Document title	Project proposal for Quality assurance of phytoplankton monitoring in the Baltic Sea (HELCOM PEG QA) 2020-2022
Code	4-13
Category	DEC
Agenda Item	4 - Matters arising from the HELCOM Groups
Submission date	01.11.2018
Submitted by	Executive Secretary
Reference	Outcome of STATE & CONSERVATION 9-2018, para 7J.21

Background

STATE & CONSERVATION 9-2018 welcomed the presentation of Ms. Iveta Jurgensone, Chair of the Phytoplankton Expert Group (PEG), on Quality assurance of phytoplankton monitoring in the Baltic Sea, and considered how to find a suitable working arrangement to support the evolving needs and emerging issues and topics under HELCOM, e.g. in relation to indicators and assessments. The Meeting discussed the need and capacity of the PEG group to take on the work on identifying and developing indicators, as well as conducting assessment, to support HELCOM work and agreed to come back to this at State and Conservation 10-2019. (Outcome of STATE & CONSERVATION 9-2018, para 7J.19)

The Meeting considered and in principle endorsed the project proposal for Quality assurance of phytoplankton monitoring in the Baltic Sea, taking into account the need to identify suitable working arrangements with regards to indicators and assessment. (Outcome of STATE & CONSERVATION 9-2018, para 7J.21)

Action requested

The Meeting is invited to consider and approve the project proposal for PEG QA 2020-2022 in principle taking into account the pending clarification on a suitable working arrangements with regards to relevant indicators and assessments.

PROJECT DESCRIPTION (PROJECT NO. XX.XX)

1. Title of the project:

Quality assurance of phytoplankton monitoring in the Baltic Sea (HELCOM PEG QA)

2. Project Manager(s):

Ms. Iveta Jurgensone, Latvia, 2020-2022

3. Proposing party:

Contracting parties: Latvia

4. The body supervising the project:

HELCOM STATE & CONSERVATION

5. Target and activities:

The main target of the project is to ensure and maintain high quality standard of the international Baltic Sea regional phytoplankton monitoring within the HELCOM COMBINE Programme. This should be achieved by:

- Maintaining annual training courses (workshop)
- Maintaining the phytoplankton biovolume list
- Participation in intercalibrations
- Maintaining the HELCOM guidelines for monitoring of phytoplankton species composition, abundance and biomass
- The project will serve as a forum for discussion of phytoplankton indicators being developed in HELCOM and the results of the indicator evaluation of future HELCOM holistic assessments.

The main activities within the project will be carried out at the annual workshops. The venue of the workshops will be circulated between the Contracting Parties and their marine laboratories. Suggested host countries are: Poland in 2020, Sweden (Umeå University) in 2021 and in 2022 Denmark. Intersessional activities will be organized if needed. The following types of activities are planned:

Activity:	**Aim:**
Training courses	**To maintain continuity and high quality in phytoplankton identification and quantification, in particular because a new generation of phytoplankton researchers and analysts are currently joining the PEG;** **To follow recent changes in the taxonomy of Baltic Sea relevant phytoplankton in order to keep the PEG Phytoplankton species/biovolume list up to date.** **The training courses are planned to encompass:** **a) Identification of phytoplankton species;** **b) Maintaining and enhancing the competence of analysts to identify alien species;**

	c) Enhancing the competence of analysts to distinguish resting stages from vegetative stages in the plankton **Presenting representative and validated images of Baltic Sea phytoplankton species, publicly available in the HELCOM PEG image gallery at www.Nordicmicroalgae.org.**
Intercalibrations	**To keep the high standard of phytoplankton monitoring in the Baltic Sea, to assure the comparability of results. The group is active in selecting suitable intercalibrations which could be participated by the group members. At the annual meetings, we allocate time to discuss and find solutions for the possible quality problems revealed within intercalibrations. In addition, organizers of the intercalibrations are invited to the meeting for presentation of the results where the results will be evaluated and discussed and can lead to future suggestions for intercalibrations.**
Further unifying the counting method	**To continuously update the HELCOM monitoring manual for phytoplankton species composition, abundance and biomass.**
Updating of the biovolume file	**To add new taxa and size classes when necessary; to update the biovolume file according to recent taxonomical changes in co-operation with ICES Data Centre.**
Harmonization of biovolume calculations between CEN standard EN16695:2015 and the PEG biovolume list	**To start the harmonization of biovolume calculations between the PEG biovolume file and the CEN standard EN-16695:2015 by starting with taxa that show major differences.**
Production of environmental fact sheets	**To update and produce environmental fact sheets to track changes in Baltic Sea phytoplankton community structure.**
Platform for phytoplankton indicators	**The project will serve as a forum for discussion of phytoplankton indicators and the results of the indicator evaluation of future HELCOM holistic assessments.**

The project period is three years. Ms. Iveta Jurgensone, Latvia, will be the chair and convener during 2020-2022.

6. Expected results.

The outcome of the project will be:

a) Annual reports from the three workshops to HELCOM STATE & CONSERVATION;
b) Annually revised species/biovolume list of Baltic Sea phytoplankton species;
c) Updated HELCOM Monitoring manual for Phytoplankton - Species composition, abundance and biomass
d) We will discuss the existing and possible new phytoplankton indicators and the outcome of this will be presented as a part in the annual workshop report.
e) After participating intercalibrations, the outcome of results and discussions will be presented as a part in the annual workshop report.
f) Updated HELCOM environmental fact sheet (Cyanobacteria biomass);
g) Continuation of contribution of quality-checked images to the HELCOM PEG image gallery at www.Nordicmicroalgae.org;
h) Final report (2020-2022).

