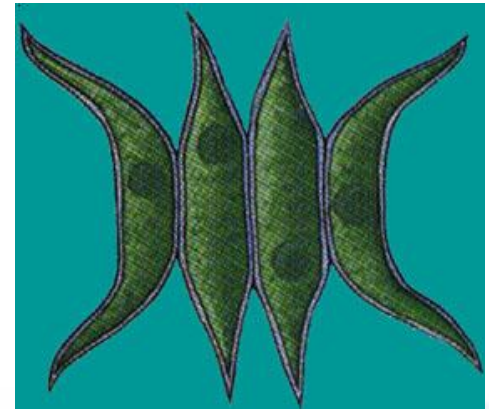
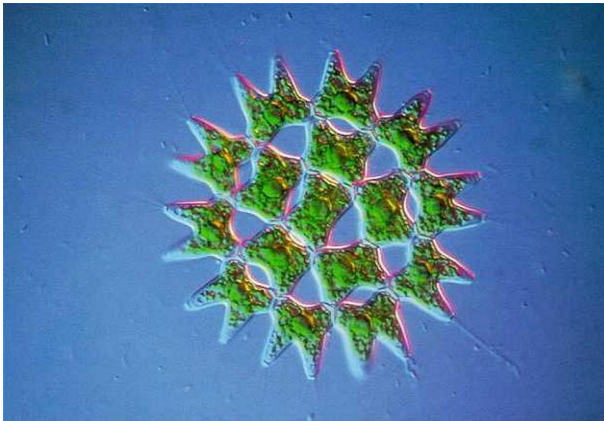


# NGIG and cross-GIG activities on intercalibration of phytoplankton

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NGIG and cross-GIG coordinator for  
intercalibration of lake phytoplankton*



# Outline

- Status after phase 1, what is achieved?
- Challenges for phase 2, what remains?
- How can we proceed in NGIG?
- How can we collaborate with or benefit from other phytoplankton GIGs and WISER?

# Status after IC phase 1, what is achieved and what remains?

## Summary:

- Chlorophyll a agreed for all GIGs
- Taxon. Comp. agreed for Alpine GIG, but remains for other GIGs
- Bloom metrics missing for all GIGs
- Combination rules missing for all GIGs
- IC of Whole BQE: missing for all GIGs

# Specific info on NGIG achievements

## IC decision for NGIG phase 1: chlfa

Type	Ecological Quality Ratios		Chlorophyll a concentrations (µg/l)	
	<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>	<i>High-Good boundary</i>	<i>Good-Moderate boundary a</i>
LN1	0.50	0.33	5.0 – 7.0	7.5 – 10.5
LN2a	0.50	0.29	3.0 – 5.0	5.0 – 8.5
LN2b	0.50	0.33	3.0 – 5.0	4.5 – 7.5
LN3a	0.50	0.30	5.0 – 7.0	8.0 – 12.0
LN5	0.50	0.33	2.0 – 4.0	3.0 – 6.0
LN6a	0.50	0.33	4.0 – 6.0	6.0 – 9.0
LN8a	0.50	0.33	7.0 – 10.0	10.5 – 15.0

Range of absolute values of chlorophyll. Each country must decide where in the range they will set their boundaries. Norway has used the minimum value within the range for all types.

# Metrics in use in NGIG

NGIG phytoplankton metrics	Sweden	Finland	Norway	UK	Ireland
<b>Abundance metrics:</b>					
Chl a	1	1	1	1	1
Max Chl a					
Biovolume	1A	1			
Max Biovolume					
<b>Taxonomic composition metrics</b>					
% Cyanobacteria	1B	1		1	
% Chrysophytes					
% pennate diatoms					
% other phytoplankton classes					
Trophic index based on ranking of taxa along the trophic gradient	1C		1		
Evenness					
Number of Cyanobacteria species					
Total number of species	(1) only for acid gradient				
Scores based on abundance of indicator species					1
Weighted averaging based system				1	
<b>Bloom metrics</b>					
Biomass of any bloom-forming taxon					
Biomass of cyanobacteria					
Biomass of any bloom-forming taxon if > 2xG/M chlfa boundary					
Frequency of blooms: number of occasions where biomass is > 2xG/M boundary over a 3-year sampling period					
Other					
<b>Multimetric for abundance and taxon. comp.</b>	Parameter A,B &C				1
<b>Multimetric for abundance, taxon. comp. and blooms</b>					1

# Specific info on NGIG progress

## Taxonomic composition metrics:

- only Sweden has complete national methods, Finland is testing the Swedish method
- Norway has developed new composition metric based on Total-P optima of single taxa. The metric clearly separates reference/good status lakes from impacted lakes. This new metric will now be discussed with other NGIG countries and validated with new monitoring data from Norwegian lakes
- UK is developing a composition metric along the same lines as Norway
- IE will follow the UK methods

# Cross-GIG Conclusions on common metric development

- There is a large variability of metrics in use in different countries within and between GIGs,
- The comparability between them is presently uncertain.
- Most GIGs are in favour of developing a common metric that can be used for IC option 2 (common benchmark used to compare different assessment systems).

