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Agenda Item	7 – Salmon and sea trout including HELCOM Recommendation 32-33/1
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This document has been prepared by the HELCOM RETROUT Project manager

Background

Following the agreement by [HOD 49-2015](#) (Outcome para. 4.35), HELCOM is involved as a partner in the a three-year (10/2017–09/2020) Interreg project RETROUT (Development, promotion and sustainable management of the Baltic Sea Region as a coastal fishing tourism destination).

The RETROUT project develops and promotes sustainable and ethical fishing tourism in the Baltic Sea region and improves the environmental conditions in rivers to strengthen migratory fish populations, with special focus on sea trout. RETROUT will provide guidance in the form of best practice toolboxes for river restoration and fishing tourism. These toolboxes can be used by authorities and stakeholders to help foster sustainable growth within this field through measures for improving stock and river habitat status and through appropriate policy and regulatory adjustments for fishing tourism.

The project comprises 14 partners from the Baltic Sea countries (Sweden, Estonia, Latvia, Lithuania and Poland) including HELCOM as an intergovernmental organization. Stockholm County Administrative Board is the lead partner responsible for the overall project coordination. RETROUT is a flagship project of the EU Strategy for the Baltic Sea Region Policy Area Bioeconomy and it is co-financed by Interreg Baltic Sea Region Programme under the Natural resources priority field.

HELCOM is leading Work Package (WP) 4 “Assessment of status and management of seatrout rivers and stocks”. The aim of WP 4 is to compile information on the status of sea trout rivers and stocks, evaluate different river restoration methods and technological solutions, and to recommend best practices and management options. The WP 4 working group includes experts in the fields of river restoration, fish biology, cultural history, water resources management and environmental communication. HELCOM is responsible for the strategic planning and coordination of the working group. The main project results will be published in the HELCOM Baltic Sea Environment Proceedings (BSEP) by the end of the project, after endorsement from the Fish Group.

The tasks and deliverables of WP 4 are in line with HELCOM 2013 Ministerial Agreements on salmon and sea trout, and the project activities will support implementation of HELCOM BSAP conservation goals for the Baltic sea trout based on HELCOM Recommendation 32-33/1. The work of RETROUT WP 4 aligns with the scopes of the Group on Ecosystem based Sustainable Fisheries (ToR, Work Plan 2018-2019) and Task Force on Migratory Fish Species (ToR, Work Plan 2017-2018) with regard to migratory fish.

The recent and upcoming activities of RETROUT WP 4 are set out in the Annex to this document.

Action requested

The Meeting is invited to take note of the RETROUT activities.

Recent and upcoming activities of the RETROUT project, Work Package 4 (Assessment of status and management of sea trout rivers and stocks)

The overall scope of RETROUT is to develop and promote the Baltic Sea Region as a coastal fishing tourism destination, with focus on sea trout. The project has four Work Packages addressing different aspects of the project scope, including the biological basis for trout fishing through stock and river habitat status assessment and management and river restoration practices, policy reform studies and dialogue, and actual development and promotion of coastal fishing tourism destinations.

The main aim of RETROUT Work Package 4 (WP 4), led by HELCOM, is to compile information on the status of sea trout rivers and stocks, evaluate different river restoration methods and technological solutions, and to recommend best practices and management options. The assessment of status of sea trout rivers and stocks will support national implementation of HELCOM Recommendation 32-33/1 “Conservation of Baltic salmon and sea trout populations by the restoration of their river habitats and management of river fisheries”, while the river restoration best practices guidelines can contribute to the updating of HELCOM Recommendation 32-33/1, with regard to addition of guidelines on restoration practices.

The work of WP 4 is divided in the following 4 Groups of Activities (GoA) that in summary will:

1. *Assessment of sea trout river and stock status, impacts of recreational fishing and management options*, with the aims to
 - develop a common, standardised methodology for assessing sea trout river and stock status
 - assess sea trout river and stock status
 - gather data on recreational fishing and its impacts on sea trout populations
 - evaluate management option scenarios and potential growth of sea trout stocks
2. *Joint evaluation of completed restoration projects*, with the aims to
 - undertake a research study of past river restoration projects to identify differences between successful and failed projects
 - evaluate the ecological effects of habitat restorations and fish ways already installed in the study cases
 - gather data costs, construction time, stakeholder involvement/information and project difficulties
 - produce a consolidated report on river restoration success factors based on the study outcome
3. *Demonstrating efficient river restoration measures*, with the aims to
 - demonstrate efficient river restoration measures and implementation methods as a way to promote identified success factors/best practices and innovative approaches
 - transnational learning-by-doing that will result in increased knowledge of lessons learned of different approaches, management systems and innovative tools (e.g. stakeholder communication, cross-sectorial coordination) valuable for advancing implementation
 - at the pan-Baltic level, provide new knowledge for a concrete input to the Baltic ToolBox for River Restoration and development of recommendations for improving habitat and stocks of migratory fish species
4. *Develop Baltic Toolbox for River Restoration*, with the aims to
 - by using inputs from WP 4 activities 4.2 (joint evaluation of completed restoration projects) and 4.3 (demonstrating efficient river restoration measures), jointly develop a Baltic Toolbox for River

Restoration to be published as a HELCOM report in the BSEP and used by local, regional, national public authorities.

The following meetings are planned under WP 4:

- Monitoring and assessment method workshop at Klaipeda University in Lithuania (in June 2018) – *DONE*
- Partnership mid-term meeting (in May 2019) – *DONE*
- Study visits to demonstration sites in Estonia, Latvia/Lithuania, Sweden and Poland (summer/fall 2019 and 2020)
- Pan-Baltic meeting on river restoration and trout management (in period 6)
- Yearly RETROUT partnership meetings (yearly in fall; 1st in Stockholm October 2017, 2nd in Stockholm October 2018)

Summary of the recent activities and progress within WP4

The project passed its half-way milestone in end of March 2019 and is currently in its fourth (of six) period.

Progress summaries for different GoAs in WP 4 are provided below. An overview of all planned WP 4 GoAs and tasks is given in Table 1.

