2026

Lost Fishing Gear:

Retrieval, recycling, and preventive actions for abandoned recreational fishing gear in the central Baltic Sea

D.2.2.1 Recommendations of actions needed for retailers and producers alike to fulfil their obligations of the EU SUP-directive regarding plastic fishing gear

Interreg

Co-funded by the European Union

Central Baltic Programme

Re:Fish

Lost fishing gear is found in all seas, lakes, and waterways where recreational fishing takes place. It causes unnecessary suffering for fish, birds, and marine mammals. In the EU project Re:Fish, we are working towards a cleaner and healthier Baltic Sea.

Project period: 2023–2026
Funded by Interreg, Central Baltic Programme
Project partners: Keep Sweden Tidy (SE, lead partner), Keep the Archipelago Tidy (FI), University of Tartu (EE), Finland Environmental Institute (FI)

Read more at **centralbaltic.eu/project/refish/**

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Finnish Environment Institute

Project information

Funded by the EU's Interreg Central Baltic Programme under its "Improved Coastal and Marine Environment" priority, the Re:Fish project "Retrieval, recycling, and preventive actions for abandoned recreational fishing gear in the central Baltic Sea" (project period from March 2023 to February 2026) was coordinated by the Keep Sweden Tidy Foundation in cooperation with partners from Finland, Keep the Archipelago Tidy Association and the Finnish Environment Institute, and from Estonia, the University of Tartu.

The Re:Fish project addressed the problem of ghost fishing and plastic pollution caused by lost recreational fishing gear in Sweden, Finland, and Estonia. Through activities such as gear retrieval operations, end-of-life gear collections, citizen-based science initiatives, educational training and awareness campaigns, the project engaged anglers and fishers using passive gears, manufacturers, NGOs, research institutions, and authorities to prevent gear loss and advance practical measures for gear recovery and material recycling.

More information, project materials, and results can be found on the project webpage.

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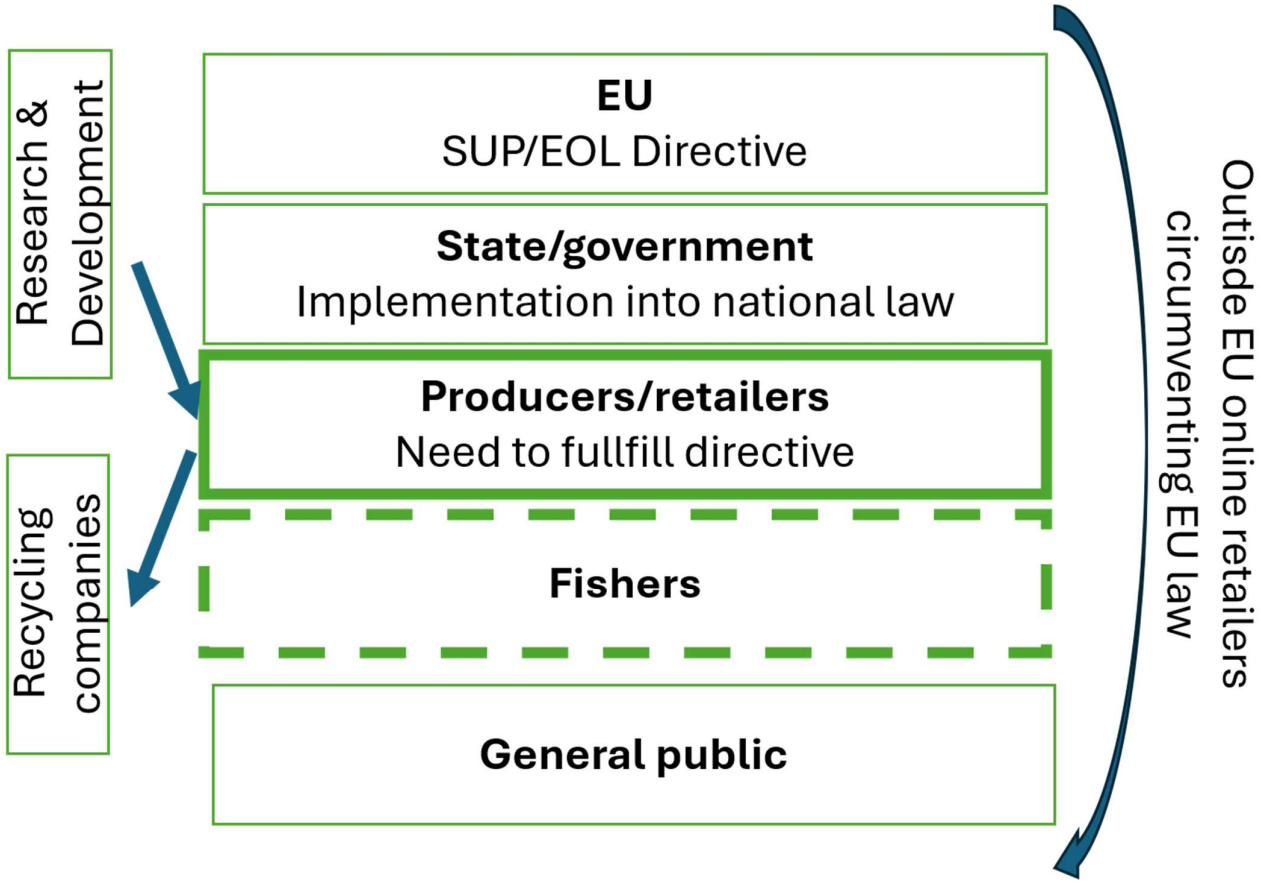

Figure 1 Stakeholders involved in EU SUP-directive

1 Introduction

The environmental risk of Abandoned, Lost and Discarded Fishing Gear (ALDFG) has been recognised in several previous projects and studies. Because of this, fishing gear was included in the EU Directive on Single Use Plastic 2019/904 (SUP – directive) and this was implemented in legislation such as in Finland and Sweden at the beginning of 2025. When the Interreg Central Baltic funded project Re:Fish, started in 2023, there was no widely established ready-to-use workflow for handling end-of-life fishing gear (EOL). The project Re:Fish tackled the ALDFG problem at its three levels: at its end, when nets, lines and jigs have already been lost by retrieving them via draggings and divings; in the middle – directing customers to “recycle” (return) their EOL gears and at the very beginning of the circle: educating young fishers about sustainable fishing habits. In none of these three aspects, producers and retailers appear as the main actors. Nevertheless, the SUP-directive has distributed them the central role.

The goal of this document is to focus on the role of producers and retailers working in line with the obligations by SUP directive regarding the life-cycle management of fishing gear containing plastic with more focus on the Baltic Sea region. In order to map the awareness regarding the SUP directive and its implementation we carried out a survey among producers, retailers and fishers in the three project countries: Sweden, Finland and Estonia. The document gives an overview of the current situation in every country, summarizes the information gained by interviews, and provides solutions in order to enhance overall better management and handling of plastic containing EOL fishing gear.

