OSPAR CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT OF THE NORTH-EAST ATLANTIC

Strategy for a Joint Assessment and Monitoring Programme (JAMP)

(*Reference number 2003-22***)**[1]

(2006 Revision)

INTRODUCTION

1. Scientific knowledge of the seas is the indispensable basis for all marine management. The OSPAR Convention rightly requires the Contracting Parties, amongst other things, to "cooperate in carrying out monitoring programmes", to develop quality assurance methods, and assessment tools and to "carry out…research which is considered necessary…to increase knowledge and understanding of the marine environment", "take into account scientific progress which is considered to be useful for... [such] ...assessment purposes and which has been made elsewhere", and imposes on the OSPAR Commission duties to "define and implement collaborative monitoring programmes", to "approve the presentation and interpretation of their results" and to "carry out [quality status] assessments", including in such assessments "both an evaluation of the effectiveness of the measures taken and planned for the protection of the marine environment and the identification of priorities for action".

2. This Joint Assessment and Monitoring Programme (JAMP) therefore sets out the basis on which the OSPAR Contracting Parties will work together in fulfilling these obligations over the period until 2010.

3. The Programme is described in three sections. The first section sets out the overall strategy, considering objectives, guiding principles, the nature of the assessments to be produced, the means to ensure scientific quality, the relationship with marine research, and the programme management. The second section gives a strategic overview of the assessments that are intended to be produced. The third section sets out in more details, for each of six themes, the issues to be addressed, the tools to be developed, the data collection to be undertaken and the assessments to be produced.

SECTION I: STRATEGY

A. Objectives

4. The main objectives of the JAMP are:

   a. the preparation of environmental assessments of the status of the marine environment of the OSPAR maritime area or its regions, including the exploration of new and emerging problems in the marine environment;

   b. the preparation of contributions to overall assessments of the implementation of the OSPAR Strategies, including in particular the assessment of the effects of relevant measures on the improvement of the quality of the marine environment. Such assessments will help inform the debate on the development of further measures;

[1] As amended by OSPAR 2004 (see OSPAR 2004 Summary Record (OSPAR 04/23/1) § 4.3-4.6); OSPAR 2005 (see OSPAR 2005 Summary Record (OSPAR 05/21/1) § 4.9) and ASMO 2006 (ASMO 2006 Summary Record (ASMO 06/12/1) § 2.14.

supported by:

c. the implementation of collective OSPAR monitoring, including the development of the necessary methodologies;

d. the preparation of environmental data and information products needed to implement the OSPAR Strategies.

B. Guiding principles

5 The JAMP establishes a clear progression between the reasons for monitoring, data collection, assessment and decision making. This requires the definition of clear, verifiable management goals, i.e. goals that are in the form of a testable hypothesis, and the preparation of environmental assessments of the status of the marine environment of the OSPAR maritime area or its regions that are relevant to the management goals.

Commitment

6. Implementation of the JAMP implies provision by each Contracting Party of an appropriate level of resources to achieve the common intention. The value of a collaborative exercise in collecting information is substantially reduced if some partners do not fulfil the roles foreseen for them. The commitments of each Contracting Party to its part of any collaborative effort therefore presuppose the loyal fulfilment by all other Contracting Parties of the commitments which they make to that element of this programme.

Economy of effort, added value and synergy

7. Since resources are inevitably limited, the aims must be to use them as efficiently as possible, to seek the maximum added value from OSPAR collaboration as a return to Contracting Parties from their contributions, and to seek synergy with other programmes and organisations, both inter-governmental and non-governmental.

8. The monitoring data and information generated by OSPAR through its co-ordinated environmental monitoring activities form the baseline for OSPAR's thematic and holistic assessments (see section C below) of the quality status of the OSPAR maritime area. Such data and information should generally be gathered in accordance with agreed OSPAR guidelines and procedures and thus be comparable across the breadth of the OSPAR maritime area.

9. All the material available from other organisations collecting information about the marine environment must be used to the fullest possible extent, subject to such checks and precautions as are needed to maintain the quality of the underlying science at a level sufficient for the purposes of each specific assessment.

