres, accommodation, restaurants, recreational fishing services, boat rental, angling shops and fishing guides – all this is ensured by a variety of recreational fishing service providers, both public and private. Recreational angling tourism is closely linked to historical aspects of the site, which is why locals and stakeholders organise various cultural events. The provision of services is carried out by bringing together local communities.

Thus, angling tourism ensures business opportunities all through the season and helps to diversify the supply chain. Such an initiative, based on tourism trends in Europe, offered the EU project "Sustainable Coastal Angling Tourism – a development chance for the South Baltic Region", and among its initiatives was the creation of the webpage Fishingsouthbaltic.eu, since so far angling tourism has been an undeveloped economic growth opportunity and a market niche in the South Baltic Region (Fishingsouthbaltic.eu, (2018c).<sup>41</sup>

In accordance with Commission Decision 2010/93/EC Lithuania shall collect data on salmon, eel and cod. Unfortunately, data on other fish resources are not required. The main institution involved in recreational fishing and angling data collection is the Fisheries Service (FS), and in particular the Fisheries Research and Science Unit of Ministry of Environment) (FRSU ME), which is in charge of distribution of recreational fishing and angling licences. Since the licence allows both mainland and coastal recreational fishing and angling, it is difficult to determine the fishing intensity (except for salmon, which as of 2012, requires a specific license). Salmon and eels are caught exclusively in inland waters (Cervera, Salz, Alberti, Robles, 2014)<sup>42</sup>

It should be noted that for the purposes of fish stock conservation and improvement catchand-release is in force since 2017. Although salmon and brown trout fishing is permitted from 1 January, as of 1 October up till 15 days all of the salmon and brown trout caught shall be immediately released back into the river, even if the person holds a Fishing Card. Failure to comply with the catch-and-release requirement during this period may result in a fine.

<sup>&</sup>lt;sup>40</sup>Coalition Clean Baltic (2017c). Recreational fishing in the Baltic Sea region. Lithuania. Retrieved: https://ccb.se/wp-content/uploads/2018/02/ccb\_recreational\_fishing.pdf Access: 26.08.2019.

<sup>&</sup>lt;sup>41</sup> Fishing South Baltic (2018c). CATCH: Coastal Angling Tourism - a development chance for the South Baltic Region. Retrieved: https://www.fishingsouthbaltic.eu/about/ Access: 26.08.2019.

<sup>&</sup>lt;sup>42</sup> Červera, H., Salz, P., Alberti, C., Robles, R. (2014). Country report field work mission to Lithuania. Retrieved: https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/lithuania-report\_en.pdf Access: 26.08.2019.

According to the Ministry of Environment and salmon farming experts, this shall ultimately bring benefit to the environment (Paulaitis, 2017 m. spalio 17 d.)<sup>43</sup>.

Lack of data on angling tourism in Lithuania, including the Klaipėda region, where there are a number of problems, prevents officially to draw attention to and explore specific problems. For example, there is an ongoing conflict between commercial and recreational fishing. Besides, the commercial fishing and fishing fleet statistics is detailed and is updated on a regular basis, which is not the case for angling (Oficialiosios statistikos portalas, 2018).<sup>44</sup>

However, the Lithuanian fishing supply exists and it is widely advertised in Latvia on sites such as laukucelotājs.lv., copeslietas.lv., viss.lv., etc.

#### Angling Card

Angling Cards for amateur anglers is not limited. Rights to recreational fishing is subject to the payment of a fee for restoration and conservation of fish stocks.

Card price for a whole day – EUR 2.5;

Per week – EUR 8 (7 days);

Per month – EUR 14 (30 days) (llpf.lt, 2019).45

Regulations apply to each and everyone aged 16 and above wishing to go angling salmon, sea trout and brown trout in freshwater; individuals shall purchase a Fishing Card and pay a fishing fee.

Angling in sea (salt water) is free of charge. Angling in freshwater is not free of charge. Angling rights in rivers and lakes are held by owners, and fishing there is subject to their approval and prior purchase of the Fishing Card. A Fishing Card can be purchased nearby fishing sites from the owner, sports organisations, tourism offices, campsites, etc.

