

Working Group on Phytoplankton and Microbial Ecology (WGPME)

2015/MA2/SSGEPD03 The Working Group on Phytoplankton and Microbial Ecology (WGPME), chaired by Alexandra Kraberg, Germany, and Marie Johansen, Sweden, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2016	5–7 April	East Boothbay, USA	Interim report by 1 June to SSGEPD	
Year 2017	28–30 March	Reykjavik, Iceland	Interim report by 15 May to SSGEPD	
Year 2018	26–29 March	Aberdeen, UK	Final report by 15 May to SCICOM	

ToR descriptors

ToR	Description	Background	Science Plan topics addressed	Duration	Expected Deliverables
a	Investigate factors affecting the closeness of correlations between chlorophyll a and phytoplankton biomass	a) There is a need to further develop phytoplankton related indicators. The phytoplankton biomass indicators developed so far for the MSFD only consider Chla as a rough estimate of plankton biomass.	IEOM, objectives 2 and 3	1 year	Position paper with recommendations for the scope of using chlorophyll:biomass (biovolume) correlations in different contexts
b	Review evidence base for the use of simplified indicators for (pelagic) ecosystem change	a) Lack of good phytoplankton descriptors in MFSD	IEOM, objectives 2 and 3	3 years	Review paper, report
c	Joint workshop in 2017 with other ICES WG (climate change, zooplankton, hydrography, harmful algae?)	a) Potentially harmonize methodological approaches (e.g. molecular tools) b) Provide more precise phytoplankton descriptors (MSFD) c) Advice e.g. to OSPAR-COBAM	EPD, objectives 1, 2 and 4 EPI, objective 1	Year 3	Report Agreed recommendations for methods standardization
d	Conduct an integrated analysis of phytoplankton and microbial plankton responses to global warming	a) Understand consequences of long-term changes e.g. in phenology and body size for foodweb functioning and associated ecosystem services	EPD, objectives 1, 2 and 4 EPI, objective 1	3 years	Report
e	Plankton reference database	a) Facilitate better comparability between time series, producing representative images for all of the species included in each time series relevant to WGPME.	IEOM objective 1	3 years	Completed image database on http://planktonnet.awi.de
f	Preparation of peer-	WGPME results need to be	All objectives	3 years	1 manuscript on the

	reviewed manuscripts	made available not only as advice to respective science committees but also to the wider scientific community	above		robustness of different indicators 1 manuscript on chlorophyll biomass relationships
g	Review and evaluate methodologies used for metagenetic analysis of plankton (joint ToR with WGIMT)	Recommend development of standardized protocols for applications in fisheries management and ecosystem assessment.	1,2,9,10	year 3	Present findings at scientific conferences; Report to EG members and ICES community.

Summary of the Work Plan

Year 1	Based on the data already collected the analysis of species-specific long-term trends in phytoplankton will be continued, establish a work programme on tests of the suitability/robustness of different phytoplankton indicators particularly those in use for the MSFD will be established. Exploration of closer collaboration with WGIMT.
Year 2	Provide a new co-operative research report, finish the image database providing images of all taxa routinely reported for the time series stations represented by the group.
Year 3	Carry out a joint work shop with working groups such as WGHABD, continue work on long-term dynamics of phytoplankton at large spatial scales.

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.
Participants	The Group is normally attended by some 10-20 members and guests plus online participants.
Secretariat facilities	None.
Financial	None. If database of phytoplankton image metadata is to be further developed, then some technical support will be necessary to link the database to/integrate it with other ICES resources
Linkages to ACOM and group under ACOM	There are no obvious direct linkages.
Linkages to other committees or groups	There is a very close working relationship with all the groups of Ecosystem Processes and Dynamics (SSGEPD) It is particularly relevant to the Working Group on Harmful Algal Blooms.
Linkages to other organization	