

Meeting Report

9th GloBal TestNet Forum

Ist to 2nd February 2018
The Institute of Marine Engineering, Science and Technology
I, Birdcage Walk
London
SWIH 9JJ
United Kingdom

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Introduction

The 9th Annual meeting of the Global TestNet took place in London (UK) on the Ist and 2nd February 2018 at IMarEST headquarters in London. The two day meeting welcomed members from many of the facilities and observers from US Coast Guard Independent Labs, Class Societies, international organisations and national research centers. A WebEx system was setup to allow others to join in but there have been some issues with the use of the system and therefore it is not sure at this stage whether the online participants have managed to follow up the discussion during the meeting.







Figure 1: GloBal TestNet Members and Observers at 8th Annual GloBal TestNet Forum in London.

Global TestNet would like to thank IMarEST for kindly hosting our annual meeting once again.



Table 1: GloBal TestNet Members Present or Participating via WebEx

Name	Representing	2017 Committee Members
Citta Ingolica Pataroan	DHI-DK	
Gitte Ingelise Petersen Guillaume Drillet		2017 Chair
	DHI-Singapore GCDC	2017 Chair
Stephan Gollasch		
Bill Davidson	GBF	
Rich Muller	GBF	
Chris Brown	GBF	
Allegra Cangelosi	Great Waters Research Collaborative (GWRC) University of Wisconsin Lake Superior Research Institute	2017 Steering Committee
Tim Fileman	Plymouth Marine Laboratory (PML) & PML Application s Ltd	2017 Secretariat
Cato ten Hallers	MEA-nl	
Louis Peperzak	Control Union Water B.V.	
Youngsoo Kim	KOMERI	2017 Steering Committee
Heejung Kim	KOMERI	
Kyoungsoon Shin	KIOST	
Stephanie Delacroix	NIVA	

Table 2: GloBal TestNet Observers Present or Participating via WebEx

Name	Representing
Antoine Blonce	IMO GloFouling
John Alonso	IMO GloFouling
Theofanis Karayannis	IMO Marine Biosafety
Megan Jensen	IMO Marine Biosafety
Jan Linders	GESAMP-BWWG
Mr. Hwang, Yeong-Jong	Korean Register of Shipping
Line Emilie Sverdrup PhD	DNV-GL
Cees van Slooten	Control Union
Jiapeng Wen	Environmental Protection And Energy Conservation Research
Jiapeng vven	Center, China Waterborne Transport Research Institute
Peter Paul Stehouwer	SGS via WebEx
Gerd Schneider	SGS via WebEx

After a brief introduction and health and safety announcement by the Global TestNet Secretariat (Tim Fileman) and a welcoming speech by the Chairman of the Global TestNet (Guillaume Drillet), the agenda was approved with slight changes as reflected in the final agenda as attached at the end of this report (Annex I). In brief, the following were reported to the members:

• The Global TestNet has, during 2017, continued to increase its visibility toward other stakeholders interested in ballast water management. An overview of the meeting attended by the Chair and the Secretariat of the organisation was



- presented to the members. The presentation is attached at the end of the report (Annex 2).
- Many changes have affected the Global TestNet this year. These include the closing
 of two test facilities (MERC and DHI Singapore) somehow compensated in term
 of membership by the addition of a new member from China (Shanghai Test
 Facility) and the request for membership from SGS Korea carrying out
 environmental testing of ballast water management systems (BWMS). The Global
 TestNet member's approval process closes on the 12th of February 2018.
- On technical matters, the Global TestNet has refreshed its inter-comparison charts that reflect the approaches used by different facilities. Global TestNet is also currently trying to reach a consensus on the sizing of organisms during type approval testing following the circulation of a proposed sizing approach (Annex 3). In addition, the Global TestNet has approved the opening of its membership to experts working on biofouling issues and is officially supporting the IMO's GloFouling Project that was initiated by UNDP and implemented by the IMO (see later in this report for further details).
- During 2017, Global TestNet members have also approved the registration of the
 organisation as a charity in the UK with the intention of submitting an application
 for the registration as an NGO under the umbrella of the IMO. The chair
 apologized for not having been able to push this agenda through before the annual
 meeting due to high load of work at the Singapore facility in the last months of
 2017.

