



OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic
Working Group on Monitoring and on Trends and Effects of Substances in the Marine
Environment (MIME)
Copenhagen: 20-24 November 2017

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Draft MIME summary record

Agenda Item 0 – Opening and representation at the Meeting

MIME 17/0/1, MIME 17/0/2 Rev.1

0.1 The meeting of the Working Group on Monitoring and on Trends and Effects of Substances in the Marine Environment (MIME) was held from 20-24 November 2017 at the International Council for the Exploration of the Sea (ICES) in Copenhagen, Denmark.

0.2 The meeting was chaired by Dag Øystein Hjermann (Norway) and was attended by representatives from the following:

Contracting Parties: Belgium, Denmark, France, Germany, Ireland, the Netherlands, Norway, Spain, Sweden and the United Kingdom;

Inter-governmental Observer Organisations: the Oil Companies' European Organisation for Environmental and Health Protection (CONCAWE), the International Council for the Exploration of the Sea (ICES) and HELCOM;

Guests: Felix Christopher Mark (BIOACID: Biological Impacts of Ocean Acidification), Patrick Gorringe (NOOS: North West European Shelf Operational Oceanographic System and EMODnet: European Marine Observation and Data Network Physics) and Simon Wilson (AMAP: Arctic Monitoring and Assessment Programme).

0.3 A list of participants is at **Annex 1**.

Agenda Item 1 – Adoption of the Agenda

MIME 17/1/1 Rev.1, MIME 17/1/1 Add.1, MIME 17/1/Info.1

1.1 The draft agenda for the meeting and provisional timetable were adopted (MIME 17/1/1 Rev.1 and 17/1/1 Add.1). The Heads of Delegation (HoDs) noted the late documents and agreed to address them all. HoDs agreed to address two items under Any Other Business: a proposal from France to change part of an OSPAR Region boundary in its national waters and; an information document on Pharmaceuticals in the Baltic Region. A copy of the agenda with the revised document list submitted to the meeting is at **Annex 2**. A list of actions arising from the meeting is at **Annex 3**.

1.2 The Secretariat reminded MIME of its Programme of Work 2015/16 for the Hazardous Substances and Eutrophication Committee (HASEC) (MIME 17/1/Info.1). MIME noted all products would be addressed during the meeting and were on track to meet the stated deadlines for delivery, except for Product 7, the risk-based approach for biological effects monitoring to identify chemical hot-spots where monitoring should be focused. This Product was addressed under Agenda Item 4 (§§4.2-4.3). The Secretariat informed MIME that CoG(2) had met 16-17 November 2017 and the meeting had agreed task groups to develop: (a) an approach to assess OSPAR's achievement against the North-east Atlantic Environment Strategy 2010-2020; (b) an outline structure for a renewed Strategy and; (c) an approach for the QSR 2023.

Agenda Item 2 – JAMP and Contracting Parties’ evolving monitoring as drivers for development of OSPAR monitoring of substances and of their effects

MIME 17/2/1, MIME 17/2/Info.1

Progress in the JAMP

2.1 The Secretariat presented the Theme H products of the JAMP 2014-2020, to recall the specifications that required work by MIME and the timetable for the work (MIME 17/2/Info.1). Recalling that the North-East Atlantic Environment Strategy was due to be renewed post-2020 and that OSPAR had agreed the next QSR would be in 2023, MIME proposed several edits to the Theme H products and timetable (**Annex 4**) and agreed the Chair of MIME would present the proposed JAMP changes to HASEC 2018.

2.2 Sweden presented work on conversion possibilities for contaminant concentrations in different fish tissue (MIME 17/2/1). Several Contracting Parties reported they adopted similar approaches in their national processes. Denmark collated Contracting Parties’ information on species and analytes as at **Annex 5**. MIME agreed to provide the information from Contracting Parties on conversion factors for fish tissues to HASEC 2018, and to put conversion factors on MIME’s 2018 meeting agenda.