2 Status quo of the SUP directive and its implementation in each of the project countries with regard to fishing gear

2.1 Sweden

In Sweden, the SUP-directive has been implemented through ordinances in national legislation. The main legal act is the Ordinance on Extended Producer Responsibility for Fishing Gear (SFS 2021:1001), which specifies what must be done to comply with the legislation. The ordinance contains provisions on a system for extended producer responsibility for the waste management of fishing gear. The purpose of the ordinance is to establish a system to (1) increase the collection, reuse and material recycling of fishing gear, and (2) reduce littering from fishing gear. It also follows from Section 18 that: The objective is that, by 2027 at the latest, the quantity of waste consisting of fishing gear collected separately in a calendar year shall constitute at least 20% of the quantity of fishing gear placed on the Swedish market during the same calendar year. The calculation shall be made by weight. In practice, this means that the first year in which end-of-life (EOL) gear was collected is 2025, with reporting to the Swedish Environmental Protection Agency due no later than 31 March 2026.

For a company to place fishing gear on the Swedish market, it must be affiliated with a producer responsibility organisation. There is one at the time being, called Fiskekretsen AB. It was established in autumn 2024 and currently has 135 members. Its primary function is to help facilitate the collection and recycling of fishing gear made of plastics, promote the use of recycled plastics in new products, reduce the amount of plastic waste in the oceans and other aquatic environments, and provide support and information to all its members.

The collection system for fishing gear is nationwide and covers gear from both recreational and commercial fishing. Swedish municipalities are responsible for providing dedicated collection containers, primarily at recycling centres, for fishing gear used by private individuals. When the containers are full, the

municipality orders collection from a waste management company contracted by Fiskekretsen. The municipalities receive compensation for the additional workload. Fiskekretsen offers collection points for professional fishers at easily accessible locations adapted to the spatial distribution of the fishery. The collected fishing gear is transported to certified recycling facilities, where the gear is processed.
If the legislation is not complied with, producers may be required to pay an environmental sanction fee.

2.2 Finland

The work in preparation for the SUP directive had begun well before it took effect in Finland. The producers of fishing gear had to submit a notification of joining the producer register at the latest by 31st of December 2023. The producers started their separate division under the Finnish SUP Producer Group Ltd. which has been registered since early 2023, with acceptance into the producer register confirmed on 18 September 2024. The SUP Directive for fishing gear took effect on 1 January 2025. Under the Government Decree on Fishing Gear Containing Plastic (1319/2022), 150 collection points are required. These have been established via the non-profit service company Rinki as 75 fixed and 75 flexible points, covering stationary and other fishing gear (per Section 4(15) of the Fishing Act 379/2015) along with associated ropes and floats. Finland is in the phase of gathering information of the fishing gear collection system: how much material is returned, what is its quality and what are the recycling options.

2.3 Estonia

In accordance with the requirements of extended producer responsibility (EPR) under the SUP directive, the producers of the products of concern in Estonia are obligated to collect fishing gear containing plastic and ensure proper management and treatment starting from 31 December 2024. Pursuant to

subsection 110 of § 23 of the Waste Act, a producer of plastic-containing fishing gear is a natural or legal person who:

1) is established in Estonia and, irrespective of the sales method, including sales by means of distance communication, places plastic-containing fishing gear on the Estonian market in the course of economic or professional activities;

2) places plastic-containing fishing gear on the Estonian market in the course of economic or professional activities under a contract concluded by means of distance communication as defined in point 7 of Article 2 of Directive 2011/83/EU of the European Parliament and of the Council;

3) sells plastic-containing fishing gear by means of distance communication directly to households or other users in Estonia, while being established in another Member State of the European Union or outside the European Union.

In accordance with the principle of EPR, the producer is responsible for the product placed on the market from the moment of its manufacture and/or placing on the market until it becomes waste and until such waste ceases to be waste. Consequently, the producer is not released from responsibility if the waste arising from the products placed on the market has been collected and handed over to a waste management operator. The producer must be aware of what happens to such waste thereafter; that is, the producer must know how the waste management operator to whom the waste is transferred handles the waste. Therefore, the producer must have knowledge of the entire waste management chain from beginning to end.

All Estonian producers are required to register in the Register of Products of Concern (have a registration no. in PROTO). Producers who have joined a producer responsibility organisation are not required to register themselves in the Register of Products of Concern, as in such cases the organisation carries out the registration on their behalf and submits to the Register of Products of Concern the names of the producers that have joined the producer responsibility organisation (the producer is registered via the organisation). At present moment

(January 2026) no producer responsibility organisations have been established for plastic-containing fishing gear in Estonia.

Upon joining the Register of Products of Concern, the producer must also submit a public awareness plan, which shall specify how the producer complies with § 268 of the Waste Act and with the requirements set out in Regulation No. 57 of the Minister of the Environment of 22 July 2013, *"List of Information to Be Made Available to Users of Products of Concern and the Methods and Procedure for Providing Such Information"*. This includes a description of the information activities planned by the company to inform its users about the return of products of concern and their environmental impact.

In the case of plastic-containing fishing gear, the awareness plan may include e.g. posts in fishing-related social media groups, dissemination of information in retail outlets and on websites engaged in the sale of fishing equipment, as well as in professional journals and newspapers. The producer of plastic-containing fishing gear is not required to organise a nationwide information campaign. Any campaign shall be targeted at users of fishing gear. At the point of sale (including online) producers and distributers of fishing gear containing plastic must make information available on how to return fishing gear that is no longer in use and indicate the locations of their waste collection points closest to the point of sale and the locations of local government waste stations where fishing gear is collected.

The producer must take back discarded fishing gear from the user of the fishing gear, the distributor of the fishing gear, port reception facilities, the local government and the waste manager operating under a contract with the local government waste station. All producers must have a contract with a waste operator and submit data to PROTO. The annual collection target shall be at least 10% of the fishing gear placed on the market in the preceding year. Delivery of fishing gear waste must be free to the end user.

EPR applies to all fishing gear containing plastic that is not intended exclusively for use in inland waters, and it covers plastic-containing nets, traps, fishing lines, ropes, buoys, and lures, if their plastic content exceeds 80%. Currently Estonia is

in the phase of gathering information of the fishing gear collection system: how much material is returned, what is its quality and what are the recycling options.
Below are listed some of the obstacles that are more problematic and/or need to be resolved to fully implement the EPR scheme for fishing gear products containing plastic in Estonia:

- small quantities of products of concern placed on the market with no guaranteed collection rates;
- establishing contracts with waste operators;
- new solutions needed for waste operators;
- few fishing gear producers vs 252 ports in Estonia;
- large trawl nets placed on the market elsewhere, entering waste stream here;
- ghost nets gathered during trawling campaigns.

3 Interaction with stakeholders

3.1 Questionnaires

For this recommendation document, questionnaires and interviews with producers, retailers and fishers were conducted in the project partner countries Estonia, Finland, and Sweden. This was done to gain insight into the current issues and challenges for the stakeholders on how to comply with the SUP directive. The questionnaires, created and shared via the software Lyyti, were available in 4 languages (English, Estonian, Finnish and Swedish; questionnaire questions each for retailers, producers and fishers in English in Appendix I) and were accessible in summer 2024. The questionnaires were widely distributed, and all project partners were encouraged to share them through their channels in their respective countries.
Eight producer answers were received (4 in Finnish and 4 in Swedish). From retailers seven answers were received (one in Finnish, 2 in Swedish and majority i.e. 4 in Estonian). From fishers 88 answers were received. Fishers answered between June and August, retailers between July and August and producers between July and September.