7. Consistency with HELCOM priorities __X__yes____no

8. Timetable

The project will be carried out in 2020-2022 as a continuation to the ongoing HELCOM PEG project for 2017-2019. More specific timetable:

Regular tasks will be discussed during all workshops, for example:

- discussion on new species and size classes that have occurred in the previous year's samples including non-indigenous species. New species have to be presented with picture showing characteristic features for the species and location of sampling
- discussion of new environmental fact sheets and updating of the existing one (Cyanobacteria biomass)
- harmonization of species identification by common microscopy of samples from the Baltic Sea
- harmonization of analyzing methods by discussing the methodology and intercalibration results to assess homogeneity in the analyses
- information on recent changes in taxonomy of planktonic microalgae
- new images to add to the phytoplankton image gallery
- information on new relevant literature, projects about e.g. the development of phytoplankton indicators, meetings and conferences
- review of phytoplankton indicators being developed by Lead Countries.

Specific tasks for the workshops are:

Workshop 2020, to be held in Poland

a) A training course on cyanobacteria (teacher to be decided).
b) Discussion of the next intercalibration which will be recommended to be participated by the group members. Wishes of the group will be sent to the representatives of the ProfTest SYKE, which is organizing interlaboratory proficiency tests for phytoplankton.

Workshop 2021, to be held in Sweden

a) A training course on Baltic Sea phytoplankton identification, Heidi Hällfors, Finland.
b) Presentation of the results from the Proftest SYKE 2020 intercalibration and discussion of the outcome.
c) Planning the next project (2023-2025).

Workshop 2022, to be held in Denmark

a) A training course diatoms, Nina Lundholm, Denmark or on diatom resting spores and dinoflagellate cysts, Anna Godhe, Sweden.

Specific tasks to support the development and evaluation of phytoplankton indicators

As this project period is in the middle of the 6 years cycle, focus will be on discussions on revised indicators or new proposed indicators that have been developed after the current assessment period.

9. Budget.

9.1. Total costs

The total costs for HELCOM from 2020 to 2022 are estimated to be **16480** EUR.

9.2. Costs divided per financial year

Estimated costs for HELCOM

2020:

Compensation for one teacher (120 EUR/h, 8 hours)	960 EUR
Travel and accommodation for the teacher	1000 EUR
Administrative costs	1100 EUR
Participation in the intercalibration	3000 EUR
Travel and accommodation for project manager to present the PEG work in the HELCOM State and Conservation meeting	600 EUR
SUM	**6660 EUR**

2021:

Compensation for one teacher (120 EUR/h, 8 hours)	960 EUR
Travel and accommodation for the teacher	1000 EUR
Administrative costs	1100 EUR
Presentation and evaluation of the Proftest SYKE 2020 phytoplankton intercalibration at PEG annual workshop	1000 EUR
Evaluation of previous intercalibrations.	1500 EUR
Travel and accommodation for project manager to present the PEG work in the HELCOM State and Conservation meeting	600 EUR
SUM	**6160 EUR**

2022:

Compensation for one/two teachers (120 EUR/h, 8 hours)	960 EUR
Travel and accommodation for the teacher	1000 EUR
Administrative costs	1100 EUR

Travel and accommodation for project manager to present the PEG work in the HELCOM State and Conservation meeting	600 EUR
SUM	**3660 EUR**

9.3. Sources of financing divided per financial year

In general both HELCOM and the host countries finance the workshops and activities therein:

2020: HELCOM and Poland

2021: HELCOM and Sweden

2022: HELCOM and Denmark

The share of the host country is estimated to be ca. 1500 EUR annually. The estimated costs for HELCOM do not cover the expenses of the national experts expected to participate in the project.

10. Additional requests

10.1. From the contracting parties

The Contracting Parties are supposed to cover the travel expenses for the participation of the national experts in the workshops.

11. Procedure of nomination of the Project team members

The present phytoplankton expert group consists of the following experts:

Hans Jakobsen	Denmark
Helene Munk Sørensen	Denmark
Andres Jaanus	Estonia
Marko Järvinen	Finland
Heidi Hällfors	Finland
Sirpa Lehtinen	Finland
Jeanette Göbel	Germany
Anke Kremp	Germany
Regina Hansen	Germany
Susanne Busch	Germany
Jessica Saule	Germany
Iveta Jurgensone	Latvia
Irina Olenina	Lithuania
Janina Kownacka	Poland
Justyna Kobos	Poland
Wojciech Kraśniewski	Poland
Evgenia Lange	Russia
Katerina Voyakina	Russia
Andrey Sharov	Russia
Marléne Johansson	Sweden
Siv Huseby	Sweden
Helena Höglander	Sweden
Marie Johansen	Sweden
Ann-Turi Skjevik	Sweden
Maria Karlberg	Sweden
Lars Edler	Sweden

12. Signatures of the project managers.

Ms. Iveta Jurgensone
Chair of HELCOM Phytoplankton Expert Group

13. Opinion of the chairman of the relevant body.

State and Conservation 9-2018 considered and in principle endorsed the project proposal for Quality assurance of phytoplankton monitoring in the Baltic Sea, taking into account the need to identify suitable working arrangements with regards to indicators and assessment. (Outcome of STATE & CONSERVATION 9-2018, para 7J.21)

14. Opinion of the Executive Secretary

The same as above

15. Decision of the heads of Delegation

(Reference is to be given to the relevant Minutes of the Heads of Delegation's Meetings)

___ to establish _____not to establish