



## **MSC Sustainable Fisheries Certification**

### **Lake Peipus Perch and Pike-Perch Fishery**

#### **1<sup>st</sup> Surveillance Report**

**May 2019**



Client: Logi-F

Certificate Number: F-MC-233002

Assessment Team: Rob Blyth-Skyrme, Dmitry Sendek, Anya Tishchenko (translation).

## Contents

General Information .....	4
1. Background.....	5
1.1 Scope and history of the assessment.....	5
1.2 Changes to the fishery since full assessment.....	6
1.2.1 Changes to the management system.....	6
1.2.2 Changes to relevant regulations.....	6
1.2.3 Changes to Personnel involved in science, management or industry .....	6
1.2.4 Changes to the scientific base of information, including stock assessments ....	7
1.2.5 Changes and updates on the ecosystem .....	7
1.2.6 Where enhanced fisheries, any updates on fishery's position in relation to scope criteria .....	7
1.2.7 Any developments or changes within the fishery which impact traceability or the ability to segregate between fish from the Unit of Certification (UoC) and fish from outside the UoC (non-certified fish). .....	7
1.2.8 Harmonisation.....	7
1.2.9 Summary catch and TAC data .....	8
1.2.10 Summary of condition status.....	9
2. Assessment Process .....	10
2.1 Surveillance audit activities .....	10
2.1.1 What was inspected.....	10
2.1.2 Surveillance audit team details .....	10
2.1.3 Date and location of surveillance audit.....	11
2.1.4 Stakeholder Consultation .....	12
2.1.5 Surveillance Standards .....	12
3. Results.....	13
Condition 1 (UoC 1: Perch).....	13
Condition 2 (UoC 1: Perch).....	15
Condition 3 (UoC 2: Pike-perch) .....	17
Condition 4 (UoC 2: Pike-perch) .....	20
Condition 5 (UoCs 1 and 2) .....	22
Condition 6 (UoCs 1 and 2) .....	25
Condition 7 (UoCs 1 and 2) .....	27
Condition 8 (UoCs 1 and 2) .....	29
Condition 9 (UoCs 1 and 2) NEW at year 1 Audit .....	30
Condition 10 (UoCs 1 and 2) NEW at year 1 Audit .....	32
Condition 11 (UoCs 1 and 2) NEW at year 1 Audit .....	33
4. Conclusion .....	35
5. References .....	36
6. Appendices .....	37

Appendix 1. Re-scoring evaluation tables.....	37
PI 2.3.1 – ETP species outcome .....	37
PI 2.3.2 – ETP species management strategy .....	39
PI 2.3.3 – ETP species information .....	42
Appendix 2. Stakeholder submissions .....	44
Appendix 3. Surveillance audit information .....	44
Appendix 4. Additional detail on conditions/ actions/ results .....	45
Appendix 5. Revised Surveillance Programme .....	47

## General Information

Fishery name	Logi-F Lake Peipus Perch and Pike-Perch Fishery		
Unit(s) of assessment	1) Perch ( <i>Perca fluviatilis</i> ) taken in the Estonian waters of Lake Peipus using gillnets and trapnets. 2) Pike-perch ( <i>Sander lucioperca</i> ) taken in the Estonian waters of Lake Peipus using gillnets and trapnets.		
Date certified	13 <sup>th</sup> October 2017	Date of expiry	12 <sup>th</sup> October 2022
Surveillance level and type	Level 6: Default surveillance		
Date of surveillance audit	25 <sup>th</sup> - 27 <sup>th</sup> February 2019		
Surveillance stage (tick one)	1st Surveillance	Yes	
	2nd Surveillance		
	3rd Surveillance		
	4th Surveillance		
	Other (expedited etc)	N/A	
Surveillance team	Lead assessor: Dr. Rob Blyth-Skyrme Assessor: Dr. Dmitry Sendek		
CAB name	Marine Certification LLC		
CAB contact details	Address	Osennyya str. 17 Block 1, Suite I, Room 146 Moscow 121609 Russia	
	Phone/Fax	+ 7 960 242 4845	
	Email	<a href="mailto:julia.nebolsina@marcert.ru">julia.nebolsina@marcert.ru</a>	
	Contact name(s)	Julia Nebolsina	
Client contact details	Address	AS Logi-F Videviku 7 Parnu EE 80042 Estonia	
	Phone/Fax	+372 447 5720	
	Email	<a href="mailto:fish@logif.ee">fish@logif.ee</a>	
	Contact name(s)	Olgert Margus / Uve Seero	

# 1. Background

## 1.1 Scope and history of the assessment

The Lake Peipus Perch and Pike-perch Fishery occurs on Lake Peipus (Pskovsko-Chudskoe Ozero in Russian), a lake of approximately 3,555 km<sup>2</sup> that is located on the border of the Republic of Estonia and the Russian Federation (Figure 1).



**Figure 1:** The Lake Peipus basin  
(Source: Roll et al. 2006)

By surface area, Lake Peipus is the fourth largest European lake. The lake consists of three parts: the largest and deepest northern part is called Lake Peipsi (Lake Chudskoe in Russian, area = 2,611 km<sup>2</sup>, maximum depth = 12.9 m), the middle strait-like part, called Lake Lämmijärv (Lake Teploe in Russian, area = 236 km<sup>2</sup>, maximum depth = 15.3 m) and the southern part, called Lake Pihkva (Lake Pskov; area = 708 km<sup>2</sup>, maximum depth = 5.3 m). Lake Pihkva is predominantly Russian; there is no Estonian fishing activity in this part of Lake Peipus.

The Lake Peipus Perch and Pike-perch Fishery targets European perch (*Perca fluviatilis*) and pike-perch (*Sander lucioperca*) in Estonian waters of Lake Peipus; both target species are predatory percids that are native to Lake Peipus and the surrounding region. The fishery is divided into two Units of Assessment (UoAs), with the gillnet and trapnet fisheries for perch comprising UoA 1, and the gillnet and trapnet fisheries for pike-perch comprising UoA 2.

The original assessment of the fishery commenced in September 2016, and the fishery was certified on 13<sup>th</sup> October 2017. The full assessment report for the fishery is available on the MSC website, here: <https://fisheries.msc.org/en/fisheries/lake-peipus-perch-and-pike-perch/@@view>. This report comprises the Year 1 Annual Surveillance report for the certified fishery.

## **1.2 Changes to the fishery since full assessment**

### **1.2.1 Changes to the management system**

There have been no significant changes to the fishery management system since the initial assessment.

It is noted that meetings of the Estonia-Russia Fishery Commission (ERFC) were changed from twice-per-year to just a single meeting in November annually immediately prior to the Lake Peipus fishery assessment. It was reported to the Audit Team this year that this change has not caused much difficulty for managers despite initial concerns. In between meetings, Estonian officials from the Fishery Resources Department are able to call or e-mail with Russian counterparts as needed, and the Heads of the Estonian and Russian Delegations to the ERFC can write to each other if any issues need to be addressed more formally.

### **1.2.2 Changes to relevant regulations**

It was reported to the Audit team that there were two prominent changes to regulations for fishing on Lake Peipus since the initial assessment.

- 1) From December 1<sup>st</sup> 2018, recreational fishers are limited to 15 kg perch catch per day, and are now required to buy a licence if they use spinning gear or up to three gears at a time. Recreational gillnets or longlines are also permitted under restrictions including effort limits and the requirement to purchase a fishing card and report catches (<https://www.riigiteataja.ee/akt/127112018014>).
- 2) In 2018, trapnetting in Lake Peipus was not permitted from 21<sup>st</sup> June to 20<sup>th</sup> August unless the codend of the trap had a minimum mesh size of 86 mm. For 2019, this rule has been modified to allow trapnetting during the summer period to proceed >10 km from the Estonian coast only with a minimum codend mesh of 86 mm (<https://www.riigiteataja.ee/akt/129122018021>). It is understood that this rule was introduced for the benefit of the vendace stock in particular, but should also reduce the potential for mortality of small pike-perch.

### **1.2.3 Changes to Personnel involved in science, management or industry**

Since the initial assessment, Herki Tuus has taken over from Kaire Märtin as the Head of the Fishery Resources Department of the Estonian Ministry of the Environment. It is understood that Mr. Tuus worked previously within the Department as the Estonian representative in Brussels, and his appointment should not change the approach to management in Lake Peipus in any significant way. It is noted that Ms. Märtin is now listed as an Adviser for the Department (<https://www.envir.ee/en/contact>).

#### **1.2.4 Changes to the scientific base of information, including stock assessments**

As reported in the initial assessment, the scientific base of information for the Lake Peipus fishery is collected during four fishery surveys annually, each with a different focus (Spring – mainly for vendace, smelt, perch and pike-perch, June – mainly for pike-perch and vendace, August – mainly for bream and roach, and October – mainly for pike-perch, perch and pike). The only difference in 2018 compared to previous years was that the summer trawl survey in June spent more time working in the upper layers of the water column to sample pelagic species – vendace and smelt.

For both target species – perch and pike-perch – the stock status assessment and TAC calculation are based on the results of the autumn trawl survey. According to the latest scientific data, stock status of pike-perch in the Lake Peipus increased slightly. In 2017 and 2018, pike-perch populations were dominated by fish groups of the 2015-2016 generations. Fish of these generations will form the basis of stock and catches in 2019. The 2017 and 2018 year-classes of in Lake Peipsi were poor, but very strong in Lake Pihkva.

The total allowable catch (TAC) for pike-perch in 2019 was set at 1,520 tonnes (t) with an Estonian share of 685 t. The stock of perch in the Lake Peipus also increased due to the growth of the dominant, very strong 2015 generation, which will form the basis of the stock and catches in 2019. The TAC of perch for the Lake Peipus in 2019 was set at 3,150 t with an Estonian share of 1,500 t (ERFC, 2018).

#### **1.2.5 Changes and updates on the ecosystem**

No significant changes in the Lake Peipus ecosystem were noted. It was highlighted, though, that 2018 was a very warm year, and that as a result there had been an emergency closure of the trapnet fishery for ten days in August to minimise the potential for mortality to occur while fish were constrained within the trapnets, or during hauling; this was related to low dissolved oxygen concentration in the warm water.

#### **1.2.6 Where enhanced fisheries, any updates on fishery's position in relation to scope criteria**

It is confirmed that perch and pike-perch taken in the Lake Peipus fishery are from natural populations that are not subject to enhancement.

#### **1.2.7 Any developments or changes within the fishery which impact traceability or the ability to segregate between fish from the Unit of Certification (UoC) and fish from outside the UoC (non-certified fish).**

No changes were reported to the Audit Team on the way that the fishery operates that would impact traceability or the ability to segregate between fish from the UoC and fish from outside the UoC.

#### **1.2.8 Harmonisation**

Since the Estonian Lake Peipus Fishery entered assessment in 2016, the Russian Lake Peipus Perch and Pike-perch Fishery has entered assessment (as of mid-March 2019, the Final Determination Report for this fishery has been published on the MSC website: <https://fisheries.msc.org/en/fisheries/russian-lake-peipus-perch-and-pike-perch/@@assessments>), as well as the Russian and Estonian Lake Peipus Perch and Pike-perch Fishery (as of mid-March 2019, there is no report available for this fishery: <https://fisheries.msc.org/en/fisheries/russian-and-estonian-lake-peipus-perch-and-pike-perch/@@assessments>). Because these fisheries target the same stocks and occur within the same water body using some of the same gears, consideration needs to be given to

harmonisation (Annex PB, MSC 2014). In this regard, it is noted that all three Lake Peipus assessments are being conducted by Marine Certification LLC, and Dr. Blyth-Skyrme is Lead Assessor for both the Estonian Lake Peipus Fishery (i.e., the fishery being audited) and the Russian Lake Peipus Fishery.

During the site visit for this surveillance audit, a Skype call was held between the Estonian Lake Peipus Audit Team and Dr. Andy Hough, Lead Assessor for the Russian and Estonian Lake Peipus Fishery (see note of meeting, Appendix 4). It was noted that there is a condition on the Russian Lake Peipus Fishery on black-throated diver (*Gavia arctica*), a bird species which is regarded as being ETP for the Russian fishery because it is included on the Russian Red List, and which is understood to interact occasionally with the Russian fishery.

Black-throated diver is also listed as an Annex I bird species on the EU Birds Directive ([http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index\\_en.htm#g](http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm#g)), and therefore has the potential to qualify as ETP for the Estonia Lake Peipus Fishery. While there was no information presented during the initial assessment to suggest that are interactions between the Estonian fishery and this species, the harmonisation discussion indicated that it should indeed be considered as ETP for Estonian fishery. As such, this has now been added in to the assessment and PIs 2.3.1-2.3.3 have been rescored in line with the scoring for the Russian Lake Peipus Fishery (see Appendix 1). It was confirmed that black-throated diver will also be considered as ETP for UoAs in the Russian and Estonian Lake Peipus Fishery.