GoA 4.1 Assessment of sea trout river and stock status, impacts of recreational fishing and management options

Lead: HELCOM

Timeframe: Periods 1-4, to be finished by September 2019

Progress summary:

Most progress has been made on the tasks (4.1.1, 4.1.3-4.1.7) concerning monitoring methodologies, with task 4.1.3 (Monitoring and assessment method workshop in Lithuania) completed already in Period 2, and task 4.1.1 (Common methodology on trout river habitat monitoring and electrofishing) partly finished in Period 2. The current agreed approach is to combine the outputs of tasks 4.1.1 and 4.1.4-4.1.7 (Tests of assessment methods in [Countries]) in a common sea trout river monitoring methods report, thus efficiently advancing the project goal of common agreed methodologies for assessing sea trout river habitat and stock status. In Period 3 progress has been made in planning of the format to be used as well as doing preliminary preparations for the report. Part of the monitoring methods testing (4.1.4-4.1.7) has been conducted in during 2018 by concerned PPs, but some testing remains to be done during summer 2019 (Period 4). Therefore, finalisation of the combined 'methods report' will be done after that.

Concerning task 4.1.2 (Assessment of sea trout river and stock status...), there has been unclarity of the proper approach for implementing the task due to imprecise original planning and change of key people. However, the RETROUT WP 4 working group have considered this and worked on specifying the scope, aims and approach for the task 4.1.2, in order to achieve the goals set for GoA 4.1 and WP4. Detailed plans to take the work forward has been developed and contacts to central data providers has been established. The plan is to conduct a Baltic Sea wide assessment of sea trout streams, based on existing data and information available via ICES and PPs. A request for permissions to access and use sea trout data sets gathered by ICES WGBAST has been sent to the data contributors and access has been granted from most countries. A working document detailing the plan for task 4.1.2 has been prepared, and it is set out as **Appendix 1** in this document.

The role of HELCOM (PP 13) in GoA 4.1 has been overall coordination and internal and external communication. Contact to concerned PPs has been maintained through discussions, email exchange and monthly WP4 online meetings. Plans for implementing the GoA 4.1 were discussed in detail and agreed upon during the yearly partnership meeting in Stockholm, Sweden, in October 2018., and further refined during the partnership midterm meeting in Gdansk, Poland, in May 2019. In leading and promoting the task 4.1.2 HELCOM has had a central role and has actively worked with developing concrete plans for the task and taking them forward. In rest of the GoA 4.1 tasks HELCOM has had a supporting and coordinating role.

GoA 4.2 Joint evaluation of completed restoration projects

Lead: Campus Roslagen AB (Sweden)

Timeframe: Periods 1-3, to be finished by March 2019

Progress summary:

In earlier Periods progress was made in in tasks 4.2.1 (Case study template and interview guide) and 4.2.2 (Case study data collection and summary). During Period 3, data concerning past river restoration cases (task 4.2.2) had been received by all concerned project countries (PP1, PP5, PP8, PP9, PP17). Additionally, some information was received from a Russian NGO, and there might still be a possibility to obtain useful data from Finland. All-in-all 87 completed and 6 non-realized restoration projects in about 70 rivers had been reported. The type of restorations included migration improvements (dam removals, fish ways) and habitat restorations (adding gravel & stones, planting trees on river banks, etc.).

Recent progress has also been made in task 4.2.3 (Interviews with key Stakeholders of selected past river restoration cases). Following the agreed selection criteria developed by the GoA lead (PP16), a sub-set from all cases (task 4.2.2) were chosen for in-depth studies (task 4.2.3). Two projects per countries were picked out for the stake-holder interviews; one successful and one failure. Based on the interview guide (task 4.2.1) developed by PP16, concerned project partners conducted interviews with at least three stakeholders for each chosen restoration project (implementing authority, a stakeholder in favour of the restoration, and a stakeholder against it). In some of the cases there were challenges in finding relevant stake-holder contacts willing to be interviewed, which has delayed the finalisation of the task. Interview reports as English transcripts, following the Instructions for the interview report developed by GoA 4.2 lead PP16, were to be finalised during Period 3. The interviews are finished by most concerned PPs and reports have been submitted to GoA 4.2 lead by 2 of 5 concerned PPs.

Based on multivariate quantitative analyses of received restoration case data, and qualitative analyses and interpretation of the in-depth interviews, a consolidated report (task 4.2.4) on success factors of restoration activities will be produced, feeding into the Baltic Sea Toolbox for river restoration best practices (GoA 4.4). This is expected to be achieved during Period 4.

The role of HELCOM (PP 13) in GoA 4.2 has been to support the GoA Lead (PP 16), e.g. through active project coordination and communication, and by aiding in the development of the case selection criteria and the interview guide. HELCOM has especially been responsible for the relevant contacts to Baltic Sea counties within the HELCOM framework for increasing the data coverage in GoA 4.2. In practice, HELCOM also assisted in conducting a stakeholder interview of a restoration destination in Finland.

GoA 4.3 Demonstrating efficient river restoration measures

Lead: University of Tartu /EMI (PP 5, Estonia)

Timeframe: Periods (2)3-6, to be finished by end of September 2020

Progress summary:

Within GoA 4.3 the involved partners intend to demonstrate efficient river restoration measures and implementation methods based on national and transnational knowledge from research and dialogue. The purpose of the restoration projects is to demonstrate solutions for improving quality of sea trout river habitats with the aim to increase and secure sustainable stock production. The river restoration demonstration projects are carried out independently and in internal coordination by concerned PPs in Estonia, Latvia, Lithuania, Poland and Sweden (PP1, PP3, PP5, PP7, PP8, PP9, PP14, PP15, PP17). A total of 12-14 restoration cases are included, covering measures such as building of fish ways, biotope restorations, water quality improvement, and dam removal plans.

In most of the cases planning and procurement for the restoration work has been done, with transition towards the implementation phase. In three sites the of the Swedish cases (implemented by external non-project funding) restoration work has already finished.

All demonstration projects are documented carefully from the start until finishing in form of process documentation including all relevant proceedings. Each demonstration project will come with a dedicated case study report covering the key issues in English. For the documentation and reporting, draft instructions/guidelines have been prepared for common approval by the WP 4 working group (see **Appendix 2**). A summary of the demonstration project results will be included as a dedicated section in the 'Baltic Toolbox' on river restoration best practices (output of GoA4.4).

The role of HELCOM in this GoA is to facilitate and coordinate the transnational dialogue and peer-learning between the restoration demonstration cases. This is done through active contact keeping and communication on the status and progress of the different restoration projects, leading to frequent sharing of experiences. HELCOM will also steer and support the final restoration case reporting process.

GoA 4.4 Develop Baltic Toolbox for river restoration

Lead: HELCOM (PP 13)

Timeframe: Periods 4-6, to be finished by end of September 2020

Progress summary:

This GoA has not yet had any direct progress to report, as it has not been in an active phase until the beginning of period 4 starting in April 2019.