3.1.1 Difference of awareness of the SUP-directive and its implementation across producers, retailers and fishers

Producers

Four returned answers from producers were in Finnish and four in Swedish. Half of the respondents (4/8) answered to have sufficient information on the SUP-directive. Two producers already had a plan for its implementation, and the rest was not ready with their plans. 75% of the respondents belonged already to a producer's group and all but one considered this to be useful (one answer "neutral").

Table 1 Questions and responses from producers about the SUP-directive

Do you feel like you have enough knowledge of the SUP-directive and its' regulations concerning recreational fishing gear?	Do you have a plan how to meet the requirements of the SUP-directive?	Are you involved in the extended producer responsibility network?	Do you find the cooperation in the producer responsibility network useful?	Lang-uage
No	Not yet ready	No	Yes	se
No	Not yet ready	Yes	Yes	se
Yes	Yes	Yes	Yes	fi
Yes	Yes	Yes	Yes	fi
Yes	Not yet ready	No	Neutral	fi
No	Not yet ready	Yes	Yes	se
No	Not yet ready	Yes	Yes	fi
Yes	Not yet ready	Yes	Yes	se

Retailers

Only 2/7 retailers answered to have enough information about the SUP directive for fishing gear and 3/4 of Estonian retailers did not know about the directive. One retailer had a ready plan for the implementation, of one retailer the plan was not

yet ready and all others did not have any plans. Only one retailer belonged to a producers group but answered not to consider that useful.

Table 2 Questions and responses from retailers about the SUP-directive

Do you feel like you have enough knowledge of the SUP-directive and its' regulations concerning recreational fishing gear?	Do you have a plan how to meet the requirements of the SUP-directive?	Are you involved in the extended producer & retailer responsibility network?	Do you find the extended producer & retailer responsibility network useful?	Lang-uage
No	No	No		se
Directive unknown	No	No		et
No	Not yet ready	Yes	No	et
Directive unknown	No	No		et
Directive unknown	No	No		et
Yes	No	No		fi
Yes	Yes	No		se

Fishers

Half of the 88 returned answers from fishers were in Estonian, 32 in Finnish and 12 in Swedish. The level of familiarity of the SUP-directive was even less among fishers. More than half of them had not heard about them with the largest fraction among the Estonian answers.

Table 3 Fishers' answers to the question "Have you heard of the Single use plastics directive (SUP) and its regulations concerning the fishing gear producers and retailers?"

Language	No	Yes	Unsure	Sum
SE	6	6	0	12
FI	16	13	3	32
EST	26	8	10	44
Sum	48	27	13	-

3.1.2 Used material and plastic replacement option

Fishing gear varies in the material being used

The range of products manufactured by the producers who answered the questionnaire varied (Table 4). Three of the producers manufactured only lures, two lines, lures and rods, one lines, nets, rods and lures, one lines, rods, draw boxes, fly lines, and fly-tying materials, one lines and lures and one only rods. The most widely used plastic component was polyprop(yl)ene (PP), followed by polyamide (PA) and polyethylene (PE). Generally, the applied plastic components varied between producers and most producers applied more than one type of plastic component.

Table 4 Material used in the production of fishing lines, lures, rods and nets

Used component	Count
Polyprop(yl)ene PP	4
Polyamide PA	3
Polyethylene PE	2
Polystyrene PS	1
Polyurethane PU	1
Dyneema fiber	1
Other (CAB)	1
Other (ABS)	1
Other (PVC)	1

Five of eight producers had not changed plastic for biodegradable or natural material, three to some extent. To the question “Is recycling taken into consideration during production of the fishing gear in your company” three producers answered with yes, two with “to most extent”, one answered “seldom” and two answered with “no”. Seven of the eight producers also answered to the question “How is recycling taken into consideration during the production in your company?”. The answers were:

- as little waste as possible;
- working on alternative solutions for packaging as well as for material choices;

- minimising packaging material and using cardboard packaging where possible;
- using broken equipment for making new one and replacing of parts.
- using recycled plastic

One producer expressed careful planning of new products but also pointed to the fact that this is especially for a small company a challenge which can be eased by collaborating with other businesses and sector organisations and that they also work actively on effective informing consumers about the recycling of fishing gear.

3.1.3 Preferred recycling opportunities

When producers and retailers were asked "What do you consider to be the most efficient way of reducing the chance of losing sport fishing gear?" The selection option "Communicative campaigns" got most votes. Producers also considered "Advice and guidance" and "Technical/designed solutions on the product" as effective means of reducing the chance of losing gear.

Table 5 Areas of required support for producers and retailers

In which issues do you need more support so that you could take the required steps in recycling and reuse of fishing gear? (Choose 3 most important ones)	Producers	Retailers
Recycling system	5	3
Collaboration with others (producers, producers' community, recycling companies and authorities)	4	0
Financing	3	2
Guidelines	3	5
Legal requirements	2	1
Material replacement	2	1
Solving certain challenges	1	1
Information and research	1	1
No need for additional support	3	1

Table 6 Ways to reduce lost fishing gear according to producers and retailer

What in your opinion is/are effective ways(s) to avoid or reduce the fishing gear products ending up in nature from the end users? Choose maximum of 3 most important ones.	Producers	Retailers
Communication campaigns	5	3
Advice and guidance	4	2
Technical/designed solutions on the product	4	2
Recycling system	2	2
Retrieval actions (beach cleanups, diving, dragging etc.)	2	2
Other solutions	1	2
I don't know	1	2

Fishers mostly answered that the appropriate gear for the specific fishing area prevents gear loss (53%). This was followed by using the right gear with regard to weather and ice (43%) and using the right technique (41%).
23% of the fishers answered that communication among fishers prevents loosing fishing gear, followed by "Collection activities like beach-cleanups" (18%), "Information and communication on social media" (16%), "Cooperation with environmental organizations" (7%), "Retailer or producer communication campaigns" (6%), "Background information on the fishing area" (6%), "Reporting system" (3%), "Do not know" (9%), and "Other means" (9%).

According to the recreational fishers who answered the questionnaire, the best location for EOL gear collection bins would be at retailers' premises where recreational fishing gear is sold (27 %). Some other popular sites would be popular fishing places (23,9%) and communal recycling centres (24 %). Also, marinas gained some popularity (18 %).
The best motivation for recycling broken or old fishing gear would be that it can be done free of cost (69,3 % answered this as one of the three most significant incentives). The free-of-cost collections are also in line with the SUP-directive's requirements. Fishers are also motivated to recycle because of environmental

perspectives (54,5 %), and the location of the recycling points should be considered carefully. 38,6 % would be more motivated to recycle if they received compensation for the recycled gear.

However, according to the questionnaire, most fishers do not feel it's necessary to create a recycling system for old gear (43,2 %), and only 21,6 % think it is essential. Most of the fishers recycle all or at least some of their gear (78,4 %), which is a relatively high percentage considering that the collection of EOL gear had not yet begun in Finland and was only partially in Estonia and Sweden at the time this questionnaire was answered. This might be why fishers do not think it is essential to create a new system to replace their recycling habits.

3.2 Interviews and other direct reaches for stakeholders

To complement the questionnaire results and open up some of the risen issues, in each of the three project countries one representative of each of the three stakeholder groups i.e. fishing gear producers, retailers and end-users (fishers' associations) were interviewed (interview questions in English in Appendix II). This resulted in 9 interviews in total. Potential interviewees were contacted during various events such as fairs and seminars. All but one interview were conducted by KATA. The remaining interview with one Estonian retailer was conducted by a representative from Tartu University. All the interviews were recorded and transcribed. The interviews were conducted at the end of 2024 and a few during 2025.