Agenda Item No I; Registration of the Global TestNet as a charity and IMO NGO:

The Members of the Global TestNet received an update from the Secretariat on the functioning and legal obligations required to be fulfilled by the Global TestNet to be registered as a charitable incorporated organisation (CIO) in the UK.

The members agreed to initially have at least a trustee from the UK who is well aware of the obligations and regulations in force in the UK. Tim Fileman proposed Professor Stephen de Mora from Plymouth Marine Laboratory as a trustee and the members approved that proposition (he has since accepted). Mr. Dandu Pughiuc (ex IMO retired) has also agreed to act as a trustee for Global TestNet. The members also agreed that the number of Trustees should be at least three (3) as per the regulations in force in the UK but should not exceed five (5) and should include at least two individuals with expertise in BWMS testing (e.g. members of the Global TestNet). As such, a team of three trustees could be agreed upon very quickly and the registration of the Global TestNet as a UK based charity could be initiated in the coming weeks.

ACTIONS:

- It was agreed that additional trustees will be proposed and some of the individuals present at the meeting agreed to approach other potential trustees to ask for their support. These additional trustees should agree by the 1st of March 2018.
- The charity should therefore be able to open a bank account by the 1st of April 2018



which will allow fees to be collected and the process of applying for charitable status can begin.

The rules and regulations to be applied to the trustees and the charity will be based on the existing by-laws and agreements from the members (some of which are not yet reflected in the by-laws yet but will be integrated as part of the governing documents of the charity). It was also agreed that an additional membership level of "non-voting member" was required. These are members who pay annual fees, can take part of all meeting and activities of the Global TestNet but cannot vote. Voting members should be test facilities involved in the physical testing of BWMS and anti-fouling equipment (e.g. antifouling systems and in-water hull cleaning devices). Voting members will vote for or against the inclusion of non-voting members in the Global TestNet without requiring the submission of QAPP and QMP documentation as stipulated in the Bylaws for voting members. Members also agreed that non-voting members may be elected as part of the Steering Committee by voting members. Based on the discussions that took place during the meeting the structure shown in Figure 2 of Global TestNet will be reflected in the charity application documents.

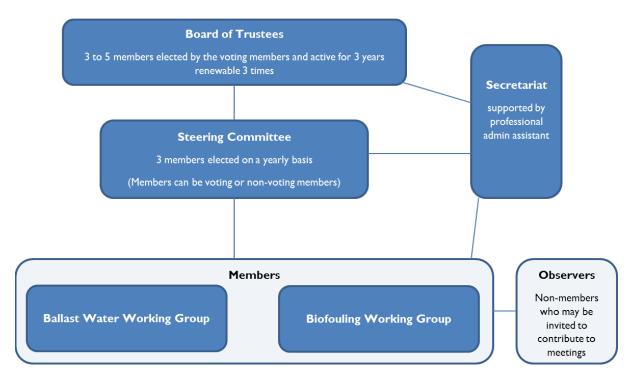


Figure 2: Global TestNet Structure

Agenda Item No 2: Response to the closure of two test facilities

Two of the test facility members of the Global TestNet have officially announced that they will not be continuing type approval (TA) testing of BWMS. The reasons proposed for these decisions might, in the case of one test facility, raise serious questions about the robustness of TA testing of BWMS by the members of the Global TestNet. The members agreed that a communication as a response to these closures should be made and addressed to stakeholders with interests in ballast water management. The group decided to remind external stakeholders



that the members of the Global TestNet are committed to their objectives to improve the testing of BWMS by increasing transparency in the testing as well as by increasing the comparability of the tests from one facility to another. The communication was prepared during the meeting and has been shared with the members before the end of the meeting. This letter is attached at the end of this report and is on our website (Annex 4).