Deviation in implementation (WP 4)**GoA 4.1 Assessment of sea trout river and stock status, impacts of recreational fishing and management options**

According to the original project Work Plan an output of task 4.1.1 was to be finalized by the end of June 2018. This was not reached. At the yearly partnership meeting in October 2018 the WP 4 working group agreed to combine the outputs of tasks 4.1.1 and 4.1.4-4.1.7 (Tests of assessment methods in [Countries]) in a common sea trout river monitoring methods report, to include summary descriptions of the main methods as well as summarized experiences of them by the PPs. Some of the national monitoring and assessment methods testing (4.1.4-4.1.7) have already been conducted, but some testing remains to be done during summer 2019 (Period 4). Therefore, finalisation of the combined 'methods report' will be done after that.

Concerning task 4.1.2 (Assessment of sea trout river and stock status...), there has been unclarity of the proper approach for implementing the task. Partly since many of the persons involved in the original planning

of the project or in the early start of it have left and been changed to new people, it has turned out to be challenging to follow precisely the original idea. This has caused a considerable delay in this task. However, effort has been made on clarifying the plans and now this task is progressing. Due to the early difficulties the original schedule of completion by end of Period 4 is not any more realistic and needs to be postponed in order to enable a good and useful output from this task. Currently, a request for permissions to access and use sea trout river data sets gathered by ICES WGBAST has been sent to the data contributors and access have been granted from most countries. After the process of accessing all needed data, compilation and analyses are to be done in fall 2019. A draft report should be ready by end 2019, and finalization and approval for publication in HELCOM working structures can be done during spring 2020.

GoA 4.2 Joint evaluation of completed restoration projects

GoA 4.2 has suffered from some delays, namely due to organizational changes in the start of the project (change in lead partner organization for the GoA), and more lately the progress has been delayed and dependent on the data submission from project partners (and HELCOM countries). These challenges throughout the project have shifted the schedule of all the tasks of this GoA and the finalisation of the GoA as well. However, currently most in-depth interviews have already been conducted and some delivered, and preparations for the data analyses have started. The GoA 4.2 is now well progressing, but following the delays, requires further schedule changes, that however, should be minor to their degree. After receiving finalised interview reports, analyses, ready conclusions and a draft report should be ready during fall 2019.

GoA 4.3 Demonstrating efficient river restoration measures

The Swedish (Bränningeån, Erstaviksbäcken, Moraån, Skeboån and Vitsån), and the Polish (Reda) rivers should also be listed in the work plan as demonstration cases (as own tasks) since they will be considered in the project, regardless that they are (partly) implemented by external non-project funding.

GoA 4.4 Develop Baltic Toolbox for river restoration

Not relevant

HELCOM's contribution to project communication

During Period 3 HELCOM has contributed the project's internal communication, by sustaining an active contact to RETROUT management team, project partners and collaborators.

The Project manager presented recent and upcoming activities in the WP 4 of the RETROUT project to the HELCOM [FISH 9-2019](#) Meeting on 30-31 January 2019.

According to the project's visibility rules, HELCOM has a RETROUT project web site (<http://www.helcom.fi/helcom-at-work/projects/retROUT/>).

HELCOM also prepared and published on its web site a news release from the RETROUT [yearly partnership meeting in Stockholm on 1-2 October 2018](#) and from the [partnership mid-term meeting in Gdansk on 8-9 May 2019](#).

Summary of the upcoming activities within WP4

The next upcoming activities of RETROUT WP 4 include tasks from all GoAs. An overview of all planned WP 4 GoAs and tasks is given in Table 1.

GoA 4.1 Assessment of sea trout river and stock status, impacts of recreational fishing and management options

Tasks 4.1.1 *Common methodology on trout river habitat monitoring and electrofishing*, and 4.1.4 *Tests of assessment method [in countries]* have been decided to be combined in one common 'methods' report. The report will provisionally contain a common description for habitat survey methods and river status assessments as well as trout monitoring and electrofishing, and additionally summaries of the experiences of each partner country in testing/applying the sea trout stock and habitat assessments methods considered at the methods workshop (task 4.1.3) in some selected test rivers. Specifically, the report will first present the River Habitat Survey (RHS), the Trout Habitat Score (THS) and the parr density estimation from electrofishing, and then contain a compilation/synthesis of the country wise summaries on available information/experiences of the testing/use of these methods. This work lead by Stockholm County Administrative Board (PP1, Sweden) is to be finished by end of September 2019.

Task 4.1.2 *Assessment of sea trout river and stock status, extent of pressures and management options*, will have a high priority, as this task is lagging in schedule and rapid advancement now needed. According to the RETROUT project workplan, the Baltic Sea-wide assessment will be largely based on existing data and information available via project partners, HELCOM Contracting Parties and ICES WGBAST. In short, following what was agreed by the WP 4 working group at the YPM in Stockholm, the current aim is to update the HELCOM SALAR project report ([BSEP 126A](#)) from 2011 to the parts concerning sea trout, although with slightly renewed approaches (parr densities to be used instead of estimated smolt numbers as basis for status measurement). The assessment within RETROUT project could potentially take into account more rivers with existing data, and hence provide a more comprehensive status evaluation with higher single river resolution than what has so far been done by ICES WGBAST or HELCOM.

After the completing the initiated process of accessing all needed data, compilation and analyses are to be done in fall 2019. A draft report should be ready by end 2019, and finalization and approval for publication in HELCOM working structures can be done during spring 2020. A more detailed account of the plans for this task is given in **Appendix 1**.

GoA 4.2 Joint evaluation of completed restoration projects

The stakeholder interviews (task 4.2.3) have been finished by most PP countries as well as regarding one interview case in Finland. Complete reports from the stakeholder interviews for the selected restoration cases should be submitted by concerned PPs to the GoA lead (PP 16) as soon as possible but at the latest by end of May 2019 to facilitate the advancement of the activity.

The remaining phase of GoA 4.2 contains quantitative data analysis of all reported restoration projects supported (to be supported by the Project leader, PP1) as well as qualitative data analysis of all reported cases and the in-depth interview-based data (to be done by the Activity leader, PP16). The final phase of the GoA covers the preparation of a concise report on success factors based on the analyses, comprising descriptions of selected projects and comparison of successful and unsuccessful ones, as well as identified best practices. The report will be included as a chapter in the Baltic Toolbox (to be prepared under GoA 4.4). Tentatively this GoA will be finished during fall 2019.

