

**NATIONAL MARINE BIOLOGICAL AQC SCHEME / BEQUALM**  
**Teleconference meeting 20<sup>th</sup> January 2015, 10.00-15.00**

**Attending:** David Johns (DJ, Chair, SAHFOS), Tim Mackie (TM, NI EA), Myles O'Reilly (MoR, SEPA), Claire Mason (CM, CEFAS), Clare Scanlan (CS, SEPA), Astrid Fischer (AF, Technical Secretary, SAHFOS), Rafael Salas (RS, MI), Keith Cooper (KC, CEFAS), Jim Ellis (JE, CEFAS), Mandy Prior (MP, Finance Manager, EA), Contractors and contractors representative.

**Apologies:** Emma Verling (EV, JNCC), Joe Silke (JS, MI), Matthew Green (MG, Natural Resources Wales)

**Last Meeting Actions & minutes**

**Astrid:**

- Include the new standards in the list of standards sent around within committee on the NMBAQC web site and in the Prue Addison document. *Done.*
- Send electronic copies of the NMBAQC posters/flyers to Grant, Sarah and David H. *Done.*
- Update the benthic sampling protocol by David H with the new remedial guidelines. *Done.*

**David J.**

- Ask Sarah Peaty to see if NMBAQC can receive a copy of the standard "Nomenclature Requirements for the Recording of biodiversity data, taxonomic checklists and keys". *Done. The British standard has to be purchased from <http://shop.bsigroup.com/ProductDetail/?pid=000000000030253112> (price £104 or £52 for members)*
- Issues to raise at next HBDSEG meeting:
  - Name change to North-Atlantic Marine Biological Analytical Quality Control Scheme. *Done. HBDSEG were unable to support a name change at this time due to the unsecure nature of the funding for the scheme. There was a perception that already stretched resources were being used to support other countries outside the UK and whilst the number of laboratories is low it was not thought appropriate to actively expand the scheme beyond the UK at this time. Once the funding position is clear it may be possible to expand in the future in order to establish a similar model to QUASIMEME but this would require further discussion with other EU countries..*
  - Find out who deals with food web descriptors (this may be Simon Greenstreet), to raise the issue again of fish larvae ring test, look at juvenile fish within context. *Done. Consistent assignment of juveniles was thought to be necessary to standardise datasets to ensure data can be compared and assessed consistently especially as data from a wide range of sources is likely to be used for all the main drivers (Habitats, WFD and Marine Strategy). Focus and agreement on more common species should be the focus in the first instance.*
  - e-DNA, this is being tested currently and there is no QA/QC on this as far as we are aware. *Done. There was no detail on this in the update paper. Please provide more information on EDNA and what the committee is suggesting.*

*As we do not currently rely on EDNA for any of our monitoring this should not be a priority at this time.*

*Cefas added that this is just something they are currently investigating and just wanted NMBAQC and HBDSEG to be aware of this. It is also important that eDNA ensures that the speciation is correct so that two laboratories working on this are using the same species and to prevent multiple records being produced for one species.*

- Tender contracts, including those for universities, should provide a sampling and processing protocol as well as a QA specification. *Done. HBDSEG would assume that is already the case. Clearly having been raised then it would appear not and the committee should consider what further actions can be taken to promote the scheme and ensure due consideration is given for quality management particularly if the data is being used in support of regulatory or statutory requirements.*

### **Sarah**

- Send around a list of Fish species of interest to include in the ringtest exercise, this could be due to unusual size class or more uncommon species. *Done.*
- Find out how the fish workshop run by IFM is accredited, and to find out if it is possible to collaborate, find a model that works for both IFM and NMBAQC together. *Done. IFM is happy to collaborate, and have offered us an article in their magazine. Their course is self-accredited (due to the history of the scheme).*

### **Matt Green**

- Provide Emma Verling with contact details of other interested parties in the epibiota document. *Done.*
- Ask for approval from participants to his assignment of juvenile information request to use the obtained data and when approved to send the document to Tim Mackie, Tim Worsfold (APEM) and David H. *Ongoing, awaiting responses from the contractors.*