Review of Contracting Parties’ implementation of the CEMP

2.3 In a tour de table Contracting Parties provided information on their CEMP-related national monitoring programmes. In summary:

Contracting Party	Changes since 2016	Additional information
Belgium	None	-
Denmark	None	Sampling flat-fish or eel-pout in alternate years
Germany	None	PBDE monitoring since 2016
Ireland	None	Imposex survey planned for 2018
Netherlands	None	Acidification monitoring programme in North Sea to start in 2018, for ten years
Norway	None	No passive-sampler monitoring in 2017. Established ‘provisional reference levels’ to set objective reference levels for each contaminant in each tissue
Spain	None	-
Sweden	None	A biological effects monitoring campaign at approx. 5 stations on west coast in the OSPAR area, with plans to take material for chemical analyses at a later stage
United Kingdom	None	Less frequent sampling (6-years) of contaminants that were at BAC and annual sampling when at EAC

2.4 The Secretariat and Contracting Parties used the information to review and revise the descriptions of their national programmes in the pre-CEMP and CEMP appendices (**Annex 6**).

Agenda Item 3 – Assessment activities

MIME 17/3/1, MIME 17/3/2, MIME 17/3/3, MIME 17/3/4(L), MIME 17/3/Info.1, MIME 17/3/Info.2

CEMP rollover assessment

3.1 The United Kingdom (Rob Fryer) informed MIME that the preparation of the 2017/18 CEMP rollover assessment was underway (MIME 17/3/1) and an updated draft was available on the ICES server, at <http://dome.ices.dk/OSPARMIME2017/main.html>. MIME was informed that regional-scale assessments (i.e. for the common indicators) would also be made available here. The United Kingdom drew MIME’s attention to the

following two issues that arose from Contracting Parties' risk-based approach to monitoring, which had resulted in reduced sampling in areas identified as not as risk and had implications for interpretation of results:

- a. certain components were dropping out of the annual assessment, e.g. imposex, because of too few data or too few monitoring sites;
- b. in regard to (sub)regional assessments, for (sub)regions in which only ~~the 'impacted' sites~~ 'at risk' were being monitored, ~~and not 'reference' sites,~~ then concentrations at the regional scale could appear ~~ed~~ to be static or even increasing.

3.2 In discussion MIME recalled the current monitoring programme had evolved over time and was based on a long history. Contracting Parties recognised that if the CEMP were to be redesigned, stations could be strategically located to achieve a representative network across all OSPAR (sub)regions, for example with 'gold-standard' stations for the broad status assessments, supplemented with hot-spot sampling for ecological status information. However, there was also a case for continuing monitoring at historical stations to maintain long-term datasets and then to supplement them with a small number of new stations where there were gaps (see further discussion in §4.2).

3.3 During the meeting Contracting Parties worked on their national data to address identified issues. The United Kingdom also led work on incorporating biological effects data in the assessment, but MIME concluded that there were insufficient data to make the extra coding worthwhile. The United Kingdom also drafted an assessment of water-sample data, using heavy metals, PFOS and TBT for illustration including DNA data. After discussion MIME agreed the following specifications for the draft water-sample assessment:

- a. to include EQS assessment values;
- b. that EQS would be applied to metals data ~~would be~~ from filtered samples and to; organics from whole water ~~would be from whole water;~~
- c. to include only CEMP monitoring data that matched the sediment and biota data assessments (national monitoring data that were not CEMP would not be included in any of the three matrix assessments).

3.4 Germany informed MIME that it conducted an annual entire North Sea cruise and sampled for organics and metals in alternate years. Contracting Parties agreed to check their national monitoring data were marked as 'CEMP' in the ICES DOME, as appropriate.

3.5 MIME agreed the United Kingdom (Rob Fryer) with support from the Vice-Chair of Monitoring (Denmark) would:

- a. **lead on producing a draft CEMP assessment report for HASEC's approval and publication at OSPAR 2018, that included trial BACs and trial Canadian FEQGs** (see details in §3.13);
- b. **subsume the Dogger Bank area into the Southern North Sea CEMP sub-region, with effect for the 2018 annual CEMP assessment;**
- c. **start a Frequently Asked Questions page in the CEMP tool that would be added to over time.**

3.6 MIME agreed to two draft Work Programme 2018/19 products: to examine the CEMP monitoring programme from a regional perspective at MIME 2018, to potentially recommend strategic changes and; to draft the next annual CEMP assessment report in time for MIME 2018 (**Annex 7**).

