



## Baltic Marine Environment Protection Commission

HELCOM Fish Correspondence Group concerning a draft document on BAT/BEP descriptions for sustainable aquaculture in the Baltic Sea region (CG Aquaculture)

Online, 16 June 2021

CG AQUACULTURE  
4-2021

# Outcome of the fourth meeting of HELCOM Fish Correspondence Group concerning a draft document on BAT/BEP descriptions for sustainable aquaculture in the Baltic Sea region (CG AQUACULTURE 4-2021)

## Introduction

0.1 With reference to the outcome of FISH 13-2021 (paragraph 5.1) and in accordance with the [HELCOM COVID-19 policy](#), the fourth Meeting of the HELCOM Fish Correspondence Group concerning a draft document on BAT/BEP descriptions for sustainable aquaculture in the Baltic Sea region (CG AQUACULTURE 4-2021), was held as an online meeting via Zoom on 16 June 2021.

0.2 The Meeting was attended by delegations from Denmark, Estonia, Finland, Germany, Lithuania, and Poland as well as Observers from CCB and FEAP. The List of Participants is contained in **Annex 1**.

0.3 The Meeting was co-chaired by Anita Künitzer (Germany) and Orian Bondestam (Finland). Markus Helavuori, HELCOM Professional Secretary and Petra Kääriä, HELCOM Associate Professional Secretary, acted as secretaries of the Meeting.

## Agenda item 1 Adoption of the Agenda

1.1 The Meeting adopted the Agenda of the Meeting as contained in document 1-1.

## Agenda item 2 Matters arising from HELCOM work of relevance of the group

2.1 The Meeting took note of the updated Terms of Reference and Work Plan for CG Aquaculture, as approved by FISH 12-2020 (document 2-1), as presented by the Secretariat.

2.2 The Meeting took note of extracts from recent HELCOM meeting outcomes of relevance for GG Aquaculture (document 2-2), as presented by the Secretariat.

2.3 The Meeting took note of information on the update of the HELCOM Baltic Sea Action Plan (BSAP), noting that no specific actions have been proposed related to aquaculture. Therefore, the Meeting recognized that the work of CG Aquaculture is of utmost importance when it comes to the development of sustainable aquaculture in the Baltic Sea region.

## Agenda item 3 Latest information on aquaculture techniques and BAT/BEP

3.1 The Meeting noted that the Work Plan of CG Aquaculture includes the task to compile the latest information on environmental and economic performance of various aquaculture techniques for different types of production, possibly contributing to the BAT/BEP descriptions.

3.2 The Meeting recalled that CG AQUACULTURE 3-2020 had welcomed the offer by Finland to take the lead in compiling this information, taking also into consideration new innovations.

3.3 The Meeting further recalled that CG AQUACULTURE 3-2021 further noted that Germany may be able to contribute with some data related to the economic aspects, but not on a company basis.

3.4 The Meeting considered the draft report on the current status of recirculation aquaculture systems (RAS) and their profitability and competitiveness in the Baltic Sea area (document 4-2). The Meeting thanked Finland for preparing this useful draft report.

3.5 In discussing the draft report on RAS, the Meeting noted e.g. that:

- the provided information is useful also for the development of BAT/BEP for sustainable aquaculture;
- compared to seawater RAS farms, investment costs are typically lower for traditional open system farming. Most seawater RAS farms are currently not profitable. However, there is a profound interest in RAS investments, which can be presumed to affect the profitability of RAS farms;
- freshwater RAS producing known species such as trout tend to be more profitable than those using seawater;
- recommendations for BAT for RAS systems should be considered, possibly also including nitrogen and phosphorous limits;
- it would be useful if the report could elaborate on the discharge treatment technologies as well as possible utilization or restrictions related to sludge from RAS;
- more information on environmental performance of RAS would be useful, e.g. related to nitrogen and phosphorous effectivity;
- if available, information on experiences with RAS in Norway could be useful to include in the report; and
- the aim and scope of the report should be more clearly described.

3.6 The Meeting noted a comment by Germany and CCB that as long as the externalities of open cage farms are not adequately considered it is difficult to compare the economic performance of such farms with RAS. It should not be concluded that RAS does not constitute BAT due to a lack of economic viability.