### **Claire Mason**

- Provide Emma Verling with contact details of other interested parties in the epibiota document. *Done post-meeting.*
- Check within Cefas that tender contracts, including those for universities, should provide a sampling and processing protocol as well as a QA specification). *Ongoing.*
- Update the Best Practise guidance to explain that the BSI scope is on sediments/sludges, not environmental samples and that research evidence suggested there is no difference between freezing/not freezing samples. Change 'must' be frozen to 'should'. *Done post-meeting.*
- Inform BSI that the scope of the standard is not environmental samples. *Done. Claire has spoken to BSI and told them we are interested in reviewing the standard. BSI are looking how to proceed- awaiting their July meeting in Philadelphia.*

### **David H.**

- To come up with transport guidance of samples (together with Myles and Paul McIlwaine from Cefas). *Ongoing. There has been a draft from Paul McIlwaine from Cefas- action Keith to look into this.*
- Update the Benthic Invertebrate Guidelines for next year. *Ongoing. Action Myles to find if he has a word version of the guide to send to David H.*

### Myles

- Circulate the epibiota report to SNH. *Done.*
- To come up with transport guidance of samples (together with David H and Paul McIlwaine from Cefas). *Ongoing.*
- Send the current logo protocol to Astrid. *Done.*

### Clare S

- Draft and circulate a paper for UKTAG meeting. *Done.*
- Provide feedback on Saltmarsh plant ringtest to Mandy *Done*
- Resend the draft MAB/Seagrass Workshop proposal to the committee. *Done.*
- Contact Claire M to investigate funding for Macroalgae workshop (European Marine Fisheries Fund, Euromarine), *Ongoing.*
- Liaise with Matt G about collaboration with Natural Resources Wales for Macroalgae workshop. *Ongoing. Clare S has had a meeting with Napier University and will get together with them on an identification manual for seagrass.*

### All

- Send comments to Emma by 31<sup>st</sup> October. *Done.*
- Let Astrid know when standards are being withdrawn or revised. *Ongoing.*
- Feedback on the seasonality of macroalgae sites and what can be found there to Clare so she can make an informed decision on when and where a good location for the workshop would be; a trial size would be sufficient. *Ongoing. Action Clare S to chase this up.*

### **Minutes of the last meeting**

There were a few corrections to the minutes of the last meeting.

### **Priorities from HBDSEG**

We have received the following priorities from the HBDSEG meeting: JNCC are updating their monitoring manual. This work needs to be integrated into the NMBAQC work programme with a view to broadening the scope of the UK guidance for marine biological monitoring to support HBDSEG.

There is considerable UK effort going into habitat mapping. A review is needed to ensure habitat mapping is supported by appropriate quality management using the principles originally set out in Prue Addison's paper.

The committee need to consider what gaps there to fill as MSFD monitoring programmes and indicators come on line to support the quality of the evidence base.

Identify further areas for NMBAQC to investigate

- Habitat mapping
- Integration with work being undertaken by JNCC on the monitoring manual
- Where CMAs are reliant upon marine biological data for regulatory or statutory purposes then consideration of an enhanced role for providing overarching audit services that underpin the quality of evidence e.g. 5% audits of invertebrate sample analysis

The general view from the NMABQC committee was that with limited funding there is currently no possibility to expand further than what is currently already on the agenda. QA

budgets are already stretched and for example large areas of regional seas are currently not being assessed. **Action Tim to email David J about the effect of budget cuts so that David J can take this to HBDSEG. Action Tim to contact Defra to find out about monitoring programmes submitted to Defra and to find out areas of vulnerability. Action David J to contact everyone to get ideas on how we can set up a QA mechanism that works with our current financial constraints.**

### **Phytoplankton update**

The workshop was held in December for 2½ days in Denmark, there were 18 participants and it went really well. We are now writing the final report, but the Statements of Performance have already been sent out. By the end of the month we are hoping to send out the call for next year, in which we are hoping to include bio-volume as an extra measurement in the inter-comparison exercise. This is an important factor in the WFD and in the MSFD, so we are increasing the volume sent out to 50 ml (from 30 ml) so that participants can use 25 ml aliquots for homogenisation. The Marine Institute is also looking if it will be possible to take over the name BEQUALM. **Action Rafael to take legal advice in this matter.**

### **Epibiota update**

All is going well with the Epibiota document. Becky and Emma are happy that several people took the time to have a good read through the draft document and have provided useful feedback. As a result of this, Becky has been going through everything and updating the document based on people's comments. We have also been really pleased that a few people have volunteered to help us complete the ROV/AUV and Freshwater Lens sections of the report; so overall, we have gotten exactly the outcome we wanted in sending it out more widely. Hopefully we will have a new draft ready in the next month or so, depending on how fast the external people can write the various sections.