Limited fishing permits (L10) can be purchased online via the environmental permit information system ALIS website by clicking on electronic services for natural and legal entities: http://alis.am.lt/

<sup>&</sup>lt;sup>43</sup> Paulaitis, P. Delfi portal. 2017 m. spalio 17 d. Tendencija aiški: atnaujintos žvejybos taisyklės pakeitė žvejų ipročius. Retrieved: https://www.delfi.lt/grynas/gamta/tendencija-aiski-atnaujintos-zvejybos-taisykles-pakeite-zvejuiprocius.d?id=76067757 https://www.delfi.lt/pure/gamta/tendency-aiski-updated-fishing-rules-change-fishingprocess.d?id=76067757 (In Access: 25.08.2019)

<sup>&</sup>lt;sup>44</sup> Oficialiosios statistikos portalas (2018). Verslinė žvejyba bei žvejybos laivyno statistika Retrieved: https://osp.stat.gov.lt/documents/10180/5118910/Verslinis+%C5%BEuv%C5%B3+sugavimas+j%C5%ABrose+%5 BLT%5D+85630000.html Access: 25.08.2019

<sup>&</sup>lt;sup>45</sup> Ilpf.lt (2019). NAUJOS MĖGĖJŲ IR LIMITUOTOS POVANDENINĖS ŽŪKLĖS VIDAUS VANDENYSE TAISYKLĖS TAISYKLIŲ IŠAIŠKINIMAS 2014 birželio 4 d. Retrieved: http://llpf.lt/NAUJIENOS-17. Access: 25.08.2019

Those who do not have access to internet banking services, may purchase the amateur angling permits at any *Tiketa* box office. Permits are also available from Olifea (Pearl/Telelot) terminals, the permit code: 10 10 82. (siluteinfo.lt, 2019).<sup>46</sup>

According to the law "Amateur Fishing" persons under the age of 16 and over the age of 65, as well as for disabled persons can fish for free in the public waters without a fisherman's card (Lietuvos Respublikos mėgėjiškos žūklės įstatymo pakeitimo įstatymas, 2012-12-20).<sup>47</sup>

<sup>&</sup>lt;sup>46</sup> siluteinfo.lt (2019). Šilutes turizmo informacijos centras. Žvejyba. Retrieved: http://siluteinfo.lt/pramogos/zvejyba/ Access: 25.08.2019

<sup>&</sup>lt;sup>47</sup> Lietuvos Respublikos mėgėjiškos žūklės įstatymo pakeitimo įstatymas. Straipsnio redakcija įsigalioja nuo: 2012-12-20. Teisės akto straipsnis. Retrieved: http://www.infolex.lt/ta/159696:str1 Access: 25.08.2019.

#### ESTONIA

In Estonia, Fishing Regulations entitle each person to fishing with no more than three fishing gear units; this applies to those, who have paid for recreational fishing rights, i.e., the rights to go fishing on public water bodies considering the limitations stipulated by the Fishing Regulations. Fishing in private water bodies is subject to prior approval from its owner. A document verifying the fishing rights of a recreational fisherman is deemed a personal identification document (such as a passport, ID card, driver's license). As of 2011, the payment for fishing rights could be made via the site pilet.ee, by calling the 24/7 hotline 11800, and at several Eesti Post (Omniva) post offices. Since 2018, the fee is set as follows: 1) 24 hours - 1 euro; 2) 7 days – 3 euro; 3) 182 days (six months) – 13 euro; 4) 365 days (one year) – 20 euro. Children in pre-school age, students under 16 years of age, retired persons, illegally repressed persons and people with disabilities are entitled to angling free of charge. This does not apply to fishing areas where fishing is subject to holding an Angling Card. Such as the trout rivers in Central Estonia and salmon and brown trout rivers in North Estonia, as well as in protected areas: Endla and Silma nature reserves, and Matsalu National Park. Angling Cards are only available for a charge and are issued by the Environmental Board (EB) (Louna-Eesti Kalastajati klubi, 2018)<sup>48</sup>.

