



Working Group on European Marine Monitoring and Assessment (EMMA)

Report on the second meeting, 5/6 February 2004 at EEA, Copenhagen

Opening of the meeting.

1. Peter Bosch and Ben van de Wetering (chairs of EMMA) welcomed participants to the EEA and the second meeting of EMMA.

Agenda Item 1

2. The proposed agenda was adopted by the meeting.

Agenda Item 2: Progress with the development of the marine strategy

3. The Commission informed the meeting that the Working Group on strategic goals and objectives will take place in Brussels on 17 February 2004 and will consider in particular what the Marine Strategy should look like and what should be the strategic goals and objectives. The second stakeholder conference, at which the first draft of the Marine Strategy will be presented, will be held on the 10 to 12 November 2004. The Commission's formal proposal will be submitted to the council and parliament by May 2005. Partner organisations were invited to inform EMMA about activities relevant to the context of the development of the strategy.
4. OSPAR is in the process of reviewing its strategies, monitoring and assessment programmes, and progress has been made with regards to eutrophication.
5. The Black Sea Commission (BSC) is developing its strategies in line with the requirements of the Water Framework Directive.
6. In the Mediterranean UNEP/MAP is formally evaluating the Medpol programme as requested by its contracting parties. It is expected that MEDPOL IV will be adopted in 2005 and will start in 2006.
7. AMAP: The Arctic Council of Ministers met in Helsinki and considered new strategies and assessments which will be more focused, and include long term trend monitoring. POPs, mercury and human health are more short term issues. There will be considerable changes in the strategy which will be geared to the main questions and will not use indicators. The revised strategy will be ready for the next meeting of Ministers of the Arctic Council in May 2004.
8. The HELCOM Commission meeting in March will discuss the structure and function of HELCOM and its new data strategy.

9. JRC: There has been a prioritisation exercise at JRC. In the field of coastal and marine research there is the focus on supporting the Strategy 'Protect and conserve the marine environment' under the 6th Environmental Action Programme with emphasis on the development and implementation of the Marine Strategy. In particular the JRC Project ECOMAR (Monitoring and Assessment of Marine Ecosystems) has been set up incorporating a scientific and technical approach to marine and coastal issues. In the context of ECOMAR a European marine data service will be established and will provide data on a routine basis, based on satellite imagery. The customers for ECOMAR include DG Environment and the Marine Conventions.

Agenda Item 3: The assessment process

10. The Commission presented its paper on further work on the assessment process (paper 3-1) and in particular on how the basic principles agreed at the first EMMA meeting could be practically implemented. Four types of assessment are described in the paper (compliance assessments, indicator-based assessments, assessment of specific issues and holistic integrated assessments). The Commission proposed that EMMA should start with exploring the modalities of indicator-based assessments (even though AMAP will not undertake this type of assessment) and later build on experience from that with the other types. Two organisations are ahead of the rest in terms of indicator-based assessments and thus the EEA and HELCOM were asked to share their experiences with the meeting.
11. The meeting participants raised a number of concerns. OSPAR thought it would not be possible to agree on a common set of indicators and AMAP did not like breakdown of assessments into the 4 types. Several organisations (AMAP, OSPAR, HELCOM, BSC) and countries (NL, SE, UK) indicated that the strategic objectives and goals of the Marine Strategy should be defined before developing assessments, tools and methodologies. The BSC also asked on the place scientific research would have in this process.
12. There was support from some participants (BSC, Germany, and UK) on the use of indicator-based assessments. The BSC and JRC indicated that there should be a scientific basis to indicators and spatial features (JRC) should also be taken into account.
13. The EEA pointed out that there was a parallel process underway (as was discussed at the first EMMA meeting) between the work of EMMA and of the other working groups. The work of EMMA should be looking / thinking ahead to the main issues the Marine Strategy will be addressing: this should guide the work of EMMA.
14. The Commission stated that the agreement of strategic goals and objectives for the Marine Strategy may take up to 2 years and so EMMA should start with the groundwork in the mean time. There are two components to the Marine Strategy. The first is the final aim of the Marine Strategy, the other is cooperation and coordination between the organisations and countries involved: all need to be working in the same direction with the same principles and processes. There are different levels of assessments: national, regional, European and World. One aim of the Marine Strategy is to get a common approach for all regional seas, including monitoring and scientific research.
15. The EEA presented its experience on the use of indicator-based assessments. A number of questions were raised for discussion and consideration:
- Is it possible to agree on a EU issue storyline and policy questions?
 - Do policy makers ask the same questions for each of the regional seas, what would be different questions?
 - How far are the available existing indicators suited for European wide assessments?
 - How could we reach agreement on the objectives, benchmarks and targets the assessments would be based on?