ACTIONS:

The members of the Global TestNet agreed to share this communication as widely as
possible because of the upcoming PPR5 meeting taking place at IMO the first week of
February.

Agenda Item No 3: Introduction to the GloFouling Partnership

The IMO delegates (led by Antoine Blonce) introduced the members to the GloFouling Partnership project which is a collaboration between the Global Environment Facility (GEF), the United Nations Development Programme (UNDP) and the International Maritime Organization (IMO). It will address the transfer of aquatic species through biofouling (the build-up of aquatic organisms on a ship's underwater hull and structures). The project aims to support developing countries in implementing the IMO's existing guidelines on biofouling. The Global TestNet has agreed to endorse the initiative in principle and the Chairman has already sent supporting letter to the UNDP person in charge. The discussion during the annual meeting allowed the members to discuss the extent to which Global TestNet could actually support the project.

ACTIONS:

- Global TestNet has agreed to open its organisation to scientists working on biofouling issues and agreed to try to organize its annual meeting back to back with the future R&D forum expected to be launched as part of the GloFouling Partnership.
- Also, Global TestNet agreed to guide the upcoming biofouling group in developing guidelines for the testing of antifouling tools (e.g. antifouling systems and in-water hull cleaning) together with guidelines for the validation of such work.

It was also proposed whether the GloFouling Partnerships project might support Global TestNet by financially supporting new members of the biofouling group in registering with Global TestNet but this was not considered possible due to financing regulations in force at the IMO.

Agenda Item No 4: Updates from GESAMP BWWG

The Chair of the GESAMP BWWG (Jan Linders) made an introduction about the roles of GESAMP and the activities taking place within this group. The impact of additives on the production of disinfection byproducts (DBPs) was considered a topic which should deserve attention by test facilities. Test facilities have raised concerns on the new requirements of having to run numerous sample analyses because of the cost and time necessary to perform this work which is not seen of high value to the evaluation of risk from using BWMSs. The chair of GESAMP confirmed that these additional analyses were requested without performing a cost-benefit analysis. The test facilities confirmed that these additional costs will be reflected into the costs of testing new BWMSs. DNV-GL mentioned that the implementation of the new G8



guidelines should be seen as a very good step that has increased the comparability of testing with challenge water preparations becoming more similar between test facilities. The management of volatile compounds is now considered more equal across test facilities.

ACTIONS:

- DNV GL has agreed to share once more its methodology for the evaluation of TRO in test water (deadline March 2018).
- In order to improve the methodology used by the GESAMP BWWG it was agreed that the chair of GESAMP will share a detail list of information that test facilities could provide to the expert group in order to improve the evaluation of risks globally (Deadline: Ist March).

Agenda Item No 5: Preparation of Test Water

During the morning of the second day of meeting, DNV-GL (Line Sverdrup) presented water quality data from waters around the test facilities as well as water quality data from ports around the world. The presentation also included some information sharing on the impacts of additives used for preparing test waters on the TRO consumption and UV-T of test water (also supported by data shared by Cato ten Hallers of MEA-nl). The members considered that the presentation was informative and fitted very nicely with preliminary data shared by DHI Denmark during the previous (8th) meeting (Gitte Petersen).

ACTION:

• The Chairman proposed that the inter-comparison charts (aka the Istanbul paper) are share with the ILs in order to generate an overview of practices across test facilities.

The agenda item also included a long discussion on the adequacy of testing the BWMS at the level of total suspended solids (TSS) required by the regulations when many ports around the world have water quality (TSS) much more challenging that what required during type approval testing. The group agreed that it would not be possible to force technology developers to test their equipment in much more stringent ways than required by the regulation. The group also agreed that the system design limitations (SDL) approach in discussion at the IMO would not be an adequate platform to address this issue. Finally, the group agreed that testing extreme TSS value during land-based biological efficacy tests would not be possible because the extreme TSS values would impair the biology of the organisms during the tests, rendering the tests invalid. Therefore, the group agreed that filters should be tested against high level of TSS outside the protocols for biological efficacy testing and agreed to generate a Filter Test Protocol for the evaluation of filter robustness to TSS levels that are reflecting real world scenarios.