An important consequence of this change is that there are now three new conditions added to the Estonian Lake Peipus Fishery (Conditions 9, 10 and 11 – see summary in Table 3 and detailed rationale in Appendix 1). In harmonising timelines as closely as possible with the Russian Lake Peipus fishery, these will be set for four years (and so are scheduled to be closed by the end of the certification period for the Estonian Lake Peipus Fishery on 22<sup>nd</sup> October 2022, in approximately 3.5 years). This is in conformity with PB3.4 (MSC 2014).

## 1.2.9 Summary catch and TAC data

The following information on TACs was sourced from the Estonian Ministry of Rural Affairs (<https://www.agri.ee/sites/default/files/content/kalandus/pyygiandmed/2018/peipsi-20181231.ods>). Catch data for product that was eligible to use the certificate were provided by the Logi-F client (O. Margus, pers. comm.).

It was noted by the client that the perch stock in the lake was dominated by small fish in 2017 and 2018; these were not marketable as MSC. This explains the very limited quantities of perch that were sold as MSC in those years (Table 1).

**Table 1:** UoA 1 (Perch) TAC and Catch Data

<b>TAC (Estonia + Russia)</b>	Year	<b>2018</b>	Amount	<b>2667.5 t</b>
<b>UoA share of TAC (Estonia)</b>	Year	<b>2018</b>	Amount	<b>1287.5 t</b>
<b>UoC share of TAC</b>	Year	<b>2018</b>	Amount	<b>Up to 1287.5 t</b>
<b>Total green weight catch by UoC</b>	Year (most recent)	<b>2018</b>	Amount	<b>1,638 kg</b>
	Year (2 <sup>nd</sup> most recent)	<b>2017</b>	Amount	<b>0 kg</b>

**Table 2:** UoA 2 (Pike-perch) TAC and Catch Data

<b>TAC (Estonia + Russia)</b>	Year	<b>2018</b>	Amount	<b>1466.76 t</b>
<b>UoA share of TAC (Estonia)</b>	Year	<b>2018</b>	Amount	<b>676.76 t</b>
<b>UoC share of TAC</b>	Year	<b>2018</b>	Amount	<b>Up to 676.76 t</b>
<b>Total green weight catch by UoC</b>	Year (most recent)	<b>2018</b>	Amount	<b>54,923 kg</b>
	Year (2 <sup>nd</sup> most recent)	<b>2017</b>	Amount	<b>1,674 kg</b>

### 1.2.10 Summary of condition status

The fishery was certified with eight Conditions, covering Performance Indicators (PIs) in Principles 1, 2 and 3 (Table 3, below, and see Section 3 for a detailed description of progress against these conditions).

**Table 3:** Summary of Assessment Conditions

<b>Condition number</b>	<b>Performance indicator (PI)</b>	<b>Status</b>	<b>PI original score</b>	<b>PI revised score</b>
1 (UoC 1)	1.2.2 (Slb)	Behind target	75	N/A
2 (UoC 1)	1.2.4 (Slc)	Behind target	75	N/A
3 (UoC 2)	1.2.1 (Slf)	On target	75	N/A
4 (UoC 2)	1.2.4 (Slc)	Behind target	75	N/A
5 (UoCs 1 & 2)	2.3.2 (Slb, Slc)	Behind target	65	N/A
6 (UoCs 1 & 2)	2.3.2 (Sle)	Behind target	65	N/A
7 (UoCs 1 & 2)	2.3.3 (Sla, Slb)	Behind target	60	N/A
8 (UoCs 1 & 2)	3.1.3 (Sla)	On target	60	N/A
9 (UoCs 1 & 2)	2.3.2 (Slb, Slc)	New (Year 1 Audit)	65	N/A
10 (UoCs 1 & 2)	2.3.2 (Sle)	New (Year 1 Audit)	65	N/A
11 (UoCs 1 & 2)	2.3.3 (Sla, Slb)	New (Year 1 Audit)	60	N/A

## **2. Assessment Process**

### **2.1 Surveillance audit activities**

#### **2.1.1 What was inspected**

The following was inspected during the year 1 surveillance audit:

- Changes to the fishery and its management, e.g. legislation and regulations, personnel changes within the science and management structure and within the industry;
- Compliance with fishery management regulations and requirements;
- Changes and updates on ecosystem issues, in particular fishery interactions with ETP species;
- Harmonisation requirements with other lake Peipus fisheries;
- Any changes that might affect traceability within the fishery and conformity with regulations;
- Progress against Conditions.

#### **2.1.2 Surveillance audit team details**

**Audit team leader:** Dr. Rob Blyth-Skyrme - Principles 2 and 3.

Rob started his career in commercial aquaculture, but subsequently shifted his focus to the sustainable management of wild fisheries. After his PhD he went to the Eastern Sea Fisheries Joint Committee, where he became the Deputy Chief Fishery Officer. He then moved to Natural England, the statutory adviser to UK Government on nature conservation in English waters, to lead the team dealing with fisheries policy, science and nationally significant fisheries and environmental casework. Rob now runs Ichthys Marine Ecological Consulting Ltd., a fisheries and environmental consultancy. As well as carrying out general consultancy, he has undertaken all facets of MSC work as a lead assessor, expert team member and peer reviewer across a wide range of fisheries, including in freshwater. Rob is a member of the MSC's Peer Review College and has completed the MSC v1.3 and v2.0 training modules.

Marine Certification LLC confirms that Rob meets the competency criteria for team leaders and has the appropriate skills and experience required to serve as a Principle 2 and 3 assessor. It is also confirmed that Rob has no conflicts of interest in relation to the Estonian Lake Peipus fishery.

**Expert team member:** Dr. Dmitry Sendek - Principle 1.

Dmitry has worked for 25 years as a professional fishery scientist. Since 2000 he served as a Senior Researcher at the Laboratory of Monitoring of Salmonid Fish Populations, State Research Institute on Lake and River Fisheries (GosNIORKh), St. Petersburg. From 1994 to 2000 he worked as a Researcher at the Laboratory of Fish Genetics, GosNIORKh, St. Petersburg. And from 1991 – 1993 he was employed as a Laboratory Assistant at the Laboratory of Cell Populations, Salmonid Fish Genetics Group. Institute of Cytology, Russian Academy of Sciences, St. Petersburg.

Dmitry received PhD in zoology in 2000 from the GosNIORKh, St. Petersburg with a thesis on the "Phylogenetic analysis of Coregonid fishes by means of allozyme electrophoresis method." His research interests include: Evolution, phylogeography and systematics of coregonids species on the basis of molecular markers analysis; Population genetics of fish

species: coregonids, Atlantic salmon, Sea trout, European grayling, Arctic char, European smelt, Sockeye salmon, and Pink salmon; Genetic conservation of coregonids fishes in Eurasia, and investigation of fish fauna of poorly studied water bodies of the Northern Russia.

Marine Certification LLC confirms that Dmitry meets the competency criteria for team members and has the appropriate skills and experience required to serve as a Principle 1 assessor. It is also confirmed that Dmitry has no conflicts of interest in relation to the Estonian Lake Peipus fishery.

Both Rob and Dmitry were on-site for the surveillance audit. Translation was provided by Anya Tischenko, who was acting for the CAB.

### 2.1.3 Date and location of surveillance audit

The site visit took place in Tartu, Estonia, from February 25<sup>th</sup>-27<sup>th</sup> 2019, with meetings as indicated below in Table 4.

**Table 4.** Stakeholder consultation & meetings

Date	Attendees	Topics discussed
25 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Anya Tischenko (Marine Certification)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures</li> <li>• Confirmation of site visit plan</li> <li>• Changes in key staff</li> <li>• Changes in the environment of Lake Peipus</li> <li>• Changes in the fishery</li> <li>• Progress against Conditions</li> </ul>
25 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Anya Tischenko (Marine Certification)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> <li>• Vaino Vaino (Estonian Marine Institute)</li> <li>• Elor Sepp (Estonian Marine Institute)</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in key staff</li> <li>• Changes in Regulations or the management system</li> <li>• Changes in the environment and stocks of Lake Peipus</li> <li>• Performance of the fishery</li> <li>• Progress against Conditions</li> </ul>
25 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Anya Tischenko (Marine Certification)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> <li>• Ivo Kask (Fishery Inspectorate)</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures</li> <li>• Changes in key staff</li> <li>• Changes in Regulations or the management system</li> <li>• Performance of the fishery</li> <li>• Compliance</li> <li>• Progress against Conditions</li> </ul>
26 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Anya Tischenko (Marine Certification)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> <li>• Liivika Naks (Ministry of Environment)</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures</li> <li>• Changes in key staff</li> <li>• Changes in Regulations or the management system</li> <li>• Future plans for management</li> <li>• Changes in the fishery</li> <li>• Progress against Conditions</li> </ul>

26 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Anya Tischenko (Marine Certification)</li> <li>• Olger Margus (Client: Logi-F)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> <li>• Margus Narusing (Fisherman)</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in the environment and stocks of Lake Peipus</li> <li>• Changes in the fishery</li> <li>• ETP species interactions</li> </ul>
27 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Anya Tischenko (Marine Certification)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> <li>• Meelis Tambets (Wildlife Estonia)</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in the environment of Lake Peipus</li> <li>• Changes in the fishery</li> <li>• ETP species interactions</li> </ul>
27 <sup>th</sup> Feb 2019	<ul style="list-style-type: none"> <li>• Rob Blyth-Skyrme (Marine Certification)</li> <li>• Dmitry Sendek (Marine Certification)</li> <li>• Dmitry Lajus (Client: Logi-F)</li> </ul>	<ul style="list-style-type: none"> <li>• Preliminary results of the audit</li> </ul>

#### 2.1.4 Stakeholder Consultation

A total of 4 stakeholder organisations and 5 individuals having relevant interest in the Lake Peipus Perch and Pike-Perch Fishery were identified and consulted during this surveillance audit. The interest of others not appearing on this list was solicited through the postings on the Lake Peipus Perch and Pike-perch Fishery page of the MSC website (<https://fisheries.msc.org/en/fisheries/lake-peipus-perch-and-pike-perch/@@assessments>).

#### 2.1.5 Surveillance Standards

This surveillance audit was carried out according to the MSC Standard v2.0, and process requirements set out in MSC Fisheries Certification Requirements v2.0.

### 3. Results

#### Condition 1 (UoC 1: Perch)

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	1.2.2	SIb: The HCRs are likely to be robust to the main uncertainties.	75
<b>Condition</b>	<p>The management system accounts for some uncertainty when setting HCRs. For example, managers estimate the magnitude of mortality from recreational and IUU fishing, and include the estimates in the stock assessment and in the process of allocating the TAC and quotas. However there remain some uncertainties about how managers estimate actual values for recreational and IUU fishing, and for the level of mortality associated with discarding, particularly of juvenile perch. Perch is the subject of quite an intensive recreational fishery, and in some years the volume of the recreational fishery can be about half of the commercial fishery, especially if the ice conditions in winter are favourable for amateur fishing (Oru et al. 2014). Thus, it is not clear that the HCRs are likely to be robust to the main uncertainties (levels of mortality associated with non-commercial fisheries and discarding).</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIb is met, specifically through demonstrating the following:</p> <p>SIb: <i>"The HCRs are likely to be robust to the main uncertainties."</i></p>		
<b>Milestones</b>	<p>Please note: Milestones here are similar or the same as those for Condition 2.</p> <p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Design a scientifically valid approach to determine the sources and amounts of perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding) that will aid in meeting the SG80 requirement for this SI.</li> <li>Provide a description of the plan to the Audit Team.</li> <li>Resulting score = 75.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Implement the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Resulting score = 75.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>Continue implementing the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation, and provide a summary of findings.</li> <li>If necessary, the Client should meet fishery managers to review data and discuss possible changes to HCRs.</li> <li>Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirement of SIb is met, such that the HCRs are likely to be robust to the main uncertainties.</li> <li>Resulting score = 80</li> </ul>		
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>The Client, in consultations with Estonian Fishery Inspectorate, Ministry of Environment, Ministry of Rural Affairs and Estonian Marine Institute, will develop a plan of survey aiming to describe patterns and magnitude of illegal fishing in Peipus Lake, including discards of juvenile perch. The latest question will be addressed in detail by the Estonian Marine</p>		