16. HELCOM gave a presentation on its use of indicators. There are 2 parallel processes in HELCOM: the development of EcoQOs and the development of indicators. The indicators are based on monitored variables, statistical treatment of data, and are presented in indicator fact sheets including the scientific evaluation. Indicator reports are also produced and are short assessments based on factsheets. In 2003 there were 14 pilot indicators. Factsheets and indicator reports will be annually updated. There will also be periodic targeted assessment reports on various themes. Major scientific background assessments will be produced about every 10 years.

17. Germany said that its customers require indicators. The questions are then:

- what should an indicator tell us, natural or policy information?
- should they be complex or easily understandable?
- how should they be produced, common methods or use of a harmonised classification (as in Water Framework Directive)?
- who should produce them (EEA, countries, conventions)?

EMMA has to find answers to these difficult questions.

18. Germany also thought the main problem was that there were two main players in the marine environment: the Marine Conventions and the European Commission through the Water Framework Directive. The latter is a very strong driver because it is a Directive. EMMA appears to be focusing on Marine Convention 'language' not on WFD 'language'. So perhaps the issue is whether EMMA should build on the WFD or on a super European Marine Convention.

19. The Commission indicated that it is not aiming for a European Marine Convention and is not taking over the role of the Marine Conventions. The Commission wants to cooperate with them and has the intention of developing a common approach for all sea areas, EU and non-EU. The final form of the MS is under discussion such as the need for a marine framework directive for the EU or extending WFD into the marine area (as is being done in the Black Sea). These options will be discussed at the Strategic goals and objectives working group meeting in February.

20. UNEP/MAP: Work on indicators started a few years ago. At present there are 130 indicators of sustainable development including indicators of marine pollution which were developed by the Mediterranean Commission for Sustainable Development (MCSDD). However, the application of the marine pollution indicators is at present being evaluated through the MED POL Programme. To that end, a Workshop was held covering biomarkers, chemical and ecological indicators. Indicators will be finalised in 2004 and will be associated to the new MED POL Phase IV Programme.

21. AMAP did not agree with the statement that indicator-based reports are not too difficult to produce. There is a need to define what is meant by an indicator – that is the problem. Their view was that there should be the same methodologies for collecting data. AMAP has a different strategy by getting scientists involved in working groups that prepare reports for the decision-makers.

22. The Commission stated that it needed comparable assessments across Europe's Seas for the assessment of policies and problems many of which can be exported from one sea to another. For example, measures to control oil pollution in one sea, may have an impact elsewhere – i.e. the problem may be exported. The extension of the Common Agricultural Policy to the new EU countries will potentially have a negative impact in terms of increasing loads to seas from these countries. This needs to be assessed at a European level. The mercury problem is a global problem and there is a need to go from the regional to the European level. The Commission needs high frequency (annual) and up to date information to do this. This is the driving force behind indicator reporting with questions coming from many sources, including parliament and politicians. Often these questions have to be answered immediately.

23. Current information is important to HELCOM assessments and the annually updated indicator fact sheets are considered as a part of the operational process from data to periodic

assessments. In HELCOM, the responsible institutes that produce the data also produce the fact sheets. The operational process is important since it has been experienced that it takes a huge effort to re-establish data flows for periodic assessments only and there is a fear that the whole process would lose momentum.

24. OSPAR has traditionally produced large assessments over a long time period. It is now realised that data needs to be more regularly updated, and available as soon as possible. There are now thematic assessment activities that will allow regular updates. What data the Commission will receive in future in light of the WFD is unknown because of the limited resources in Contracting Parties. OSPAR relies on national delegates/individuals, and the continuity their participation in established working groups, and also on ICES.