Development of new assessment tool platform

3.7 ICES presented progress with the development of the new web-application platform for the CEMP assessment tool (P17/014). In discussion the following features were identified to be important:

- a. views of the regional-scale assessments;
- b. make the code available for sharing;
- c. click on a station and get profile and summary of all the site's information e.g. as a downloadable package for each station, such as a html tab or pdf;
- d. select by Contracting Party name;
- e. retain the regional boundary lines when zooming to different geographic scales;
- f. store datasets and script used for an assessment as an archive, e.g. using digital object identifiers (DOI);
- g. select by MSTAT, e.g. to select impacted or representative stations;
- h. have links to assessment methods, assessment criteria etc. as in the current tool;
- i. explore presentation options for viewing overlying data at one station, e.g. an exploding marker point, so that different species could be clicked separately;
- j. future options could include, for example, eutrophication parameters, riverine inputs layers.

3.8 MIME thanked ICES for its work and noted the final date for delivery was MIME 2018. MIME drafted a Work Programme 2018/19 product to consider further development needs for the new assessment tool, at MIME 2018 (**Annex 7**).

OSPAR contaminants and MSFD Commission Decision GES requirements

3.9 The Secretariat presented a request from OSPAR to further develop common and candidate indicators towards the next QSR and towards meeting MSFD Good Environmental Status criteria of Commission Decision 2017/848 (MIME 17/3/2).

3.10 A drafting group made proposals for the list of elements and thresholds for contaminants and groups of contaminants that could be used to meet the MSFD Commission Decision D8C1 and D8C2, and described the work that would be needed to meet gaps, e.g. adaptation of monitoring or new indicators.

3.11 MIME agreed to **intersessionally work to complete the analysis of how to address the Commission Decision Criteria, in written procedure led by the Secretariat and the Chair would provide the response to HASEC 2018 for its consideration.**

Assessment criteria

3.12 The United Kingdom reminded MIME had been tasked with considering whether establishing assessment values for PBDEs in sediment and biota and assessment criteria for metals in sediment & biota was feasible (MIME 17/3/3). MIME recalled that ~~therefore-background assessment concentrations (BACs) contaminants could not be easily measured at had been~~ were established at a level that was marginally greater than background concentrations (BCs) ~~i.e. was measurable, and that enabled Contracting Parties to demonstrate to allow a precautionary test~~ with good statistical power that concentrations were effectively at BC. Further, for man-made substances the BC was zero, so a Low Concentration (LC) must be set which was both measureable and environmentally low, in order to construct the BAC. The United Kingdom presented preparatory work on BACs for PBDEs that included consideration of: number of years of monitoring; the assessment model; the typical variability in the data; and statistical power; ~~and smoothing matrix model.~~

3.13 A drafting group investigated a number of options during the meeting. In conclusion, MIME agreed:

- a. to present trial BACs for **B**PDE 47 and to use the Canadian Federal Environmental Quality Guidelines (FEQGs) values **for PBDEs** in the draft 2017/18 annual assessment, in time for HASEC 2018. The assessment would be clearly titled as ‘trial’ in the CEMP assessment tool;
- b. all Contracting Parties would ensure their national data for PBDEs had been submitted to ICES DOME, they would quality check it and resubmit data as necessary, as soon as possible;
- c. France volunteered ecotoxicology support intersessionally, e.g. to help check reports and **background** documents **that underlie different PBDE assessment criteria**, and provide advice. AMAP offered its toxicity data and PBDE data but noting the latter were in higher organisms;
- d. draft Work Programme 2018/19 products to revisit the trial BACs, develop BACs for all PBDEs and develop assessment values, at MIME 2018 (**Annex 7**).