	<p>Institute in the framework of a project "<i>Discarding and the survival of discard of Lake Peipsi commercial fisheries: impact assessment of different fishing gears and techniques</i>". Recreational fishing will be studied by Ministry of Rural Affairs with a support of European Maritime and Fisheries Fund (EMFF), which carries out regular surveys every two-three years in the entire Estonia including Lake Peipus:</p> <p><a href="http://www.envir.ee/sites/default/files/harrastuskalapyyk_2012.pdf">http://www.envir.ee/sites/default/files/harrastuskalapyyk_2012.pdf</a></p> <p><a href="http://www.envir.ee/sites/default/files/harrastuskalastajate_uuring_2016_euk_logodega.pdf">http://www.envir.ee/sites/default/files/harrastuskalastajate_uuring_2016_euk_logodega.pdf</a></p> <p>The Client will observe projects fulfilled by the Estonian Marine Institute and Ministry of Rural Affairs and keep the Certifier informed about the progress.</p> <p>Regarding the quantification of the recreational fishing, at the moment, there is agreement (but not formal contract so far) with some company to perform sociological survey of recreational fishing (which includes (i) field survey in the Lake, (ii) telephone, and (ii) internet survey). The survey is planned for years 2019-2020, so the results will be available in 2020. It is not clear in what form they will be published, but at least partly, the essential results will be available publically in 2020</p> <p><u>Year 2:</u></p> <p>Collection of field data aimed to describe patterns and to estimate magnitude of illegal fishing (including discards of juveniles) in cold and warm seasons (in-depth interviews with stakeholders and fishers in fishing sites). Preliminary analyses of obtaining data and, based on that, modification of methodologies if needed. Observing above-mentioned projects.</p> <p><u>Year 3:</u></p> <p>Collection of field data aimed to describe patterns and to estimate magnitude of illegal fishing (including discards of juveniles) in cold and warm seasons (in-depth interviews with stakeholders and fishers in fishing sites). Consultations with the governmental agencies about methodologies and preliminary results. Observing above-mentioned projects.</p> <p><u>Year 4:</u></p> <p>Final analysis of data and preparation of the report about patterns of illegal fishing and quantitative analysis of magnitude of removals</p>
<p><b>Progress on Condition</b> <b>[Year 1]</b></p>	<p>The EU and Estonian Government has funded the Estonian Marine Institute to undertake a project during 2018-2020 entitled "<i>Discarding and the survival of discards of Lake Peipus commercial fisheries: impact assessment of different fishing gears and techniques</i>". The project has two main goals: in addition to supporting managers in efforts to preserve the good status of Lake Peipus fish stocks, it aims to compile suggestions for environmentally-friendly solutions for fishing.</p> <p>During the project, the main commercial fishing methods are being studied: trap-nets, gill nets and Danish seines (mutniks), with the amount of unwanted catch and fish survival after release being estimated. Practically, scientists sample fish that are to be discarded from the commercial fishery and place them in cages nearby or transport them in tanks to the nearest point where it is possible to place a cage in the water. Usually the cages are very close to the place of catch. The cages are constructed so that the fish have the ability to choose the depth at which to swim (the cages include the whole water column). Survival is assessed and after a week the surviving fish are released.</p> <p>On the basis of these experiments, and in relation to factors including water temperature, net type, mesh size, soak time and handling regime, suggestions are proposed to maximize the survival rate of the released fish. The results will support the assessment of Lake Peipus commercial fish stocks through improving the estimation of fisheries mortality, and support management of the commercial fishery to minimize the unnecessary mortality of the fishes. Thus, the issue of discards and survival of juvenile perch is currently under investigation.</p> <p>It was also reported to the Audit Team that a sociological survey of recreational fishing on Lake Peipus is being implemented, which includes (i) a field survey of recreational fishing</p>

	<p>on the Lake, (ii) a telephone survey, and (ii) internet survey (Liiviki Näks, Ministry of the Environment, Estonia). Surveys are designed for several years and the first results are planned to be published in 2020. It is assumed that, based on the data obtained, the scientists of the Maritime Institute will be able to propose solutions for better management of the fishery, including TAC setting and ensuring the HCRs are robust to the main uncertainties.</p> <p>While there is clearly good progress being made towards meeting some parts of the Condition, a key issue is IUU fishing, and at the time of the first surveillance audit the Audit team did not receive any evidence that this problem is being studied. Therefore, the Audit Team was not presented with evidence showing progress against all component parts of this Condition.</p>
<b>Status of condition</b> <b>[Year 1]</b>	<p>This Condition is 'behind target', and revised milestones are set for years 2 and 3 in accordance with 7.23.13.1.b.i (MSC 2014). It is noted that these revised milestones are consistent with the existing CAP; as such a revised CAP is not needed.</p> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>• Develop and implement a scientifically valid approach to quantify perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding).</li> <li>• Resulting score = 75.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>• Present initial results of work undertaken to quantify perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding). If results indicate that mortality is significant, the Client should meet fishery managers to review data and discuss possible changes to HCRs.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirement of SIb is met, such that the HCRs are likely to be robust to the main uncertainties.</li> <li>• Resulting score = 80</li> </ul>

## Condition 2 (UoC 1: Perch)

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	1.2.4	SIc: The assessment takes uncertainty into account.	75
<b>Condition</b>	<p>The assessment identifies major sources of uncertainty. Estimation of the level of recreational fishing is based on questionnaires received from recreational fishers (responsibility of Ministry of Environment). Volumes of fish caught by recreational fishers are based on the number of fishermen on the Peipus Lake during winter and summer periods, the intensity of fishing, intensity of fishing of particular species of fish (targeting behaviour), and average time spent fishing during the winter and summer periods. The collected data are recorded in a so called "amateur fisher card". The level of IUU catch and discard mortality is accounted for by applying a correction factor to the fishing mortality estimate. The ultimate values of non-commercial and IUU removals and discard mortality are determined by expert review of fishery scientists of both countries at joint ERFC, but the methodology of their approximations is unclear. Essentially, it is clear that the assessment identifies major sources of uncertainty, but it is not apparent how this uncertainty is taken in to account.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIc is met, specifically through demonstrating the following:</p> <p>SIc: <i>"The assessment takes uncertainty into account."</i></p>		

<p><b>Milestones</b></p>	<p>Please note: Milestones here are similar or the same as those for Condition 1.</p> <p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>• Design a scientifically valid approach to determine the sources and amounts of perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding) that will aid in meeting the SG80 requirement for this SI.</li> <li>• Provide a description of the plan to the Audit Team.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>• Implement the plan as designed in Year 1.</li> <li>• Update the Audit Team as to progress of implementation.</li> <li>• Review the appropriateness of different methods to take account of uncertainty in the perch stock assessment.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>• Continue implementing the plan as designed in Year 1.</li> <li>• Update the Audit Team as to progress of implementation, and provide a summary of findings.</li> <li>• If necessary, meet with fishery managers to review data, discuss uncertainties, and consider modifications to the stock assessment methods.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirement of SIc is met, such that the perch stock assessment takes uncertainty into account.</li> <li>• Resulting score = 80.</li> </ul>
<p><b>Client action plan</b></p>	<p><u>Year 1:</u></p> <p>The Client, in consultations with Estonian Fishery Inspectorate, Ministry of Environment, Ministry of Rural Affairs and Estonian Marine Institute, develops a plan of survey aiming to describe of patterns and magnitude of recreational and illegal fishing of perch in Peipus Lake, including discarding of juvenile perch. The latest question will be addressed in detail by the Estonian Marine Institute in the framework of a project "<i>Discarding and the survival of discard of lake Peipsi commercial fisheries: impact assessment of different fishing gears and techniques</i>". Recreational fishing will be studied by Ministry of Rural Affairs with a support of European Maritime and Fisheries Fund (EMFF), which carries out regular surveys every two-three years in the entire Estonia including Lake Peipus:</p> <p><a href="http://www.envir.ee/sites/default/files/harrastuskalapyyk_2012.pdf">http://www.envir.ee/sites/default/files/harrastuskalapyyk_2012.pdf</a></p> <p><a href="http://www.envir.ee/sites/default/files/harrastuskalastajate_uuring_2016_euk_logodega.pdf">http://www.envir.ee/sites/default/files/harrastuskalastajate_uuring_2016_euk_logodega.pdf</a></p> <p>The Client will observe projects fulfilled by the Estonian Marine Institute and Ministry of Rural Affairs and keep the Certifier informed about the progress.</p> <p>These projects are performed by governmental agencies to provide data which will be used in the stock assessment to reduce associated uncertainties. The Client will request about how obtained information is used will keep the certifier informed about that.</p> <p><u>Year 2:</u></p> <p>Collection of field data aimed to describe patterns and to estimate magnitude of illegal perch fishing (including discards of juveniles) in cold and warm seasons (in-depth interviews with stakeholders and fishers in fishing sites) with particular attention to uncertainties of the estimates. Preliminary analyses of obtaining data and, based on that, modification of methodologies if needed. Continuous interacting with governmental agencies. Observing abovementioned projects, keeping the certifier informed about the progress.</p> <p><u>Year 3:</u></p>

	<p>Collection of field data aimed to describe patterns and to estimate magnitude of illegal perch fishing (including discards of juveniles) in cold and warm seasons (in-depth interviews with stakeholders and fishers in fishing sites). Consultations with the governmental agencies about methodologies and reviewing of preliminary results. Observing above-mentioned projects, keeping the certifier informed about the progress.</p> <p><u>Year 4:</u></p> <p>Final analysis of data and preparation of the report about patterns of recreational and illegal perch fishing and quantitative analysis of magnitude of removals with focus on analysis of uncertainties and how the collected information is used in the stock assessment.</p>
<b>Progress on Condition</b> <b>[Year 1]</b>	<p>As discussed against Condition 1, there is more information being collected to assess uncertainty related to discards and survival of juvenile perch, which will be used in stock assessment and TAC setting \ A comprehensive sociological survey of recreational fishing on Lake Peipus is being implemented and the first results are planned to be published in 2020. However, it is not clear that the issue of uncertainty associated with the volumes of IUU fishing, as well as with the use of these data in estimating stock status and ensuring that uncertainty is taken in to account in establishing the TAC for perch.</p> <p>While there is clearly good progress being made towards meeting some parts of the Condition, a key issue is IUU fishing, and at the time of the first surveillance audit the Audit team did not receive any evidence that this problem is being studied. Therefore, the Audit Team was not presented with evidence showing progress against all component parts of this Condition.</p>
<b>Status of condition</b> <b>[Year 1]</b>	<p>This Condition is 'behind target', and revised milestones are set for years 2 and 3 in accordance with 7.23.13.1.b.i (MSC 2014). It is noted that these revised milestones are consistent with the existing CAP; as such a revised CAP is not needed.</p> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>• Develop and implement a scientifically valid approach to quantify perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding). Review the appropriateness of different methods to take account of uncertainty in the perch stock assessment and TAC setting.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>• Present initial results of work undertaken to quantify perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding). If results indicate that mortality is significant, the Client should meet with fishery managers to review data, discuss uncertainties, and consider modifications to the perch stock assessment methods and TAC setting.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirement of SIc is met, such that the perch stock assessment takes uncertainty into account.</li> <li>• Resulting score = 80</li> </ul>

### Condition 3 (UoC 2: Pike-perch)

	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
<b>Performance Indicator (PI) &amp; Score</b>	1.2.1	SIc: There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	75

<b>Condition</b>	<p>Whilst there is evidence that there are at least regular reviews of measures to minimise UoA-related mortality of unwanted catch of pike-perch, so that SG60 is met, the Assessment Team was made aware of a concern that there is an unknown level of pike-perch mortality occurring in the summer trapnet fishery, which has increased in intensity in recent 3-5 years (V. Vaino, pers. comm., site visit). The Assessment Team was also made aware that there is intent to investigate this issue and that funding was being sought for the work, but had yet to be obtained. However, in the absence of a review of this issue, and the introduction of measures as appropriate to minimise UoA-related mortality from this cause, it is not possible to confirm that the fishery meets SG80.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SI1 is met, specifically through demonstrating the following:</p> <p>SI1: <i>“There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.”</i></p>
<b>Milestones</b>	<p>Please note: Milestones here are similar or the same as those for Condition 4</p> <p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>• Design a scientifically valid approach to determine the sources and amounts of pike-perch mortality associated with discarding in the summer trapnet fishery that will aid in meeting the SG80 requirement for this SI.</li> <li>• Provide a description of the plan to the Audit Team.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>• Implement the plan as designed in Year 1.</li> <li>• Update the Audit Team as to progress of implementation.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>• Continue implementing the plan as designed in Year 1.</li> <li>• Update the Audit Team as to progress of implementation, and provide a summary of findings.</li> <li>• Develop and/or test options to minimise discard mortality in the fishery, as appropriate.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirement of SI1 is met, such that there is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock <u>and they are implemented as appropriate.</u></li> <li>• Resulting score = 80</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>The issue on juvenile discards of pike-perch be fully addressed in the project of the Estonian Marine Institute entitled "Discarding and the survival of discard of Lake Peipus commercial fisheries: impact assessment of different fishing gears and techniques". The Client will observe about the progress of the project and will inform the certifier about it. The Client will discuss the design of the project and utilisation of its results with a focus on alternative ways to reduce of bycatch of juvenile pike-perch with Estonian Marine Institute and will inform about this the certifier.</p> <p><u>Year 2:</u></p> <p>The Client observes a progress of a project of the Estonian Marine Institute entitled "Discarding and the survival of discard of Lake Peipsi commercial fisheries: impact assessment of different fishing gears and techniques" discuss obtained results and</p>