According to statistics, in 2017 there were 60,758 anglers registered in Estonia (Coalition Clean Baltic, 2017d).<sup>49</sup> In 2017, a total of 24,677 angling cards were issued for recreational fishing (including angling). The number of angling cards on salmon rivers has increased, which might explain the improvement in salmon and brown trout stocks. A total of 309,928.01 euro was generated from the sales of angling cards, of which recreational angling accounts for 789,179.91 euro or almost 12,000 euro more than a year ago. Part of the revenues from fishing rights are transferred to the state budget. The remaining funds are transferred to the Environmental Investment Centre (EIC), which serve as grants in relation to EU projects. It should be noted, however, that a statistically correct picture of angling cannot be obtained, since the data are merged together with recreational fishing (Fisheries Information Centre, 2019).<sup>50</sup>

<sup>&</sup>lt;sup>48</sup> Louna-Eesti Kalastajati klubi (2018). Fishing permit in Estonia. Retrieved:

http://www.kalastusinfo.ee/sisu/fishing-in-estonia/fishing-in-estonia.php Access: 25.08.2019

<sup>&</sup>lt;sup>49</sup> Coalition Clean Baltic (2017d). Recreational fishing in the Baltic Sea region. Lithuania. Retrieved:

https://ccb.se/wp-content/uploads/2018/02/ccb\_recreational\_fishing.pdf Access: 26.08.2019.

<sup>&</sup>lt;sup>50</sup> Fisheries Information Centre (2019). Estonian fishery Yearbook 2017. Retrieved:

http://www.kalateave.ee/images/downloadplugin/040669a9e24251276963c0cd1ed68560-Estonian-Fishery-2017-web.pdf Access: 12.08.2019.

Estonia has no official statistics on recreational fishing. Recreational fishing (including angling) in Lake Peipsi takes place mainly in winter (angling of perch and white fish). In addition to the angling fee, Estonian tourism businesses also receive additional income from accommodation services and catering (FAO Fishery Country Profile, 2005).<sup>51</sup>

<sup>&</sup>lt;sup>51</sup> FAO Fishery Country profile (2005). The Republic of Estonia Profile. Retrieved: http://www.fao.org/fi/oldsite/FCP/en/EST/profile.htm Access: 25.08.2019

#### 5. LATVIA

The total length of the Baltic See and the Gulf of Riga coastline in Latvia reaches nearly 500 km; there are 2,256 lakes with an area exceeding 1 ha, of which 13 have an area larger than 1000 ha. The total surface area of Latvian lakes amounts to around 100,000 ha, which make up 1.5 % of Latvia's territory; there are 800 reservoirs, of which 3 exceed the area of 1000 ha, 12,500 rivers with a total length of 37,000 km. 880 rivers are longer than 10 km, while 17 – longer than 100 km. In accordance with the Civil Law, lakes, reservoirs and rivers (or sections thereof) of higher fishery value have been granted public waterbody status, or fishing rights therein are owned by the state (Bārtule, 2018)<sup>52</sup>.

Section III, Fishery Law, covers not only fishing, but also angling. Fishing rights are stipulated by Section 10(1) of the Fishery Law, namely, "A natural person, by taking into account regulations governing angling, is entitled to exercise angling rights laid down for him or her in all waters of the Republic of Latvia, unless any of the types of fishing is prohibited, except lakes which are in private ownership and where fishing rights are not owned by the State." Article 113–1119 of the Civil Law stipulates, who the holder of fishing and angling rights in certain waters is (Civil Law, 1937, Art. 1113–1119<sup>53</sup>; Fishery Law, 1998, Section 6)<sup>54</sup>

Angling in Latvia is subject to purchasing an angling card with 3-month or 1-year term. It can be bought in angling and hunting shops, supermarkets, "Maxima" shops, or online via the website www.epakalpojumi.lv. Licenses may be purchased from local governments by selecting the relevant water body and type of license by its term, from post offices, fuel stations, "Narvesen Baltija" kiosks, from some municipal agencies, as well as from some companies – from around 1,300 points of sale. Price for one year – EUR 14.23, and for 3 months – EUR 7.11. An angling card is deemed valid only if presented together with an identity document. However, unlike in Estonia, in Latvia anglers do not have an option to buy 1-day angling permits. At present, an angling card is not required for persons under the age of 16 and

<sup>&</sup>lt;sup>52</sup> Bārtule, I. (2018). Accessibility of water bodies for angling, crayfish catching and underwater hunting. Latvian Fisheries Yearbook 2018.pdf Retrieved:

https://www.zemeunvalsts.lv/documents/view/c042f4db68f23406c6cecf84a7ebb0fe/Latvijas%20zivsaimniecibas% 20gadagramata%202018.pdf Access: 11.08.2019.

