

## Working Group on Phytoplankton and Microbial Ecology (WGPME)

2018/MA2/EPDSG03 The Working Group on phytoplankton and microbial ecology (WGPME), chaired by Marie Johansen, Sweden and Rowena Stern, UK, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2019	11–14 March	Las Palmas de Gran Canaria, Spain		Meeting in association with WGZE and WGIMT
Year 2020	28–30 April	by corresp/ webex		physical meeting cancelled - remote work
Year 2021			Final report by Date	

## ToR descriptors

	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	EXPECTED DELIVERABLES
<b>TOR</b>					
a	Generate improved knowledge of small food web components that are poorly monitored/assessed	There is a lack of consideration of microbial biomass in monitoring and assessment studies.	1.3	3 Years	Review paper (in year 3) Feed into relevant national and international working groups as appropriate
b	Explore the use of indicators and provide recommendations for methods development.	a) Potentially harmonize methodological approaches (e.g. molecular tools) b) Provide more precise phytoplankton descriptors (MSFD)	1.3; 4.1; 4.4	3 years	The group will review and evaluate available science dealing with indicator development as needed. National updates on the topic will be requested from EG members.
c	Conduct an integrated analysis of phytoplankton and microbial plankton re-sponses to global warming.	Understand consequences of long-term changes e.g. in phenology and body size for foodweb functioning and associated eco-system services.	1.3; 2.5	3 years	Papers production depending on the key outcomes.
d	Produce a guide of live vs Lugol-fixed key species from existing samples.	Facilitate better comparability between time series, producing representative images for to facilitate better comparability between time series, producing representative images for all of the species included in each time series relevant to	4.4	3 years	Recommendation document to ICES to set up a database and ICES identification leaflets.

		WGPME, provide realistic images pointing out limits of species IDs.			
e	Produce a Cooperative Research Report on Phytoplankton/ Zooplankton (in collaboration with WGZE)	Develop an integrated plankton report presenting trends in occurrence of both phyto and zooplankton	1.3; 1.9	Year 2	CRR: Phytoplankton and Zooplankton Status Report
f	Investigate factors affecting the closeness of correlations between chlorophyll a and phytoplankton biomass.	There is a need to further develop phytoplankton related indicators. The phytoplankton biomass indicators developed so far for the MSFD only consider Chl a as a rough estimate of plankton biomass.	3.3; 4.1	Year 3	Position paper with recommendations for the scope of using chlorophyll:biomass (biovolume) correlations in different contexts

### Summary of the Work Plan

Year 1	A joint workshop with WGIMT, WGZE with the goal of further methods standardization. This is of high priority, to finalize the plankton status report. Most of the ToR will run for the whole 3 years period.
Year 2	Assemble data for (online), to continue work on manuscripts already in preparation. Finalize the integrated plankton report.
Year 3	Discuss assesment efforts historically made of the small food web components. The generation of recommendations to improve how they best can be concidered and applied in food web assessments.

### Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem effects of fisheries, especially with regard to the application of the Precautionary Approach. Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible. However the resource of a database with identification leaflets of phytoplankton would be recommended.
Participants	The Group is normally attended by some 20–25 members and guests.
Secretariat facilities	Standard secretarial support
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are no obvious direct linkages.
Linkages to other commities or groups	There is a close working relationship with WGZE, WGIMT and also some linkage to WGHABD.
Linkages to other organizations	None specific