	<p>different ways of reducing pike-perch juvenile bycatch with the Estonian Marine Institute and keep the certifier informed about this.</p> <p><u>Year 3:</u></p> <p>Collecting of field information in the frame of the project on discarding and the survival of discard of Lake Peipus commercial fisheries: impact assessment of different fishing gears. Informing the certifier about the progress of the project. The Client discusses obtained results and different ways of reducing pike-perch juvenile bycatch with the Estonian Marine Institute and keep the certifier informed about this.</p> <p><u>Year 4:</u></p> <p>Collecting of field information in the frame of the project on discarding and the survival of discard of Lake Peipsi commercial fisheries: impact assessment of different fishing gears. Informing the certifier about the progress of the project. Feasible options to minimise discarding that are identified in Year 3 are implemented as appropriate. The Client prepares a final report for certifier about results of the project.</p>
<p><b>Progress on Condition</b></p> <p><b>[Year 1]</b></p>	<p>The EU and Estonian Government has funded the Estonian Marine Institute to undertake a project during 2018-2020 entitled "Discarding and the survival of discards of Lake Peipus commercial fisheries: impact assessment of different fishing gears and techniques". The project has two main goals: in addition to supporting managers in efforts to preserve the good status of Lake Peipus fish stocks, it aims to compile suggestions for environmentally-friendly solutions for fishing.</p> <p>During the project, the main commercial fishing methods are being studied: trapnets, gillnets and Danish seines (mutniks), with the amount of unwanted catch and fish survival after release being estimated. Practically, scientists sample fish that are to be discarded from the commercial fishery and place them in cages nearby or transport them in tanks to the nearest point where it is possible to place a cage in the water. Usually the cages are very close to the place of catch. The cages are constructed so that the fish have the ability to choose the depth at which to swim (the cages include the whole water column). Survival is assessed and after a week the surviving fish are released.</p> <p>On the basis of these experiments, and in relation to factors including water temperature, net type, mesh size, soak time and handling regime, suggestions are proposed to maximize the survival rate of the released fish. The results will support the assessment of Lake Peipus commercial fish stocks through improving the estimation of fisheries mortality, and support management of the commercial fishery to minimize the unnecessary mortality of the fishes. Thus, the issue of discards and survival of juvenile pike-perch is currently under investigation.</p> <p>The first year's results of studying pike-perch discards in the summer trapnet fishery show that the temperature is key factor influencing survival, because low oxygen in warm water leads to higher levels of mortality. Due to the high temperature of the water in August 2018, fishing with trap-nets was closed for 10 days. It was argued also that mortality is higher when the whole net of the trap-net is hauled rather than bringing smaller quantities of the catch on to the deck, for example by using a brail net.</p> <p>As an alternative measure to avoid unwanted by-catch of the target fish species, it should be mentioned that in 2018, Estonian fishers were able to participate in a programme to purchase trap-nets with a large mesh size (40-45 mm) in compared with the permitted mesh size (24 mm). This program was developed taking into account the views of science (Marine Institute, Estonia) and is funded by the EU (the subsidy is up to 80% of the cost of fishing gear, which on average costs about 10 thousand Euros). About one-third of Estonian trap-nets were understood to have been transferred to a large mesh size through this programme.</p>
<p><b>Status of</b></p>	<p>This condition is considered to be 'on target', as the first milestone is met.</p>

<b>condition</b> [Year 1]	
------------------------------	--

#### Condition 4 (UoC 2: Pike-perch)

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	1.2.4	SIc: The assessment takes uncertainty into account.	75
<b>Condition</b>	<p>The assessment identifies major sources of uncertainty. The level of non-commercial and IUU catch and discard mortality is accounted for by applying a correction factor to the fishing mortality estimate. The ultimate values of non-commercial and IUU removals and discard mortality are determined by expert review of fishery scientists of both countries at joint ERFC, but the methodology of their approximations is unclear. Essentially, it is clear that the assessment identifies major sources of uncertainty, but it is not apparent how this uncertainty is taken in to account.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIc is met, specifically through demonstrating the following:</p> <p>SIc: <i>"The assessment takes uncertainty into account."</i></p>		
<b>Milestones</b>	<p>Please note: Milestones here are similar or the same as those for Condition 3</p> <p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Design a scientifically valid approach to determine the sources and amounts of pike-perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding) in the summer trapnet fishery that will aid in meeting the SG80 requirement for this SI.</li> <li>Provide a description of the plan to the Audit Team.</li> <li>Resulting score = 75.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Implement the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Consider the appropriateness of different methods to take account of uncertainty in the pike-perch stock assessment.</li> <li>Resulting score = 75.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>Continue implementing the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation, and provide a summary of findings.</li> <li>If necessary, meet with fishery managers to review data, discuss uncertainties, and consider modifications to the pike-perch stock assessment methods.</li> <li>Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirement of SIc is met, such that the pike-perch stock assessment takes uncertainty into account.</li> <li>Resulting score = 80</li> </ul>		
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>The Client, in consultations with Estonian Fishery Inspectorate, Ministry of Environment, Ministry of Rural Affairs and Estonian Marine Institute, develops a plan of survey aiming to describe of patterns and magnitude of recreational and illegal fishing of pike-perch in Peipus Lake, including discarding of juvenile pike-perch. The latest question will be addressed in detail by the Estonian Marine Institute in the framework of a project</p>		

	<p>"Discarding and the survival of discard of Lake Peipsi commercial fisheries: impact assessment of different fishing gears and techniques". Recreational fishing will be studied by Ministry of Rural Affairs with a support of European Maritime and Fisheries Fund (EMFF), which carries out regular surveys every two-three years in the entire Estonia including Lake Peipus:</p> <p><a href="http://www.envir.ee/sites/default/files/harrastuskalapyyk_2012.pdf">http://www.envir.ee/sites/default/files/harrastuskalapyyk_2012.pdf</a></p> <p><a href="http://www.envir.ee/sites/default/files/harrastuskalastajate_uuring_2016_euk_logodega.pdf">http://www.envir.ee/sites/default/files/harrastuskalastajate_uuring_2016_euk_logodega.pdf</a></p> <p>The Client will observe projects fulfilled by the Estonian Marine Institute and Ministry of Rural Affairs and keep the Certifier informed about the progress.</p> <p>These projects are performed by governmental agencies to provide data which will be used in the stock assessment to reduce associated uncertainties. The Client will request about how obtained information is used will keep the certifier informed about that.</p> <p><u>Year 2:</u></p> <p>Collection of field data aimed to describe patterns and to estimate magnitude of illegal pike-perch fishing (including discards of juveniles) in cold and warm seasons (in-depth interviews with stakeholders and fishers in fishing sites) with particular attention to uncertainties of the estimates. Preliminary analyses of obtaining data and, based on that, modification of methodologies if needed. Continuous interacting with governmental agencies. Observing abovementioned projects, keeping the certifier informed about the progress.</p> <p><u>Year 3:</u></p> <p>Collection of field data aimed to describe patterns and to estimate magnitude of illegal pike-perch fishing (including discards of juveniles) in cold and warm seasons (in-depth interviews with stakeholders and fishers in fishing sites). Consultations with the governmental agencies about methodologies and reviewing of preliminary results. Observing abovementioned projects, keeping the certifier informed about the progress.</p> <p><u>Year 4:</u></p> <p>Final analysis of data and preparation of the report about patterns of recreational and illegal pike-perch fishing and quantitative analysis of magnitude of removals with focus on analysis of uncertainties and how the collected information is used in the stock assessment.</p>
<b>Progress on Condition</b> <b>[Year 1]</b>	<p>As discussed against Condition 3, there is more information now available to assess uncertainty related to discards and survival of pike-perch, which has to be used in stock assessment and TAC setting. A comprehensive sociological survey of recreational fishing on Lake Peipus is being implemented and the first results are planned to be published in 2020.</p> <p>While there is clearly good progress being made towards meeting some parts of the Condition, a key issue is IUU fishing, and at the time of the first surveillance audit the Audit team did not receive any evidence that a scientifically valid approach was elaborated to determine the sources and amounts of pike-perch mortality associated with IUU fishing. Therefore, the Audit Team was not presented with evidence showing progress against all component parts of this Condition.</p>
<b>Status of condition</b> <b>[Year 1]</b>	<p>This Condition is 'behind target'.</p> <p>Revised milestones are set for years 2 and 3 in accordance with 7.23.13.1.b.i (MSC 2014). It is noted that these revised milestones are consistent with the existing CAP; as such a revised CAP is not needed.</p> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Develop and implement a scientifically valid approach to quantify pike-perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding in the summer trapnet fishery). Review the appropriateness of different methods to take account of uncertainty in the pike-perch stock assessment and TAC setting.</li> </ul>

	<ul style="list-style-type: none"> <li>Resulting score = 75.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>Present initial results of work undertaken to quantify pike-perch mortality associated with recreational and IUU fishing in Lake Peipus (including of juvenile by-catch and discarding in the summer trapnet fishery). If results indicate that mortality is significant, the Client should meet with fishery managers to review data, discuss uncertainties, and consider modifications to the pike-perch stock assessment methods and TAC setting.</li> <li>Resulting score = 75.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirement of Slc is met, such that the pike-perch stock assessment takes uncertainty into account.</li> <li>Resulting score = 80</li> </ul>
--	--

### Condition 5 (UoCs 1 and 2)

	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
<b>Performance Indicator (PI) &amp; Score</b>	2.3.2	<p>Slb: There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.</p> <p>Slc: There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.</p>	65
<b>Condition</b>	<p>The Lake Peipus Perch and Pike-perch Fishery has a number of measures in place which are expected to ensure that the UoA does not hinder the recovery of asp and wels catfish as ETP species. However, it is not possible to say that there is a strategy in place, in particular because information on interactions is anecdotal, only (Slb). Further, in the in the absence of any data on captures and the condition of the fish upon release, it is not possible to say that there is an objective basis for confidence that the measures/strategy will work (Slc).</p> <p>These requirements are clearly linked and so the same Condition is set to address both Slb and Slc.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of Slb and Slc are met, specifically through demonstrating the following:</p> <p>Slb: <i>“There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.”</i></p> <p>Slc: <i>“There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.”</i></p>		
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Conduct a review of the evidence base for interactions between the Lake Peipus gillnet and trapnet fisheries and asp and wels catfish as ETP species.</li> <li>Develop a plan to implement a strategy to manage impacts on asp and wels catfish, paying particular attention to the MSC definition of a ‘strategy’ (Table SA8, MSC 2014).</li> <li>Conduct and present a preliminary analysis to determine if the proposed strategy will work.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>If necessary, refine the strategy to manage impacts on asp and wels catfish based on the preliminary analysis presented at Year 1.</li> </ul>		

	<ul style="list-style-type: none"> <li>• Implement the plan as designed in Year 1 / refined in Year 2.</li> <li>• Update the Audit Team as to progress of implementation.</li> <li>• Resulting score = 65.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>• Continue implementing the plan as designed in Year 1 / refined in Year 2.</li> <li>• Present initial results from the implementation of the strategy.</li> <li>• Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirements of SIb and SIc are met, such that there is a strategy to manage asp and wels catfish as ETP species in place, and that there is an objective basis for confidence that it will work.</li> <li>• Resulting score = 80 (for SIb and SIc). It is noted that if this Condition is met but Condition 6 is not met then the resulting score for PI 2.3.2 overall will still be &lt;80.</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>Develop a plan of implementation of a strategy to managing impacts of UoA on redlisted fish species. In the first turn, to pay attention to (i) collecting information about interaction of redlisted species with fishing gear, (ii) assessment of effect of fishery removals in the UoA on population status of redlisted species, and (iii) to developing measures to reduce effect of UoA on redlisted species as elements of the strategy. Collect and summarise available information about interaction of redlisted species with fishing gear in the UoA by interviewing stakeholders (fishery inspection, fishers). Contact a non-profit organisation which, according to information from the Estonian Marine Institute, deals with research and protection of asp (tag/recapture and telemetry studies, stocking of the young fish into the Emajõgi river, studies of the habitat use of asp).</p> <p><u>Year 2:</u></p> <p>Develop a plan to implement a strategy to manage impacts on asp and wels catfish. Conduct and present a preliminary analysis to determine if the proposed strategy will work.</p> <p><u>Year 3:</u></p> <p>Presenting initial results regarding the implementation of the strategy. If necessary, refine the strategy to manage impacts on redlisted species based on the preliminary analysis presented at Year 2.</p> <p><u>Year 4:</u></p> <p>Demonstrate that there is a strategy to manage asp and wels catfish as ETP species in place, and that there is an objective basis for confidence that it will work.</p>
<b>Progress on Condition [Year 1]</b>	<p>The Audit Team spent a significant portion of the first annual audit considering the ETP species conditions (Conditions 5, 6 and 7).</p> <p>For asp, the Ministry of Environment published the Asp Protection Action Plan in October 2018 (<a href="https://www.envir.ee/sites/default/files/tougja_tk_redigeeritud.pdf">https://www.envir.ee/sites/default/files/tougja_tk_redigeeritud.pdf</a>). It was highlighted in this document that the protection of asp at the individual level is sufficient, but that restoring access to spawning habitats in the upper reaches where prevented by dams, and ensuring appropriate spawning habitat (gravel in fast flowing water) is available, are the key issues. This document represents a positive change in the overall understanding of asp in Estonia. There are also several actions proposed for consideration during the 2018-2022 period, including for an Estonian asp population assessment; this is listed as a Priority II action (i.e., an action that will support the achievement of the action plan objectives directly) but it is not apparent if this will be undertaken.</p> <p>It was also identified that Wildlife Estonia (an Estonian non-Governmental Organisation) has been working to support recovery of the species since 2009, with</p>