3.7 The Meeting noted that Finland would welcome further information on RAS and comments on the draft report for its further development. The Meeting encouraged Contracting Parties and Observers to contact [jouni.vielma@luke.fi](mailto:jouni.vielma@luke.fi) by **15 September 2021** in that respect. The Meeting invited Finland to submit an updated draft report to the next meeting of CG Aquaculture.

3.8 The Meeting noted that information on general features and economic aspects also for other types of aquaculture operating in the Baltic Sea region is still needed and encouraged Contracting Parties and Observers to provide such information to Germany ([wera.leujak@uba.de](mailto:wera.leujak@uba.de)) at their earliest convenience.

3.9 The Meeting took note of information provided by CCB on a [report on costs of poor farming practices and mortalities on salmon farms](#) and in particular a summary comment in that report, stating that although promoted as a healthy and sustainable product, the transparency and accountability are extremely weak by comparison with land-based farming, with data often absent on important phenomena such as mortalities, escapes and environmental impacts.

#### Agenda item 4 Developing BAT/BEP under HELCOM Recommendation 37/3

4.1 The Meeting noted that the Work Plan of CG Aquaculture includes the task to jointly develop BAT/BEP descriptions for the aquaculture operators, relevant for both existing and new, sea-based aquaculture and land-based aquaculture with a potential impact on the Baltic Sea.

4.2 The Meeting considered the first proposal for BAT-BEP to avoid or minimize hazardous substances pollution from aquaculture operations in the Baltic Sea region (document 4-1), as presented by Germany. The Meeting noted that the three main categories of hazardous substances considered are

veterinary medicinal products (VMPs), antifouling, and cleaning and disinfection products. The Meeting thanked Germany for the document and noted the following general comments:

- the proposal in document 4-1 focuses on open aquaculture systems rather than closed or circular ones such as RAS. The Meeting agreed that other types of systems should also be covered, and that the proposal should be restructured to distinguish between land-based and sea-based systems;
- information on limits for maximum allowable concentrations that may have been set by Contracting Parties is not available; and
- not all Contracting Parties have had sufficient time to consider the document.

4.3 The Meeting discussed the proposals in document 4-1 in more detail, provided some editorial amendments and noted inter alia the following specific comments:

- animal welfare related issues should be removed from the hazardous substances part;
- actions related to pharmaceuticals in the updated BSAP should be considered in the development of the topic of VMPs;
- considerations related to sea lice and cleaner fish should be deleted as they are not relevant for the Baltic Sea;
- planning and permitting of new farms should be included under a separate topic, not as part of the hazardous substances;
- the topic on hazardous substances should include, according to the HELCOM objective with regard to hazardous substances, recommendations on hazardous substances which should be avoided;
- the use of antibiotics, taking into consideration related developments within the EU;
- regarding anti-fouling, proposed BSAP actions focusing e.g. on the promotion of biocide-free anti-fouling systems should be taken into account, as well as ongoing developments related to the proposed revision of HELCOM Recommendation 20/4 to avoid the use of copper as an anti-fouling biocide;
- further information is needed on the extent of use of various biocides on nets and cages in the Baltic Sea, considering that biofouling is less of a problem in lower salinities;
- staff training regarding the correct use of hazardous substances is a general and important issue to achieve awareness and prudent use as well as on handling spills and this aspect should be elaborated throughout the document;
- for disinfectants, the use of oxygen-based agents should be recommended instead of chlorine-based ones.

4.4 The Meeting noted that further details and comments are provided in document 4-1-Rev.1.

4.5 The Meeting encouraged Contracting Parties to consider taking the co-lead with Germany on the topic of BAT/BEP for hazardous substances.

4.6 The Meeting noted that more time is needed to review the document and invited the Contracting Parties and Observers to provide further comments based on document 4-1-Rev.1 to Germany ([ulrike.pirntke@uba.de](mailto:ulrike.pirntke@uba.de)) by **30 September 2021**.

4.7 The Meeting recalled that Sweden had informed CG AQUACULTURE 3-2020 that they may consider taking the lead in developing BAT/BEP for the topic of animal welfare and invited Sweden to confirm whether they are able to take the lead on this topic as soon as possible.