GoA 4.3 Demonstrating efficient river restoration measures

The work with the river restoration demonstration cases will proceed over different implementation phases depending on the stage of each restoration project. The work with the restoration demonstration cases are being carried out very independently by each responsible project partner. Each restoration demonstration case shall produce a dedicated demonstration project report (a concise report in English writing, full documentation in national language) in form of a process documentation, generally following the draft reporting instructions (still to be approved and adopted by the WP 4 working group; see **Appendix 2**). The dedicated demonstration case reports will feed into the 'Baltic Sea Toolbox on River Restoration Best Practices' (GoA 4.4) as an own chapter/section and shall be ready by the end of period 5 regardless of the current stage of the project at that time, in order to be possible to compile and prepare the Baltic Toolbox report in time.

GoA 4.4 Develop Baltic Toolbox for river restoration

GoA 4.4 is formally active from the beginning of the current project period 4. The key task is to jointly develop a 'Baltic Sea Toolbox' for river restoration best practices. The Toolbox will consist of summary inputs from GoAs 4.2 (Joint evaluation of completed restoration projects) and 4.3 (Demonstrating efficient river restoration measures). The main objective is to provide a list of best available practices and recommendations for cost-efficient and effective river restoration for enhancing ecological quality and increasing sea trout productivity. As a number of river restoration manuals already exist, it is important to be clear on what this project outcome will produce and how it will complement to what already exists in this field. Most existing river restoration manuals give detailed practical advice on how to do the restoration work itself, whereas the RETROUT report strives to describe the best practises for the whole process of conducting successful restoration projects from initial evaluation of the problem and need for a restoration to, planning, practical implementation and impact evaluation.

Tentatively the structure of the Toolbox report would be the following; it should have an introduction, methods & approaches chapter, a chapter with the main results from 4.2, a chapter with summarising the demonstration cases 4.3 (the full case reports could be annexed to the Toolbox), and a synthesis with list of best available practices and recommendations for cost-efficient and effective river restoration. Based on the material to be delivered by the WP 4 PPs, HELCOM will prepare a first draft of the 'Toolbox' report to be circulated for comments and further development to the concerned PPs.

The final main output will be a Baltic Toolbox for River Restoration to be published as a HELCOM report. Before publication by HELCOM the draft report will be circulated to members of the FISH Group for approval. The original time plan for the WP 4 activities might not enable a ready report published by HELCOM by the end of the project in September 2020, as the completion of the restoration demonstration cases directly overlap with this schedule as also they are set to be finished by the end of the project. As the restoration case reports will be a central ingredient of the Toolbox, it was agreed already at the YPM 2018 that the case reports (first full versions) need to be delivered at the latest by end of period 5 (i.e. March 2020), regardless of the status of the restoration project at that time. Due to these schedule uncertainties a realistic approach would be to strive for a finalized Toolbox as a RETROUT project report version by the end of period 6, where after the HELCOM review and publication process could take place as an own procedure.

In addition to the river restoration 'Toolbox', GoA 4.4 also includes study visits to river restoration demonstrations sites in the concerned PP countries. The first visits to Estonia, Poland And Sweden will take place during fall 2019, and a combined visit to Latvia and Lithuania will be done in summer 2020.

Table 1. Overview of WP 4 GoAs and tasks

TASK	TITLE	LEAD/RESPONSIBLE	DEADLINE	STATUS
<i>GoA 4.1 Assessment of sea trout river and stock status, impacts of recreational fishing and management options, Lead: PP 13, HELCOM</i>				
Task 4.1.1	Common methodology on trout river habitat monitoring and electrofishing	PP1 CAB Stockholm (Sweden)	by end of period 4 (ext.)	ongoing
Task 4.1.2	Assessment of sea trout river and stock status, extent of pressures and management options	PP 13 HELCOM	draft by end 2019 (ext.)	ongoing
sub-task	Gather data on recreational fishing and its impacts on sea trout populations	PP 17 MIG (Poland)	??	unknown
Task 4.1.3	Monitoring and assessment method workshop in Lithuania	PP 9 Klaipeda University (Lithuania)	by end of June 2018	delivered
Task 4.1.4	Tests of assessment method in Lithuania	PP 9 Klaipeda University (Lithuania)	by September 2019	to be delivered
Task 4.1.5	Tests of assessment method in Latvia (in selected rivers)	PP 8 BIOR (Latvia)	by September 2019	to be delivered
Task 4.1.6	Tests of assessment method in Estonia (in selected rivers)	PP 5 EMI (Estonia)	by September 2019	to be delivered
Task 4.1.7	Tests of assessment method in Poland (in selected rivers)	PP 17, MIG (Poland)	by September 2019	to be delivered
Task 4.1.8	Tests of assessment method in Sweden (in selected rivers)	PP1 CAB Stockholm (Sweden)	by September 2019	to be delivered
<i>GoA 4.2 Joint evaluation of completed restoration projects, Lead: PP 16, Campus Roslagen AB</i>				
Task 4.2.1	Case study template and interview guide	PP 16 Campus Roslagen AB (Sweden)	by January 2018	delivered
Task 4.2.2	Case study data collection and summary	all	by 28 September 2018 (ext.)	delivered
sub-task	Circulate template to all HELCOM countries	PP 13 HELCOM	by 19 October 2018	delivered
Task 4.2.3	Interviews with key Stakeholders	all, guidance by PP 16 Campus Roslagen AB	by May 2019 (ext.)	delivered
Task 4.2.4	A consolidated report on success factors of restoration activities	PP 16 Campus Roslagen AB (Sweden)	by end 2019	ongoing
<i>GoA 4.3 Demonstration projects, Lead: PP 5, University of Tartu (EMI)</i>				
sub-task	production of a habitat assessment and a time series graph of parr densities for river restoration sites and control sites	all Activity 4.3 partners	by end of September 2018	unreported
sub-task	collection of data about the ecological status of the project rivers	all Activity 4.3 partners	by end of August 2018	unreported
Task 4.3.1	Valgejõgi 1	PP 5 EMI (Estonia)	by end of Period 6	ongoing
Task 4.3.2	Valgejõgi 2	PP 5 EMI (Estonia)	by end of Period 6	ongoing
Task 4.3.3	Jägala jõgi	PP 5 EMI (Estonia)	by end of Period 6	ongoing
Task 4.3.4	Kunda jõgi	PP 5 EMI (Estonia)	by end of Period 6	ongoing
Task 4.3.?	Pudisoo (new)	PP 5 EMI (Estonia)	by end of Period 6	ongoing
Task 4.3.5	Smiltelė	PP 9 Klaipeda University and PP 15	by end of Period 6	ongoing