Collaboration with AMAP

3.14 AMAP (Simon Wilson) gave an overview of potential areas for collaboration, including sharing OSPAR and AMAP guidelines (MIME 17/3/4, P17/013). AMAP proposed several possible areas for collaboration to better incorporate Arctic Region I data and information in the next QSR. In particular MIME and AMAP discussed methods for bringing together assessment processes.

3.15 MIME **agreed** a draft Work Programme 2018/19 product to collaborate with AMAP intersessionally and at MIME 2018 on: (a) assessment procedures; (b) method and process for providing AMAP’s Region I information and data for the QSR 2023; (c) harmonising common guidelines (**Annex 7**).

Agenda Item 4 – Concentrations and effects of hazardous substances

MIME 17/4/1(L), MIME 17/4/2(L), MIME 17/4/3, MIME 17/4/4(L) Rev.1, MIME 17/4/4(L) Add.1, MIME 17/4/Info.1, MIME 17/4/Info.2, MIME 17/4/Info.3, MIME 17/4/Info.4(L), MIME 17/4/Info.5(L)

Biological effects and a risk-based approach

4.1 France gave a brief overview to the background for biological effects monitoring and the drivers for moving it from pre-CEMP to CEMP (MIME 17/4/1 and P17/002). The issues resulting in Contracting Parties submitting separate biological effects and contaminants data were explained. Many Parties had used the simplified format ICES developed for biological data, but this was not a long-term solution. France presented the outcomes of a limited study of integrated biological effects at hot-spots using both chemical and biological effects data. Several EU Member States had implemented the integrated biological effects approach for MSFD, which was an additional reason for making the approach a full CEMP component. France suggested it could conduct a comparison of the cost of biological cruise compared with biological effects monitoring. In discussion France clarified a number of technical and scientific points.

4.2 The United Kingdom explained it had not progressed the first steps of a risk-based approach for biological effects monitoring to identify chemical hot-spots where monitoring should be focused. A theoretical risk-based approach could be drafted, but it was questionable as to how useful that would be. For example, particular techniques could be recommended, but they might not be adopted, in which case such a document would be redundant. The United Kingdom suggested that a review was needed of the entire chemical and biological monitoring programme to rationalise and optimise types of sampling at the regional scale (as described in §3.2). In discussion the following points were made:

- a. long-term monitoring at historic sites was carried out for trend analyses and these datasets should not be broken. Uninterrupted monitoring at a representative set of stations was essential for regular regional assessments;

- b. a risk-based approach could result in switching effort to more hot-spots, with unintended consequences for calculations of long-term trends in regional assessment;
- c. even though there was strong scientific consensus of the utility of biological effects approach, there were political considerations to take into account. For example in one Contracting Party different agencies were responsible for chemical or biological monitoring. Therefore reducing effort to save costs for one programme would not necessarily mean increased funding and resource transferred to the other;
- d. some Contracting Parties had already rationalised their chemical and biological monitoring programmes to maximise efficiencies and cost-saving. Further changes were unlikely to be agreed;
- e. it was important to discuss candidate indicators that could be developed to meet MSFD requirements on D8C2, biological effects. Currently imposex was the only OSPAR biological effects common indicator. If MIME recommended other biological effects as candidate indicators, that would add weight to the argument to start new monitoring;
- f. for the second cycle of MSFD scientists were recommending integrating biological effects, in particular bio assays. Also there was an initiative through the European Commission on the best biological effects tools. OSPAR had a role because the marine environment expertise resided in this subsidiary body.

4.3 MIME noted with regret that the United Kingdom expert who was leading the risk-based approach work would no longer be involved in MIME work. MIME agreed:

- a. **the Chair of MIME would advise HASEC 2018 that the second steps of the risk-based approach (Work Programme future product) would not continue;**
- b. **France and the United Kingdom would provide a report to HASEC 2018 on the biological effects work;**
- c. to keep the development of biological effects on its Work Programme 2018/19 (**Annex 7**).