3.2.1 Finding the right level of bureaucracy

On the one hand, producers and retailer expressed the additional bureaucratic burden risen by the implication of the SUP-directive for fishing gear, resulting in more time and money spent. For example, in Sweden did the producers of fishing gear first need to found their own SUP producer group as they were not accepted by existing ones (communicated in interview). Retailers communicated that they

do not want to increase the prices of their products for customers, but they might need to make up for the added costs.
In addition, naming a target amount for recycled plastics from fishing gear may not address the right link in the chain. One producer from Finland and from Sweden raised the concern that they might be made to pay if they do not reach the recycling target of fishing gear – in Sweden at 20% by 2027 (Swedish Government, 2021) and in Finland 10% of what was put on the market the previous year (Valtioneuvosto, 2022) - while they aim to produce long lasting products.
On the other hand, there seems to be a lack of regulation. One producer commented that customs would have concrete data what comes into the country and a tax could be used to return/recycle fishing gear. At the present situation, fishing gear ordered via E-commerce from non-EU website fall through the SUP-directive i.e. the sellers of these products do not contribute monetarily to the collection of EOL fishing gear within EU. These products are generally cheaper than their EU counter mates. This is usually realised by using low-quality plastics, which results in an easier breakage and worsening the ALDFG situation. In addition, fishers would buy new nets instead of fixing the old ones as the incentive of saving money by repairing gear is not given with the cheap nets.

3.2.2 Recycling options

When the project started, the recycling of EOL fishing gear in Sweden was done at the Sotenäs Marine recycling centre. As Finland had not - and still has not - such in place, several recycling companies were contacted to query about recycling possibilities of EOL fishing gear. None of the companies were able to recycle the fishing gear due to the lack of a recycling system to handle them. In order to potentially recycle fishing gear, the different plastics must be (manually) separated from each other. Often, fishing nets are made of a blend of different plastics, where some plastics are recyclable whereas others are not.
Retailers had a strong opinion of reducing the packaging in which the lures are packaged. They think that it is the packaging that is the most problematic aspect, in contrast with the lures and fishing line being left in the environment. Producers

say that they have been phasing out plastic in their packaging, selling them more in pick and mix fashioned boxes. During interviews the producers also mentioned that for fishing lures made out plastic, the leftovers from producing them are brought back into circulation so that no plastic goes to waste.
One producer/retailer reported rather illustratively an experience with providing the option of returning used nets. People returned fishing nets with fish attached. After adding a lock to the container the problem continued as people placed their nets in bags next to the container which eventually attracted rodents. In addition, during the collection campaign in 2024 in Finland, at a retailer's store, the only returned net contained fish. This had as a consequence, that for the 2025 collection campaign the collection bin was placed in a spot that was easier for the sales personnel to observe. No net was returned.

3.2.3 Defining the right target group

Respondents of questions as well as of interviews in the fishers' group were apparently sport fishers. They communicated clearly that they are distinct to people fishing without a sporting habit. They widely expressed that sport fishers are not the right addresses for tackling the problem of oceans and seas plastic pollution, especially in the Baltic Sea. In their opinion the commercial fisheries are those that contribute most to the plastic problem, and that the waste from recreational fishing is too marginal of a problem. Fishers stressed that they always bring their litter with them and also pick up litter they find wherever they are fishing. The fishers also maintained the opinion that those who have been fishing for a longer time know how and where it is good to fish. None of the ones we interviewed used fishing nets exclusively, but a combination of fishing nets and spinning rods. The fishers were surprised when told that during the dragging operations conducted in 2024 that over 4 km of fishing nets were found in the sea.
Keep The Archipelago Tidy Association maintains the beach cleaning program "Siiste Biitsi" (in English "Tidy Beach") which engages people to voluntarily collect litter at beaches. During the run of this project, six of such volunteer beach cleaners contacted Keep the Archipelago Tidy Association in Finland. All of the

beach cleaners supported the project's objectives as they have seen firsthand how damaging fishing-related litter can be. The biggest problems on popular fishing sites mentioned by them were the lack of awareness and lack of proper disposal bins at the site or nearby. Many of the fishers that the beach cleaners have met on these fishing sites having an obvious litter problem have been of different backgrounds and appeared to have a lack of sufficient Finnish language skills, and most likely with little or no experience of nature awareness while enjoying life outdoors. According to the beach cleaners, it seems that not all of these fishers do understand the harmful impact of the fishing gear litter they leave behind. Maybe it's because of the small size or amount, or they do not know of the harms caused by e.g. plastic in the nature. The volunteers suggested that the most efficient way in their opinion is to communicate about the littering problem in several languages, not only the main languages, and do it in different ways and levels: signs on the most popular fishing sites, communication campaigns and cooperation with authorities.

3.2.4 Raising public interest

During the course of the Re:fish project, there has been continuous interest by the press. This has been expressed by publishing online articles and broadcasting radio interviews. When presenting the project at fairs and diving events, the project was well-received by the public for its actions to gain knowledge on the litter left behind by recreational fishers. In addition, during the dragging operations local people got in contact with the crew. The vessel was usually moored in commercial fishing harbours and people came from their summer cottages to inform the crew about their lost nets including type and amount. Following up on these notifications, usually resulted in finding nets.

4 Discussion and next steps

This document's primary aim is to bridge the gap between all the stakeholders within recreational fisheries industry and help them find a mutual understanding under the EU's SUP – directive. It is also meant to help identify the problems in all the project partner countries from various angles, from the different stakeholder groups and some issues that all countries share and have in common.

The project Re:fish overlapped with the implementation of the SUP-directive for fishing gear into Finnish, Swedish and Estonian law. The questionnaires were carried out approximately half a year before the obligation of producers to contribute to a collection system for EOL fishing gear. Both producers and retailers were at that stage not homogenously confident with the upcoming system. There was a clear gradient from producers, via retailers to fishers about the awareness of the directive regarding the fishing gear EOL. Producers were well aware of what was to come, while half of the fishers did not know about the directive. This points to the fact that the responsibility of distributing the information to the fishers – as without them knowing about the directive and the possibility of returning their gear they are not going to do so – lied with the producers. In Finland, the SUP-producers group started a campaign which resulted in 2025 in 112.6 t tonnes returned fishing gear. This amount included 100.1 t for re-use (this amount came from commercial fishing and aquaculture and was sent to Ukraine for drone defense); 1.6 t for recycling and 10.8 t for recovery (SUP Tuottajat, 2026). This shows that producers in Finland have taken on their role which was given to them by the EOL directive.

There was also a difference in expressed needs regarding recycling between producers and retailers. While producers saw the strongest need in a recycling system, retailers expressed a need for more guidelines. Overall, producers showed that they understand their role in the SUP-directive as being widely able to name concrete actions how recycling is taken into consideration during the production in their companies.