		Klaipeda District Municipality (Lithuania)		
Task 4.3.6	Rīva	PP 7 Kurzeme Planning Region, PP 14 Ventspils Regional Municipality, supported by PP 8, BIOR (Latvia)	by end of Period 6	ongoing
Task 4.3.7	Reda	PP 17 MIG (Poland)	by end of Period 6	ongoing
Task 4.3.8	Bränningeån	PP1 CAB Stockholm (Sweden)	by end of Period 6	ongoing
Task 4.3.9	Erstaviksbäcken	PP1 CAB Stockholm (Sweden)	by end of Period 6	ongoing
Task 4.3.10	Moraån	PP1 CAB Stockholm (Sweden)	by end of Period 6	ongoing
Task 4.3.11	Skeboån	PP1 CAB Stockholm (Sweden)	by end of Period 6	ongoing
Task 4.3.12	Vitsån	PP 3 Haninge municipality (Sweden)	by end of Period 6	finished, unreported
<i>GoA 4.4 River restoration best practices toolbox, Lead: PP 13, HELCOM</i>				
Task 4.4.1	Baltic Sea region best practices manual for river restoration	PP 13 HELCOM	by end of Period 6	ongoing
Task 4.4.2	Summary publications in national languages	EMI (Estonian), BIOR (Latvian), Klaipeda University (Lithuanian), MIG (Polish) and Stockholm CAB (Swedish)	by end of Period 6	not started
Task 4.4.3	Study visits to demonstration sites in Estonia, Latvia/Lithuania, Sweden and Poland	EMI, BIOR, Klaipeda University, MIG and CAB Stockholm	by end of Period 6	ongoing
Task 4.4.4	Pan-Baltic meeting on river restoration and trout management	PP 13 HELCOM	by end of Period 6	not started

Appendix 1. Plan (version 2) for RETROUT WP 4 GoA 4.1, TASK 4.1.2: Assessment of sea trout river and stock status, extent of pressures and management options

[working document yet to be approved by the RETROUT WP 4 working group]

Background

Below relevant excerpts from RETROUT project Application text and the Work Plan regarding task 4.1.2.

RETROUT Application v. 11:

The assessment of status of sea trout rivers and stocks will support national implementation of HELCOM Recommendation 32-33/1 “Conservation of Baltic salmon and sea trout populations by the restoration of their river habitats and management of river fisheries”.

An assessment of stock status will be carried out, building on the work being done by the International Council for the Exploration of the Seas (ICES) Assessment Working Group on Baltic Salmon and Trout (WG BAST).

A concrete output of the activity will be the publication of a HELCOM report assessing the status of sea trout rivers and stocks, including the extent of impacts caused by recreational fisheries and scenarios for management. The assessment will be largely based on existing data and information available via project partners, HELCOM Contracting Parties and ICES WG BAST, while some national measures will be implemented to strengthen stock assessment and management capacity.

Work Plan v. 2:

WP 4 will perform a scenario study including

- a. assessment of recreational fishing pressure
- b. assessment of status of sea trout rivers and stocks
- c. comparison of different management options

Writing a Baltic Sea wide assessment of trout streams including the necessary compilations of GIS and other data. Based on existing data and information available via project partners. Combining habitat data (whole stream system) with electrofishing etc fisheries datasets.

Including:

- comparison of streams with restoration activities and streams without.
- the extent of impacts caused by recreational fisheries and scenarios for management (stocking scenarios).
- case study long term time series analyses of the monitoring programme in the Stockholm municipality area
- case study a national level test to combine different data sources in Estonia regional Baltic Sea level

- work by the HELCOM Secretariat to use various available databases for a regional overview

Output: a report (assessment of sea trout rivers of the Baltic Sea) including the main results, which will be published by HELCOM.

Preliminary plan to execute the task

The general strategy for completing the task was discussed and agreed upon by the WG at the YPM 2018 in Stockholm. The WG 1) had noted that agreeing on aims and tasks that are realistically achievable within the course of the project and given the current circumstances and resources available, is a prerequisite for successfully carrying out and finishing the task and the Activity, and 2) had agreed that the task 4.1.2 should be kept as clear and simple as possible allowed by the interpretation of the work plan in order to successfully achieve finishing of the task, and 3) had further noted that the loosely described plans for the task in the application and work plan can cause unclarity, but also enables freer interpretations of how the task can be executed. In YPM 2018 the WG noted that this task in terms of complexity at most could become a status update on Baltic Sea trout rivers and stocks, with the approach, extent and format similar to the earlier HELCOM SALAR publication. This would produce regional sea trout river stock/habitat statuses based on estimated parr densities (based on electrofishing) and the THS.

What should be achieved?

- A BS-wide assessment of the status of sea trout rivers and stocks.
- Produce a map with all evaluated and non-evaluated sea trout rivers in the BS region (made available on the HELCOM maps and data service): rivers could be categorized according to THS Habitat Classes (0-3), water quality (good, int., poor according to WFD), population type (wild, self-sust. – historical/disappeared; as in SALAR), and the status evaluation result to be achieved through this exercise (red, yellow, green according to the criteria/thresholds to be chosen).
- Produce an assessment report
- The report can include in addition to the assessment itself also e.g. a chapter on common, standardised methodologies for assessing sea trout river and stock status (summary of task 4.1.1+4.1.4-...), a chapter on fisheries, including recreational fisheries (based on available information from ICES WGBAST), and a possible chapter about sea trout management options.
- The structure of the report could be built on similar elements as the SALAR [report](#).

What will this contribute with beyond what already has been/is being done on this matter (SALAR report, ICES WGBAST work, HELCOM core indicator work, etc.; see Table 1)

- A possibility to include more rivers (not bound to selection criteria of ICES or HELCOM indicators)
- Higher resolution: assessment done on the scale of rivers/river systems instead of different larger assessment units
- The attempt to compare rivers with and without any restoration activities
 - E.g., see what the current status of the evaluated rivers from SALAR (2011) is, and compare rivers where any restorations have been done since that to rivers where no restoration have taken place (although the status assessment method was not the same in SALAR as is will be in RETROUT, perhaps this sort of coarse comparison still could give useful information on the direction of the development in the rivers as ‘positive’, ‘no change’, or ‘negative’)

What would be the preferred extent of the assessment?