Trial assessment of fish disease data

4.4 Germany reported progress on a trial assessment of data on fish diseases index (FDI) as a step towards developing the component from pre-CEMP to CEMP, and to agree next steps (P17/003). Germany described the work that had been undertaken intersessionally, and the issues that prevented a full trial assessment from having been carried out. Germany proposed to: (a) finalise submission of its national data to ICES in 2017/18; (b) initialise the submission of additional data from other countries by ICES Working Group on Pathology and Diseases of Marine Organisms; and (c) run the assessment in 2017/18 to present to MIME 2018. In discussion Germany clarified the following:

- a. stations could be identified by ICES rectangles or station names, it was flexible;
- b. FDI can be made for practically any species, so new species could be introduced;
- c. the French dataset was too small and only had three diseases rather than nine, so had not been included. Differentiation between locations was improved with a full suite of nine fish diseases;
- d. Germany was prepared to continue development and maintenance of the tool for the time being. The short description on maintenance would need expanding before handing to someone else;
- e. the FDI had BACs and EACs and could be a new common indicator. The EAC was defined by the value of the FDI that associated with a % of loss in condition factor;

- f. if only data from hot-spots were used then there would be a loss in statistical power. A reference dataset would need to be used that was from various years and from all areas that would be subject for an assessment. The reference dataset would not change, so BACs and EACs would not change, except possibly over a long term (e.g. 20 years).

4.5 MIME agreed to a draft Work Programme 2018/19 product for Germany to lead on running a full trial assessment of fish disease data, using a larger dataset, and would present it to MIME 2018 (**Annex 7**).

Mercury assessment

4.6 Ireland reminded MIME of the background to and previous work on establishing assessment concentrations, and presented options for assessing mercury in the marine environment, for MIME to consider and decide which to progress (MIME 17/4/2(L) and P17/004). In discussion Contracting Parties recalled that there were already measures in place to prevent point source inputs and most mercury contribution was atmospheric. ~~Also, once mercury was present in fish, the concentrations would remain and not decline.~~

4.7 Ireland led a drafting group that developed ‘time to target’ maps of mercury in different species and proposed developing ‘distance to target’, too. Following discussion MIME agreed:

- a. distance to target would be distance to background concentrations (BC) and would only be for metals and PAHs which were naturally occurring;
- b. **Intersessionally, Ireland-United Kingdom would generate pairs of graded colour maps (heat map) for each contaminant; (i) time to target and (ii) distance to target.** These would be available in the CEMP tool, as separate documents;
- c. **Denmark would draft a paragraph for the CEMP report describing MIME’s mercury work, for HASEC 2018.**

Ocean acidification

4.8 On behalf of Ireland the Secretariat presented an overview of developments in ocean acidification (OA) of relevance to OSPAR and implications for CEMP monitoring, including reference to a QUASIMEME workshop and the Pathways to Adaptation Summary for Policymakers from the Arctic Ocean (MIME 17/4/3).

4.9 The United Kingdom presented its contribution to work on ocean acidification the outcomes of the Marine Climate Change Impact Partnership (MCCIP) report (MIME 17/4/Info.4(L) and P17/001). Germany (Felix Christopher Mark) gave a presentation on the BIOACID (Biological Impacts of Ocean Acidification) project (P17/005).

4.10 Belgium gave the following oral report on developing ocean acidification proficiency testing in concert with QUASIMEME. An agreement had been made between RBINS OD Nature and QUASIMEME to set up a test for the preparation of sample material. QUASIMEME accepted the proposal to investigate whether it would work. Stability of the material would be ensured by autoclaving the sample. For a test, it was not necessary to have identical concentrations in the testing bottle like in the environment, for as long as the homogeneity of the samples met the requirements, and the stability suited the test. So unlike the Scripps Institute material that showed identical concentrations between the bottled material and the environment it came from, this would not be the case. Focus would be on marine and coastal water, whether filtered or not. The variety encountered here was much higher than in the open ocean, as the water was influenced by riverine inputs with largely differing characteristics compared to the receiving water when it came to inorganic carbon parameters. However, it was believed fit for purpose for monitoring in national waters. Basic homogeneity tests would be carried out at RBINS, when these look promising samples would be sent to Scripps San Diego for further evaluation. There, thorough testing on homogeneity as well as stability would be carried out. If results were promising, a batch preparation for distribution amongst participants would be organised.