# Cross-GIG conclusions, april 2009

Tasks	Main results of group discussions (details below)
Data compilation	Most GIGs will collaborate closely with WISER using common template. GIG leads should be the link between WISER and national data owners. Data should be compiled by Oct/nov 2009.
Harmonisation of methods	To harmonise details of sampling and counting methods, several workshops will be offered during summer 2009 (WISER/CEN)
Revision of Ref cond.	Most GIGs will check their ref. lakes against new pressure info, and revise the list of reference lakes, if needed. NGIG will establish a common monitoring network of reference sites.
Revision of Types	<p>NGIG will add some missing types (very shallow lakes, mountain lakes, deep and mid-altitude mod.alk.lakes),</p> <p>CB GIG may split the types to allow segregation between stratified and non-stratified lakes and between humic and clearwater lakes</p> <p>ECGIG: Few common types</p> <p>ALGIG: No need for change.</p> <p>MGIG: Will add two natural lake types: <i>Calcareous</i> type and <i>Temporal Saline</i> type, will split calcareous type reservoirs (LM8) into "Wet" and "Arid", similar to siliceous type, if data are available</p>
Common metric	Most GIGs are in favour of developing a common metric for taxonomic composition that can be used for IC option 2, based on ranking of taxa, using Trophic optima and SD into account, and then weighted averaging. Test version should be available in spring 2010
Combination rules and Whole BQE IC	Different combination rules in use. Will be testetd and changed, if needed. WISER will provide guidance. Whole BQE IC: Option 2, if common metric is found, option 3 if not. For option 3: comparison of classes and using new IC guidance to check what is acceptable



# What's next?

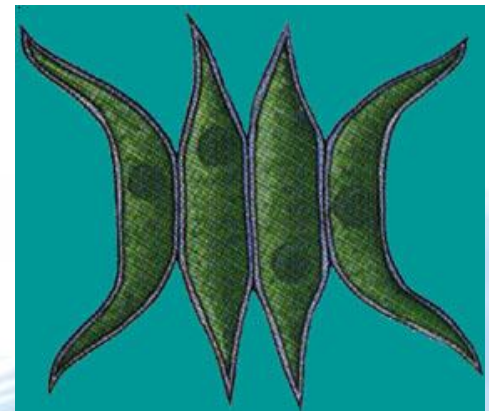
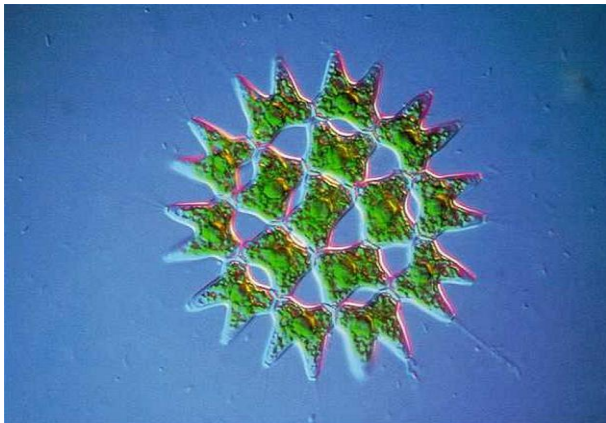
- NGIG meeting here at SYKE 29.-30. Oct.

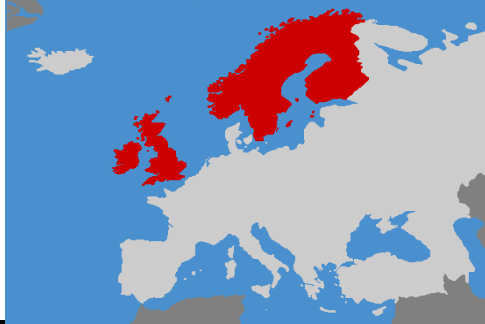
Time	Topic
1400-1415	Welcome, introduction, objective of workshop, agenda
1415-1445	Summary from Nordic WFD workshop at SYKE, 27.-29.10.2009
1445-1515	Summary of NGIG milestone 1 report to Ecostat
1515-1530	Update on WISER progress
1530-1545	<i>Coffee break</i>
1545-1630	NGIG Data compilation, problems and clarifications
1630-1730	Typology issues, need for splitting of types, need for new types? Discussion of table with missing or new types included (attached), see minutes from Oslo workshop below*
<del>1930</del>	<del>Common NGIG dinner in Helsinki</del>
0900-0945	Reference conditions, status on filling the JRC questionnaire, implications for NGIG chlfa ref. values from phase 1
0945-1030	Compliance and feasibility checking of MS assessment methods (ref. WISER/IC questionnaire on assessment methods)
1030-1045	<i>Coffee break</i>
1045-1215	Common taxonomic metrics for IC phase 2. Presentation and discussion of different possible metrics. Contributions from all NGIG countries requested. Can we agree on a common metric now? See input from Geoff Phillips below **
1215-1300	<i>Lunch at SYKE canteen</i>
1300-1345	What to do with bloom metrics?
1345-1430	What to do with combination rules or construction of a common multi-metric for NGIG? Normalisation of EQRs
1430-1445	<i>Coffee break</i>
1445-1545	Workplan for 2010 considering collaboration with WISER, including next meeting
1545-1600	Summary and conclusions