10. It is particularly important that synergy is achieved between the monitoring activities under the JAMP and the requirements of EC Directives (such as those relating to the Water Framework Directive (WFD) and the Habitats Directive). So far as there is a spatial overlap in coastal waters between OSPAR and the WFD and an overlap in the issues addressed, there is a need to ensure a consistent approach in both organisations, and for each to prevent duplication by making the best use of the expertise and tools developed by the other.

Quality assurance

11. However well an assessment and monitoring programme is defined and executed, if there is no assurance that the information collected is of good quality and if it is not assessed appropriately, the total exercise will have little value. For this reason, OSPAR has adopted a quality assurance (QA) policy which acknowledges the importance of reliable information as the basis for effective and economic environmental policy and management regarding the OSPAR Convention area. This policy requires that QA procedures should be applied to the whole chain of JAMP activities, from programme design, through execution, evaluation and reporting to assessment. It recognises, nevertheless, that QA should be appropriate for the purpose of the assessment or monitoring activity to which it relates – that is, sufficient but not over-elaborate. OSPAR has agreed that steps should be taken to improve its QA procedures with the aim of ensuring that all necessary procedures are in place and sufficient for the purpose.

C. Nature of assessments

12. 'Assessment' is both a process and its product. As a process, a marine environmental assessment is a procedure by which information is collected and evaluated. It is undertaken from time to time to estimate the state of knowledge. Its product is an assessment report, which is a document synthesising information, presenting the findings of the assessment and making recommendations for action for future work. Assessments should include both a scientific/technical assessment and a management oriented summary.

13. This product can either be a thematic assessment dealing with one aspect of the marine environment, or a general assessment of all aspects of that environment. This programme sets out to produce both kinds of assessment product, in an integrated series, with the successive thematic assessments building up to a new general assessment in 2010.

14. A general assessment of the quality of the OSPAR maritime area or its sub-regions is defined as:

> a statement of the whole or part of the current knowledge of the health of the environment of a defined maritime area and its coastal margin. A complete statement includes an analysis of the region's hydrodynamics, chemistry, habitats and biota with an evaluation of the impact of humans over space and time against this background of natural variability. All aspects of human influence on the maritime area concerned should be examined. This should include discharges, emissions and losses of contaminants, nutrient and radioactive substances occurring in that maritime area, or reaching it from the catchments draining into it or by airborne transport. It should also include inputs, concentrations and environmental effects of contaminants, nutrients and radioactive substances, dumping, transport, and the exploitation of biological and non-biological resources. The evaluation of the effectiveness of measures taken and planned for the protection of the marine environment and the identification of priorities for action should also form part of it.

15. The purpose of both kinds of assessment is to provide both managers and scientists with:

a. a concise summary of contemporary knowledge and current management;

b. an identification of significant gaps in knowledge which can provide an authoritative basis for defining priorities for further scientific and other investigations; and

c. a basis for judging the effectiveness and adequacy of environmental protection measures and for making any necessary adjustments.

To achieve this, JAMP assessments will take into account all available relevant information. Where appropriate QA procedures have not been applied, caution will be needed in drawing conclusions.

16. In view of the objectives of the OSPAR Convention, assessments should focus on:

a. the extent to which contamination and other adverse effects of human activities occur;

b. whether human health is safeguarded;

c. whether the biological diversity of marine ecosystems is conserved, and the components of the marine environment are used in a sustainable way;

d. the effectiveness of the measures taken or planned for the protection of the marine environment; and

e. priorities for action.

17. In 1994 the Oslo and Paris Commissions agreed to divide the North-East Atlantic into five regions for assessment purposes:

a. Region I – Arctic Waters;

b. Region II – Greater North Sea;

c. Region III – Celtic Seas;

d. Region IV – Bay of Biscay and Iberian Coast;

e. Region V – Wider Atlantic.

These regions (which are defined more precisely in Appendix 1) should continue to serve as the geographical basis for future regional assessments.

D. Ensuring scientific quality

18. The JAMP processes can be divided into three groups, according to the products that result from them:

a. the development of tools, or the adoption of those developed by other international bodies or other sources;

b. the specification and execution of information collection programmes (including monitoring in the narrower sense);

c. the production of assessments.

This section describes some approaches that should be adopted for these various processes, in order to ensure the scientific quality of the products. In effect, this section therefore provides criteria for the more detailed specifications for further work.