4.11 The Secretariat informed MIME that CoG(2) 2017 had agreed to invite HASEC 2018 to analyse whether it could take on the mandate for developing OA to a full CEMP appendix. In discussion the following points were made:

- a. Contracting Parties recognised that OSPAR's scientific expertise for OA lay predominantly in HASEC and in MIME. Contributions and sub-sessions at the ICES Marine Chemistry Working Group on OA would feed into MIME and HASEC, rather than other OSPAR groups;
- b. several Contracting Parties commented on the fact that OA required a different monitoring and sampling programme from the contaminants programme;
- c. several Parties highlighted aspects of OA monitoring that were more aligned with eutrophication monitoring and nutrient analyses. For example: high-frequency sampling such as from fixed buoys and ferry-boxes; monitoring of abiotic factors; periodic/seasonal measurements similar to measuring productivity. One Contracting Party informed MIME that from September 2017 its OA monitoring would become routine with its eutrophication programme;
- d. if HASEC took the mandate for OA, close coordination with EIHA would probably be necessary;
- e. it was noted that although HASEC was probably the most appropriate Committee to take responsibility for developing OA, at the current time there was nothing to feed into HASEC since OSPAR-ICES SGOA¹ had finished. More guidance from CoG as how it saw OSPAR's role would help;
- f. a new ICG was suggested that could address OA within HASEC. It could begin by identifying what global activities were taking place in OA. OA could not be fully separated from climate change and there could be a case for a joint HASEC–BDC ICG;
- g. another proposal was for ICES to have an ongoing role, which was a SGOA suggestion that had not been taken forward.

4.12 In conclusion MIME agreed **the Secretariat would collate an overview of Contracting Parties' comments and suggestions on ways forward for developing OA in the CEMP, and the Chair of MIME would present it to HASEC 2018.**

Microplastic indicator

4.13 The United Kingdom presented an overview of intersessional work with ICG-ML (marine litter) and EIHA on developing a candidate indicator for microplastics in sediment (MIME 17/4/4(L) Rev.1), including the Microplastic Monitoring Overview – an inventory of sampling, extraction and analytical techniques (MIME 17/4/4(L) Add.1). MIME noted the aim was to align microplastic monitoring with the existing CEMP monitoring programme. The United Kingdom gave an overview of rapid-screening approach to detect and quantify microplastics based on fluorescent tagging with Nile Red and Microplastics Baseline Surveys at the Water Surface and in Sediments of the North-East Atlantic (MIME 17/4/Info.1 and Info.2). MIME considered the questions posed in MIME 17/4/4(L):

- a. several Contracting Parties welcomed the development of an OSPAR microplastic common indicator;
- b. the United Kingdom clarified the development had begun with microplastic in sediment because it was easy to target the monitoring and would be stable. The next phase would look at monitoring biota and third would be floating litter;

¹ Joint OSPAR/ICES Study Group on Ocean Acidification

- c. Sweden Contracting Party recommended cooperation with HELCOM, and provided the United Kingdom with the report of the Outcome of HELCOM SPICE workshop on microlitter, 7-8 November 2017;
- d. one Contracting Party asked whether a 'microplastic' had been defined, as size of plastic particles could vary greatly;
- e. in response to questions of monitoring costs, the United Kingdom explained the aim and purpose were to align the monitoring with the existing monitoring programme. The method of choice, and therefore cost implications, would be discussed with ICG-ML. The assessment criteria were still to be developed.

4.14 The United Kingdom explained the next steps were for ICG-ML to conduct further intersessional work to finalise a technical specification of a candidate microplastics in sediment indicator, for submission to EIHA and HASEC in 2018.