ACTIONS:

 Louis Peperzack agreed to develop such a draft protocol based on existing in house methodology together with Stephanie Delacroix as NIVA has also been working on such proposition together with DNV-GL. These two facilities are expected to cooperate in the production of a draft document to be shared with members and ILs (deadlines Ist April 2018).



- In addition to this task, Allegra Cangelosi has agreed to lead an effort to support the development of standard tests for filters through the ISO (USA members).
- Finally, the group agreed to have a non-voting member to lead technical discussions on the impact of DOC on test water conditions. The members agreed to share their relevant data with DNV-GL and DNV-GL would therefore develop a proposition for the harmonized management of DOC impacts in test water.

Agenda Item No 6: Natural Test Water Conditions

A presentation of information from 100 shipboard tests over the last years was given by Stephan Gollasch. The information was presented in an interesting manner, showing natural organism density and water quality data during shipboard and benchmarking these numbers against the existing water quality data required for the development of land-based tests. The level of phytoplankton being lower than required in many cases, the group proposed that the size class of the 10-50um should be extended (e.g. including for instance organisms in the 5-10um class). The test facilities agreed that including smaller organisms in the size class representing mostly phytoplankton organisms would allow better testing, rendering it more robust, decreasing the quantity of invalid tests due to low amounts of cells in the 10-50 size; and decreasing the need for STO additions in land-based testing.

ACTION:

Allegra Cangelosi has agreed to write up a note supporting this position (deadlines Ist May). This note will be shared with regulatory bodies to support the improvement of existing testing guidelines.

Agenda Item No 7: Global Port Water database

Allegra Cangelosi presented the advancement in the development of a water quality database for ports which is expected to be developed based on data from the Global TestNet members. The discussion concluded that many existing sources of information are not of the quality required to forecast the relevant water quality information in ports and therefore their impact on BWMS.

ACTIONS:

- The group agreed to work toward working and information sharing principles.
- The scope and objectives of the database as well as the terms and conditions applying to members sharing information will be developed in the coming months and will be led by three facilities (Golden Bear, NIVA and GWRC).

Agenda Item No 8: Isokinetic sampling onboard ships

The presentation by Youngsoo Kim on the inclusion of straightener in the ballast water pipes before sampling ports allowed the members to discuss the potential use of such equipment at test facilities. The group agreed that sampling onboard ships is not always an easy task and that guidance on installing sampling ports in the proper manner would be of benefit for the successful implementation for the convention. Yet, the group agreed that aside from land-based test facilities, the members of the Global TestNet are not in a position to generate such proposition. No action item was generated after the presentation.



Agenda Item No 9: Ring tests across facilities

Cato ten Hallers of MEA-nl led a discussion on the relevance of ring testing to increase the comparability of testing across facilities. The discussion was initiated by a review of past and ongoing activities that have supported the cross-comparison of methodologies applied during the type approval testing. The Chair reminded the members that a few of the discussed items were already closed in 2017 during the revision of the inter-comparison charts and followed up with a clarification from the IL on the sizing of organisms.

ACTION:

• The Steering Committee will share once more the charts with all members and add the drawing created by NIVA to support the methodology for the measurement of organisms (sizing minimum dimension) (Deadline I March) (included as Annex 3).

The steering committee also reminded members that some of the members (MERC) have shared their SOP with the group and that this should be considered as a good effort from the members to increase the success of Global TestNet (other SOPs on phytoplankton analyses have been published by DHI, NIVA and Golden Bear as part of IMO submission by Norway to PPR4). The group concluded that the sizing was already covered by the agreement between tests facilities in 2017. However, the members agreed that the staining methods could be a good topic for the cross-comparison of skills in between facilities; yet the groups agreed that this was probably the most difficult comparison to perform.

One member reminded all that BSH (Germany) has been working on a validation procedure to cross-compare the work from different facilities. The program which will be developed with the Alfred Wagner Institute in Germany will have its project leader entering in contact with all test facilities to propose a sampling and analyses cross-performance test.