In the meantime, Becky has been working on a draft of the 'Analysis' guidelines and we will hopefully have an initial draft of these to circulate in the coming month or two as well. So overall, good progress.

When Becky and I were chatting, we discussed a bit the feeling we have that it would be important to clearly articulate to people what the ultimate 'aim' of these guidelines are when they are eventually placed on the website. Conscious that other guidelines and standards on the NMBAQC website are ones that organisations 'sign up to' whereas these are a bit different. It feels like we will need to articulate this clearly somewhere. Also perhaps we may need to say something about the relationship between these and the BSI and European standards. In any case, these are thoughts which we just need to consider when we get to that stage.

The NMBAQC committee felt that the ultimate aim of the guide is to give useful guidance and to state what best practise is. A lot of standards are hard to digest- our guides are built from experience in the field, so can tell what not to do as well as how to do it right. The next step for NMBAQC will be to build it up as a new component, which was our original intention, but has proved to be difficult to date. The idea would be to have a reverse ring test where own samples can be re-assessed, providing the exercise can be cost-effective. At a later date workshops could be planned where both video and physical (grab) samples could be used as a training exercise.

Another thing to consider would be epifaunal targeted photo ring-test for fauna that are not included in grabs (e.g. rock associated species) using photographs. **This is something that the benthic contractor may be able to address, action Myles to investigate with David Hall.** Originally Tim Mackie asked CMAs for video and their ID's for that video- although he has received some of the video he has not had the corresponding ID's and therefore was unable to take the ring test further. We may be able to get some high quality video image and ID's via the University of Plymouth (UoP) who are studying the Lyme Bay. We could use dropbox or yYouTube to distribute large video files. **Action David J/Astrid to investigate if UoP would give permission to use their files for an exercise.** The signup sheet for such a test would need to state the use of dropbox or an ftp server as some government agencies cannot access these. **Action Emma to investigate setting up a private youtube channel. Action Tim and Clare S to investigate with their organisations which would be the option their organisation is least uncomfortable with to share QA of video files.**

### Contractor's update APEM

**Action Astrid to update the timetable on the web with the new dates supplied by APEM.**

### PSA Update

#### 1. Subscriptions

LabCode	PS52/53/54/55	PS-OS01/02/03
PSA_2101	1	1
PSA_2102	1	1
PSA_2103	1	1
PSA_2104	(1)	1
PSA_2105	1	1
PSA_2106	1	-
PSA_2107	1	-
PSA_2108	1	-
PSA_2109	1	-
PSA_2110	1	1
PSA_2111	1	-
PSA_2112	1	-
PSA_2113	1	-
PSA_2114	1	-
PSA_2115	1	-
PSA_2116	-	1
PSA_2117	-	1
PSA_2118	-	1
PSA_2119	-	1
PSA_2120	-	1
	14 (15)	11

## 2. 2014-2015, Year 21 Operations

Exercises have been distributed in line with the previously circulated 2014-2015 timetable (available on the scheme website), with slightly delayed circulations of PS54 and PS55. All circulations have been sent out to participants. The deadline for PS-OS submission has passed, but will be extended to increase returns. Returns and results, to date, are summarised in the table below.

Exercise	Status	Returns / Comments
PS52	Samples distributed 15/09/14 Interim report circulated 19/12/14	Mud/Sand Test 13 out of 14 (15) returns received Excluding 1 extra multi data set
PS53	Samples distributed 15/09/14 Interim report circulated 19/12/14	Diamicton Test 13 out of 14 (15) returns receive Excluding 1 extra multi data set
PS54	Samples distributed 19/12/14 Exercise active	Gravel Test 1 out of 14 (15) returns received

PS55	Samples distributed 19/12/14 Exercise active	Diamicton Test 1 out of 14 (15) returns received
PS-OS01-03	Samples requested 14/10/14 Data and sample submission deadlines passed Extended deadlines to be issued Exercise active	6 out of 11 lists of samples 6 out of 11 datasets received 0 out of 33 samples selected 0 out of 33 samples received

### a. Issues arising

The deadline for PS-OS submission has passed but will be extended to increase returns. Pass/Fail criteria and new z-score formulae are yet to be applied in interim reports to date. These will be applied in the final PSA component report.