Agenda Item 5 – Review and revision of the Coordinated Environmental Monitoring Programme (CEMP)

MIME 17/5/1, MIME 17/5/2, MIME 17/5/3(L), MIME 17/5/4(L), MIME 17/5/5(L), MIME 17/5/Info.1(L)

CEMP appendices and guidelines

5.1 The Secretariat presented the MIME-related CEMP, pre-CEMP and ocean acidification appendices for review by MIME (MIME 17/5/1). Contracting Parties reviewed and provided revisions to several appendices (**Annex 6**) and **agreed the Chair of MIME would propose the revisions for updating the CEMP (Agreement 16-01) to HASEC 2018.**

5.2 The Secretariat presented the MIME-related CEMP guidelines (Agreement 2016-04) for review by MIME (MIME 17/5/2). Belgium and Denmark checked the guidelines and no changes were proposed.

5.3 The Vice-Chair of Monitoring (Denmark) presented draft revisions to guidelines for monitoring contaminants in biota (Agreement 99-02, MIME 17/5/3/(L) and contaminants in sediment (Agreement 02-16, MIME 17/5/4(L). In discussion:

- a. Belgium noted the guidelines could be sent to the Marine Chemistry Working Group (MCWG). Recently the MCWG noted from the results of QUASIMEME analysis that there was room for improvement in the participating laboratories;
- b. France informed MIME of a study that found distinction could be made between the species *Mytilus edulis* and *Mytilus galloprovincialis* on the Brittany and Normandy coast, and the guideline was revised (p.26, biota guidelines).

5.4 MIME **agreed the Secretariat would correct the format of the chemical names (e.g. HNO₃) and conduct a general check of presentation for both documents, and the Chair of MIME would recommend the draft revised guidelines on contaminants in biota (Agreement 99-02) and sediment (Agreement 02-16) to HASEC 2018 for publication.**

5.5 As part of the annual review of JAMP guidelines and related technical annexes, the Vice-Chair of Monitoring (Denmark) presented the guidelines and annexes identified as requiring review and revision (MIME 17/5/5(L)). MIME discussed whether to combine the PAH-specific biological effects Annex with the general PAH Annex, as suggested by MCWG. In discussion:

- a. France considered the integration and interpretation of the biomarkers to be most important in the PAH-specific biological effect Annex;
- b. The Vice-Chair of Monitoring noted that by combining the PAH-specific biological effects Annex with the general PAH Annex, the biological effects information would be saved even if biological effects did not become a full CEMP component;

5.6 MIME agreed **Belgium would make a draft revision of the biota guideline technical annexes for PAH in time for MIME 2018.**

5.7 MIME discussed whether to update the guideline for PFOS in sea water as suggested by MCWG and agreed **Germany would make a draft revision of the PFOS guideline in time for MIME 2018, subject to approval by HASEC.**

5.8 MIME discussed other guidelines that were out-of-date and due for review. MIME agreed:

- a. **Denmark would review the guidelines on Quality Assurance for biological monitoring in the OSPAR areas in time for MIME 2018;**
- b. **France would review the guidelines for contaminant-specific biological effects and general biological effects monitoring, subject to HASEC approval.**

5.9 Collaboration with AMAP and HELCOM on guidelines that were common to those bodies and OSPAR, to work towards harmonising them as appropriate was addressed under Agenda Item 3 (§3.14).

Agenda Item 6 – Development of monitoring and assessment

MIME 17/6/1

EU and HELCOM assessment values

6.1 During discussions under Assessment Criteria (§3.12), Denmark presented an overview of a comparison of EU and HELCOM assessment values for MIME's consideration of their usefulness for OSPAR purposes (MIME 17/6/1).

EMODnet

6.2 MIME received two overview presentations by Patrick GorringeReese, on the European Global Ocean Observing System (EuroGOOS, P17/006) and EMODnet data portals (P17/007). MIME noted there was an EMODnet Secretariat and support was available to help data providers. In discussion the following responses to questions about EMODnet were given:

- a. the dataset on which an assessment was based could be given a unique DOI that would maintain the data unchanged, in perpetuity;
- b. quality assurance was carried out at a rudimentary level by regional leaders, e.g. to check whether data were within an expected range. EMODnet did not have the same level of quality assurance as ICES Dome, but there were more data in EMODnet than ICES;
- c. it was possible to filter and select data by data originator, but not by quality level;
- d. combined biotic, chemical and abiotic datasets could not be submitted in totality. The data would be split into different EMODnet portals and effort would be needed to recombine them. This would be problematic if, for example, concurrent nutrient and salinity were required for an assessment, because they would be separated and stored in separate portals. EMODnet had plans to be able to query data across portals to bring such data together.