- The spatial extent would be whole Baltic Sea region: rivers flowing to the BS as defined by HELCOM marine area
- The temporal extent what comes to status is the current situation, and could be assessed e.g. as the average of last five or three years (so that any data available from the assessment period is averaged: if data is available from five years then it's the mean of five, but if there's only one year of data from the period then that data is the basis for the assessment, or something similar, in order to include instead of exclude data, however keeping in mind assessment quality and confidence issues)

What is the approach?

- The status assessment would principally be based on the same method as used in ICES WGBAST and HELCOM core indicator (i.e. Recruitment Status (RS) = observed parr dens/potential parr density*100).
- Only rivers where there are not any ongoing (significant) stocking should be included in the assessment, but otherwise both original, mixed and reintroduced (re-stocked) populations could be taken into account
- The observed parr density data are based on electrofishing results
- The potential parr density would require a few different approaches:
 - in the ICES WGBAST sea trout assessment the potential maximum parr density is predicted with an equation based a multiple linear regression analyses from Trout Habitat Score (THS), river width, air temperature and coordinates , which requires detailed habitat data from the electrofishing occasions for calculation of THS
 - if data for THS do not exist, the potential parr densities could be derived from information on river/stream width based on its known importance for predicting parr densities – in cases with non-available THS some basic habitat data, such as river width, usually still exist (using a width-based approach would be beneficial compared to expert opinion in that it would be more objective and for a coarse status evaluation potentially accurate enough)
 - if data for neither THS nor stream width exist, the potential parr densities could be obtained through expert elicitation
- A proposed approach would be to use the best available method (the currently most accurate) to obtain the potential parr densities for each river in order to maximize the use of all existing information.
- A logical sequence for sorting the river data could be the following:
 - is the river a potential sea trout river? if NO → exclude; if YES →
 - is sea trout parr density data available? if NO → only direct expert evaluation of status possible (→ consider if it is feasible or treat as 'non-evaluated'); if YES →
 - is there habitat data for THS? if YES → use THS-based approach for potential parr densities; if NO →
 - is there stream width data available? if YES → use width-based approach for potential parr densities; if NO →
 - is expert estimations on potential parr densities available? if YES → use expert elicitation-based approach for potential parr densities; if NO →
 - is direct expert evaluation of status possible? if YES → use direct expert evaluation of status; if NO → treat as 'non-evaluated'
- Based on the calculated average RS for each river/river system, the results are evaluated for status against pre-chosen thresholds determining three status classes: red (=poor; RS<50 %), yellow (=moderate; RS=50-80%) and green (=good; RS>80%)

What data is needed?

- all possible river on sea trout rivers in the BS region, with if available:
 - site-specific parr density estimates based on electrofishing results

- corresponding THS (or THS-variables), coordinates, average temperature, average wetted width
- or corresponding average wetted widths
- or corresponding expert evaluated potential parr densities
- migration hindrances
- restoration measures done
- stocking information
- water quality (good, int., poor according to WFD),
- population type (wild, self-sust. – historical/disappeared; as in SALAR)

Data sources?

- Much data gathered by ICES WGBAST
- Additional data from RETROUT PP countries
- Complementing information/additional data from other countries

How will the needed data be obtained?

- From ICES WGBAST
 - request for permission to access and use the ST river data gathered by WGBAST sent out and granted from most countries
- RETROUT PP countries
 - request for potential additional data sent out
- Other countries
 - potential request is subject to upcoming complementation needs considered after initial exploration of the ICES WGBAST data sets

Who will contribute in drafting?

- Lead drafting responsibility at HELCOM
- Contribution by all concerned and in this matter competent project partners throughout the process
 - requires active participation in terms of providing substantial and constructive feed-back when requested, also pro-active participation is welcomed
- Possible review by ICES WGBAST to gain wide acceptance for the work (details to be sorted out)
- Contribution by HELCOM working groups, e.g. task force on migratory fish (Fish-M) (review round or circulation before acceptance? details to be sorted out)
- Different HELCOM working structures (Fish-M, Fish Group, HOD) to be kept informed (potentially need for a final approval and publication permit)

What would be a realistic schedule?

TENTATIVE

- plan and data requests in May – *DONE*
- After accessing the ICES WGBAST data sets, possibilities of these will be explored and additional data/information needs will be mapped (during summer 2019)
- DL for receiving potential additional data from PPs by August
- A complete targeted request for any additional needed data/information will then be sent out to the countries, during end of summer 2019
- After receiving all needed data, compilation and analyses are to be done in fall 2019.
- A draft report should be ready by end 2019
- Finalization and approval for publication in HELCOM working structures done during spring 2020.
- NOTE! the original schedule of completion by end of period 4 (September 2019) is not anymore realistic, and needs to be postponed

Table 1. Comparison

	SALAR (2011)	ICES WGBAST (2018)	HELCOM CORE INDICATOR (2018)	HELCOM RECOMMENDATION 32-33/1 REPORTING (2018)
Spatial extent	HELCOM marine area (BS including Kattegat)	Baltic Sea restricted to ICES SD 22 in south west	HELCOM marine area (BS including Kattegat)	HELCOM marine area (BS including Kattegat)
Temporal coverage of the latest status	2007-2009	Recruitment status: for 2017 and average for 2015-2017 Recruitment trend: 2013-2017	2011-2016	reporting every third year, latest report with data for 2017
Status assessment method	% of PSPC realized smolt production in relation to potential smolt production capacity; for sea trout based on ' <u>best available information and estimates of experts</u> ' grouped into three groups of MSY traffic lights	Recruitment status, RS <ul style="list-style-type: none"> • <u>as observed parr densities relative to the potential maximal parr densities that could be expected under given habitat conditions</u> • observed parr densities obtained from individual sampling density estimates calculated from electrofishing catches of 0+ parr by some removal-based estimation method (e.g. Zippin) • predictions of potential maximal parr densities at the individual sampling occasion are obtained from 	RS, in principle the same as in ICES WGBAST <ul style="list-style-type: none"> • comparison of observed parr densities with reference potential (maximal) parr densities under given habitat conditions • according to the Indicator report, "good status is achieved when the moving parr density average remains over 50% of the reference parr density. Consequently, the threshold value is a moving average of parr densities over 4-5 years." <i>Q: A bit unclear what this exactly means: is RS (obs parr dens./potential parr dens.) calculated for</i> 	National reporting/updating of list with all sea trout rivers/streams with less than 50% of PSPC (original list based on SALAR report) <ul style="list-style-type: none"> • unknown evaluation method (probably expert evaluation, since smolt data are not commonly available for sea trout) Assessments (in practice an updated listing) of man-made migration hindrances for salmonids. listing/updating restoration actions See Rec 32-33/1 and the latest report (2018) + annex