Development of tools

19. "Tools" covers all the procedures and techniques that are needed for collecting information, QA, and interpretation and assessment of data. To ensure the quality of the final OSPAR assessments, OSPAR will ensure that appropriate procedures and techniques are developed (or adopted from other sources) for all major information collection and assessment exercises. There is a particular need to improve upon existing assessment tools such as background reference concentrations (BRCs) and ecotoxicological assessment criteria (EACs). It will be an important task under the general theme to check that there are comprehensive, coherent and consistent tools for such exercises. In this task, the available tools will need to be considered against the aims of the information collection programmes (including monitoring programmes) described below.

Specification and execution of information collection programmes

20. In specifying the ways in which the information needed for the JAMP will be collected, the following aims will need to be considered:

a. describing the spatial distribution of a range of physical, chemical, biological and other parameters (including human demography, the range and scale of human activities and the resulting impacts on the marine environment, and the distribution of other species and their populations);

b. determining temporal trends and/or discrete changes, either as a means of assessing the effectiveness of policy measures, or for the purpose of assessing, by the use of suitable indicators, the changes and variability in the quality of the marine environment; and

c. establishing links between anthropogenic pressures and observed impacts and other changes in the marine environment.

"Information collection" will need to cover all forms of gathering, compiling and processing data (including monitoring), as well as the collection of additional information of all kinds.

21. The OSPAR Convention (Annex IV, Article 1) defines monitoring as "the repeated measurement of:

a. the quality of the marine environment and each of its compartments, i.e. water, sediments and biota;

b. activities or natural and anthropogenic inputs which may affect the quality of the marine environment; and

c. the effects of such activities and inputs."

22. Monitoring may be focused on the measurement of either spatial distributions or temporal trends. Both constitute important elements of a monitoring programme. However, comparison of trends in monitoring data provides a significantly greater insight into the development of the quality status locally or across the breadth of the OSPAR maritime area than does the comparison of absolute values derived from one-off surveys or spatial monitoring programmes.

23. Monitoring and information collection programmes in this sense will need to be focused on providing the answers to specific questions and testing specific hypotheses. Ideally, this will require the identification of:

a. the variables for which information is to be collected;

b. the QA procedures to be applied;

c. the locations and the frequencies at which numerical values are to be collected;

d. the methods for assessing the monitoring results, including the way in which values are to be presented, when and by whom the results are to be assessed and the way in which the assessment is to be presented;

e. the other information needed for the assessment (such as normalisation parameters or numerical values for co-variables which could explain variations in the data produced by the monitoring).

Appropriate statistical approaches and methods will be used in the design and implementation phases of these monitoring and information collection programmes.

24. Regional differences in the general level of scientific information on the OSPAR maritime area, in inputs and in national monitoring programmes, may mean that certain temporal and spatial programmes will be region-specific.

25. In specifying any monitoring or other information collection programme, it is essential to optimise the use of the limited resources (particularly ship-time at sea) by promoting synergies between different types of monitoring and information collection, including the use of data from satellites and ships of opportunity. It is also important that when specifying monitoring or information collection programmes it is made clear when monitoring of a substance can terminate or be changed between regular or periodic monitoring. Further, the monitoring strategy for each substance should be clear in relation to the media for which data will be collected, and the sampling strategy to be followed (monitoring at fixed intervals or "event" orientated).

26. Assessments arising from monitoring data are critically dependent upon practical mechanisms for handling data from different activities, for example from integrated biological and chemical programmes, or linking the observed changes in spatial distribution and temporal trends in substances, or their effects, to inputs into the OSPAR maritime area. Steps will be needed to ensure that documents, data and products are managed consistently and are easily available to users.

27. The data storage and handling centres are therefore central in the process, and it is important that their role is clear and continuously developed and strengthened. A starting point is that data will be accessible to the OSPAR community along with any additional relevant information relating to its quality and comparability. Data management activities should be properly co-ordinated in co-operation with other conventions, governmental and non-governmental institutes, the EC and the European Environment Agency (EEA).

Production of assessments

28. When procedures for the production of assessments are established, there will be a task under the theme "General" (see paragraphs 51-57) to consider whether the arrangements for the collection and

interpretation of information are sufficiently comprehensive and consistent with approaches under other themes to achieve a uniformly high quality in OSPAR assessments.