# Cross-GIG meeting (all BQEs) at JRC 5.-6. Nov.

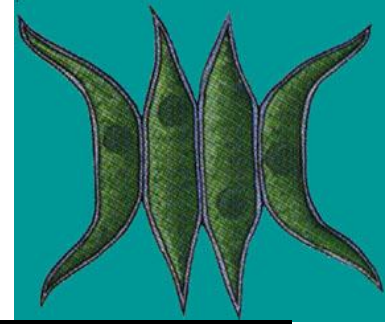
- New IC guidance
- BQE overviews
- Refcond work
- WISER/GIG collaboration
- Separate BQE session on:
  - Compliance and feasibility check
  - Data collection
  - Choice of IC option

# Thank you for your attention





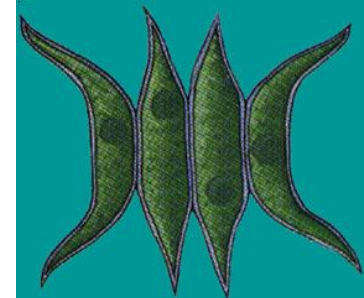
# L-N-PH



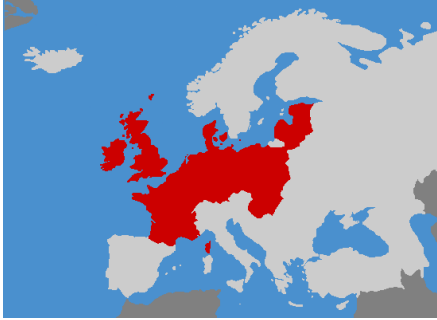
Organization	Lead – NO, all countries participate
MS methods	SE, UK, IE, FI, NO some countries still developing or validating methods
Compliance	Not yet demonstrated
Feasibility	All MS similar pressure (eutrophication), are the concepts underlying the metrics comparable?
Dataset	Request Sep 2009, deadline Oct 09
IC option	Whole BQE, Option 3



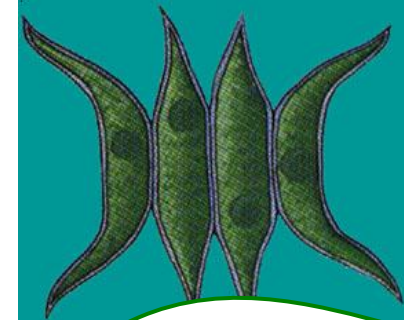
# L-ALP-PH



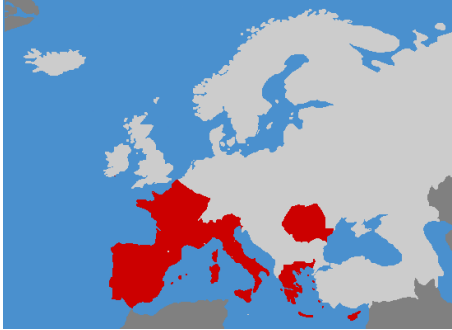
Organization	Lead – AT, all countries OK
MS methods	AT, GE, IT, SI FR – will present November 2009
Compliance	Will be verified (see Phase 1)
Feasibility	All MS similar pressure/concept
Dataset	Request, update, sent by AT and SI
IC option	Whole BQE, Option 3 – to be decided



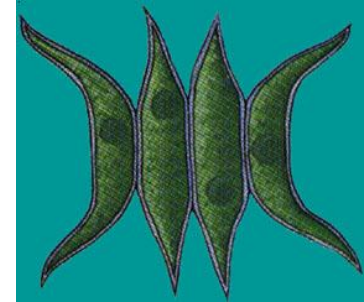
# L-CB-PH



Organization	Lead – UK, DE countries ???	DI No respo
MS methods	BE, DE, EE, IE, LT, NL, UK FR – developing PL, DK ?	UK and IE deve a new meth
Compliance	Not started	
Feasibility	Not started, Likely to be the case	
Dataset	Request July 2009, planned Oct 2009	
IC option	Option 3 + common metrics	LT, LV, I



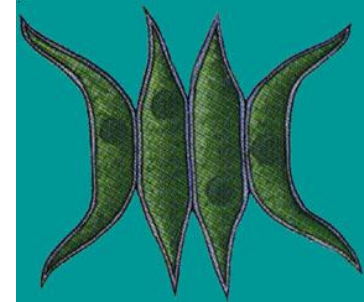
# L-M-Ph



Organization	Lead – ES, all countries
MS methods	CY, IT, ES, PT – methods based on IC FR – new composition metrics RO- not decided on composition metrics GR – not decided on combination rules
Compliance	Not started
Feasibility	The same pressure/concept
Dataset	Data request and collection, Dec 2009
IC option	Whole BQE, Option 3?



# L-EC-PH



Organization	Lead – HU, countries ???
MS methods	HU - finalised method BG, RO = agreed to test
Compliance	Not started
Feasibility	Not started
Dataset	Data collection, Dec 2009
IC option	too early to decide