The responses by the producers confirmed that there is a broad variety of materials used to produce lures, rods and lines. There was only one producer which manufactured nets. The variety of plastics used in fishing gear production is one of the major problems for recycling. Mixed plastics have usually inferior properties in recycling and sorting is very time-intensive. As part of the Re:fish project, 10 kg of gill nets which had been collected during a campaign at waste service stations in the Archipelago Sea, were analysed for recycling properties. (Keep the Archipelago Tidy Association, 2025).
As recycling of fishing gear pose its challenges presently, producers opt for reducing plastic waste differently i.e. by replacing plastic packaging with more sustainable materials and developing new commodalities of packing such as offering refillable containers. Producers are open to new sustainable product developments but presently do not see an alternative for plastic in their products. Another option to prevent ALDFG is repairing and selling gear second hand. In that case however, gear is not counted as recycled and hampers reaching the recycling quotas. This is counterproductive as the main goal should be to keep as much fishing gear as possible in use.
Fishers want recycling places which are easy to reach and no extra costs should accrue. A voucher system for returned fishing gear would increase their willingness to recycle their gear.

Getting into discussion with producers and fishers made clear that the group of fishers is not a homogenous group. Sport fishers need to be differently addressed than fishers without a sporting attitude. Interviewed sport fishers showed a sustainable fishing attitude with applying the right gear and right techniques to avoid gear loss. Producers of sport fishing gear do not see themselves as the problem but commercial fishing. Clearly, different actors have to take on their role in reducing plastic waste and the motivation to contribute ones own share. This is not only true for EOL fishing gear but for the whole plastic sector. There is a need to create a shared understanding of ALDFG/EOL fishing gear. Everyone can be a part in this, small actors as well as large ones. The attitude sport fishers have towards sustainable fishing could be used to multiply among leisure fishers.

Beach clean ups and dives at leisure fishing hotspots in Finland showed that the usage of the beach is reflected by the litter found. While fishing related waste was 6% of the total litter reported in the "Finnish coastal macrolitter monitoring results" in the years 2012 – 2021 (0,47 % in 2023), the proportion of fishing related litter at the fishing hot spots was 16,7%. At one of the chosen hot spots a sauna/restaurant complex was constructed during the runtime of the project. While before the construction of the complex, the fishing related litter was 36%, while after the construction the fraction was 6,7%. This further demonstrates the impact of the usage type of the beach. This also clearly demonstrate that the general public needs to be reached and general litter literacy to be improved. In Norway, Kystverket (2022) has an inspiring video about ALDFG. In this project, Håll Sverige Ren coordinated the creation of signs illustrating in a funny way why ALDFG should be prevented. In Estonia, videos were created for display on ferries to inform ferry guests about sustainable fishing. These are examples on which one can build up to.
While synergy between (Nordic) countries has to be strengthened also with regard to handling ALDFG/EOL fishing gear, not all actions can be streamlined due to national differences. While for example in Estonia free-time events for young people about sustainable fishing were hold (including informing about the detrimental effect of ALDFG), this is a concept which does not fit into the Swedish system. There a more effective way to educate about sustainable fishing is via the existing fishing clubs with which Håll Sverige Ren already had an ongoing collaboration. In Finland, the existing fishing clubs provide an opportunity for spreading knowledge on sustainable fishing. For example, during the running time of the project, one outreach event took place with the Vaasa fishing club.

Retrieving ALDFG has to be the very last option. This project has shown that draggings are expensive and may also draw negative attention of citizens. In addition, organising dives has also been shown not to be straight forward. In Finland, it was hard to book diving time and in Sweden one company jeopardized the diving efforts. The EOL SUP directive only considers newly introduced fishing

gear but not lost gear prior to the introduction of this legislation. At the present, retrieval of these gears lies with individual efforts like in this project.

There is a clear need for improvement of the existing EOL fishing gear handling and one project cannot address all levels in depth. Parallel to the project Re:fish, the project Blue Circular Nets (CIRCNETS) was carried out in the Interreg Northern periphery and Arctic program, an adjacent region to the Interreg Central Baltic region. The project CIRCNETS looked among others into life cycle assessments in fishing gear waste management methods and gaps and possibilities of current end-of-life fishing gear disposal systems.
It has also to be noticed that the EU does not consider the present SUP-directive as static and performed a public consultation from 23.12.25 – 17.3.26 asking public feedback with the heading “Rules on single-use plastics and fishing gear (evaluation)”. The commission adoption is planned for the second quarter in 2027.
In addition, the Helsinki Commission has started to address ALDFG with three recent publications in the group sea-based-pressures and the topics “fisheries” and “marine litter” (RS 9, 10 & 11). One of them elaborates on best practices of fishing gear marking applicable in the Baltic Sea.

These efforts and activities clearly state that ALDFG is an issue which needs to be addressed and gets increasingly awareness and actions against it.

EU
Find a solution for the increasing amount of outside EU-purchases undermining the efforts for reducing plastic waste

State/government
Ease recycling opportunities and make decisions with involved partners

Research and development
Development of clever sustainable production and recycling paths

Producers & retailers
Continue the good work with building up a collection system and looking for recycling options

Fishers
Sport fishers can act as multipliers for right fishing skills and environmental friendly behaviour

General public
Think after when producing litter and use litter reporting systems

Various actors incl. NGOs
Encourage using less plastic & returning nevertheless used plastic;
Engage citizens by providing litter reporting tools;
Use programs like "Siisti Biitsi" (Clean Beach) to create a community understanding of litter

Figure 2 Major action points per stakeholder

5 Conclusion

Within the framework of the Interreg Central Baltic project Re:fish, we went in dialogue with directly involved EOL/ALDFG fishing gear stakeholders i.e. producers, retailers and fishers by carrying out a questionnaire complemented with individual interviews. We observed different levels of awareness about the EU SUP-directive between the interviewed stakeholders. Producers highlighted the need for a functioning recycling system, while retailers emphasized the need for clearer guidelines and instructions. It shows that different stakeholders have different needs to fulfill the requirements of the SUP Directive.

The results reveal several structural and practical gaps that affect the life-cycle management of EOL (end-of-life) fishing gear. Without a functioning and accessible collection and recycling system, the obligations of the SUP Directive cannot be effectively fulfilled, regardless of awareness levels among producers and retailers.

Structural system development, combined with clearer guidance and improved product design, is therefore essential for achieving sustainable life-cycle management of plastic-containing fishing gear in the Central Baltic region.

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Appendix I – Questionnaires

The questionnaire was translated into Estonian, Finnish and Swedish. The questions in the questionnaire that were posted online through the Lyyti website. The questions were made in collaboration with all the project partners. The questions were constructed with the SUP directive including the recycling in mind, and questions what the different stakeholder groups will need to achieve the aims of the directive. There was an individual set of questions for producers, retailers and fishers respectively. Few questions were the same across the three groups, with a higher overlap in questions between retailers and producers.

Questionnaire for producers

A questionnaire for recreational fishery gear producers about the SUP-directive

The aim of this questionnaire is to establish the needs of producers of recreational fishing gear in Estonia, Finland and Sweden in order to find out what could be done better or what is lacking considering the execution of the SUP-directive. The information you provide will help us gain an insight into your needs so that more people can enjoy fishing in plastic free seas. The questionnaire is answered anonymously, and questions marked with an asterisk (*) are mandatory. The questionnaire is available until 15th of September 2024.

In summary, the European union's single use plastics directive (SUP-directive) aims to prevent and reduce the impact of plastic waste especially in marine environments, to promote a circular economy, and to harmonise the product regulation in the EU single market.
This questionnaire is a part of the Re:Fish project funded by Interreg Central Baltic. You can read more about the project at https://centralbaltic.eu/project/refish/.