29. The high level of ambitions for a holistic quality status report (that is, to cover a wide range of issues in a single, balanced, all embracing view, to be understandable and interesting to a wide audience; and to be relevant to policy-making and decision-making) makes it necessary that Contracting Parties and other participants realise from the outset both the resource implications and the need to adhere to the agreed schedule of activities.

E. Relationship between the JAMP and marine research

30. There should be a two-way traffic between marine research and the work of OSPAR on marine environmental assessment and monitoring. OSPAR welcomes the endeavours of Contracting Parties' agencies and institutes and of observer organisations to help resolve questions raised by its work. However, OSPAR itself will not attempt to intervene in questions relating to the selection of projects for funding. In general, OSPAR highlights the need for marine research to study further:

a. the basic processes of the marine environment (biology, physics and chemistry) on different scales;

b. the causes of long-term changes identified by monitoring programmes; and

c. cause-effect relationships.

31. The products envisaged by the JAMP have a particular concern with new and emerging problems in the marine environment.

32. Furthermore, the need to improve marine environmental management tools and approaches (such as, the development of an ecosystem approach, mapping progress towards OSPAR's strategic objectives, and the basis for setting and use of ecological quality objectives (EcoQOs)) creates a powerful driving force towards developing a more sophisticated framework for the interpretation of marine environmental data and for better assessment tools to operate in that framework.

F. Programme management

33. As a result of the commitments in article 6 of, and Annex IV to, the OSPAR Convention, the JAMP is a continuous activity, not a one-off exercise. The current agreements on how it is to be conducted are set out in the JAMP Manual, as amended from time to time. The results of its various phases appear in the data and the assessments which OSPAR produces and publishes.

34. The working structure of the OSPAR Commission reflects its current strategic approach. The Environmental Assessment and Monitoring Committee (ASMO) retains the primary responsibility for environmental assessment and monitoring. The other Strategy Committees will work in close collaboration with ASMO in these matters. In accordance with its terms of reference, ASMO will contribute to assessments undertaken by other OSPAR Strategy Committees or by other forums, and respond to external requests for monitoring or assessment information.

35. ASMO will be responsible for recommending to OSPAR, in the case of thematic assessments on the basis of proposals from the relevant Strategy Committee, what should be the scope, content and method of all assessments. Where assessments require services from external data managing centres, ASMO will include in such recommendations an indication of the cost implications. For holistic reports, ASMO will take into account the recommendations and results of the relevant international organisations on the appropriate way to construct marine quality status reports.

36. The Secretariat will include appropriate elements to ensure the delivery of the products specified in this programme in the draft work programmes submitted to the Strategy Committees. The Secretariat will also submit to ASMO an annual report on the implementation of the JAMP. In the light of this report, and of the advice of the Strategy Committees, ASMO will:

a. propose any necessary changes in Sections I and II of the JAMP;

b. adopt any necessary revisions of the products and their descriptions in Section III (provided that where such revisions would have implications for the OSPAR budget, they shall not have effect until confirmed by OSPAR).

37. Such revisions will include any changes necessary to ensure that the products of the JAMP are consistent with the European Marine Strategy which is being developed on the initiative of the European Commission.

38. In managing the implementation of the JAMP, ASMO will be guided by the JAMP Implementation Plan. ASMO will be responsible for regularly updating this plan to ensure that it provides effective guidance on the purpose and content of each of the JAMP products and the method by which it is to be produced. Basing itself on the JAMP Implementation Plan, ASMO will ensure that the necessary products are included in its annual work programme and, with the assistance of the Secretariat, will draw to the attention of the other Strategy Committees similar needs for items to be included in their annual work programmes.

SECTION II – ASSESSMENTS SCHEDULE

39. OSPAR will aim to complete general assessments of the development in the quality status of the OSPAR maritime area and its (sub-) regions in 2010 and 2019. These assessments will, in particular, consider whether the progress under the OSPAR Strategies is still focusing on the most significant issues.

40. In the period until 2010, there will be a number of intermediate thematic assessments. These will be so designed that they will be able to be updated with relatively little effort for 2010, and incorporated in the general assessment for that year. This section gives a strategic overview of these thematic assessments, which are described in more details, together with the work on developing tools and collecting information, in Section III below. In addition to the main thematic assessments mentioned in this section, there will be other, more specific assessments as detailed in Section III. All these thematic assessments are summarised in their temporal sequence in Appendix 2.