	<p>work focused on the Emajõgi River (the largest Estonian river draining in to Lake Peipus), principally to restore access to the upstream sections of the river where asp spawn by removing dams or creating fish passes; this is seen as the key issue in supporting its recovery. It was also noted that work was undertaken recently to study asp movement, and this indicated that asp is only resident in the lake for May-July (this work is scheduled for publication in a peer-reviewed journal in summer 2019 – M. Tambets, Wildlife Estonia). Importantly, the potential for asp to be taken in the fishery is therefore very limited because gillnetting is prohibited in the summer period, while its pelagic/near surface behaviour limits the potential for asp to be captured in trapnets.</p> <p>For wels catfish, progress against the Condition is less apparent, and there was little additional information presented to the Audit Team. It was highlighted that wels catfish is at its northernmost distribution in Estonia; as well as problems with catching sufficient numbers of males and females together, the northernmost range limit may have been the reason that efforts to reintroduce wels catfish to Finland in the past using wels catfish from Estonia were not successful. In this regard, a key issue reported to the Audit Team is that wels catfish do not spawn in water of less than approximately 25°C; low water temperature appears to be a major constraint to the Lake Peipus population.</p> <p>M. Tambets (Wildlife Estonia) indicated that he had observed wels catfish very rarely in the Emajõgi River over the last 20 years. M. Narusing (a senior Lake Peipus fisherman) indicated that fishermen do catch wels catfish in the Lake Lammijärvi area, but that they appear to be reside in deeper holes and are active (and therefore become available to the fishery) only in the warmest weather. He also commented that he felt the abundance of wels had increased in recent years; however, it was noted that fishermen tended to return asp and wels as quickly as possible, often without them coming aboard the vessel, and that such catches may not be recorded reliably in logbooks; while a quick release is undoubtedly helpful in ensuring the fish have the best possible opportunity to survive following release, it is therefore also likely that any data on catches are incomplete.</p> <p>There is no indication currently of if/when a wels catfish Protection Action Plan will be produced, and it is noted that asp is listed on Annex II of the Habitats Directive, whereas wels catfish is not, which may mean that wels has a lower management priority.</p>
<p><b>Status of condition</b> <b>[Year 1]</b></p>	<p>For asp, the publication of the Protection Action Plan is clearly very positive, and provides a lot of background information that was sought for the Condition. Importantly, it also supports the finding at assessment that the fishery is highly likely to be not hindering recovery of asp (i.e., PI 2.3.1). For wels catfish, the evidence presented at year 1 also supports the finding at assessment that the fishery is highly likely to be not hindering recovery of this species.</p> <p>Nevertheless, the key issue identified for this condition is that data on catches of ETP fish species within the certified fishery are insufficient to allow the magnitude of the fishery impact to be determined, which is critical to the MSC definition of a strategy (Table SA8, MSC 2014), which includes that it “<i>should contain mechanisms for the modification [of] fishing practices in the light of the identification of unacceptable impacts.</i>” In essence, some data on the magnitude of catches is needed in order to determine if the fishery may cause unacceptable impacts. This was identified in the Year 1 milestone for this condition, and in the accompanying action plan (“<i>In the first turn, to pay attention to (i) collecting information about interaction of redlisted species with fishing gear, (ii) assessment of effect of fishery removals in the UoA on population status of redlisted species</i>”), and the Audit Team was not presented with information to suggest that progress had been made in these regards. As such, for both asp and wels catfish, this Condition is ‘behind target’.</p> <p>Revised milestones are set for years 2 and 3 in accordance with 7.23.13.1.b.i (MSC 2014). It is noted that these revised milestones are consistent with the existing CAP; as such a revised CAP is not needed.</p>

	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Develop and implement a plan to quantify mortality (based on catches and estimated survival rates) of asp and wels catfish in the certified fishery by gear type, lake and/or season as appropriate.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>Present initial results of work undertaken to quantify mortality of asp and wels catfish in the certified fishery. If results indicate that mortality is significant, present proposals for changes to management deemed necessary to ensure the fishery is highly likely to not hinder the recovery of asp and wels catfish.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that there is a strategy to manage asp and wels catfish as ETP species in place, and that there is an objective basis for confidence that it will work.</li> <li>Resulting score = 80 (for SIb and SIc). It is noted that if this Condition is met but Condition 6 is not met then the resulting score for PI 2.3.2 overall will still be &lt;80.</li> </ul>
--	--

### Condition 6 (UoCs 1 and 2)

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	2.3.2	SIe: There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.	65
<b>Condition</b>	<p>There is consideration of asp and catfish stock status in the annual Estonian science review (e.g., EMI 2017), but it is not clear that there is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and that they are implemented as appropriate.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIe is met, specifically through demonstrating the following:</p> <p>SIe: <i>“There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.”</i></p>		
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Develop a plan to conduct regular reviews of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species, paying particular attention to the MSC definition of ‘regular’ (SA3.5.3.2, MSC 2014).</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Implement the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Resulting score = 65.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>Continue implementing the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p>		

	<ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirements of SId are met, such that a review has taken place and there is a process in place to ensure 'regular' reviews are undertaken.</li> <li>Resulting score = 80 (for SId). It is noted that if this Condition is met but Condition 5 is not met then the resulting score for PI 2.3.2 overall will still be &lt;80.</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>Develop a plan to conduct regular reviews of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species. To carry out consultations with key stakeholders - Ministry of Environment, Estonian Marine Institute and Estonian Fund for Nature about organisation of such regular (once a two years) reviews.</p> <p><u>Year 2:</u></p> <p>Discussing with key stakeholders a plan on collecting field data on effect of UoA on redlisted fish species and analysis of feedback from them.</p> <p><u>Year 3:</u></p> <p>Reporting field data on interaction of redlisted fish species to key stakeholders and analysis their feedback on potential options to minimise UoA-related mortality of ETP species.</p> <p><u>Year 4:</u></p> <p>To summarise reviews from stakeholders and demonstrate that the SG80 requirements of SId are met. Feasible options to minimise discarding that are identified in Year 3 are implemented as appropriate.</p>
<b>Progress on Condition [Year 1]</b>	<p>As discussed against Condition 5, there is more information now available to support the finding in the original assessment that the certified fishery is highly likely to not hinder recovery of asp and wels catfish. Nevertheless, it is an MSC requirement that a review of alternative measures to minimise UoA-related mortality is conducted regularly (i.e., at least every five years) and that measures considered 'appropriate' are implemented.</p> <p>The Audit team was not presented with evidence showing progress against this Condition.</p>
<b>Status of condition [Year 1]</b>	<p>This Condition is 'behind target'.</p> <p>Revised milestones are set for years 2, 3 and 4 in accordance with 7.23.13.1.b.i (MSC 2014). It is noted that these revised milestones are consistent with the existing CAP; as such a revised CAP is not needed.</p> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Develop and implement a plan to assess factors affecting interaction rates and mortality rates of asp and wels catfish in the certified fishery by gear type, lake and/or season as appropriate. This may be undertaken usefully in association with a study designed to address Condition 5.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>Undertake a review of alternative measures to minimise UoA-related mortality of ETP species and present findings.</li> <li>Demonstrate there is a plan in development to ensure that any alternative measures deemed 'appropriate' will be implemented.</li> <li>Demonstrate that there is a plan in development to ensure that a review of alternative measures is undertaken 'regularly'.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p>

	<ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirements of SId are met, such that there is a process in place to ensure 'regular' reviews are undertaken and appropriate measures are implemented.</li> <li>Resulting score = 80 (for SId). It is noted that if this Condition is met but Condition 5 is not met then the resulting score for PI 2.3.2 overall will still be &lt;80.</li> </ul>
--	---

### Condition 7 (UoCs 1 and 2)

	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
<b>Performance Indicator (PI) &amp; Score</b>	2.3.3	<p>SIa: Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species.</p> <p>SIb: Information is adequate to measure trends and support a strategy to manage impacts on ETP species.</p>	60
<b>Condition</b>	<p>Only asp and wels catfish were determined to be ETP species, and both species were reported by stakeholders to be taken in the fishery very rarely. However, there is no quantitative information available that is adequate to assess the UoA related mortality (SIa). Further, while information including knowledge of asp and wels catfish spawning behaviour and habitat preferences, as well as some data on population status and fishing activity are collected, and is adequate to support measures to manage impacts, it is not adequate to measure trends and support a strategy to manage impacts on ETP species (SIc).</p> <p>These requirements are clearly linked and so the same Condition is set to address both SIa and SIb.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIa and SIb are met, specifically through demonstrating the following:</p> <p>SIa: <i>"Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species."</i></p> <p>SIb: <i>"Information is adequate to measure trends and support a strategy to manage impacts on ETP species."</i></p>		
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Design a scientifically valid approach to address the condition by collecting quantitative data on asp and wels catfish captures and mortalities in the fishery, and measure trends.</li> <li>Resulting score = 60.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Implement the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Resulting score = 60.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>Continue implementing the plan as designed in Year 1.</li> <li>Present initial results from the implementation of the strategy.</li> <li>Resulting score = 60.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirements of SIa and SIb are met, such that there is some quantitative information that is adequate to assess UoA related mortality and impact and to determine whether the UoA may be a threat to</li> </ul>		

	<p>protection and recovery of asp and wels catfish, and that information is adequate to measure trends and support a strategy to manage impacts on asp and wels catfish.</p> <ul style="list-style-type: none"> <li>Resulting score = 80</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>Develop a scientifically valid plan of collecting quantitative data on effects of UoA on asp and wels with fishing gear. To pay attention to three questions: (i) quantitative information on interaction of redlisted species with UoA gear, (ii) mortality resulting from these interactions, (iii) population trends of asp and wels.</p> <p><u>Year 2:</u></p> <p>Collection of field data on interaction of redlisted species with UoA gear and associated mortality.</p> <p><u>Year 3:</u></p> <p>Collection of field data on interaction of redlisted species with UoA gear and associated mortality.</p> <p><u>Year 4:</u></p> <p>Summarising of field data on interaction of redlisted species with UoA gear and associated mortality collected during years 2 and 3. Analysis of available data on population status of asp and well and assessment of risks for population of redlisted species caused by mortality caused by interaction with UoA fishing gear.</p>
<b>Progress on Condition</b> <b>[Year 1]</b>	<p>As discussed against Condition 5, there is more information now available to support the finding in the original assessment that the certified fishery is highly likely to not hinder recovery of asp and wels catfish. Nevertheless, it continues to be the case that there is no quantitative information available that is adequate to assess the UoA related mortality (Sla), and information is not adequate to measure trends and support a strategy to manage impacts on ETP species (Slc).</p> <p>The Audit team was not presented with evidence showing progress against this Condition.</p>
<b>Status of condition</b> <b>[Year 1]</b>	<p>This Condition is 'behind target'.</p> <p>Revised milestones are set for years 2, 3 and 4 in accordance with 7.23.13.1.b.i (MSC 2014). It is noted that these revised milestones are consistent with the existing CAP; as such a revised CAP is not needed.</p> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Develop and implement a plan to quantify mortality (based on catches and estimated survival rates) of asp and wels catfish in the certified fishery by gear type, lake and/or season as appropriate. This may be undertaken usefully in association with a study designed to address Condition 5.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>Present initial results of work undertaken to quantify mortality of asp and wels catfish in the certified fishery.</li> <li>Demonstrate that there is a plan in development to ensure that data will be collected to measure trends in catches over time.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirements of Sla and Slb are met, such that there is some quantitative information that is adequate to assess UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of asp and wels catfish, and that information is adequate to measure trends and support a strategy to manage impacts on</li> </ul>

	asp and wels catfish. • Resulting score = 80
--	---

### Condition 8 (UoCs 1 and 2)

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	3.1.3	SIa: Clear long-term objectives that guide decision-making, consistent with MSC fisheries standard and the precautionary approach are explicit within management policy.	60
<b>Condition</b>	<p>The EU CFP does not apply to inland fisheries, so this is covered by national (Estonian / Russian) strategic objectives and management policy, as well as the agreement that underpins the ERFC.</p> <p>The Estonian Fisheries Strategy (2014 – 2020) explicitly mentions an ecosystem approach to fisheries management in Estonia. MoE also states that “The strategic goal of fisheries is to guarantee the good condition of fish populations and the diversity of fish species” and goes on to say “It is vital to avoid the negative effect fishing has on the ecosystem. Fish populations are considered to be in good condition when fish resources can reproduce themselves naturally in the existing environmental conditions and when the species have a characteristic age structure despite the pressure of commercial fishing” (MoE, 2016).</p> <p>The recently revised Fish Act (2015)’s state purpose is to (i) ensure conservation and economic use of fish and aquatic plant resources on the basis of internationally recognized principles of responsible fisheries; (ii) ensure reproduction capacity of fish and aquatic plant resources and productivity of bodies of water; and (iii) avoid undesirable changes in the ecosystem of bodies of water.</p> <p>The use of annually-evaluated TACs, allied with a comprehensive control system (both unusually for an inland lake) suggests that a precautionary approach is implicit in the management system, and thus meets SG 60. However the ecosystem approach is not necessarily precautionary, and thus SG 80 is not met. As a result a condition has been imposed to resolve this.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIa is met, specifically through demonstrating the following:</p> <p>SIa: “Clear long-term objectives that guide decision-making, consistent with MSC fisheries standard and the precautionary approach are explicit within management policy.”</p>		
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>• Provide evidence that approaches for embedding the precautionary approach into fisheries management on Lake Peipus have been discussed at national level.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>• Provide evidence that approaches for embedding the precautionary approach into fisheries management on Lake Peipus are agreed at national level.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Year 3:</u></p> <ul style="list-style-type: none"> <li>• Provide evidence that the agreed precautionary approach is proposed for adoption at the whole lake level at transboundary level.</li> <li>• Resulting score = 75.</li> </ul> <p><u>Years 4:</u></p>		