25. UNEP/MAP regularly undertakes the preparation of thematic assessments (e.g. eutrophication and hazardous substances) for the development of pollution control measures. They have produced a joint Mediterranean assessment report with experts from the EEA and it had been a successful experience which will be repeated in 2005. Recently they had refined their monitoring programme which now includes trends, compliance and biological effects monitoring which is successfully ongoing in 10 countries. They now have a better capability than before and will be able to deliver more attractive products and a validated database. Assessments are normally prepared by individual scientists or Institutes contracted and coordinated by the MED POL Secretariat.

26. The EEA proposed that the focus should be on the most important policy questions and on building of systems that provide policy makers with information. The feeling was that there are common issues involving all Marine Conventions and countries. Perhaps EMMA should identify two marine environment management issues that are universal at the pan-European level and then assess these issues, identifying the main problems in the assessment process at the European level. EMMA was then divided into five small working groups to identify the most important issues and the problems associated with assessing them.

27. The main Issues identified were (arranged according to the number of the sub-groups – in brackets - identifying them as the main issues

- Fisheries (3);
- Shipping (3);
- Biodiversity;
- Climate change;
- Coastal Habitat degradation;
- Eutrophication/municipal pollution;
- Hazardous substances; and,
- Industrialisation of sea because of spatial planning – wind turbines, mariculture, extractions, oil abstraction.

28. The main problems associated with the assessment of these issues regionally and at the European level were identified as:

Climate change:

- Not all regions deal with the issue;
- Uncertainty issues;

Fisheries:

- Limited information on effects of environmental changes on fisheries, and vice versa;
- Managing fisheries rather than managing the environment;
- Common Fisheries Policy is isolated from other policy processes, and there is bias in data availability to catch statistics rather than environmental effects;

Shipping:

- Lack of data on pressures etc, oil usage etc, substances, alien species
- Need for common methodology
- Lot of issues and complications, thus selection of indicators would be difficult

Habitat degradation

- Lack of geographic coverage of several data sets
- Assessments not connected with management/policy.

Generic

- Knowledge of functioning of the system (ecosystem) in relation to indicators
- Socioeconomic impacts need to be considered increasingly assessments.
- Some of these issues are scientific (lack of knowledge) others are organisational (lack of data, linkage with policies, not undertaken everywhere)

Agenda Item 4: Assessment methodology, tools and criteria

29. The ETC/Water had created, and circulated to the EMMA group, a useful inventory and overview of assessment methodologies, tools and criteria, which had been structured according the four main types of assessment (cf. §10 above). In addition, several generic tools had been identified.

30. Several organisations and participants (e.g. AMAP, Germany) thought that the exercise was useful for informing other people on what is going on, and others (e.g. ICES, UNEP/MAP, OSPAR) indicated that there was more information that could be made available if required. AMAP also thought that a workshop on tools etc. might also be useful.

31. The Commission stated that the purpose of this task had been to provide a 'tool box' and that the exchange of knowledge was important, particularly if the harmonisation of assessments is to be achieved. The overview should be considered to be a living document and will be updated with additional information as it becomes available, particularly from UNEP/MAP, OSPAR and ICES.

Further work on eutrophication

32. The Commission informed EMMA about the state of play regarding its initiatives on how to deal with the eutrophication issue. The aim is to focus first on the harmonisation of assessment methodologies and criteria for all waters (paragraph 6 of paper 4/1/1). There will be a kick-off workshop under the auspices of the WFD CIS ECOSTAT working group during the second quarter of 2004 (paragraph 18 of paper 4/1/1). EMMA was asked whether it agreed with this approach.