<sup>&</sup>lt;sup>53</sup> Civil Law. PART THREE. Property Law. . Adopted: 28.01.1937. Published: Latvijas Vēstnesis (Latvian Offical Gazette), 01.09.1992,

No. 44.

<sup>&</sup>lt;sup>54</sup> Fishery Law. Adopted: 12.04.1995. Published: Latvijas Vēstnesis (Latvian Offical Gazette), 07.01.1993, No. 66 (349).

over the age of 65, as well as for disabled persons (SIA "Latvijas Lauku konsultāciju un izglītības centrs", no year).<sup>55</sup>

The fact that the anglers obey these rules is proven by the information provided by the inspectors, who have said that more than 90% of anglers have bought an angling card, since the Administrative Violations Code of Latvia provides for a fine of 15 to 350 euro. Angling card sales generate around 600,000–700,000 euro in the state budget. This money forms part of grants to Fish Fund, while the rest is transferred to state budget (Kupčs, 2018).<sup>56</sup>

According to the Latvian Rural Advisory and Training Centre data (in Latvian: Latvijas Lauku konsultāciju un izglītības centrs) (LRATC), in 2017 the cards were bought by 95,951 persons, in 2016 – 95,000, but in 2015 – 50,692 showing an increasing interest in angling, despite the decline in Latvian population numbers. Another beneficial factor is the growing range of points-of-sale and types of purchase (Valsts lauku tīkls, 2018).<sup>57</sup>

Based on the information on the received reports and revenue from the licensed angling, crayfish catching and underwater hunting are transferred for Fish Fund development, it can be concluded that the total sum of sold licences (according to the report) in 2017 amounted to 99,617 euro, while another 49,095 euro were transferred to the state budget. The respective number for 2018 reached already 256,860 euro and 52,038 euro. According to publicly available information, it is not possible to determine the share of contributions from sold angling licences, but the cumulative increase is obvious (Ministry of Agriculture. Industry portal, 2019).<sup>58</sup>

Considering the number of purchased licenses, the traffic at angling sites can be observed, i.e., which fishing sites are preferred. The largest number of licences are bought for angling in River Salaca. Q1 2017 – 17,228 EUR, Q2 – 5,884 EUR, and in 2018 it reached 21,945 EUR and 6,801 EUR accordingly. It is the best visible example as to how long-term use pays off. A similar tendency is observed for Lake Usma, Durbe, Burtnieks, Liepāja, Kaņieris, Sauka, Zebrus, and in Greater Riga region lakes, in which young pike and pike-perch are released on a regular basis. The same applies to other lakes and rivers, where it is taken care of the conservation and reproduction of fish resources and prevention of overfishing. The revenue

<sup>&</sup>lt;sup>55</sup> SIA "Latvijas Lauku konsultāciju un izglītības centrs" (no year). Angling cards. Fisheries Division Retrieved: https://www.makskeresanaskarte.lv/products Access: 28.08.2019.

<sup>&</sup>lt;sup>56</sup> Kupčs, E. (2018). One-day angling cards are said to be introduced only next year. LSM.LV, 01.01.2018.

<sup>&</sup>lt;sup>57</sup> Valsts lauku tīkls (2018). The requirement to buy angling cards is strictly obeyed. Retrieved: http://laukutikls.lv/nozares/zivsaimnieciba/raksti/makskeresanas-kartes-perk-apzinigi Access: 28.08.2019.