1. What fishing gear do you produce? (Choose appropriate one(s)) *
    - Fishing line
    - Fishing nets
    - Fyke nets
    - Fish traps
    - Lures
    - Fishing rods
    - Fishing tags
    - Other, specify:
2. What materials are used in your products? (Choose appropriate one(s)) *
    - Plastic
    - Metal
    - Wood
    - Cork
    - Carbon fibre or other composite material
    - Other materials, specify
3. Which plastics?
    - Polyamide (PA)
    - Polyethylene (PE)
    - Polypropylene (PP)
    - Polystyrene (PS)
    - Polyester (PES)
    - Polyurethane (PU)
    - Dyneema fibre
    - Other, specify:

4. Which metal is used?
    - Lead
    - Iron
    - Other, specify:
5. Do you feel like you have enough knowledge of the SUP-directive and its'regulations concerning recreational fishing gear? *
    - Yes
    - No
    - Not familiar with the directive
6. Do you have a plan how to meet the requirements of the SUP-directive? *
    - Yes
    - Not completely ready
    - No; explain why there is no plan:
7. What do you consider to be as the largest problem for you as a producer with the SUP-directive? *
8. In which issues do you need more support so that you could take the required steps in recycling and reuse of gear (Choose 3 most important ones) *
    - Financing
    - Recycling system
    - Collaboration with stakeholders
    - Legal requirements
    - Information and research
    - Instructions
    - Material replacement
    - Recyclability of the products
    - Other; specify:
9. Are you involved in the extended producer responsibility network? *
    - Yes
    - No
    - I don't know
10. Do you find the cooperation in the producer responsibility network useful? *

- Yes
- Neutral
- No

11. Is recycling taken into consideration during production of the fishing gear in your company? *

    - Yes
    - Mostly yes
    - Rarely
    - No

12. Specify, how is recycling taken into consideration during the production in your company?
13. What in your opinion is/are effective ways(s) to avoid or reduce the fishing gear products ending up in nature from the end users? Choose maximum of 3 most important ones. *

    - Communication campaigns
    - Advice and guidance
    - Technical/designed solutions on the product
    - Retrieval actions (beach cleanups, diving, dragging etc.)
    - Recycling system
    - I don’t know
    - Other, specify:

14. Have you considered replacing plastics with natural or environmentally friendly materials in some product categories, or some parts used in fishing gear production? *

    - All plastics have been replaced with natural or environmentally friendly materials
    - Most of the plastics have been replaced with natural or environmentally friendly materials
    - Some of the plastics have been replaced with natural or environmentally friendly materials
    - None of the plastics have been replaced with natural or environmentally friendly materials
    - I don’t know

15. Why have the plastics not been replaced?
16. In which extent would it be possible to recycle the materials in your company? (Please specify the gear and/or parts)
17. Which assessments have you conducted for your products? (Choose appropriate one(s)) *

- Life cycle assessment
- Material inspection
- Calculation of emissions
- None of these
- Other environmental assessment; specify:

18. What kind of future changes would you like to see in the fishing gear industry, to make it more environmentally friendly and sustainable in the future? *
19. Approximately what percentage of your annual sales is made up of different types or parts ore recreational fishing gear (e.g., rods, reels, lines, lures) per country?

- In Finland
- In Estonia
- In Sweden
- In Europe

20. Free comment! Is there something else you want to mention or comment about?

Questionnaire for retailers

A questionnaire for recreational fishery gear retailers about the SUP-directive in Estonia, Finland and Sweden

The aim of this questionnaire is to establish the needs of retailers of recreational fishing gear in order to find out what could be done better or what is lacking considering the execution of the SUP-directive. The information you provide will help us gain an insight into retailer's needs so that more people can enjoy fishing in plastic free seas. The questionnaire can be answered anonymously, and questions marked with an asterisk (*) are mandatory. The questionnaire is available until 15th of September 2024.

In summary, the European union's single use plastics directive (SUP-directive) aims to prevent and reduce the impact of plastic waste especially in marine environments, to promote a circular economy, and to harmonise the product regulation in the EU single market.
This questionnaire is a part of the Re:Fish project funded by Interreg Central Baltic. You can read more about the project at https://centralbaltic.eu/project/refish/.

1. In which country or countries do you operate? *
    - Estonia
    - Finland
    - Sweden
    - Other EU-country
2. Do you feel like you have enough knowledge of the SUP-directive and its' regulations concerning recreational fishing gear? *
    - Yes
    - No
    - The directive is not familiar at all
3. Do you have a plan how to meet the requirements of the SUP-directive? *
    - Yes
    - Not completely ready
    - No, if not why:
4. What do you consider to be as the largest problem for you as a retailer with the upcoming SUP-directive?
5. In which issues do you need more support so that you could take the required steps in recycling and reuse of fishing gear? Choose 3 most important ones *
    - Financing
    - Recycling system
    - Collaboration with other stakeholders
    - Legal requirements
    - Information and research
    - Instructions

- Material choices
- Recyclability of products
- No need for more support
- Other issue; specify:

6. Are you involved in the extended producer & retailer responsibility network? (Choose appropriate one) *

- Yes
- No
- I don't know

7. Do you find the extended producer & retailer responsibility network useful? *

- Yes
- Neutral
- No

8. What recreational fishing gear do you sell? *

- Fishing nets
- Fishing lines
- Fike nets
- Fish traps
- Lures
- Fishing rods
- Fishing trap markings (flags, etc.)

9. Other recreational fishing gear you sell but is not listed above:
10. Which assessments have you conducted for the recreational fishing products you sell? *

- Life cycle assessment
- Material comparison
- Calculation of emissions
- None of these
- Other assessment with an environmental point of view, specify:

11. Do you have a recycling system for unsold, returned, reclamation and/or End-of-Life recreational fishing products? *

- Yes, for all products
- Yes, for some products.
- No

12. Does recyclability affect the product sales? *

- Positively
- Negatively
- No significant difference
- I don't know

13. Do you inform the customer of proper use of fishing gear to avoid losing gear in the nature? *

- Yes
- No

14. How and in what circumstances do you inform the customer?
15. Would it be possible for you to locate recycling bins at your premises to dispose of old fishing gear? *

- Yes
- Maybe
- No; specify;

16. What in your opinion is/are effective ways to avoid or reduce the fishing gear products ending up in nature from the end users? Choose maximum of three most important ones. *

- Communicative campaigns
- Advise and guidance
- Technical/designed solutions on the product
- Retrieval actions (e.g. diving, beach clean-ups)
- A recycling system
- I don't know
- Other solutions, specify:

17. How do you feel about public cleaning events aiming to clean up lost fishing gear? *

- We have organised such events or are planning to do so
- We are interested of participating in case someone else would organise the event
- No interest for such events