6.3 In conclusion, Contracting Parties thanked Patrick ~~Gorringe~~Reese for the mutually beneficial opportunity to exchange information.

Quality assurance

6.4 The United Kingdom informed MIME of developments in quality assurance for biological monitoring in WGBEC (P17/008). WGBEC conducts ring tests on an annual basis for intercalibration. This year WGBEC would send out cod liver, cod bile and cod muscle as reference material for a range of tests.

6.5 Belgium informed MIME of activities in QUASIMEME on quality assurance for chemical monitoring. Not much new. Meeting was planned with the MCWG in Vigo, Spain in ~~January~~ March 2018, to be confirmed. Exercises on OA parameters had been described earlier in the meeting (§§4.8-4.12). Regarding dioxin and dioxin-like contaminants there were too few participants for conducting proficiency testing.

Innovations

6.6 Mia Dahlström (RISE: Research Institutes of Sweden) was unable to attend the meeting, but provided an overview of the BONUS Change project (P17/009).

6.7 Denmark presented the outcomes of a development project on using passive samples for monitoring metals and organics (P17/010). **Ireland offered to give an update on the MONITOOL, a three-year project funded by the INTERREG Atlantic area European Regional Development Fund, at MIME 2018.**

6.8 Belgium presented the outcomes of a project using passive samplers for polar and non-polar organics and metals across multiple laboratories, for targeted and non-targeted analyses (P17/011).

Agenda Item 7 – Wrap-up on scientific advice and on data handling by ICES

MIME 17/7/Info.1(L)

7.1 ICES presented recent solutions to improve the situation of reporting by Contracting Parties to the CEMP database (MIME 17/7/Info.1, P17/012). In particular, ICES demonstrated the station dictionary bulk upload facility with the associated user guide, and the map widget. ICES presented a review of the quality control checks, which documented all the checks made on the data, noting it was useful to record who and when data were checked. ICES changed the main station dictionary landing page (<http://ices.dk/marine-data/tools/Pages/Station-dictionary.aspx>) to gather all the relevant information together, and also updated the links to e.g. the station maps for each programme governance.

7.2 **Belgium, Ireland and the United Kingdom volunteered to work with ICES intersessionally to consider how to address outliers, and to investigate quality control data checks.**

Draft requests for ICES advice

7.3 There were no requests for ICES advice.

Agenda Item 8 – Any other business

MIME 17/8/Info.1

8.1 The Secretariat presented a proposal by France to change part of an OSPAR Region II boundary in its national waters as it had been presented to CoG(2) 2017. MIME considered the proposal and advised: (a) it would be technically straight-forward to change the boundary in the CEMP online assessment tool, provided the shapefiles were made available; (b) the proposed boundary change would make no difference to the long-term data sets at any station, because data were assessed on an individual station basis; (c) assessments at the (sub)regional scale could be different from regional assessments in the Intermediate Assessment 2017, but this

was not considered an issue as regional-scale assessments were new and there were likely to be changes for many indicators as they were refined for the next assessment cycle.

8.2 In conclusion MIME agreed **France and the Secretariat would prepare a short information document setting out the stations concerned and implications of the proposed boundary change, and the Chair of MIME would present to HASEC 2018.**

8.3 Sweden presented a report by HELCOM on pharmaceuticals (MIME 17/8/Info.1, P17/015), highlighting the main pathways to humans was from waste water treatment plants.

Agenda Item 9 – Adoption of the Summary Record

9.1 On the basis of the current HASEC Work Programme, MIME drafted the part of the HASEC Work Programme 2018/19 related to its activities (**Annex 7**). MIME agreed the **Chair of MIME would present the draft Work Programme to HASEC 2018 for consideration.**

9.2 The Summary Record of the meeting was adopted in written procedure.