<sup>&</sup>lt;sup>58</sup> Ministry of Agriculture. Sectoral portal. (2019). Information about the received reports and revenue from the licensed angling, crayfish catching and underwater hunting transferred for Fish Fund developmen (2017–2018). Received reports and contributions to the Fish Fund. Retrieved: https://www.zm.gov.lv/zivsaimnieciba/statiskas-lapas/valsts-atbalsts/zivju-fonds/sanemtie-parskati-un-iemaksas-zivju-fonda?nid=788#jump Access: 28.08.2019.

transferred to state budget to increase the Fish Fund grants amounted to 1,710,206 euro in 2017, which is 661,912 euro more than in 2016, when the revenue was 1,048,294 euro. In 2017, the sub-programme "Fish Fund" of the Ministry of Agriculture was allocated state budget subsidy of 717,777 euro from general revenue, which was about 21,533 euro more than the grant in 2016. The largest share of the funding in 2017 was used for protection of fish resources (38.9%), reproduction of fish resources and release into public water bodies and other water bodies (27.3%), and public awareness-raising activities of fish resources, their reasonable use, farming and protection (22.4%) (Ābele, 2018).<sup>59</sup>

According to state record fish list of the Latvian Angling Sports Federation (LASF) (as of 07.01.2013), record fish in the coast of Kurzeme and its adjoining territories dates back to 1989 in River Venta – vimba of a weight of 1.4 kg; in 2004 – eel of 3.5 kg and in 2005 – a salmon of 16 kg. Lake Usma has its record fish caugh in 1998 – a vimba of 1.45 kg, and a roach of 1.31 kg in 2004 (Stikuts, 2013).<sup>60</sup>

However, Fish Fund might contribute more to improvement of the fish resource situation in Latvian waters, so that the anglers today would be more satisfied of their catch.

Lack of information and data allows for only a cautious estimation of the anglers' contribution (via licenses, angling cards and angling catch) to the Latvian economy.

Considering the experience of other countries and the fact that an angling tourist is a person who spends its holidays on water, and angling is often related to family trips, its economic contribution is huge. During the period from 1 May 2018 until 30 June, at the request of the Ministry of Agriculture, the LRATC carried out a survey of anglers (survey about the year 2017) in the entire Latvia (n=639). The survey also studied the structure of costs. Respondents were asked about their expenditure on fishing gear, boat rental, accommodation, literature, licenses and other expenses. The answers showed that anglers are prepared to spend significant amounts on angling. Some spend even several thousand euro. However, the aim of this particular survey was not to assess fishing in terms of its impact on economy, which is why several cost items were not determined and should be subject to further studies. For example, as is the case with Swedish national statistics, where anglers' expenses are recorded by multiple subcategories, such as expenses on angling gear, travel costs, fishing licences,

<sup>&</sup>lt;sup>59</sup>Åbele, J. (2018). Zivju fonda aktivitātes 2017. gadā (ENG: Fish Fund operations in 2017). Latvian Fisheries Yearbook 2018 –22. Retrieved:

https://www.zemeunvalsts.lv/documents/view/c042f4db68f23406c6cecf84a7ebb0fe/Latvijas%20zivsaimniecibas% 20gadagramata%202018.pdf Access: 28.08.2019.

<sup>&</sup>lt;sup>60</sup> Stikuts, J. (2013). Latvijas rekordzivis (ENG: Latvian record fish). Retrieved: http://www.fishing.lv/speclapas/rekzivis.htm Access: 28.08.2019.

guide/boat costs, fuel costs, and other costs for fuel, accommodation, boat houses, etc., and common cost items: short-term costs and long-term investments in angling tourism.

#### 6. COMPARISON OF ANGLING CARD FEES BY COUNTRIES (1998–2016)

Comparing the angling card fees by countries (1998–2016) (Table 2), the sharp contrast between study countries is evident: one-day fee of 1–8.11 euro, per week 3–20.45 euro, whereas per year the fee ranges from EUR 14.23 in Latvia to EUR 45 and EUR 33.80 in Sweden and Finland.

Table 2

Country	Day	Trolling, day	Night	3 days	Week	Month	3 months	6 months	Year	Trolling, year
Sweden	8.11	18.49	-	20.38	20.45	20.69	-	-	33.80	66.45
Finland	6	-	-	-	15	-	-	-	45	-
Poland	-	-	-	-	-	-	-	-	21.14	-
Lithuania	-	-	2.5	-	8	14	-	-	-	-
Estonia	1	-	-	-	3	-	-	13.4	20	-
Latvia	-	-	-	-	-	-	7.11	-	14.23	-

Comparison of Angling Card fees by countries (1998–2016)

The prices of angling cards in Poland and Estonia are similar. Other comparisons show a distinct contrast in prices, time periods and types of allowed activity. The situation in Poland is deemed most complex – multiple extra fees on angling card do not create a clear understanding of costs, except for the 1-year angling card.