33. In the discussion several participants (e.g. Germany and the Netherlands) indicated that ECOSTAT was the best forum to deal with assessing eutrophication problems and did not want parallel streams between marine (EMMA) and other waters (ECOSTAT). If there were parallel streams there would be trouble bringing them together at a later date. There was, however, a view that ECOSTAT is freshwater dominated and there was a need for marine expertise in the group (e.g. UK, France). The differences in the legal status of open seas and coastal waters should also be kept in mind.³⁴ The Commission concluded that there was support for two parallel work streams but the work has to start from a common starting point within ECOSTAT. The Commission accepted the need for marine expertise in the process and would think further on how to organise the marine stream i.e. within EMMA or a workshop with wider participation, and after considering the results of the first ECOSTAT workshop. Eutrophication assessment tools and criteria will be dealt with first by the ECOSTAT group. This approach was agreed by EMMA. The focus of the work will be on assessing eutrophication, where it is occurring, not on targets. Measures will be out of the scope of this work. Methods to calculate inputs will not be in the scope of this work. Models may be discussed as part of the assessment process. One of the key issues will be whether an OSPAR non-problem area equates to good ecological status. EMMA was invited to provide comments to the Commission on the document until 23 February.

Agenda item 5: Monitoring

35. HELCOM informed the meeting that the revision of its monitoring programmes to take advantage of the latest scientific and technological development and to make them in line with the WFD is underway.

36. OSPAR informed the meeting that the synergies with other assessments and Directives would be reported to OSPAR's Environmental Assessment and Monitoring Committee (ASMO) within a few months. Monitoring, tools and drivers are being looked at for 5 OSPAR issues excluding radioactivity and biodiversity. The Eutrophication group has also discussed and will present a paper to the WFD intercalibration group on 11 February. The Radioactive substances Committee (RSC) has also met and the Biodiversity group will meet in 2 weeks.

37. UNEP/MAP: Monitoring was reviewed at a meeting at the end of December 2003. Only 40% of countries had implemented the correct monitoring programmes but the data quality trends were very positive. An inventory of monitoring data is now in a validated database available on the Internet (<http://62.68.74.75/medpol/>). Concerning eutrophication, the TRIX index will be used in a full scale in the short-term but in the mid to long term more biological variables will be introduced, starting with a small number of countries. They have also launched an intercalibration and training exercise for Eutrophication and biological effects monitoring in parallel to the ongoing data quality assurance programme for chemical analyses.

38. The Black Sea Commission (BSC) will have finalised its monitoring programme by 2005 but will start with what is affordable by countries. Quality control aspects in terms of eutrophication parameters and phytoplankton and zooplankton are being piloted by a few countries supported by GEF. This will be followed by hazardous substances in 2005. Spatial coverage will then be improved. A report on the State of the Black Sea report will be jointly produced by the BSC and the EEA at the end of 2006 based on the new monitoring programmes.

39. AMAP: In the near future a trend-monitoring programme will be introduced to provide data and information for the UNECE and Stockholm Conventions. The focus will be on 'new' contaminants (rather than more traditional determinands such as DDT and PCBS) such as brominated flame retardants, currently used pesticides and maybe pharmaceuticals in the future.

40. The Commission concluded that currently there was no need for further EMMA guidance on monitoring as there are many concrete initiatives underway. This was agreed by the meeting.

Agenda item 6: Reporting and data handling

41. The EEA and ICES jointly presented their proposal for a pilot test of Reportnet as a tool for data exchange between data providers and data users (Document 6-1).

42. The proposal was to create a data repository, decide upload procedures, and decide on which data (e.g. 1998 OSPAR temporal trends in biota data) be made available to regional, European or global reporters on the marine environment. The data packages would then be uploaded to the data repository in March. The people involved in the test would be defined, a questionnaire prepared and distributed on the use of the facility. In April there would be an evaluation of the reaction of users on the tool, and by the end of April there would be conclusions and recommendations. There is also a gap in knowledge on the reporting obligations to Marine Conventions: this gap needs to be filled before overlaps and opportunities for streamlining can be identified.

43. In response to the presentation some participants (e.g. the Netherlands and JRC) stated that it was better to discuss concepts first on data sharing (as had been done in the concept report

produced by CIS WFD working group on reporting. After the concepts had been agreed then a data model could be produced. The model should include facilities to manage spatial data. A proposal for the architecture of such a data model could be presented at the next EMMA meeting. It was recommended to also consider overlap with UNEP-Net.

44. Many participants expressed discontent with a separate (and duplicating) repository for aggregated data. A distributed information system giving access to source data is to be preferred.

45. The EEA stated that the objective was to test principle 4¹ rather than designing something like data infrastructure. It would like to play a bit with data and data exchange formats to see if it is possible to work with common data sets.