4.8 The Meeting considered the further developed proposal for BAT-BEP to avoid or minimize nutrient pollution (document 4-3-Rev.1), as presented by Germany. The Meeting thanked Germany for the document and took note of the following general comments:

- comments provided by Estonia in autumn 2020 were not received by Germany and are hence not reflected in the document;
- the BAT/BEP descriptions should not favour specific types of aquaculture systems or recommend their use over other types of systems, but instead provide the BAT/BEP applicable for different types of systems;
- the aims of HELCOM Recommendation 37/3 should be taken into account throughout the development of BAT/BEP to avoid or minimize nutrient pollution from aquaculture in the Baltic Sea region.

4.9 The Meeting discussed the main issues and open questions as detailed in the cover note to document 4-3-Rev.1 as follows:

- aspects related to climate impacts, energy and water use and scarce land resources, as proposed by Sweden, could be included only in case Sweden or another lead country agrees to draft relevant text on the matter;
- synergies with other businesses could be relevant to consider, e.g. related to wind farms and consequently efforts should be made to include such considerations in the document;
- environmental impact assessments (EIA) for all new aquaculture operations could solve some of the open issues related to siting of such operations, noting that currently a full EIA is not required for small and medium sized aquaculture operations, although thorough impact assessments for the environment are in some Contracting Parties undertaken for all operations;
- the text related to recommending fallowing could be further softened to take into account that there are no clear indications on the benefits of fallowing in the Baltic Sea;
- the Meeting did not support recommending aquaculture management zones (AMZs);
- consider what tool to use to limit nutrient inputs: setting production limits in AMZs and/or setting maximum allowable nutrient discharges;
- the Meeting noted a preference for setting maximum allowable nutrient discharge limits rather than biomass limits and further noted that in such a case the limits in Recommendation 24/5 are outdated. The Meeting agreed that the matter requires further national consideration and a lead country to develop a proposal for updated nutrient limits, especially if quantitative limits are to be recommended. The Meeting further noted the relevance of the HELCOM Maximum Allowable Inputs (MAI) and the Country Allocated Reduction Targets (CART) and the need to consider possibilities of taking a cumulative approach to nutrient discharges in addition to setting discharge limits at farm level;
- the Meeting took note of a new section on open cage aquaculture, as drafted by Finland; and
- the part about RAS is to be further developed, taking also into account document 4-2.

4.10 The Meeting discussed document 4-3-Rev.1 in detail and reflected comments and discussion on a number of questions as further specified in document 4-3-Rev.2. The Meeting invited Germany to circulate a revised version for the BAT/BEP on nutrients based on the discussion and comments shared by the Meeting by **15 September 2021**. The Meeting invited Contracting Parties and Observers to provide comments on that new version to [wera.leujak@uba.de](mailto:wera.leujak@uba.de) by **15 October 2021** at the latest. The Meeting invited Germany to submit a new version for consideration by the next Meeting of CG Aquaculture.

4.11 The Meeting considered the draft proposal on BAT/BEP on monitoring of aquaculture (document 4-4), as presented by Estonia. The Meeting invited Contracting Parties and Observers to provide comments on the draft proposal to [kaspar.anderson@envir.ee](mailto:kaspar.anderson@envir.ee) by **30 September 2021** to be further considered by the next Meeting of CG Aquaculture.

4.12 The Meeting recalled that FISH 12-2020 welcomed an offer by Poland to prepare a first draft for BAT/BEP on marine litter, but only based on currently available information as there are no possibilities

to conduct new studies in that regard. The Meeting invited Poland to submit a first draft to the next Meeting of CG Aquaculture.

4.13 The Meeting noted that lead countries for BAT/BEP for sustainable aquaculture for the topic non-indigenous species is still lacking and invited the Contracting Parties to take lead on these topics and inform the Secretariat. The Meeting welcomed the offer by CCB to look into the possibility of providing expert input to be the basis for a first draft on the topic of non-indigenous species **by 30 September 2021**.

4.14 The Meeting considered the format and structure of the overall BAT/BEP descriptions for sustainable aquaculture in the Baltic Sea region and invited Germany to prepare a first proposal in that regard to the next meeting.

4.15 The Meeting agreed on the following detailed schedule for the finalization of the of BAT/BEP descriptions:

- Online meeting tentatively on **30 November 2021**;
- Possible online meeting in **spring 2022**, the need for which could be discussed in November 2021;
- Physical meeting on **15-16 June 2022**, tentatively in the Åland islands, Finland.

#### Agenda item 5 Any other business

5.1 The Meeting reviewed and updated the list of contacts and observers of CG Aquaculture (document 5-1), as included in **Annex 2**. The Meeting noted that Russia has not designated a contact point for CG Aquaculture and encouraged them to do so as well as to attend future meetings.