18. Free comment! Is there something else you want to mention regarding the subject or the questions?

Questionnaire for sport fishers

A questionnaire about the SUP-directive for recreational fishers

The aim of this questionnaire is to establish the needs of Estonian, Finnish and Swedish users of recreational fishing gear to find out what could be done better or what is lacking considering the SUP-directive execution. The information you provide will help us gain an insight into your needs so that more people can enjoy fishing in plastic free seas. The questionnaire can be answered anonymously, and questions marked with an asterisk (*) are mandatory. The questionnaire is available until 15th of September 2024.
In summary, the European union's single use plastics directive (SUP-directive) aims to prevent and reduce the impact of plastic waste especially in marine environments, to promote a circular economy, and to harmonise the product regulation in the EU single market.
This questionnaire is a part of the Re:Fish project funded by Interreg Central Baltic. You can read more about the at https://centralbaltic.eu/project/refish/

1. Where do you fish? (Choose appropriate one(s)) *

- Lake
- Sea
- River/Stream
- Other

2. What region do you fish in? Name the counties/municipalities:

3. What type of fishing gear do you use for recreational fishing? *

   - Hand line
   - Spinning reel
   - Troll line
   - Flyfishing
   - Bottomline
   - Ice fishing
   - Harpoon gun and a harpoon
   - Gillnet
   - Fish trap
   - Longline
   - Fykenet
   - Worm fishing equipment
   - Other fishing gear you use that were not listed:

4. On how many days approximately do you fish per year? *(answer in number of days)* *
5. For how long approximately have you been active in the recreational fishing sector? (Choose appropriate one) *

   - More than 20 years
   - 10–20 years
   - 5–10 years
   - 1–5 years
   - Less than a year

6. Have you heard of the Single use plastics directive (SUP) and its regulations concerning recreational fishing gear producers and retailers? *

   - Yes
   - No
   - Not sure

7. Do you recycle your fishing gear? *

   - Yes
   - Some of them
   - No

8. How do you dispose of your old fishing gear?

9. What challenges, if any, have you encountered when it comes to responsibly disposing of old or damaged fishing gear?

10. What would motivate you most to recycle your broken or old fishing gear? *(Choose 3 most important)* *

    - Good location of recycling points
    - Free of cost
    - Receiving compensation for the recycled gear (e.g. vouchers or discounts to retailer's products)
    - Environmental perspectives
    - Social pressure
    - Legislation
    - Other reason, specify:

11. With the amount of recreational fishing gear that you discard each year do you feel it is necessary to create a recycling system for old/broken gear? *****

    - Yes
    - Maybe
    - No

12. How often do you lose gear when fishing and which type of gear? *****

    - Every time
    - Often
    - Rarely
    - Never

13. Have you tried to retrieve your lost fishing gear? (Choose appropriate one) *

    - Yes
    - No

14. If you have tried to retrieve fishing gear, do you usually succeed? *

    - Always
    - Mostly
    - Rarely
    - Never

15. What do you think is the most effective way to avoid losing of gear? *(Choose 3 most important)* *

- Technical ways (e.g. specific knots or product design/alteration)
- Information exchange and communication on social media
- Retrieval actions (beach clean-ups, diving, dragging)
- Retailers' or producers' communication campaigns/educational sessions
- Collaborations with environmental organisations
- Fishers communicating of the problem with each other
- Info about the fishing areas (sea charts, topography etc.)
- Using the right equipment according to the fishing area
- Using the right equipment according to weather and ice conditions
- A reporting system
- I don't know
- Other, specify:

16. Would you consider using fishing gear made from natural fibres or from environmentally friendly materials if the catchability would be comparable to conventional fishing gear? (Choose appropriate one) *

- Yes
- Possibly
- Maybe not
- No

17. What do you most take into consideration when buying gear? *(Choose 3 most important)* *

- Quality, good catch ability
- Quality, long lasting/durable
- Price
- Brand
- Positive experience from previous use
- Trends
- Sustainability
- Environmental aspects
- Experts' comparison among similar products
- Visual appearance

- Domestic production
- Legal aspects (regulations and rules)
- Other, specify:

18. Which environmental assessments do you pay attention for when choosing a fishing product? (Choose appropriate one(s))

- Carbon footprint
- Material comparison
- Calculation of emissions
- Durability and longevity
- Advertised environmental assets
- I don't pay attention to environmental assessments
- Other, specify:

19. In case there was a public cleaning event organised aiming to clean up lost fishing gear at the place(s) you like to fish, would you attend? (Choose appropriate one) *

- Yes
- Maybe
- No

20. How much more would you pay extra (in %) for your fishing equipment if sustainability and reducing plastic waste in the sea and lakes would be covered for the product? *

- 0 %
- 5 %
- 10%
- 15 %
- 20 %
- Other percentage

21. If there would be recycling bins for old and broken fishing gear, what would be the best location to them in your opinion? **

- At popular fishing sites
- Retailers' premises
- Communal recycling centre
- Harbours

- Marinas
- Other, specify:

22. In which country do you live?

- Estonia
- Finland
- Sweden
- Other

23. Free comment! Is there something else you want to mention or comment about?

Appendix II – Interview questions

Interview Questions

Interview questions for producers

1. What products do you produce?
2. How familiar are you with the upcoming Single-Use Plastics (SUP) Directive and its specific regulations related to sport fishing gear? Do you feel you have sufficient knowledge to understand and comply with these regulations?
3. Do you have a strategy or plan in place to meet the requirements of the Single-Use Plastics (SUP) Directive? If so, could you provide some details on the key actions or steps you are considering?
4. What do you consider to be the biggest challenge for you as a producer with the implementation of the Single-Use Plastics (SUP) Directive? From your perspective, what are your primary concerns about these new regulations? Additionally, do you have measures in place to prevent fishing gear loss during use, in order to extend the product life cycle and minimize environmental impact?
5. In what specific areas do you feel you need more support or resources to implement effective recycling and reuse strategies for your products in compliance with the SUP Directive?
6. Are you currently involved in an Extended Producer Responsibility (EPR) network? If so, how do you see its role in supporting the transition required by

the SUP Directive? Do you believe the EPR network could take a more active role in facilitating compliance?

7. How does your company integrate recycling practices into its production processes? Can you provide specific examples of how these practices are implemented?
8. What do you think are the most effective ways to prevent fishing gear from being lost in nature from the producer's perspective?
9. What measures or strategies has your company implemented to prevent fishing gear products from being discarded in nature by end users? Can you provide specific examples of solutions or initiatives you are currently using to tackle this issue?
10. What types of materials are used in your fishing gear products, and why were these materials chosen?
11. Have you considered replacing plastics with natural or more environmentally friendly materials in any of your product categories or components used in fishing gear production? If so, could you provide examples or describe the alternatives you are exploring?
12. Are there specific materials or components that present challenges or opportunities for recycling within your company?
13. What types of assessments have you conducted for your products, such as environmental impact, life cycle analysis, or compliance with the SUP Directive? Can you provide details on the findings or outcomes of these assessments?
14. What changes or innovations would you like to see in the fishing gear industry to make it more environmentally friendly and sustainable? Are there specific practices, materials, or policies you believe could drive this transformation?
15. Approximately how much fishing gear does your company sell each year, including the types or specific components of fishing gear? Can you provide any details or estimates to help us understand the scale of your production and sales?
16. Is there anything else you would like to expand on in your answers or in general?