While the discussion was considered important to the Global TestNet, none of the members agreed to take the lead for supporting the development of any ring test activities; therefore it was agreed that the optimal strategy would be to rely on BSH to support the efforts.

Agenda Item No 10: Participation of the Global TestNet in conferences

The chair of the Global TestNet has been approached to support an upcoming conference on bio-invasion in China in the summer 2018. The group will need to decide how to support this event in case it is decided to do so. Information of the conference has been shared by the secretariat to all members. Further discussions will continue with the future Steering Committee.

Agenda Item No II: Elections

Two members raised their interest in becoming members of the Steering Committee for 2018. However, no members raised interest in taking on the position of Chair and Secretariat (Both of which had requested to step down). The members have praised the efforts of the Chairman and the Secretariat in supporting the development of Global TestNet but the members feared that their effort would not match those of the previous Steering Committees over the last two years because 2018 is expected to be a challenging year for most test facilities. The Existing Chair and Secretariat have agreed to continue their effort for 6 months until the NGO status is setup so that the future Chair would have less challenges in developing the administrative



structure of the organisation to maturity. The members are aware that the Chair may transfer to DHI Denmark or leave for new endeavors in the near future but have agreed that this should prevent the efforts of the Steering Committee in carrying on working over coming months.

The 2018 Steering committee is as follows:

- Chairman: Guillaume Drillet (DHI Singapore, Asia)
- Secretariat Tim Fileman (PML; Europe)
- Member: Stephanie Delacroix (NIVA; Europe)
- Member: Chris Brown (Golden Bear Facility; North America)

The meeting was then adjourned.

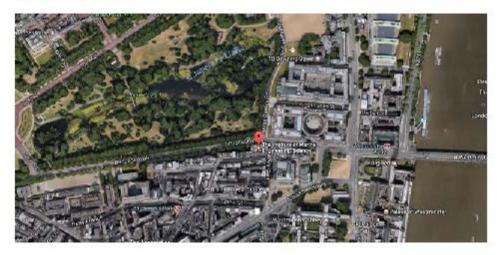


Annex I: Meeting Agenda



Agenda of the Global TestNet Annual meeting 1 the 2nd February 2018

Venue: IMarEST I, Birdcage Walk London SWIH 9]] United Kingdom +44 (0) 20 7382 2600



The meeting room is limited to 24 people and therefore attendance will be offered in priority to the members of Global TestNet, then our speakers and then to the observers.



Global TestNet Annual meeting 1st & 2nd February 2018

Day I - Thursday Ist February 2018				
09:00 – 09:30	Registration and Introductions at the IMarEST Headquarters, London Housekeeping rules reminder (IMarEST)			
09:30 - 10:00	 Welcome Address - (Global TestNet Chair, Guillaume Drillet) Update - Review of 2017's Global TestNet Achievements, New Members, etc. (Guillaume Drillet & Tim Fileman) Acceptance of the agenda + modification if required - (Tim Fileman) 			
10:00 - 10:45	 NGO Application to IMO – The story so far (Tim Fileman) New Charity Constitution – Presentation & discussion for member input lead by Tim Fileman 			
10:45 -11:00	Tea/Coffee Break			
11:00 – 12:30	 New Charity Constitution – Continued Selection of Trustees – Discussion lead by Guillaume Drillet & Tim Fileman What we need to do now to get this done lead by Guillaume Drillet & Tim Fileman 			
12:30 - 13:30	Lunch			
13:30 – 14:15	IMO's new GloFouling project – presentation by Antoine Blonce & John Alonso			
14:15 – 15:00	 GESAMP-BWWG update – presentation by Jan Linders (Chair of GESAMP-BWWG) 			
15:00 – 15:15	Tea/Coffee Break			
15:15 – 17:00	Credibility, transparency and scientific integrity in BWMS certification testing – how to address the issues that have led to two high profile test center closures – Discussion lead by Guillaume Drillet			
17:00	Day I adjourned (Dinner – pub/restaurant to be found)			