41. The schedule for thematic assessments after 2009 will be settled in 2010. References to the "programme period" therefore apply to the period up to 2010. Unless otherwise specified, the target year for assessments indicates the year in which they should be ready for submission to the OSPAR Commission.

42. To provide an intermediate reference point, an overview of OSPAR assessment work in the period 1998 – 2005 will be produced in 2006.

43. For the ***Biological Diversity and Ecosystems Strategy***, there will be:

a. a series of assessments of human activities that impact significantly on the marine environment; the purpose of these will be to provide the basis for decisions whether, on the criteria in Appendix 3 of the Convention, the human activity in question should be identified for the development of programmes and measures; since there are a number of activities to be assessed, two or three will be assessed each year;

b. an assessment of the conservation status of the species and habitats on the OSPAR list of threatened and/or declining species and habitats, to provide a basis for decisions on progress and priorities protecting them; this will be done in 2009.

44. For the ***Eutrophication Strategy***, there needs to be an ongoing review of the changes in the eutrophication status of the different parts of the OSPAR maritime area, initially using the assessment criteria in the Common procedure for the identification of the eutrophication status of the maritime area (Common Procedure) for and subsequently against the agreed ecological quality objectives for nutrients and eutrophication effects and any intermediate targets. Assessments of the eutrophication status expected after the implementation of agreed measures will also be needed. There will therefore be:

a. assessments in 2006 to identify reductions in nutrient inputs and the expected eutrophication status of all parts of the OSPAR maritime area;

b. an assessment in 2008 to look at the different areas in accordance with paragraph 3.2(b)[2] of the Eutrophication Strategy.

45. For the ***Hazardous Substances Strategy***, there needs to be both reviews of what is happening on the various chemicals identified for priority action, including assessments of changes in environmental concentrations against agreed background reference concentrations and ecotoxicological assessment criteria, and a wider-ranging consideration of the biological effects of hazardous substances in general. There will therefore be:

a. a programme for assessing the presence in the environment of chemicals identified for priority action;

b. an initial assessment in 2005 of the biological effects of hazardous substances in the OSPAR maritime area, and a more elaborated one in 2009.

46. For the ***Offshore Oil and Gas Industry Strategy***, there is a need to set up or improve information collection systems, to provide the basis for common assessments of progress towards the environmental goals that have been set. These will be brought together in an assessment in 2009 to address the full range of goals that have been established and the overall impact of offshore oil and gas activities on the marine environment. In the interim, there will be an assessment in 2007, to review the information collected under the Guidelines on monitoring the environmental impact of offshore oil and gas activities.

47. For the ***Radioactive Substances Strategy***, there is a need to assess the sources, trends, and distribution of, exposure to, and significance of radioactive substances, particularly against the baseline to be agreed. There will be assessments of progress towards the objective of the Radioactive Substances Strategy in 2007, 2008 and 2009 and an assessment of the impact on marine biota of anthropogenic sources of radioactive substances.

SECTION III: THE THEMES AND THE TARGET OUTPUT

48. This section is divided between six themes: one covering the general quality status of the OSPAR maritime area and other general issues, and five covering the fields of the five OSPAR Strategies - biodiversity (including issues relating to Annex II to the OSPAR Convention), eutrophication, hazardous substances, offshore activities and radioactive substances. Paragraphs 33 to 38 above set out how this programme of work is to be managed by the Environmental Assessment and Monitoring Committee (ASMO) in close collaboration with the other Strategy Committees and, as necessary, with other organisations.

49. Under each theme, the main issues are set out as ***starting points***, followed by the ***tools***, ***information collection*** (including monitoring) and the planned ***assessments*** that need to be developed to respond to those issues. Since the JAMP will continue to build on past achievements, the tools and information collection already in place are also noted. "Tools" are taken to be agreements on how to carry out some process; "information collection" to be the processes of acquiring information of all kinds; and "assessment" the processes of interpreting that information (the complete schedule of assessment products to be prepared under the JAMP is given at Appendix 2). In describing information requirements in the broad sense, a distinction is made between "monitoring" in the narrow sense (specific programmes setting out to capture data that would not otherwise be collected) and "reporting" (arrangements to make available information which is being collected for some other purpose – usually management or regulation of an activity).