46. UNEP/MAP said that Reportnet had arrived at the wrong time for the Mediterranean, as a lot of money has been spent developing data flows and databases. In the Reportnet context the data user appears to be the EEA itself, with no apparent direct benefit for the Marine Conventions. The Barcelona Convention Contracting Parties have decided that the hierarchy of obligations for reporting are first to the Barcelona Convention and then from the Secretariat to the EEA – this was confirmed by a meeting of the EU Mediterranean countries.

47. In response a number of other problems addressed in the proposal were raised: reporting of data by Contracting Parties; reporting on input (loads) data (quality of river input data in particular); the absence of meta information in distributed databases allowing their use for other purposes

48. The Commission reiterated that there was a need for high-level regional assessments. These could be based on reports produced regionally. There is also an obligation to report to an even higher level, European and global. The duplication of data sets can lead to real problems, for example, the retrospective replacement of incorrect data with corrected data. The approach proposed by the IRF is still valid (see EMMA document 3-1, Annex 1): ICES holds state data for OSPAR and HELCOM; NILU holds air data for OSPAR, HELCOM and Europe as a whole. The situation regarding input data however (normally at the secretariat level) cannot be regarded as satisfactory. Data should be shareable. There should be a data exchange system, through which there is access to all types of data. Further work should be focused on riverine input data. The term repository has been used. Perhaps 'virtual' repository is more appropriate where there is a map/switchboard of data flows. The meeting was asked whether this could be a basis of a test case.

49. In response the UK indicated that they were not sure of what was meant. In the UK institutes make data available to others. What would be more powerful is a flow of information across Europe – information flow rather than data flow. It is the assessments that drive the data flows.

50. AMAP and the Black Sea Commission thought that the pragmatic approach now proposed by the Commission had more chance of success than what was talked of before. The general public may want information rather than data and thus data does not always have to be given in the same format.

51. HELCOM stated that the basic problem is to make databases really functional to facilitate data flows. The flow of data and the quality of data are still issues. There are often money constraints to undertake the necessary work.

52. Germany said that there was still the question of where the work/assessments will be done, EEA or Marine Conventions. There is also the question of economics of the work. Riverine inputs will be the test case in the EU. HELCOM has an extensive database including diffuse sources.

¹ Information on the marine environment should, to the fullest extent possible, be shared to facilitate the production of assessments

Many international River Conventions also have this. It will be important to gain access to these databases.

53. ICES thought the Commission's proposal was a good way forward. The data quality issue should lie with the data providers though ICES also undertakes quality checks. A road map is needed telling data users where the data/information can be found. The best way to make data available that gives a scientifically sound assessment should also be defined. ICES would be pleased to work in this context. The data required should also be specified. There is as always the issue of costs and who is paying for the work.

54. UNEP/MAP has made improvements in its data quality. Data from 1975 to 1992 are now available on the Internet. There is a web site where an inventory of the database can be seen (<http://62.68.74.75/medpol/>) and a simple and justified request to the secretariat will result in the delivery of raw data.

55. JRC proposed a system of distributed databases maintained by the institutions collecting and processing the raw data. These should be linked by some kind of central virtual interface giving access to meta information (the availability of meta information is crucial), and controlled access to data needed for other assessments.

56. The EEA said that it liked the virtual system. Not only the data are needed but also the knowledge with the data i.e. meta information about the data. Even though the objectives of the Marine Strategy are not set yet, these are not necessarily needed for the test case. Who undertakes the test case is not so important in the end. The focus should be on building a flexible structure for the future. Technically whether the data flows are 'pull' or 'push' is not so important, the specific needs for data should drive which is used. When the needs and type of data are determined, the correct technology can be selected. At present the tendency is for 'pull' technology with freely available data, with countries doing as many quality checks as possible before sending the data.

57. AMAP stated that the assessment tools, methodologies and products should be designed first before determining data flow.

58. The UK's view was that up to now assessments at the European level have added no value above those assessments at the regional level. Contaminant concentrations in biota are not comparable between seas so why do we need to compare them across the seas.