Carol has been asked if our data can be used in a paper- Action Carol to send details to Claire Mason so she can make a decision depending on the context.

We still have to decide on the pass/fail criteria, but these will be applied in the final report. The criteria need to have an influence on the result and Claire M is in discussion with a statistician over the formula and will pass the information on to Carol.

Some samples that were sent just before Christmas got frozen and had to be resent. One lab had questioned their report but they had failed to get their laser and sieve data together correctly which was their own mistake. The contractor's representative is always there should it come to a dispute.

## Benthic Invertebrates update

### 1. Subscriptions

LabCode	LR18	OS53/54/55
BI_2001	-	1
BI_2002	-	1
BI_2004	-	1
BI_2005	-	1
BI_2007	-	1
BI_2008	1	1
BI_2009	-	1
BI_2016	-	1
BI_2017	-	1
BI_2019	1	1
BI_2021	-	1
BI_2023	-	1
BI_2026	-	1
BI_2029	1	1
BI_2030	1	1
BI_2031	-	1
BI_2033	-	1
BI_2034	1	-
BI_2036	-	1
BI_2044	-	1
BI_2045	-	1
BI_2046	-	1
BI_2047	-	1
BI_2048	-	1
BI_2049	-	1
BI_2050	-	1
BI_2051	-	1
BI_2052	-	1
BI_2054	-	1
BI_2056	-	1
BI_2058	1	1
BI_2059	-	1
BI_2060	1	1
BI_2071	-	1
	7	33

## 2. 2013-2014, Year 20 Contract Carryover Operations

Samples that remained unprocessed at the contract handover point have been authorised for processing (23/12/14). These OS and LR submissions will be processed as soon as possible. Returns and results are summarised in the table below.

Exercise	Status	Returns / Comments
LR18	Exercise active	General 7 sets of specimens received 0 specimen sets reported, to date
OS53 - 55	Exercise active	93 samples received Including 13 samples for external audit 6 samples awaited 3 samples analysed & reported, to date

### a. Issues arising

A number of submissions lack hard or electronic data; these will be requested from the participant laboratories in due course. Own Samples will be reported using the new report format created for Year 21 (2014/15) submissions.



## 1. Subscriptions

LabCode	RT47/48	LR19	MB22	OS56/57/58
BI_2101	1	1	1	1
BI_2102	1	1	1	1
BI_2103	1	1	-	1
BI_2104	1	1	-	1
BI_2105	1	1	-	1
BI_2106	1	1	-	1
BI_2107	1	1	-	1
BI_2108	1	-	-	-
BI_2109	1	-	-	-
BI_2110	1	1	1	-
BI_2111	1	-	1	-
BI_2112	1	-	-	1
BI_2113	1	-	-	1
BI_2114	1	-	-	1
BI_2115	1	-	-	1
BI_2116	1	-	-	1
BI_2117	1	-	-	-
BI_2118	1	-	-	1
BI_2119	1	-	-	-
BI_2120	1	-	-	-
BI_2121	-	1	-	1
BI_2122	-	-	-	1
BI_2123	-	-	-	1
BI_2124	-	-	-	1
BI_2125	-	-	-	1
BI_2126	-	-	-	1
BI_2127	-	-	-	1
BI_2128	-	-	-	1
BI_2129	1	-	-	1
BI_2130	-	-	-	1
BI_2131	-	-	-	1
BI_2132	-	-	-	1
BI_2133	-	-	-	1
BI_2134	-	-	-	1
BI_2135	-	-	-	1
BI_2136	-	-	-	1
BI_2137	-	-	-	1
BI_2138	-	-	-	1
BI_2139	-	-	-	1
	21	9	4	32

## 2. 2014-2015, Year 21 Operations

Exercises have been distributed in line with the previously circulated 2014-2015 timetable (available on the scheme website), with a slightly delayed circulation for RT48. All circulations have been sent out to participants; all exercises are either complete or active at this time. Returns and results are summarised in the table below.