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Global TestNet Annual meeting 1st & 2nd February 2018

Day 2 – Friday 2 nd February 2018		
09:00 - 09:30	Day 2 Start – tea/coffee, networking	
	Introduction to the Day 2 Agenda by Tim Fileman	
09:30 — 10:10	 Testing Ballast Water Management Systems – Challenge Water Conditions During more than 100 Test Voyages: - presentation by Stephan Gollasch 	
10:10 - 10:50	Challenge water validations in line with recent USCG and IMO G8 requirements — Presentation by Line Emilie Sverdrup DNV Principal specialist, Environmental Risk and Preparedness	
10:50 - 11:05	Tea/Coffee break	
11:05 -11:45	Harbour water quality data base – presentation and discussion lead by Allegra Cangelosi	
11.45 – 12.25	Representative Sampling – presentation and discussion lead by Youngsoo Kim	
12:25 - 13:30	Lunch	
	Binder die between West Beritting Dieserties Ledter MCA	
13:30 – 14:10	 Ring testing between Test Facilities – Discussion led by MEA (Cato). 	
13:30 – 14:10 14:10 – 14:50	, ,	
	(Cato). • Global TestNet outputs from these discussions – summary	
14:10 – 14:50	(Cato). Global TestNet outputs from these discussions – summary & discussion lead by Guillaume Drillet	
14:10 – 14:50 14:50 – 15:30 15:30 – 15:45	(Cato). Global TestNet outputs from these discussions – summary & discussion lead by Guillaume Drillet Election of Chair, Steering Committee & Secretariat	
14:10 – 14:50 14:50 – 15:30	(Cato). Global TestNet outputs from these discussions – summary & discussion lead by Guillaume Drillet Election of Chair, Steering Committee & Secretariat Tea/Coffee Break	
14:10 – 14:50 14:50 – 15:30 15:30 – 15:45	Olivial TestNet outputs from these discussions – summary & discussion lead by Guillaume Drillet Election of Chair, Steering Committee & Secretariat Tea/Coffee Break Any Other Business:	

17th January 2018

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Annex 2: Global TestNet 2017 Overview Presentation



Summary of activities : Membership

- New Member approved (Shanghai Ocean University)
- New Member application (SGS Korea)
- Merging of Stephan Gollasch and David Matej consulting into one single membership (SGMD)
- Change of Member homebase: GSI transfer under the University of Wisconsin Superior Lake Superior Research Institute
- Member leaving official type approval testing (MERC)
- New Observer: Jiapeng Wen; China Waterborne Transport Research Institute
- · New observer: Control Union IL



Summary of activities: Global Visibility

- BWM Technology and Standardization Forum in Quindao: Full presentation (G)
- Panama GloBallast closing Workshop: Presence of Global TestNet (T),
- Korean Maritime Week (Busan): Full Presentation (G)
- London IMarEST Conference: Full Presentation (G)
- Singapore (IMarEST and Asian BW conf: slides about the pivot role of Global TestNet; G)
- Green Ship Tech Conference (Shanghai): Full Presentation (G)





Summary of activities: Technical discussions

- Refreshment of the Istanbul charts (lead by Stephan)
- Technical discussions on sizing: 3 observing IL supported the sizing of organisms as the maximum width visible under a microscope for TA testing under the USCG scheme. Only German administration seems to allow the minimum dimension of the smallest visible axis approach
- Technical discussion on salinity (initiated by Stephanie and Mario but no follow up)
- Water quality database (Updates from Allegra tomorrow)



Summary of activities: Strategic invasion of the biofouling arena

- Decisions on the future of Global TestNet to allow for the support of other vectors of invasion from shipping (fouling); Glo<u>B</u>al TestNet, becomes Glo<u>b</u>al TestNet on the day of the entry into force of the BWM convention!
- Letter of support to the GloFouling Project of IMO and engagement of Global TestNet to support the GloFouling project within our capabilities





Summary of activities: developments of the NGO status

- The members have agreed to have Global TestNet to become a registered NGO which requires:
- Trustees
- Annual member fees to be paid (est. 1-2000 USD)
- Submission of NGO status proposal to IMO (March deadline)

More discussions and decisions on this topic this morning....