		<p>a multiple regression using river width, air temp., lat. & long. and THS as predictor variables</p> <ul style="list-style-type: none"> • THS (Trout Habitat Score) is a sub-model taking into account habitat characteristics for sea trout at the river site, assigning scores for relevant habitat variables for 0+ trout parr • THS is used for predicting potential maximal parr densities and for categorizing sea trout rivers into four (0-3) Habitat Classes from poorest to best • RS calculated both for the last single year (2017) and as average over the last 3 years (2015-2017; Q: in this case <p>Recruitment trend, RT</p> <ul style="list-style-type: none"> • calculated as the bivariate correlation <u>between annual RS (see above) and sampling year</u> 	<p><i>each year and then averaged over the assessment period OR are average observed parr densities over years compared to an average potential parr density over the same years? (or do these two give the same result?)</i></p> <p>Recruitment trend, RT</p> <ul style="list-style-type: none"> • trend over time calculated for each site through linear regression of <u>parr density vs. years</u> (2000-2014) (NB! different from ICES WGBAST) 	
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		<ul style="list-style-type: none"> over the last five year period <p>For more details, see ICES WGBAST REPORT 2018: p. 283→</p>		
Criteria for rivers/sites included	Original population strain (Sea trout river categories 1-5 in SALAR report p. 27)	<ul style="list-style-type: none"> Naturally reproducing population (no stocking) Good or Intermediate water quality (<i>Q: how is water quality classified</i>) 	<ul style="list-style-type: none"> Uses (apparently) the same data as ICES WGBAST, thus, same criteria 	< 50% PSPC
Number of rivers included	~569	???	219	319
Number of sites included	~1000	RS: 612 RT:130	RS: same as in ICES WGBAST? RT: same as in ICES WGBAST?	401
Type of data collected	<ul style="list-style-type: none"> river general and spatial information; water and habitat quality; trout river/population inf (category 1-8; status of pop, existing management plan); inf. on population origin, strains, stocking practices and amounts; electrofishing results (0+ and >0+ parr data, number of swipes, sampling year); inf. on smolt production 	<ul style="list-style-type: none"> river general and spatial information; water and habitat quality; parr density (0+ and >0+) THS, Habitat Class predictor variables needed for modelling potential maximal parr density information on migration barriers and passes 	<ul style="list-style-type: none"> no original data collection, data obtained from ICES WGBAST data request necessary adjustments and amendments done by expert evaluations 	<ul style="list-style-type: none"> % of PSPC information on migration hindrances information of restorations

	<p>(observed or estimated, estimated potential production capacity→NOTE! comprehensive data on sea trout smolts were not available);</p> <ul style="list-style-type: none"> • inf. on catches (data or estimates on recreational and commercial fishery catches); • possible additional inf. on water and ecological qualities; • inf. on migration hindrances and fish ways for salmon and sea trout in the Baltic Sea rivers 			
Total amount of original data available before selection with criteria	1260 sea trout stream locations in 623 river systems	2017: ??? (more than in 2016) 2016: 254 sites in about 132 rivers	2011-2016: 562 sites in 169 rivers (min. one data point during the period; based on ICES WGBAST excel sheet on trout data)	unknown/NA
Data provider	ICES WGBAST; CPs (all except Germany)	All Baltic Sea countries	ICES WGBAST; CPs	All Baltic Sea countries (in 2018 report no information from Germany, Lithuania or Russia)
Origin of data	national authorities/experts	national authorities/experts	ICES WGBAST (national authorities/experts)	national authorities/experts
Assessment variable	reproduction level (as smolt production, % of PSPC)	recruitment status (as parr production, % of potential), $RS = R_{Obs}/R_{Pot. max} * 100$	recruitment status (as parr production, % of potential), $RS = R_{Obs}/R_{Pot. max} * 100$	% PSPC

			NB! in practice exactly this, but not called "RS"	
Spatial assessment unit level	river specific	<ul style="list-style-type: none"> river/site specific raw data assessments conducted for 5 Assessment Areas (GoB, GoF, West, East, South) and for ICES SDs 	<ul style="list-style-type: none"> based on river/site specific raw data (not found/not available) assessment for coastal areas using HELCOM assessment unit scale 3 (i.e. for 40 areas; HELCOM Monitoring and Assessment Strategy Annex 4) 	river specific by country
Status thresholds	<p>red: <50% of PSPC</p> <p>yellow: 50-79.9% PSPC</p> <p>green: ≥80% of PSPC</p>	No status thresholds used (assessed as RS in % of potential maximum)	<ul style="list-style-type: none"> GES achieved when the moving parr density average remains over 50% of the reference parr density; sub-GES if not achieved 	<50% of PSPC
Information on migration hindrances	collected with excel template for data request	collected with excel template for data request	no original data collection, data obtained from ICES WGBAST data request	some information
Information on restoration activities	inf. on demolitions of dams and existing fish ways collected with excel template for data request	inf. on existing fish passes collected with excel template for data request	no original data collection, data obtained from ICES WGBAST data request	some information

Appendix 2. DRAFT Instructions/guidelines for documentation and preparation of a case study report on the restoration demonstration projects – WP 4, GoA 4.3

[working document yet to be approved by the RETROUT WP 4 working group]

Background

Within GoA 4.3 the partners intend to demonstrate efficient river restoration measures and implementation methods based on national and transnational knowledge from research and dialogue. The purpose of the restoration projects is to demonstrate solutions for improving quality of sea trout river habitats with the aim to increase and secure sustainable stock production. The demonstration projects are a result of international peer learning and basin-wide research and will serve as examples that can be replicated in other countries. The specific value at impact level is improved water quality and increased fish production of rivers in the Baltic Sea region, which in turn offers better opportunities to strengthen the fish and tourism industries.

Documentation and preparation of a case study report

All demonstration projects should be documented carefully from the start until finishing in form of process documentation including all relevant proceedings. Each demonstration project will come with a dedicated case study report covering the key issues in English. A summary of the demonstration project results will be included as a dedicated section in the 'Baltic Toolbox' (output of GoA4.4).

Documentation of each demonstration case should be done by the RETROUT project partner responsible for the demonstration project. If a demonstration project involves several project partners documentation and preparation of the demonstration report should be coordinated jointly through effective internal communication. Only one case study report should be produced and delivered for each demonstration project.

Documentation

During all stages of the demonstration projects, relevant activities are documented carefully, including monitoring, causal analysis, administration, judicial circumstances, court proceedings, discussion with stakeholders, design and implementation. The process documentation should generally follow, to the applicable parts, the listed sequence of events for the demonstration cases as proposed in the Work Plan.