Exercise	Status	Returns / Comments
RT47	Samples distributed 15/09/14 Submission deadline passed, 31/10/14 Interim reports circulated 25/11/14 Ring Test Bulletin in progress	General Ring Test 20 out of 21 returns received
RT48	Samples distributed 18/12/14 Submission deadline 06/02/15 Exercise active	Targeted 0 out of 21 returns received
LR19	Request for specimens distributed 15/09/14 Submission deadline passed, 31/10/14 Analysis / reporting in progress	General 5 out of 9 returns received 0 specimens sets reported, to date
MB22	Samples distributed 15/09/14 Submission deadline passed, 31/10/14 Exercise complete Module report in progress	Marine Sample (1mm) 2 out of 4 returns received All returns reported.
OS56 - 58	Samples requested 15/09/14 Data submission deadline has passed, 26/09/14 Sample submission deadline has passed, 31/10/14 Analysis / reporting in progress	30 out of 32 lists of samples 30 out of 32 datasets received 78 out of 96 samples received 14 samples to be externally audited 6 samples reported, to date

#### a. Issues arising

The bulk of electronic files from previous years of scheme operations have been received. These will help to ensure consistency with previous scheme years and assist with the production of annual reports and assessing long term trends. However, the NMBAQC Scheme's most recent MS Access database file is still outstanding.

### 3. Taxonomic Workshops

A benthic invertebrate expert workshop was held w/c 10<sup>th</sup> November 2014 at Dove Marine Laboratory, Cullercoats. The programme comprised three days for sabellids and fabricids (Prof Adriana Giangrande, Lecce University, Italy) and one day for interstitial opisthobranchs (Bastian Brenzinger, Bavarian State Collection of Zoology, Munich, Germany). A summary of post-workshop feedback questionnaires is provided in Appendix A. The workshop generated a slight profit for NMBAQC, as planned. Workshop guides will be finalised as soon as possible for upload to the scheme website.

It was discussed that the sign-up for the macrobenthic exercise has dropped considerably in the last few years and this was the lowest sign-up ever. **Action David H, Carol Milner, Myles and Mandy to discuss if a variation of the contract needs to be issued to drop the macrobenthic exercise in year 22 due to lack of interest. Action Mandy to set up a teleconference for this next week.**

The outstanding samples for the Own Sample exercise have been chased twice and it is now getting close to the deadline by which they will need to be processed. **Action Carol to let Myles know which ones are outstanding. Action Mandy to check wording in the info note. Action Myles to give a final chase up otherwise samples will not be included in the Own Sample report .**

The workshop was considered positive, but the keys will need to be updated. Adriana got a lot of issues that needed dealing with so it will take some time. However, in the meantime, should anyone need a key for ID they can have a copy of the workshop key. **Action Carol/ David H to chase up Adriana and Bastian for the updated keys.**

Also the access database with all the information of the scheme since its inception, for looking at long-term trends in the data, have not been received yet. The file received was unfortunately an outdated version. **Action Myles to ask Ruth from Thomson Ecology for this file.**

**Contractor's update Thomson Ecology**

**Fish update**

**2014 / 2015 Participation (List correct as of 19<sup>th</sup> January 2015)**

LabCode	F-RRT	F-RT
2101	X	
2102	X	x
2103	X	x
2104	X	x
2105	X	
2106	X	x
2107		x
2108	X	x
2109	X	x
2110	X	x
2111	X	x
2112	X	x
2113	X	
2114	X	x
2115		x
2116		x
2117		x
2118	X	
2119	X	
2120	X	
2121	X	
2122	X	
2123	X	
2124		
2125		x
2126		x
2127	X	x
2128	X	
2129	X	
2130	X	
<b>TOTAL</b>	<b>23</b>	<b>17</b>

### Scheme Year 20 circulations (2012/13)

Exercise/ Reports	Status	Returns/Notes
FRRT05	Re-analysis of fish taxa completed. Completed and published.	Fifteen fish taxa to be from <u>Northwest European waters</u> (CSEMP samples where appropriate).
FRT07	Deadline for returns 04-04-14. Completed and published.	<u>General Fish Ring Test</u> – Assorted Fish Taxa (fifteen taxa).
Annual Fish Report	Completed and published.	Report writing will start upon completion of analysis and reporting on FRT07.

Fish Statement of Performance certificates have been completed and sent to participating laboratories.