	<ul style="list-style-type: none"> <li>• Provide evidence that the agreed precautionary approach is explicit within the management policy for Lake Peipus.</li> <li>• Resulting score = 80.</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>Currently, preparation of a new concept on management of Estonian inland fisheries is in progress, according to Ministry of Environment. It is planned to incorporate in this document precautionary approach and a concept of sustainable management. The Client will observe process of preparation of this document, and also will consider with the Estonian stakeholders how to incorporate precautionary approach in the transboundary level.</p> <p><u>Year 2:</u></p> <p>Observance of process of preparation of a new document on management of Estonian inland fisheries, which will incorporate precautionary approach, and consultations about including precautionary approach in the management documents on the Peipus Lake level.</p> <p><u>Year 3:</u></p> <p>Observance of process of preparation of a new document on management of Estonian inland fisheries, which will incorporate precautionary approach, and consultations about including precautionary approach in the management documents of Peipus Lake level.</p> <p><u>Year 4:</u></p> <p>Providing evidences on including a precautionary approach in the documents on Estonian Inland fishery management and in all-Peipus Lake management.</p>
<b>Progress on Condition [Year 1]</b>	It was confirmed to the Audit Team by the Ministry of the Environment that the precautionary approach is being incorporated in to a new overarching document regulating inland fisheries in Estonia that is scheduled for discussion in the Estonian Parliament during 2019. No specific details were available to the Audit Team as the document is still being drafted and will be subject to further discussion in any case.
<b>Status of condition [Year 1]</b>	This condition is considered to be 'on target', as the first milestone is met.

### Condition 9 (UoCs 1 and 2) NEW at year 1 Audit

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	2.3.2	SIb: Management strategy in place (alternative) SIc: Management strategy evaluation	65
<b>Condition</b>	The prohibition of fishing within 500 m of river mouths and less than 1 km from shore is considered likely to work to ensure the fishery does not hinder the recovery of black-throated diver as an ETP species, based on plausible argument; However, gillnets and trapnets do present some risk to black-throated diver because they operate during periods when the birds may be found on the lake. It is not possible to say that there is a strategy in place for ETP species, in particular because there appears to be no general requirement to report captures of ETP species, such that information on interactions is anecdotal, only. In the absence of any data on captures (or lack of captures), it is also not possible to say that there is an objective basis for confidence that the measures/strategy will work.		

	<p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIb and SIc are met, specifically through demonstrating the following:</p> <p>SIb: <i>“There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.”</i></p> <p>SIc: <i>“There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.”</i></p> <p><b>We note that the timeline allows for this new condition to be met by the end of the five-year certification period for the Lake Peipus Perch and Pike-Perch Fishery (nominally 4 years after the Year 1 audit). However, the Year 1 surveillance audit was held approximately 4.5 months after the certification anniversary. As such, the timeline for this condition actually allows only approximately 3.5 years for the Condition to be met.</b></p>
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>• Conduct a review of the evidence base for interactions between the Estonian Lake Peipus Fishery and ETP bird species.</li> <li>• Develop a plan to implement a strategy to manage impacts on ETP bird species, paying particular attention to the MSC definition of a ‘strategy’ (Table SA8, MSC 2014).</li> <li>• Conduct and present a preliminary analysis to determine if the proposed strategy will work.</li> <li>• Resulting score = 65.</li> </ul> <p><u>Year 2:</u> If necessary, refine the strategy to manage impacts on ETP bird species based on the preliminary analysis presented at Year 1.</p> <ul style="list-style-type: none"> <li>• Implement the plan as designed in Year 1 / refined in Year 2.</li> <li>• Update the Audit Team as to progress of implementation.</li> <li>• Resulting score = 65.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>• Continue implementing the plan as designed in Year 1 / refined in Year 2.</li> <li>• Present initial results from the implementation of the strategy.</li> <li>• Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirements of SIb and SIc are met, such that there is a strategy to manage ETP bird species in place, and that there is an objective basis for confidence that it will work.</li> <li>• Resulting score = 80 (for SIb and SIc). It is noted that if this Condition is met but Conditions 5, 6 and 10 are not met then the resulting score for PI 2.3.2 overall will still be &lt;80</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>Develop a plan to implement a strategy to manage the effects of fisheries on black-throat diver. To collect an available information on the interaction of perch and pikeperch gillnet and trapnet fishing with black throat diver. Conduct a preliminary analysis to determine if the proposed strategy will work.</p> <p><u>Year 2:</u></p> <p>Update, if necessary, the strategy of management of effects of fisheries on black-throat diver, based on a preliminary analysis presented in the 1st year.</p> <p>Implementation of the plan developed in the 1st year / updated in the 2nd year.</p> <p><u>Year 3:</u></p> <p>Continue the implementation of the plan developed in the 1st year / updated in the 2nd year. Presentation to the audit team of a summary of the results obtained from the implementation of the strategy.</p>

	<p><u>Year 4:</u></p> <p>Prove that there is a strategy to control black-throat diver in place, and that there is an objective basis for ensuring that it will work.</p>
<b>Consultation on Condition</b>	A Letter of Support from the Ministry of Environment of Estonia is provided.

### Condition 10 (UoCs 1 and 2) NEW at year 1 Audit

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	2.3.2	Sle: Review of alternative measures to minimize mortality of ETP species	65
<b>Condition</b>	<p>It is not clear that there is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species (black-throated diver) and that they are implemented as appropriate.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of Sle is met, specifically through demonstrating the following:</p> <p>Sle: <i>“There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.”</i></p> <p><b>We note that the timeline allows for this new condition to be met by the end of the five-year certification period for the Lake Peipus Perch and Pike-Perch Fishery (nominally 4 years after the Year 1 audit). However, the Year 1 surveillance audit was held approximately 4.5 months after the certification anniversary. As such, the timeline for this condition actually allows only approximately 3.5 years for the Condition to be met.</b></p>		
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Develop a plan to conduct regular reviews of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species, paying particular attention to the MSC definition of ‘regular’ (SA3.5.3.2, MSC 2014).</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 2:</u></p> <ul style="list-style-type: none"> <li>Implement the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Resulting score = 65.</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>Continue implementing the plan as designed in Year 1.</li> <li>Update the Audit Team as to progress of implementation.</li> <li>Resulting score = 65.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>Demonstrate that the SG80 requirements of Sle are met, such that ‘regular’ reviews are undertaken, and that any measures are <u>implemented as appropriate</u>.</li> <li>Resulting score = 80 (for Sle). It is noted that if this Condition is met but Conditions 5, 6 and 9 are not met then the resulting score for PI 2.3.2 overall will still be &lt;80</li> </ul>		
<b>Client action</b>	<u>Year 1.</u>		

<b>plan</b>	<p>Develop a plan for conducting regular reviews of the potential effectiveness and practicality of alternative measures to minimize mortality of black-throat diver associated with the UoA.</p> <p><u>Year 2:</u></p> <p>Implementation of the plan developed in the 1st year.</p> <p><u>Year 3:</u></p> <p>Continuation of the implementation of the plan developed in the 1st year. Discussion with stakeholders of the recipient and the format for providing data on the effectiveness and practicality of measures to minimize the mortality of black-throat diver.</p> <p><u>Year 4:</u></p> <p>Prove that the SG80 SId requirement is met, so that a review will be conducted and the process will provide for regular reviews. If there are potentially appropriate measures, they will be implemented. If there is a potentially useful alternative approach available to reducing bycatch that is not implemented, the review will include analysis of why it is not 'appropriate'.</p>
<b>Consultation on Condition</b>	A Letter of Support from the Ministry of Environment of Estonia is provided.

#### Condition 11 (UoCs 1 and 2) NEW at year 1 Audit

Performance Indicator (PI) & Score	PI	Scoring Issue (SI) and Scoring Guidepost (SG) 80	Score
	2.3.3	SIb: Management strategy in place (alternative) SIc: Management strategy evaluation	65
<b>Condition</b>	<p>There is no quantitative information available that is adequate to assess the UoA related mortality on black-throated diver, and information is not adequate to measure trends and support a strategy to manage impacts on ETP species.</p> <p>By the Year 4 surveillance audit, the client is required to demonstrate that the SG80 requirement of SIa and SIb are met, specifically through demonstrating the following:</p> <p>SIa: <i>"Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species."</i></p> <p>SIb: <i>"Information is adequate to measure trends and support a strategy to manage impacts on ETP species."</i></p> <p><b>We note that the timeline allows for this new condition to be met by the end of the five-year certification period for the Lake Peipus Perch and Pike-Perch Fishery (nominally 4 years after the Year 1 audit). However, the Year 1 surveillance audit was held approximately 4.5 months after the certification anniversary. As such, the timeline for this condition actually allows only approximately 3.5 years for the Condition to be met.</b></p>		
<b>Milestones</b>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> <li>Design a scientifically valid approach to address the condition by collecting quantitative data on ETP species captures and mortalities in the fishery, and measure trends.</li> <li>Resulting score = 60.</li> </ul> <p><u>Year 2:</u></p>		

	<ul style="list-style-type: none"> <li>• Implement the plan as designed in Year 1.</li> <li>• Update the Audit Team as to progress of implementation.</li> <li>• Resulting score = 60</li> </ul> <p><u>Years 3:</u></p> <ul style="list-style-type: none"> <li>• Continue implementing the plan as designed in Year 1.</li> <li>• Present initial results from the implementation of the strategy.</li> <li>• Resulting score = 60.</li> </ul> <p><u>Year 4:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate that the SG80 requirements of SIa are met, such that there is some quantitative information that is adequate to assess UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of ETP bird species, and that information is adequate to measure trends and support a strategy to manage impacts.</li> <li>• Resulting score = 80. It is noted that if this Condition is met but Condition 7 is not met then the resulting score for PI 2.3.3 overall will still be &lt;80</li> </ul>
<b>Client action plan</b>	<p><u>Year 1:</u></p> <p>Development of a scientifically based plan to collect quantitative data on the catch of the black-throated diver and their mortality during fishing.</p> <p><u>Year 2:</u></p> <p>Implementation of the plan developed in the 1st year.</p> <p><u>Year 3:</u></p> <p>Continuation of the implementation of the plan developed in the 1st year and summarising the results from the previous years.</p> <p><u>Year 4:</u></p> <p>Analyse the available mortality data of black-throated diver associated with perch and pikeperch fishing in a reservoir. Prove that requirements of SG80 SIa are met in such a way that quantitative information, used to estimate mortality and impact associated with the UoA and to determine whether the UoA could be a threat to protect and restore black-throated diver will be sufficient, and that the information is adequate to measure trends and support impact management strategies.</p>
<b>Consultation on Condition</b>	A Letter of Support from the Ministry of Environment of Estonia is provided.

## 4. Conclusion

At this Year 1 Surveillance, the Audit Team notes that the Lake Peipus Perch and Pike-Perch Fishery continues to meet the MSC Standard.

Monitoring of target stock status and of activity within the commercial fishery continues to be undertaken at a high level, and the target stocks are considered to be healthy. Condition 3 and 8 are assessed as being 'on target' against the Year 1 milestones, and good progress has been made against most parts of the other Conditions set against the Lake Peipus Perch and Pike-Perch Fishery.

However, the Audit Team was not presented with information indicating that work has been planned to investigate the potential scale and magnitude of IUU fishing on perch and pike-perch stocks (Conditions 1, 2 and 4), or to further understand the potential impact of the fishery on wels catfish and develop a management strategy for this species (Conditions 5, 6 and 7). As such, progress for these conditions was assessed as being 'behind target'. Progress will need to be made against these conditions in the next period to avoid risk that action to suspend or withdraw certification is taken at the Year 2 Surveillance (7.28.16.1, MSC 2018).