### CONCLUSIONS

Review of publicly available documents, statistics, studies and other secondary materials on the role of angling tourism in the national economy of partner countries, i.e., in Sweden, Finland, Poland, Lithuania, Estonia and Latvia, led to the following conclusions:

- 1. There are suitable natural resources for angling tourism and its development in all partner countries.
- 2. Of all partner countries only Sweden has a recreational fishing tourism strategy until 2020, which provides for accessibility, administration, legislation, marketing and general regulation of the sector, and it also stipulates cooperation of angling participants and authorities aiming to manage the fishing industry. Sweden is in the process of elaborating a future plan on angling tourism, the aim of which is not only nature protection and sustainability activities, but also the strengthening of profitability, competitiveness and growth force of businesses, thereby contributing to the creation of new jobs. In Finland, similarly as in Sweden the role of angling provides people with healthy food, because half of all fish for food is caught by anglers. Unfortunately, other project partner countries have not appreciated angling as an integral part of the hospitality sector and its contribution to national economies, and priority is given to commercial fishing.
- At EU level, there is not a common and clear recreational fishing and angling definition, and this makes data collection and situation assessment, its effects on the fish stocks, the environment and importance of angling on economy more difficult.
- 4. Among the project partner countries, most comprehensive statistics on recreational fishing (angling) is available for Sweden. However, the sub-category "Other costs" does not provide sufficiently clear breakdown of costs, therefore since 2018 new sub-categories have been introduced: "Catering expenses at restaurants" and "Food costs". Here, it should be reflected in greater detail and change of data items should be avoided to make them comparable by periods of time and enable collation and analysis of data on the economic impact of angling. The Finnish recreational fishing (angling) statistics has five key items: (1) the total number and sex of anglers; (2) breakdown of

angling by fishing gear used; (3) number of households and persons who use various fishing gear, and (4) their proportion among recreational fishermen households and among anglers, as well as (5) anglers' catch by fishing areas and catch by fishing gear. However, the data are insufficient to assess the economic impact of angling at national level. All the more so because the present statistics are compiled with two years delay, which hardly helps businesses and the entire tourism sector in adapting to rapid fishing tourism changes in demand, trends and similar processes. Both the Swedish and Finnish statistics <u>do not reflect data on foreign anglers</u> – it is a huge gap in the description of the economic impact on each country. As for all the other partner countries, fishing statistics and in particular the angling tourism statistics are undeveloped, and reliable estimations of their role in national economy cannot be made.

- 5. Seasonal fluctuations and rapid changes in angling tourism demand due to demographic reasons and overfishing, along with institutional (including bureaucratic) reasons create the need for some partner countries to improve their statistics, while for others a completely new compilation of statistics on angling, considering the experience of Sweden, Finland and other countries. In all the project countries, there is lack of recent studies on recreational angling, and the related lack of funding.
- 6. During elaboration of the present report, it was established that the procedures for issuing fishing permits, licences, and the use of generated revenue form the licences, permits, angling cards differs greatly. It is concluded that the economic contribution could be improved, which might be used to improve fish resources and fishing infrastructure.
- 7. Considering the fact that recreational angling is likely to have a significant impact on the fish resources, the project partner countries should ensure that management is carried out in accordance with the objectives of the EU Common Fisheries Policy, in line with Clause 3 of the EU regulation's preamble of 2013, which obliges all states to collect and analyse detailed statistics. Unfortunately, this applies to a few species in the Baltic Sea and freshwaters.
- Angling card (1998–2016) fees, period and angling activities vary significantly among the study countries – from 1 to 8 euro per day to 14 to 45 euro per year. It is most difficult to assess the varying price items of angling cards in Poland (except the oneyear angling card).

9. Since angling tourism has a huge potential, it can help preserve fishing and angling resources and also provide value growth to the national economies in project partner countries. Therefore, it is necessary for national official statistics to accurately and completely reflect the angling tourism in context of the entire tourism statistics.

### ANNEX 1