### Scheme Year 2014/15 Timetable for the Fish component

Exercise/ Reports	Event/Date	Notes
FRRT06	Protocol and request for specimens to be distributed 08-09-14. Completed. Last set of specimens received 14/01/15.  Analysis of fish specimens. Pending	Fifteen fish taxa to be from <u>Northwest European waters</u> (CSEMP samples where appropriate).
FRT08	Distribution of samples 03-12-2014. Completed. Deadline for results is 06/02/15.	<u>General Fish Ring Test</u> – Assorted Fish Taxa (fifteen taxa).

### Scheme Year 2015/16 Timetable for the Fish component

Timetable sent to Astrid. **Action Astrid to update the timetable on the web.**

There has been a complaint by one of the participants on the quality of the photographs in the ring test. It was decided not to take new photographs this time, as the original intention of the photographs was to be an aid for identification, but not to be leading. The ID has to come from the specimen itself. However, for future ring tests a photograph protocol will be developed so that the scheme's photographs will be consistent. Going forward, we would like to have pictures taken from fresh material, with a scalebar, against a neutral colour, with a close-up of certain details. **Action Mandy to distribute tender wording on the photographs. Action Sarah/ Jim to draft a comment to the query raised and to draft a photograph protocol.**

### Macroalgae/Angiosperms update

1. Macroalgal blooming/seagrass ring tests – the current set of ring tests was sent out on 5th January. Results are due back by 20th February, and we do not envisage granting any extensions in order to keep to published timescales.

2. Rocky shore macroalgae ring test – the current ring test was sent out on 5th January. Results are due back by 20th February, and we do not envisage granting any extensions in order to keep to published timescales.
3. Certificates – these should be with the NMBAQC Chair for signing. They were delayed this year due to the contractor being on maternity leave. **Action Clare S to see if these have now been sent.** Post meeting note- certificates have been signed and will be send out last week of January.
4. Saltmarsh – The EA saltmarsh ring test was opened up to other NMBAQC members this year. It is not known how many took part, as this is handled by the EA. SEPA comments on the test were fed back to the EA (Mandy). The final report of the exercise has not yet been received, although the correct answers were. The EA's contract for this has one to go, so we and the EA need to consider whether this will come under the NMBAQC remit in future. There were 3 other CMAs that signed up. **Action Mandy to check with Tina what the conditions of the contract are. Action Mandy/Clare S/Tina to discuss if the ring test could be an NMBAQC field test instead of a photo exercise. Action Tim to see if other NIEA department could get involved too, when the final report on the current ring test is available.**
5. There has been no progress yet on a workshop for macroalgal blooming/seagrass, but this is still on the agenda.

**Action Clare S to send Astrid the reports for last year to include on the NMBAQC web site. Action Mandy/Clare S to retender the macroalgae component. Action Mandy to send old tender to Clare S.**

#### **Zooplankton update**

The zooplankton trial ring test was sent out in November, with a returns date of 16<sup>th</sup> January. There were 12 participants from 6 laboratories. One return is outstanding, but this had been discussed beforehand and an extension had been granted on this occasion. There will be a workshop held in July this year to discuss the outcome of the results and to see how we can take this further.

#### **AOB**

##### **Signup sheet 2015-2016**

The Signup sheet for 2015-2016 was circulated among the committee. This was discussed, to be send out by Mandy, with an end of April or mid-May deadline for returns. **Action Mandy to contact Roger Proudfoot to see if he has an address database for licensing authorities.** After discussion with Myles/APEM it will be decided whether or not to go ahead with the macrobenthic exercise next year.

Cefas asked if it would be possible to have the QA incorporated in the sample processing so that there would be a draft QA specification for regional monitoring- QA the survey instead of the agency. This would then mean that each survey has and each region has to send its own 3 samples and LR to the scheme. **Action Keith to send the proposal to Astrid.**

##### **Contractors representative**

One contractor asked about the possibility of deep sea species for offshore monitoring. This would be possible if there would be a test with circa 25 different taxa in the abundance required for such a test or alternatively, to run a workshop. **Action Grant to contact this contractor to see if he would be able to provide specimens for a ring test for deep sea species and to assess how many labs would be interested in such a test. Action Astrid to put on the agenda for the next meeting.**