Three new conditions are also set at this Year 1 Surveillance, as a result of harmonising with the Russian Lake Peipus Perch and Pike-Perch Fishery that was certified in April 2019 (<https://fisheries.msc.org/en/fisheries/russian-lake-peipus-perch-and-pike-perch/@@assessments>). These new Conditions are related to potential impacts on black-throated diver (*Gavia arctica*), as an ETP bird species.

## 5. References

- Birdlife International (2018).** *Gavia arctica*. The IUCN Red List of Threatened Species 2018: <https://www.iucnredlist.org/species/22697834/132606505>. Downloaded on 26 March 2019.
- MSC (2014).** MSC fisheries certification requirements and guidance, v.2.0, 1<sup>st</sup> October 2014. Marine Stewardship Council, London, 528 pp.
- MSC (2018).** MSC fisheries certification process, v.2.1, 31<sup>st</sup> August 2018. Marine Stewardship Council, London, 189 pp.
- Roll, G., Kosk, A., Alexeeva, N. & P. Unt (2006).** Lake Peipsi/Chudskoe, experience and lessons learned brief. Hamilton, ON: World Bank, Third World Water Forum, 2006.
- ERFC (2018).** Protocol of the forty-fourth session of the Intergovernmental Commission on Fisheries in the framework of the agreement between the Government of the Russian Federation and the Government of the Republic of Estonia on cooperation in the field of conservation and use of fish stocks in Lakes Peipsi, Lämmijärv and Pihkva from May 4, 1994. 19-23 November 2018, Tartu, Estonia. 13 p. (with 6 supplements). [Протокол сорок четвертой сессии Межправительственной комиссии по рыболовству в рамках соглашения между Правительством Российской Федерации и Правительством Эстонской Республики о сотрудничестве в области сохранения и использования рыбных запасов в Чудском, Теплом и Псковском озерах от 4 мая 1994 года. 19-23 ноября 2018 г., г. Тарту, Эстония. 13 с. (с 6 приложениями).]

## 6. Appendices

### Appendix 1. Re-scoring evaluation tables

Scoring text for PI 2.3.1, PI 2.3.2 and PI 2.3.3 is revised because of the need to harmonise with the Russian Lake Peipus fishery and the Russian and Estonian Lake Peipus Fishery regarding interactions between the fishery and black-throated diver as an ETP species (see Section 1.2.8 and Appendix 4).

New text is highlighted in blue, which is consistent with the scoring text of the Russian Lake Peipus Fishery ([https://fisheries.msc.org/en/fisheries/russian-lake-peipus-perch-and-pike-perch/@\\_assessments](https://fisheries.msc.org/en/fisheries/russian-lake-peipus-perch-and-pike-perch/@_assessments)).

#### PI 2.3.1 – ETP species outcome

PI 2.3.1		The UoA meets national and international requirements for the protection of ETP species		
		The UoA does not hinder recovery of ETP species		
Scoring Issue		SG 60	SG 80	SG 100
a	Effects of the UoA on population/stock within national or international limits, where applicable			
	Guide post	Where national and/or international requirements set limits for ETP species, the effects of the UoA on the population/stock are known and <b>likely</b> to be within these limits.	Where national and/or international requirements set limits for ETP species, the <b>combined effects of the MSC UoAs</b> on the population/stock are known and <b>highly likely</b> to be within these limits.	Where national and/or international requirements set limits for ETP species, there is a <b>high degree of certainty</b> that the <b>combined effects of the MSC UoAs</b> are within these limits.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	This SI is not scored as there are no national limits for ETP species.		
b	Direct effects			
	Guide post	Known direct effects of the UoA are likely to not <b>hinder recovery</b> of ETP species.	Known direct effects of the UoA are <b>highly likely</b> to not <b>hinder recovery</b> of ETP species.	There is a high degree of confidence that there are no significant detrimental direct effects of the UoA on ETP species.
	Met?	All ETP species Y	All ETP species Y	All ETP species N
	Justification	ETP species are defined by the MSC (MSC 2014) as species that are: i) Recognised by national ETP legislation, ii) Listed on Appendix I of CITES (unless it can be shown that the particular stock of the CITES listed species impacted by the UoA under assessment is not endangered), iii) Listed in any binding agreements concluded under the Convention on Migratory Species (CMS), or iv) Classified as ‘out-of scope’ (amphibians, reptiles, birds and mammals) that are listed in the IUCN Redlist as vulnerable (VU), endangered (EN) or critically endangered (CE).		

PI 2.3.1		The UoA meets national and international requirements for the protection of ETP species	
		The UoA does not hinder recovery of ETP species	
		<p>For the Lake Peipus Perch and Pike-perch Fishery, asp, wels catfish and black-throated diver (<i>Gavia arctica</i>) were determined to be ETP species.</p> <p>Both fish species were reported by stakeholders to be taken in the fishery very rarely, and any that are taken must be returned to the water immediately upon capture.</p> <p>There was no indication that the black-throated diver is taken in the fishery, but it was scored as an ETP species for the Russian Lake Peipus fishery, and it is included as an Annex I species on the EU Birds Directive. Black-throated diver has a wide range across northern latitudes, breeding on large, deep freshwater lakes across northern Europe and Asia, with a global population estimated at c.275,000-1,500,000 individuals. While the population trend appears to be decreasing, the decline is not considered to be sufficiently rapid to approach the IUCN thresholds for 'Vulnerable' under the population trend criterion; the species was assessed for the IUCN recently as 'Least Concern' (Birdlife International 2018). Interactions cannot be ruled out but no stakeholder has raised concerns about fishery interactions with black-throated diver during site visits for the Estonian Lake Peipus Fishery or the Russian Lake Peipus Fishery (including management, science, fishery and the eNGO representatives) and observations of this species in Estonia appear to be focused strongly around the Baltic coast (<a href="https://elurikkus.ee/bie-hub/species/61116#overview">https://elurikkus.ee/bie-hub/species/61116#overview</a>).</p> <p>This is sufficient to meet the SG60 and SG80 level of performance, but the Assessment Team was not presented with evidence to show that there is a high degree of confidence that there are no significant detrimental effects; as such, SG100 is not met.</p>	
c	Indirect effects		
	Guide post	Indirect effects have been considered and are thought to be <b>highly likely</b> to not create unacceptable impacts.	There is a high degree of confidence that there are no significant detrimental indirect effects of the fishery on ETP species.
	Met?	All ETP species Y	All ETP species N
	Justification	<p>Indirect effects from the Lake Peipus Perch and Pike-perch Fishery are considered to include disturbance with feeding or spawning activities and reductions in prey availability caused by the fishing activity.</p> <p>Asp migrate in to rivers to spawn, which takes them outside of the fishing area. Male wels catfish establish and defend territories for spawning, but wels catfish is typically a riverine (river-living) rather than a lacustrine (lake-living) fish, and the fishery is prosecuted in the lake, only, and fishing locations tend to be relatively fixed in space. Overall, it is considered highly likely that the fishery is not creating unacceptable impacts with respect to spawning.</p> <p>Both asp and wels catfish are piscivorous, and so there is potential for the fishery to impact these species indirectly through overharvest of the prey species. However, the fishery is managed to maintain healthy stocks and there is no evidence that the suite of species present within the Lake is currently being overharvested. It is therefore highly likely to not create unacceptable impacts with respect to prey availability.</p> <p>Black throated diver breeds in inland locations and nests near the water's edge or on islets or hummocks emerging from the water (Birdlife International 2018). This places the animals away from potential conflict with the Lake Peipus Fishery, including during feeding forays along the coast of the lake and in shallow water. As demonstrated in scoring Principle 1 and other parts of Principle 2, fish populations</p>	

PI 2.3.1		<p><b>The UoA meets national and international requirements for the protection of ETP species</b></p> <p><b>The UoA does not hinder recovery of ETP species</b></p>
		<p>(as black-throated diver prey) are also managed at healthy levels within the lake.</p> <p>Overall, the fishery meets SG80, but in the absence of a detailed review of the issues it is not possible to confirm that the fishery meets the SG100 level of performance.</p>
References		Birdlife International 2018
OVERALL PERFORMANCE INDICATOR SCORE:		80
CONDITION NUMBER (if relevant):		N/A

### PI 2.3.2 – ETP species management strategy

PI 2.3.2		<p>The UoA has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"><li>• meet national and international requirements;</li><li>• ensure the UoA does not hinder recovery of ETP species.</li></ul> <p>Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species.</p>		
Scoring Issue		SG 60	SG 80	SG 100
a	Management strategy in place (national and international requirements)			
	Guide post	There are <b>measures</b> in place that minimise the UoA-related mortality of ETP species, and are expected to be <b>highly likely to achieve</b> national and international requirements for the protection of ETP species.	There is a <b>strategy</b> in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to be <b>highly likely to achieve</b> national and international requirements for the protection of ETP species.	There is a <b>comprehensive strategy</b> in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to <b>achieve above</b> national and international requirements for the protection of ETP species.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	This SI is not scored as there are no national limits for ETP species		
b	Management strategy in place (alternative)			
	Guide post	There are <b>measures</b> in place that are expected to ensure the UoA does not hinder the recovery of ETP species.	There is a <b>strategy</b> in place that is expected to ensure the UoA does not hinder the recovery of ETP species.	There is a <b>comprehensive strategy</b> in place for managing ETP species, to ensure the UoA does not hinder the recovery of ETP species
	Met?	All ETP species Y	All ETP species N	All ETP species N
	Justification	For the Lake Peipus Perch and Pike-perch Fishery, asp, wels catfish and black-throated diver were determined to be ETP species.  The fishery has a number of measures in place which are expected to ensure that		

PI 2.3.2	<p><b>The UoA has in place precautionary management strategies designed to:</b></p> <ul style="list-style-type: none"> <li>• meet national and international requirements;</li> <li>• ensure the UoA does not hinder recovery of ETP species.</li> </ul> <p><b>Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species.</b></p>		
	<p>the UoA does not hinder the recovery of ETP species. For asp and wels catfish, these include that these species are generally required to be returned upon capture, and that fishing is prohibited within 500 m of river mouths, which helps to prevent capture during upriver spawning migration; these are expected to ensure the UoA does not hinder the recovery of ETP fish species, and so SG60 is met.</p> <p>For black-throated diver, the fact that fishing is prohibited within 500 m of river mouths and less than 1km from shore (except for the small-mesh gillnet fishery that targets roach inshore during March and April, although potential impacts on birds and mammals are limited because of ice cover and by the inability to operate the gear during the ice-melt period), with most fishing occurring considerably further from shore, also helps to prevent interactions with coastally orientated species such as black-throated diver; SG60 is met for both UoAs. However, gillnets and trapnets operate during periods when black-throated diver are on the lake, and these gears are left to fish passively, presenting a risk of drowning (albeit that Estonian and Russian Lake Peipus fishery stakeholders corroborated the assertion that bird species are very rarely if ever taken in the Lake Peipus fisheries).</p> <p>However, it is not possible to say that there is a strategy in place for ETP species, in particular because there appears to be no general requirement to report captures of ETP species, such that information on interactions is anecdotal, only.</p> <p>In the absence of a strategy for ETP species, SG80 is not met, and a Condition of Certification (#5) is set for asp and wels. A condition (#9) is also set for black-throated diver at the Year 1 audit, with milestones and a timeline that match those of the Russian Lake Peipus Fishery (see harmonisation discussion, Section 1.2.8).</p>		
c	Management strategy evaluation		
	<b>Guide post</b> The measures are <b>considered likely</b> to work, based on <b>plausible argument</b> (e.g. general experience, theory or comparison with similar fisheries/species).	There is an <b>objective basis for confidence</b> that the measures/strategy will work, based on <b>information</b> directly about the fishery and/or the species involved.	The strategy/comprehensive strategy is mainly based on information directly about the fishery and/or species involved, and a <b>quantitative analysis</b> supports <b>high confidence</b> that the strategy will work.
	<b>Met?</b>	All ETP species Y	All ETP species N
	<b>Justification</b>	<p>The general requirement to return all asp and catfish, and the prohibition of fishing within 500 m of river mouths is considered likely to work to ensure the UoA does not hinder the recovery of ETP fish species, based on plausible argument; SG60 is met. However, in the absence of any data on captures and the condition of the fish upon release, it is not possible to say that there is an objective basis for confidence that the measures/strategy will work. As such, SG80 is not met. The same Condition of Certification is set as for SIb (#5), as the requirements for SIb and SIc are closely linked.</p> <p>The prohibition of fishing within 500 m of river mouths and less than 1 km from shore is also considered likely to work to ensure the fishery does not hinder the recovery of black-throated diver as an ETP species, based on plausible argument; SG60 is met. However, gillnets and trapnets do present some risk to black-throated diver because they operate during periods when the birds may be found on the lake. In the absence of any data on captures (or lack of captures), it is not possible to say that there is an objective basis for confidence that the measures/strategy will</p>	