Interview questions for retailers

1. How familiar are you with the upcoming Single-Use Plastics (SUP) Directive and its specific regulations related to sport fishing gear? Do you feel you have sufficient knowledge to understand and comply with these regulations?
2. Do you have a strategy or plan in place to meet the requirements of the Single-Use Plastics (SUP) Directive? If so, could you provide some details on the key actions or steps you are considering?
3. What do you consider to be the biggest challenge for you as a retailer with the implementation of the Single-Use Plastics (SUP) Directive?
4. How do you anticipate the SUP directive to impact your operations or product offerings?
5. Are you currently involved in an Extended Producer and Retailer Responsibility (EPR) network? If so, what role does your company play within this network?
6. If you are involved in the Extended Producer and Retailer Responsibility (EPR) network, how would you evaluate the usefulness of this cooperation? Are there specific benefits or challenges you have encountered?
7. What types of assessments have you conducted for your products, such as environmental impact, life cycle analysis, or compliance with the SUP Directive? Can you provide details on the findings or outcomes of these assessments?
8. Do you have a recycling system in place for unsold, returned, reclaimed, or end-of-life sport fishing products? If so, can you describe how this system operates, and any key processes involved?
9. Does the recyclability of a product impact its sales? If so, how significant is this factor in customer purchasing decisions?
10. What do you think are the most effective ways to prevent recreational fishing gear from being lost in nature from the retailer's perspective?
11. Do you have any measures or strategies that your company has implemented to prevent the loss of fishing gear in nature? Could you provide practical examples of solutions or initiatives that you are carrying out? How do they work?
12. What role do you think communication plays in the responsible disposal of recreational fishing gear?
13. Do you provide customers with instructions on the proper use of fishing gear to prevent loss? If so, what methods do you use to communicate these instructions?

14. Have you been in contact with producers to share thoughts or development ideas regarding the recyclability of any recreational fishing gear products or their packaging?
15. Would it be possible for your company to place recycling bins on your premises so that customers can responsibly dispose of their old fishing gear? If not, what is the reason for this?
16. What is your opinion on public clean-up events focused on collecting lost recreational fishing gear? Do you believe these are an effective way to reduce littering, and would your company be interested in participating in such events in some way?
17. What changes or innovations would you like to see in the recreational fishing gear industry to make it more environmentally friendly and sustainable? It doesn't have to be an invention produced by your company; feel free to speculate on behalf of other stakeholders as well. Are there specific practices, materials, or regulations that could promote this change?
18. Is there anything else you would like to expand on in your answers or in general?

Interview questions for recreational fishers

1. Are you familiar with the Single-Use Plastics (SUP) Directive and its regulations regarding fishing gear?
2. Do you feel that your organization has the knowledge or expertise to support stakeholders (such as recreational fishing gear producers and manufacturers) in implementing the measures required by the Single-Use Plastics Directive?
3. Have fishing gear producers, manufacturers, or producer organizations consulted your organization regarding the Single-Use Plastics Directive?
4. Are you aware of any challenges or obstacles that fishers might face in responsibly disposing of old or broken fishing gear? What are these challenges or obstacles?
5. From your perspective, what would an effective recycling system for old and broken fishing gear look like? What features do you think should be considered in such a system?
6. What do you believe motivates fishers to recycle their broken or old fishing gear? For example, is it environmental awareness, some kind of reward (like a coupon) received in exchange for recycling, intervention from authorities, or something

else? How frequently do you lose fishing gear while fishing, and what types of gear are most commonly lost?

7. If recycling bins for old and broken fishing gear were available, what locations do you think would be the best to ensure that fishers use them? For example, near popular fishing spots, in fishing gear stores, in central areas, or somewhere else?
8. Are there any specific ways you think fishers could be motivated to recycle their fishing gear more effectively?
9. Do you have information on how often recreational fishers lose gear in nature? How much, and what types of gear are most commonly lost?
10. What do you think are the most important and useful methods to prevent recreational fishing gear from ending up in nature? Feel free to mention multiple methods.
11. Has the importance of environmental considerations increased in decisions related to recreational fishing? How is this reflected in your organization?
12. Do you think that environmental assessments or certifications are factors that recreational fishers consider when purchasing fishing gear? How significant are these factors in their purchasing decisions?
13. What role do you think communication plays in the responsible disposal of recreational fishing gear?
14. What kind of communication do you think should be done to reduce the occurrence of recreational fishing gear ending up in nature? For example, in what form should the communication take place, where should the message be visible, or what other perspectives should be considered?
15. Do you engage in communication aimed at preventing recreational fishing gear from ending up in nature? What kind of communication do you do, and how often?
16. What changes or innovations would you like to see in the recreational fishing gear industry to make it more environmentally friendly and sustainable? Feel free to brainstorm beyond just your organization's perspective.
17. Do you organize clean-up events to collect fishing gear from nature? What kind of events (e.g., diving, clean-up activities) do you hold, and who participates in them?
18. Is there anything else you would like to expand on in your answers or in general?

Appendix III – Recommendations

To fulfill the obligations of the Single-Use Plastics (SUP) Directive, recreational fishing equipment retailers and producers must align their practices with sustainability goals and regulations. Here are four recommendations to help them comply:

1. Transition to Eco-friendly Materials

- **Action:** Replace single-use plastic items with alternatives made from biodegradable or recyclable materials, such as paper, bamboo, or plant-based plastics, whenever possible. This includes items like fishing line packaging, also plastic bags where products are packed.
- **Why:** The SUP Directive targets plastic products that are commonly found in the marine environment, and transitioning to sustainable materials can help minimize waste and reduce environmental harm.
- **Implementation Tip:** Prioritize materials that are easily recyclable or compostable and ensure clear labeling for consumers about disposal methods.

2. Offer Refill or Reusable Options for Fishing Gear

- **Action:** Introduce refillable or reusable alternatives to single-use plastic products, like tackle boxes, lures, or bait containers. Encourage customers to return used products for reuse or refill.
- **Why:** This aligns with the SUP Directive's push to reduce the consumption of single-use plastics and promote reusable items.
- **Implementation Tip:** Set up collection systems or reward programs to incentivize the return of plastic products and provide discounts on reusable alternatives.

3. Educate Consumers on Proper Disposal and Recycling

- **Action:** Launch awareness campaigns to educate consumers about the environmental impacts of single-use plastics in the fishing industry and provide guidance on how to dispose of fishing gear and packaging responsibly. Create the campaign together with an environmental organization that has experience in awareness campaigning.
- **Why:** Public education helps reduce improper disposal, which is a significant source of marine plastic pollution. By informing consumers about recycling options and sustainable practices, retailers can foster a more eco-conscious customer base.
- **Implementation Tip:** Create informative signage or online content about the environmental effects of single-use plastics and guide how to dispose of fishing-related items responsibly. The most effective way to teach people new habits is to use nudging, i.e., positive influencing.

4. Collaborate with Suppliers and Industry Bodies for Sustainable Innovation

- **Action:** Work with suppliers to develop and adopt more sustainable products, such as biodegradable fishing line, non-plastic fishing gear, and eco-friendly packaging. Engage with industry groups to share best practices and stay updated on regulatory changes.
- **Why:** By collaborating with manufacturers and industry stakeholders, retailers and producers can help drive the development of sustainable alternatives to single-use plastics within the recreational fishing sector.
- **Implementation Tip:** Join or create sustainability networks within the fishing industry to influence product development and share resources for compliance.

By implementing these recommendations, recreational fishing equipment retailers and producers can play an active role in fulfilling the requirements of the Single-Use Plastics Directive and contribute to the reduction of plastic pollution in the environment.