5.2 The Meeting took note of information provided by CCB on a film titled “Aliens” regarding the spread of a species of rainbow trout through escapes from aquaculture facilities. The Meeting further noted a comment by CCB that Russia should inform the other Contracting Parties on the expansion of aquaculture in their waters.

5.3 The Meeting noted information provided by Estonia regarding amendments to national laws, which includes provisions for the state doing preparatory analyses of potential sites for aquaculture. The Meeting noted that a similar procedure is also in place in Finland.

#### Agenda item 6 Outcome of the Meeting

6.1 The Meeting adopted the Outcome. The Outcome, together with the documents and presentations considered by the Meeting are available on the meeting site on the HELCOM Meeting Portal.

## Annex 1 List of participants

Representing	Name	Name of organization (in English)	E-mail address
<b>Co-Chairs</b>			
Co-Chair	Anita Künitzer	German Environment Agency	anita.kuenitzer@uba.de
Co-Chair	Orian Bondestam	Ministry of Agriculture and Forestry	orian.bondestam@mmm.fi
<b>Contracting Parties</b>			
Denmark	Michelle Mortensen	Ministry of Environment of Denmark (Team Aquaculture)	mimor@mim.dk
Denmark	Jonathan Staff Norgaard	Ministry of Environment of Denmark	jonsn@mim.dk
Estonia	Katrina Lang	Ministry of the environment of Estonia	katrina.lang@envir.ee
Estonia	Ketter Kärp	Ministry of Rural Affairs	ketter.karp@agri.ee
Finland	Heikki Lehtinen	Ministry of Agriculture and Forestry	heikki.lehtinen@mmm.fi
Finland	Mirva Wideskog	Centre for Economic Development, Transport and the Environment	Mirva.wideskog@ely-keskus.fi
Finland	Jouni Vielma	Natural Resources Institute Finland	Jouni.vielma@luke.fi
Finland	Mikael Wennström	Government of Åland	mikael.wennstrom@regeringen.ax
Germany	Hans-Peter Damian	German Environment Agency	hans-peter.damian@uba.de
Germany	Ulrike Pirntke	German Environment Agency	ulrike.pirntke@uba.de
Germany	Wera Leujak	German Environment Agency	wera.leujak@uba.de
Germany	Ulfert Focken	Thünen Institute of Fisheries Ecology (on behalf of Federal Ministry of Food and Agriculture)	Ulfert.focken@thuenen.de
Lithuania	Laura Stumbrienė	The Ministry of Agriculture of the Republic of Lithuania	laura.stumbriene@zum.lt
Poland	Igor Wawrzyniak	Ministry of Agriculture and Rural Development; Department of Fisheries	igor.wawrzyniak@minrol.gov.pl
Poland	Katarzyna Kaminska	The Fisheries Department Ministry of Agriculture and Rural Development	katarzyna.kaminska@minrol.gov.pl
Poland	Katarzyna Palińska-Żarska	Stanisław Sakowicz Inland Fisheries Institute	k.palinska-zarska@infish.com.pl
<b>Observers</b>			
CCB	Nils Höglund	Coalition Clean Baltic	nils.hoglund@ccb.se
FEAP	Lisbeth Jess Plesner	Federation of Aquaculture Producers	lisbeth@danskvakultur.dk
FEAP	Irja Skytén-Suominen	Finnish Fisfarmers' Association	irja.skyten-suominen@kalankasvatus.fi
<b>Secretariat</b>			
HELCOM	Markus Helavuori	HELCOM Secretariat	markus.helavuori@helcom.fi
HELCOM	Petra Kääriä	HELCOM Secretariat	petra.kaaria@helcom.fi