PI 2.3.2		The UoA has in place precautionary management strategies designed to: <ul style="list-style-type: none"><li>• meet national and international requirements;</li><li>• ensure the UoA does not hinder recovery of ETP species.</li></ul> <p>Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species.</p>		
		work. As such, SG80 is not met for black-throated diver. The same Condition of Certification on black-throated diver is set as for Slb (#9), as the requirements for Slb and Slc are closely linked.		
d	Management strategy implementation			
	Guide post	There is some <b>evidence</b> that the measures/strategy is being implemented successfully.	There is <b>clear evidence</b> that the strategy/comprehensive strategy is being implemented successfully and is achieving its objective as set out in scoring issue (a) or (b).	
	Met?	All ETP species Y	All ETP species N	
	Justification	The measures that are relevant to ETP species (including that they must be returned, and a prohibition on fishing within 500 m of river mouths) are understood to be adhered to, and can be monitored effectively through the requirement for all vessels (other than rowing boats) to be equipped with a VMS, while through a relatively high level of on-lake and at landing inspections (equivalent to about 11% of all trips – I. Kask, pers. comm.). This comprises evidence that the measures are being implemented successfully; SG80 is met. However, in the absence of a strategy, it is not possible to score higher.		
e	Review of alternative measures to minimize mortality of ETP species			
	Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species.	There is a <b>regular</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.	There is a <b>biennial</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species, and they are implemented, as appropriate.
	Met?	All ETP species Y	All ETP species N	All ETP species N
	Justification	The implementation of measures to minimize UoA-related mortality of ETP species has required that a review has been conducted, and there is consideration of asp and wels catfish stock status in the annual Estonian science review (e.g., EMI 2017). As such, SG60 is met for these fish species. <p>The implementation of measures that minimise interactions between the Estonian fishery and bird and mammal species, generally (e.g., through the prohibition of fishing within 500 m of a river mouth and within 1 km of shore (this latter measure for all fisheries except small-mesh gillnets that are employed to target mainly roach for a short season starting March 1st and runs through April each year, before the annual summer gillnet closure), has required that a review has been conducted through the ERFC. As such, SG60 is met.</p> <p>However, it is not clear that there is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and that they are implemented as appropriate. SG80 is therefore not met, and so a Condition of Certification is implemented (#6). A condition (#10) is also set for black-throated diver at the Year 1 audit, with milestones and a timeline that match those of the Russian Lake Peipus Fishery (see harmonisation discussion,</p>		

PI 2.3.2	<p>The UoA has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"> <li>• meet national and international requirements;</li> <li>• ensure the UoA does not hinder recovery of ETP species.</li> </ul> <p>Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species.</p>		
	Section 1.2.8).		
References	EMI 2017.		
OVERALL PERFORMANCE INDICATOR SCORE:			65
CONDITION NUMBER (if relevant):			5 & 6 (asp and wels catfish) 9 & 10 (black-throated diver)

### PI 2.3.3 – ETP species information

PI 2.3.3	<p>Relevant information is collected to support the management of UoA impacts on ETP species, including:</p> <ul style="list-style-type: none"> <li>• Information for the development of the management strategy;</li> <li>• Information to assess the effectiveness of the management strategy; and</li> <li>• Information to determine the outcome status of ETP species.</li> </ul>		
Scoring Issue	SG 60	SG 80	SG 100
a	Information adequacy for assessment of impacts		
Guide post	<p>Qualitative information is <b>adequate to estimate</b> the UoA related mortality on ETP species.</p> <p>OR</p> <p>If RBF is used to score PI 2.3.1 for the UoA:</p> <p>Qualitative information is <b>adequate to estimate productivity and susceptibility</b> attributes for ETP species.</p>	<p>Some quantitative information is <b>adequate to assess</b> the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species.</p> <p>OR</p> <p>If RBF is used to score PI 2.3.1 for the UoA:</p> <p>Some quantitative information is adequate to assess productivity and susceptibility attributes for ETP species.</p>	<p>Quantitative information is available to assess with a high degree of certainty the <b>magnitude of UoA-related impacts, mortalities and injuries for the status</b> of ETP species.</p>
Met?	All ETP species Y	All ETP species N	All ETP species N
Justification	<p>For the Lake Peipus Perch and Pike-perch Fishery, asp, wels catfish and black-throated diver were determined to be ETP species. Both fish species were reported by stakeholders to be taken in the fishery very rarely, and there is a general requirement to return any that are caught to the water.</p> <p>All stakeholders asserted that there were few if any interactions annually between the fishery and any bird or mammal species. This corroborates information presented by stakeholders regarding the Russian Lake Peipus Fishery.</p> <p>Qualitative information is adequate to estimate the UoA related mortality on ETP species; SG60 is met. However, there is no quantitative information available that is</p>		

PI 2.3.3		Relevant information is collected to support the management of UoA impacts on ETP species, including: <ul style="list-style-type: none"><li>• Information for the development of the management strategy;</li><li>• Information to assess the effectiveness of the management strategy; and</li><li>• Information to determine the outcome status of ETP species.</li></ul>		
		adequate to assess the UoA related mortality, and so SG80 is not met for asp, wels catfish and black-throated diver. As such, a Condition of Certification is set (#7) for asp and wels catfish. A condition (#11) is also set for black-throated diver at the Year 1 audit, with milestones and a timeline that match those of the Russian Lake Peipus Fishery (see harmonisation discussion, Section 1.2.8).		
b	Information adequacy for management strategy			
	Guide post	Information is adequate to support <b>measures</b> to manage the impacts on ETP species.	Information is adequate to measure trends and support a <b>strategy</b> to manage impacts on ETP species.	Information is adequate to support a <b>comprehensive strategy</b> to manage impacts, minimize mortality and injury of ETP species, and evaluate with a <b>high degree of certainty</b> whether a strategy is achieving its objectives.
	Met?	All ETP species Y	All ETP species N	All ETP species N
	Justification	Relevant information that is available for asp and wels catfish includes knowledge of spawning behaviours and habitat preferences, and some data on population status is collected through the annual fishery-independent surveys undertaken on Lake Peipus (albeit that these surveys are not designed to monitor these species). Relevant information on black-throated diver that is available includes knowledge of its distribution, nesting habitat preferences and feeding ecology, and a review of population status has recently been conducted (Birdlife International 2018). VMS data are also collected routinely on the fishery that help to enforce the prohibition on fishing within 500 m of river mouths. While there is no reason to retain black-throated diver, enforcement is conducted at a relatively high level and will support the requirement to return asp and wels catfish to the water; SG60 is clearly met. However, information is not adequate to measure trends and support a strategy to manage impacts on ETP species; as such, SG80 is not met. The same Condition of Certification is set as on Sla (for asp and wels catfish #7, for black-throated diver #11), as requirements for Sla and Slb are closely linked.		
References		None		
OVERALL PERFORMANCE INDICATOR SCORE:				60
CONDITION NUMBER (if relevant):				7 (asp and wels catfish) 11 (black-throated diver)

## **Appendix 2. Stakeholder submissions**

No stakeholder submissions were received at this year 1 surveillance audit.

## **Appendix 3. Surveillance audit information**

No further information was provided or is considered necessary at this year 1 surveillance audit.

## Appendix 4. Additional detail on conditions/ actions/ results

### Note of Meeting



Name of the fishery	Type of assessment / audit
Logi-F Estonian Lake Peipus Perch and Pike-Perch	Year 1 Audit

Venue of meeting	Date of meeting
Skype	27 <sup>th</sup> February 2019

Full name	Name of the organization	Position
Rob Blyth-Skyrme	Marine Certification	LA, Estonian Lake Peipus Fishery LA, Russian Lake Peipus Fishery
Dmitry Sendek	Marine Certification	P1 Expert (all three fisheries)
Andy Hough	Marine Certification	LA, Russian and Estonian Lake Peipus Fishery

### Lake Peipus fisheries – current status

#### Estonian Lake Peipus Perch and Pike-Perch Fishery

- Certified 13<sup>th</sup> October 2017
- Species: Perch and pike-perch
- Gears: Gillnets and trapnets only – 2 UoCs
- Current stage: First annual surveillance visit w/c 25<sup>th</sup> February 2019.
- P1 – 4 conditions: 1.2.2 Slb and 1.2.4 Slc (perch) and 1.2.1 Slf and 1.2.4 Slc (pike-perch).
- P2 – 3 conditions: 2.3.2 Slb, 2.3.2 Sle and 2.3.3 Sla,b (wels and asp as ETP species under the Estonian Red List).
- P3 – 1 condition: PI3.1.3 Sla (precautionary approach).

#### Russian Lake Peipus Perch and Pike-Perch Fishery

- In assessment.
- Species: Perch and pike-perch
- Gears – Gillnets and trapnets, and mutniks – 4 UoAs
- Current stage: PCDR consultation closes 1<sup>st</sup> March 2019.
- P1 – 4 conditions: 1.2.2 Slb and 1.2.4 Slc (perch) and 1.2.1 Slf and 1.2.4 Slc (pike-perch).
- P2 – 6 conditions:
  - Gillnets and trapnets: 2.3.2 Slb,c, 2.3.2 Sle, 2.3.3 Sla,b (black-throated diver as an ETP species under the Russian Red List)
  - Mutniks: 2.3.2 Sle and 2.3.3 Sla,b (black-throated diver), 2.4.3 (habitats)
- P3 – 1 condition: 3.2.3 Slc (compliance)

#### Russian and Estonian Lake Peipus Perch and Pike-Perch Fishery

- In assessment.
- Species: Perch and pike-perch
- Gears: Gillnets and trapnets, and mutniks
- Stage: Site visit held w/c February 18<sup>th</sup> 2019

### Harmonisation

#### Estonian Lake Peipus Fishery harmonising with Russian Lake Peipus Fishery

- Only gillnet and trapnet conditions are relevant.

- P1 Conditions are harmonised already.
- P3 conditions do not need to be harmonised as they are country-specific.
- Russian Lake Peipus Fishery has conditions on black-throated diver that did not appear in the Estonian Lake Peipus Fishery assessment.
- Black-throated diver – is ETP in Russian assessment because it is a Russian Red List species, and some evidence was obtained that the Russian gillnet fishery may interact.
- Russian Red List is not relevant in Estonia, but black-throated diver is listed as an Annex I species on the EU Birds Directive, so is ETP in Estonia.
- No information was presented during the site visit for the Estonian Lake Peipus Fishery assessment that indicated black-throated diver may be taken, but the proximity of the Russian zone indicates this is a possibility.
- Information is being sought on black-throated diver occurrence from Estonian Scientists at University of Tartu, but expectation is that new Conditions on black-throated diver will be introduced for the Estonian Lake Peipus Fishery, to harmonise with the Russian Lake Peipus Fishery conditions.
- Any findings from the Year 1 audit will be confirmed with Dr. Hough as soon as possible to allow early consideration in the assessment of the Russian and Estonian Lake Peipus Fishery.

Russian and Estonian Lake Peipus Fishery harmonising with the Estonian Lake Peipus Fishery and the Russian Lake Peipus Fishery

- Gillnet and trapnet conditions, and mutniks conditions, are all relevant.
- P1 Conditions will be harmonised for all UoAs.
- P2 conditions for mutniks in Russia are expected to be harmonised for both Estonian and Russian mutniks UoAs.
- P2 conditions on wels and asp are expected to be harmonised for Estonian UoAs, and conditions on black-throated diver are expected to be harmonised for all UoAs.
- P3 conditions are expected to be harmonised for Russian and Estonian UoAs separately.
- Writing the CDR currently, but no delivery date has been specified.

### **Follow up**

- Dr. Blyth-Skyrme and Dr. Hough have agreed to share any relevant findings as early as possible, and to discuss harmonisation further as needed.

## Appendix 5. Revised Surveillance Programme

No change to the Surveillance Programme as proposed originally is necessary.

**Table 5:** Surveillance level rationale.

Year	Surveillance activity	Number of auditors	Rationale
2	Level 6	Two	<p>A Level 6 surveillance schedule is appropriate for the Lake Peipus fishery because there are condition all three Principles and it is the first certification period for the fishery.</p> <p>The requirement under CR 7.23.4 (MSC 2014) is for a minimum of two auditors for surveillance in the first certification period. Reviewing progress against the condition on P3 (PI 3.1.3) may be undertaken by an auditor in conjunction with reviewing progress on the conditions on one of the other Principles if the auditor is suitably qualified (as specified in CR 7.5, MSC 2014).</p>

**Table 6:** Timing of surveillance audit.

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
2	13 <sup>th</sup> October 2017	January/February 2018	<p>CR7.23.6.1 (MSC 2014) states the following:</p> <p>"CABs may elect to undertake surveillance audits up to 6 months earlier or later than the anniversary date, where this deviation is appropriate given the circumstances of the fishery."</p> <p>As for year 1, it will be appropriate to undertake the Year 2 audit after the New year. This will allow an Audit Team to review reports from the ERFC annual meeting (held late November) and complete catch data for the year. Key managers and scientists will also be more likely to have opportunity to engage with an Audit Team post-Christmas.</p>

**Table 7:** Fishery Surveillance Program.

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 6	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re-certification site visit