Listed sequence of event according to Work Plan:

1. First, a causal analysis is undertaken. Reasons for weak trout stocks or less than good ecological status are analysed. Then restoration measures are suggested based on the identified causes of environmental issues and current conditions. This results in a checklist of necessary components for a restoration knowledgebase (e.g. GIS analyses, monitoring of migration obstacles, hydromorphological changes).
2. Cultural heritage, energy production, recreational value and other stakeholder interests are described and possible conflicting interests are identified.
3. Compromise solutions are developed together with stakeholders that improve all relevant biological parameters, prerequisites for fishing and recreation [if applicable] as well as protect and highlight cultural heritage. Stakeholders are identified, sampled and consulted using different methods, e.g. individual discussions, focus groups, negotiations, public meetings, and opinion surveys, if needed.

4. Planning and design of measures
5. Environmental impact assessment
6. Application to the competent authority (will differ between countries and projects). Court proceedings if necessary.
7. Implementation phase
8. Post-implementation monitoring (e.g. comparison of parr densities before and after restoration in restoration and control sites) for evaluation of success [point not listed in the work plan, but nevertheless important]

After completion, each project is evaluated and the experiences and documented process stages are compiled in the case study report.

Case study report

Each demonstration case shall produce a dedicated demonstration project report (a concise report in English with full documentation attached/available in national language) in form of a process documentation, generally following the applicable parts of the listed sequence of events for the demonstration cases as proposed in the Work plan (see above). In general terms the case study reports will need to be informative in a processed, compressed and readily available and usable form in order to facilitate a smooth inclusion of the information and writing of the dedicated section for the 'Baltic Toolbox'.

The case study reports should not be 'raw' project documentation but instead separately prepared reports with an adequate level of relevant details, so that it is possible to present each demonstration case in a purposive way in the dedicated section of the 'Baltic sea best practice tool box'.

The case study reports should include at least the following information below (to the extent applicable for each project) and the format should be descriptive text with needed numbers/tables/figures/pictures, written in chapters/section following the sequence of the headings below:

1. General information

- a. Country; river name; name of the restoration location
- b. Type of target sea trout population (e.g., original, mixed re-stocked)
- c. Type of restoration case (e.g. fish pass, spawning area restoration,...)
- d. Temporal scale of the restoration
 - short-term solution of particular problem, long-term restoration project, or a combination of short and long term activities
- e. Spatial scale of the restoration
 - particular stretch of a river or targeted to great part of a river or it's catchment
- f. Responsible organization(s)
- g. Duration of the project
- h. Geographical location (coordinates ~WGS84 DD MM.MMM)
- i. Total budget [if this information is publishable]
- j. Pictures from the restoration site (before-during-after)

2. Background for project

- a. Was there a sea trout population in the river before starting the restoration project?
 - were they genetically original or introduced stocks?
- b. What was known about the sea trout population (and rest of fish community and other water biota) before the restoration project?
- c. What was known about the river hydrology and water quality before the restoration project?
- d. Was there monitoring program in place before the restoration project? (and plans for continuing the monitoring after?)

- e. What was the problem in the river? Evidence for weak trout stocks or less than good ecological status
- f. Identified reasons for the pre-restoration situation
- g. Potential solutions with rationale and justification

3. Initial phase

- a. Given the settings in hand (i.e. the feature of the river/site, the 'problem' and its reasons and the potential solutions), what were
 - the aims of the restoration project (for fish/sea trout populations and other purposes),
 - the possibilities in terms of resources and time, and
 - the potential difficulties/challenges in carrying through the project?
- b. Describe different identified stakeholder interests, such as, cultural heritage, energy production, recreational value, etc., and possible conflicting interests
- c. Describe how stakeholders were identified, approached and consulted using different methods, e.g. individual discussions, focus groups, negotiations, public meetings, and opinion surveys, if needed
- d. How were different stakeholder interests acknowledged and in case of conflicts how were compromise solutions developed together with stakeholders?
- e. Where there any obstacles/difficulties or particular successes encountered during this phase?
- f. Present any lessons learned on good/bad practices during this phase?

4. Planning phase

- a. Which agencies/organizations were actively involved in the planning?
- b. How was the planning and design of measures done?
- c. How was the follow-up on the impact of the conducted restoration measure(s) planned to be done?
- d. Where there any obstacles/difficulties or particular successes encountered during this phase?
- e. Present any lessons learned on good/bad practices during this phase?

5. Preparation phase

- a. Environmental impact assessment
- b. Application to the competent authority (will differ between countries and projects)
- c. Procurement process
- d. Where there any obstacles/difficulties or particular successes encountered during this phase?
- e. Present any lessons learned on good/bad practices during this phase?

6. Implementation phase

- a. What?
- b. How?
- c. When?
- d. Who?
- e. Where there any obstacles/difficulties or particular successes encountered during this phase?
- f. Present any lessons learned on good/bad practices during this phase?

7. Evaluation of the project

- a. Success or failure all in all and for different sub-criteria (with explanations/verbal analysis)
- b. Ecological objectives:
 - did this restoration project achieve its specified ecological objective(s)?
 - how has this been/will this be evaluated (present available monitoring results/plans)?

- c. Other impact on river biota:
 - positive/negative impact on other fishes
 - positive/negative impact on other biota (vegetation, invertebrates, birds, etc.)
 - how has this been/will this be evaluated (present available monitoring results/plans)?
- d. Secondary objectives:
 - did this restoration activity achieve any additional objectives, such as e.g., provisioning recreational value or maintaining cultural heritage value?
 - how has this been/will this be evaluated?
- e. Project acceptance by stakeholders:
 - did the project encounter any particular difficulties with certain stakeholders (explain/specify)?
 - did the project encounter particularly positive stakeholders (explain/specify)?

It has earlier been noted that there is a mismatch in the timing outlined in the original Work plan – both the restoration demonstration cases and the Baltic Toolbox was set to be completed by end of period 6 – and therefor agreed on an earlier completion deadline for the first demonstration case reports to be **by the end of period 5**. All demonstration cases shall produce and submit their reports to WP lead (HELCOM, Henri Jokinen) by this deadline regardless of the current stage of the project at that time, in order for it to be possible to compile and prepare the Baltic Toolbox report. A complete study case report should however be sent as soon as the project is finished, at the latest by end of period 6, even if a first report from an unfinished phase of the project already has been sent by the end of period 5 as requested.