Annex 3: Methodology for the Measurement of Organisms (sizing minimum dimension)

DNV GL IL approach to measuring organisms in the size classes 10-50 μm and >50 μm

Dear ETV panel,

Counting of organisms in the size classes 10-50 μ m and >50 μ m depends on how the size is measured and interpreted. DNV GL IL has agreed with sub-labs on a methodology for determining sizes of organisms in the 10-50 μ m and >50 μ m size classes, provided below.

The document could be used by ETV as a generic approach to measuring size of zooplankton and phytoplankton.

Zooplankton (>50 µm)

As a general rule, size is measured as the maximum width of the minimum axis of the organism as viewed, without including cilia, spikes and appendages. Smaller zooplanktons possess a more or less bilateral symmetry, and the size should be interpreted as the width of a pore that the organisms could pass through (without the cilia, spikes and appendages). Examples of how to determine size of zooplankton is given in Figure 1.

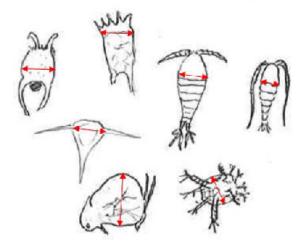


Figure 1 Examples of determination of zooplankton size. Red arrows indicate how size is measured.

Phytoplankton (10-50 µm)

Phytoplankton could have very different shapes, from radial and spherical symmetry to asymmetry or chain forming colonies. As a general rule, phytoplankton size/diameter is measured as the minimum diameter of width of cell (cell body which includes cytoplasma) as viewed excepting



spikes, chaeta or hair like structures. Cell chains and colonies that easily observed as single units are measured on cell basis and all cells are counted. Colonies and filaments where cells are permanently attached are considered 1 unit and the minimum diameter of the unit is measured. Examples of how to determine size of different phytoplankton groups are given in Figure 2.

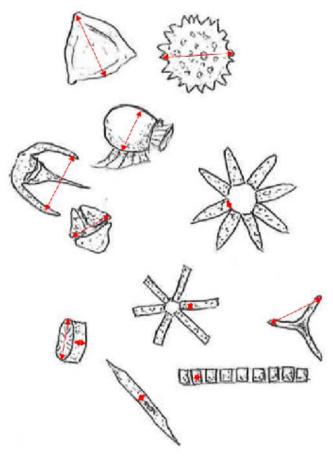


Figure 2 Examples of determination of different phytoplankton groups. Red arrows indicate how size is measured. One cell has 2 diameters drawn because either one may be used depending on which side faces towards the viewer.



Annex 4: Statement by Global TestNet 2nd February 2018



Statement by Global TestNet

2nd February 2018, Annual Meeting, London

This statement is in response to stakeholders' potential concerns raised as a result of recent closure of two test facility members of the Global TestNet. These concerns may revolve around whether there is still adequate capacity to process certification tests in a timely manner, and whether the testing protocols are adequately robust.

As an international association of test facilities, we have recently welcomed new members into our organization. These additions should help to maintain testing capacity globally. The Global TestNet continues its commitment to analyse and address concerns about the BWMS testing protocols and their implementation (see mission statement below).

The Global TestNet is actively improving testing by being a forum for discussion and sharing of experiences and data, promoting comparable and accurate test results.

The growing experience base within the Global TestNet has provided the basis for better aligning implementation of methods to improve consistency and robustness of testing. Feedback from compliance checks especially during the IMO's Experience Building Phase, will be crucial to support Global TestNet progress.

Global TestNet Mission Statement:

"To promote comparable and accurate test results on the performance of ships' ballast water and biofouling management systems for certification and protection of the natural environment and biological diversity, in particular but not exclusively by facilitating an open exchange of information, transparency in methodologies and advancing the science of testing, for the public benefit."