## Annex 2 List of Contacts and Observers of CG Aquaculture

Country/ Observer	Name	Organization	E-mail address
<b>Contracting Parties</b>			
Denmark	Michelle Obenhausen Mortensen	Ministry of Environment	mimor@mim.dk
	Jonatan Staff Nørgaard	Ministry of Environment	jonsn@mim.dk
	Alf Skovgaard	Ministry of Environment and Food of Denmark	alsko@mfvm.dk
Estonia	Hendrik Põldja	Ministry of the Environment, Water Department	Hendrik.poldoja@envir.ee
	Kaspar Anderson	Ministry of the Environment, Marine Environment Department	Kaspar.anderson@envir.ee
	Katrina Lang	Ministry of the Environment	Katrina.lang@envir.ee
	Elo Rasmann	Ministry of the Environment	elo.rasmann@envir.ee
	Eduard Koitmaa	Estonian Ministry of Rural Affairs	eduard.koitmaa@agri.ee
	Ketter Kärp	Ministry of Rural Affairs	Ketter.Karp@agri.ee
EU	Antoine Kopp	European Commission, DG MARE	antoine.kopp@ec.europa.eu
Finland	Orian Bondestam	Ministry of the Agriculture and Forestry	Orian.Bondestam@mmm.fi
	Heikki Lehtinen	Ministry of the Agriculture and Forestry	heikki.lehtinen@mmm.fi
	Johanna Helkimo	Ministry of Environment	johanna.helkimo@ym.fi
	Jouni Vielma	LUKE Natural Resources Institute Finland	jouni.vielma@luke.fi
	Markus Kankainen	LUKE Natural Resources Institute Finland	markus.kankainen@luke.fi
	Mirva Wideskog	Centre for Economic Development, Transport and the Environment for Southwest Finland	mirva.wideskog@ely-keskus.fi
	Mikael Wennström	Provincial Government of Åland	mikael.wennstrom@regeringen.ax
	Jenny Eklund-Melander	Provincial Government of Åland	jenny.eklund-melander@regeringen.ax
Germany	Ulfert Focken	(Thünen Institute, TI) on behalf of the Federal Ministry of Food and Agriculture (BMEL)	ulfert.focken@thuenen.de
	Hans-Peter Damian	German Environment Agency, UBA on behalf of the Federal Ministry for the Environment, Natur Protection, Building and Nuclear Safety (BMUB), Head of Delegation	hans-peter.damian@uba.de
	Marina Carstens	Federal Coastal State of Mecklenburg-Vorpommern	m.carstens@lm.mv-regierung.de

	Christine Wenzel	Federal Coastal State of Schleswig Holstein	christine.wenzel@melur.landsh.de
	Roland Lemcke	Federal Coastal State of Schleswig Holstein	roland.lemcke@melund.landsh.de
	Thurid Otto	on behalf of the Federal Agency for Nature Conservation (BfN Vilm) as observer,	totto@geomar.de
	Adrian Bischoff-Lang	University of Rostock, on behalf of the Federal Coastal State of Mecklenburg-Vorpommern	adrian.bischoff-lang@uni-rostock.de
	Florian Dillschneider	Federal Ministry of Food and Agriculture	Florian.Dillschneider@bmel.bund.de
	Wera Leujak	German Environment Agency	wera.leujak@uba.de
	Ulrike Pirntke	German Environment Agency	ulrike.pirntke@uba.de
	Anita Künitzer	German Environment Agency	anita.kuenitzer@uba.de
Lithuania	Laura Stumbrienė	The ministry of Agriculture of the Republic of Lithuania	Laura.Stumbriene@zum.lt
Poland	Adam Lejk	National Marine Fisheries Research Institute	adam.lejk@mir.gdynia.pl
	Anna Pyć	Polish Trout Breeders Association PTBA	anna@pstragpustelnia.pl
	Igor Wawrzyniak	Ministry of Agriculture and Rural economy	igor.wawrzyniak@minrol.gov.pl
	Katarzyna Kamińska	Ministry of Agriculture and Rural economy	K.kaminska@mgm.gov.pl
	Zdzisław Zakęś	Inland Fisheries Institute	z.zakes@infish.com.pl
	Katarzyna Palinska-Zarska	The Stanislaw Sakowicz Inland Fisheries Institute	k.palinska-zarska@infish.com.pl
Sweden	Izabela Alias	Swedish Board of Agriculture	izabela.alias@jordbruksverket.se
<b>Observers</b>			
CCB	Nils Höglund	Coalition Clean Baltic	nils.hoglund@ccb.se
FEAP	Lisbeth Plesner	Dansk Akvakultur/The Danish Aquaculture Organization	lisbeth@danskakvakultur.dk
	Irja Skytén-Suominen	Finnish Fish Farmers' Association	irja.skyten-suominen@kalankasvatus.fi
	Anna Pyc	Polish Trout Breeders Association	anna@pstragpustelnia.pl