Agenda item 7: Future meetings

59. After reflection the Commission again explained that the need for Europe-wide assessments was related to European policy. There were too many uncertainties at this stage to decide on a test case (cf. Agenda Item 6). However, there was also willingness within the EMMA group to do something. Therefore, a small group should be established between now and the next EMMA meeting to consider the whole picture including the WFD and former IRF initiatives leading to a concrete proposal. A roadmap would lead the way forward on what is trying to be achieved and the further work required. This should be produced in a collective paper produced by an ad hoc group comprising the Marine Convention secretariats, the Commission, JRC, ICES and EEA. The roadmap for future work of EMMA would be based on an example of a specific issue. As discussed already in the meeting, eutrophication is a problem of relevance to the whole of Europe with a close link to respective EU policy processes. It would also give an example of the crucial question on how to draw on national experience with the WFD.

60. There was a common agreement on the Commission's proposal. Germany highlighted again that WFD requirements need to be taken into account in the work of the ad hoc group and agreed, that all material for the meeting of the ad hoc group would be circulated to all EMMA participants. The following organisations agreed to participate in the proposed ad-hoc group: AMAP; BSC (with financial support); HELCOM (though it cannot deal with WFD); OSPAR (focus

should be on nutrients though also need to consider whole range of issues); UNEP/MAP (also invited the sub-group to meet in UNEP/MAP's Athens office); JRC; and ICES. It was agreed that the EEA would produce a first draft to feed into the ad hoc group to start the discussion: input and the scientific expertise from the conventions, JRC and ICES are also needed in outlining the whole road map. The ad hoc group accepted UNEP/MAP's offer to meet in Athens.

61. The next EMMA meeting will take place at the EEA on 23./24 June 2004.

62. The sub-group meeting will take place at UNEP/MAP's office in Athens on 6/7 April 2004.

Agenda item 8: Any other business

63. The JRC informed EMMA that there had been a meeting between DG Environment, DG JRC and DG Research on the policy research needs for the waters, marine and soils areas in Brussels on 16 January 2004. As for the marine field the meeting recommended that the relationship between ICES and JRC should be strengthened. JRC and ICES will prepare a discussion document on how the interface between policy and research on marine issues can be improved for the next EMMA meeting.

64. The question as to whether EUROSTAT should be involved in EMMA was raised. The Joint EUROSTAT/OECD questionnaire has questions relating to the marine environment. This will be reviewed in 2005.

65. The EEA informed the meeting about the Reporting Obligations Database. The coverage of the reporting requirements of the Marine Conventions is not complete. The EEA is looking to expand ROD to include Marine Conventions: this will be done bilaterally between the EEA and each Convention.

66. DG Environment had met recently with the European Committee for Standardization (CEN) because CEN had recently established a new working group on marine ecological methods, and there was concern that there might be overlaps with ICES, WFD and other work. The Commission is trying to avoid duplication. CEN should at some stage be invited to participate in EMMA to avoid duplication.

67. An expert meeting on UNEP's Global Marine Assessment (GMA) is planned for 22/23 March 2004 in New York. The EEA's Executive Director will attend this meeting. EMMA asked the Executive Director to make it clear to the expert meeting that the GMA should draw on regional experience and assessments in its processes.

68. ICES announced that it will hold its Thirteenth Dialogue Meeting in Dublin on 26 and 27 April 2004 on the topic: "Advancing Scientific Advice for an Ecosystem Approach to Management: Collaboration amongst Managers, Scientists, and Other Stakeholders". This meeting will bring together higher-level government administrators responsible for national as well as international issues, scientists involved in the process of developing scientific advice, and a range of stakeholders to discuss a coherent system of advisory processes to meet the challenge of developing an ecosystem approach that is both scientifically based and capable of implementation. ICES encouraged members of EMMA or their colleagues to participate in this meeting.

69. AMAP reported that there would be a meeting in Iceland on climatic change. An assessment report on persistent organic pollutants will be published in February, (around 400 pages). Reports on heavy metals and radioactivity will be published in March and will be available on the web. There will be a report on petroleum hydrocarbons sometime in the next 2 years. AMAP request that EMMA meetings could be held back to back with other MS meeting to reduce the burden on AMAP personnel.

Agenda item 9 – Report of the meeting

69. This report of the meeting will be agreed by correspondence.

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