50. The tools developed, the data collected and the assessments prepared under each theme will be made available as contributions to other international assessment activities at European and global level. Arrangements will be made from time to time in line with the assessment plans of other international organisations to bring together and disseminate the relevant products. Over the programme period, OSPAR

[2] This paragraph provides that there should be urgent implementation of monitoring and research in order to enable a full assessment of the eutrophication status of each area concerned within five years of its being characterised as a potential problem area with regard to eutrophication.

will also communicate the outcome of its JAMP activities through official publications, some of which may be targeted at specific audiences.

THEME A: GENERAL

Starting points

51. Annex IV of the OSPAR Convention embraces all aspects of the health of the marine environment. To fulfil the requirements of Annex IV, some broad questions must be answered:

a. What is the overall quality status of the OSPAR maritime area, and is it changing?

b. How can we distinguish between anthropogenic effects and natural background variations in the marine environment, its biological communities and production?

c. What changes in the OSPAR maritime area can be attributed to long-term climate change?

d. What are the future threats to the marine environment and can improvements be made to our ability to foresee them?

e. How can ecosystem health be assessed in order to determine the extent of human impact?

52. Work under this theme is therefore concerned with integrating the work under the other themes into a wider perspective, alongside more general studies of the seas that are being done in other programmes, both within OSPAR and elsewhere. It will draw on a wide range of sources, but will not itself generate specific major programmes for generating information. This theme will also cover the work needed to ensure the overall coherence, consistency and comprehensiveness of this programme, with a view to maintaining scientific standards.

Tools

53. Over the programme period, the following tools will be prepared:

AT-1 JAMP Guidelines by 2004 for the selection of data for use in assessments;

AT-2 JAMP Guidelines by 2004 for the assessment of trends in environmental monitoring data;

AT-3 JAMP Guidelines by 2006 for determining the frequency of monitoring, and for the selection of monitoring locations in order to secure an adequate geographical coverage, taking into account the resources available, for parameters that are or will be monitored under the JAMP;

AT-4 Arrangements for data-handling, revised where necessary by 2006 to ensure consistency, efficiency and effectiveness both within OSPAR and with other international organisations;

AT-5 Methods by 2007 needed to assess the implications of climatic change for the OSPAR maritime area.

Information collection

54. Information will be available through the data collection activities and the thematic assessments specific to each of the Strategy areas. Data will also be available from the following general OSPAR programmes:

a. the Co-ordinated environmental monitoring programme (CEMP) provides the framework to coordinate national marine monitoring programmes that are collecting information on a range of variables. It includes the Nutrient monitoring programme;

b. the Comprehensive study on riverine inputs and direct discharges (RID) provides annual data on the waterborne inputs of selected substances to the marine environment; RID started in 1990;

c. the Comprehensive atmospheric monitoring programme (CAMP) collects data on atmospheric contaminants from a network of coastal stations in order to study atmospheric inputs. CAMP started in 1987.

55. Other data and information will be obtained from relevant national and international monitoring programmes and assessment activities, including:

a. the International Council for the Exploration of the Sea (ICES);

b. the European Environment Agency (EEA);

c. the monitoring work under the UN ECE Convention on the Long-Range Transport of Air Pollution (LRTAP);

d. the Arctic Environmental Monitoring and Assessment Programme (AMAP) – especially for the parts of the OSPAR maritime area in the Arctic;

e. national environmental monitoring programmes, especially those elements addressing monitoring requirements of relevant EC Directives;

f. Bonn Agreement data on oil and other pollution from shipping;

g. the Global Oceans Observation System (GOOS);

h the monitoring work under the UNEP POP Convention;

i. remote sensing and ships –of opportunity programmes;

j. assessments by the Intergovernmental Panel on Climate Change (IPCC) and the Arctic Climate Impact Assessment (ACIA).

Assessments

56. Over the programme period the following assessments will be produced:

AA-1 By 2006, an overview of OSPAR assessment work 1998 – 2006;

AA-2 An assessment in 2010 of the quality status of the OSPAR maritime area and of its sub-regions.

57. These assessments, and the thematic assessments under the Themes B, E, H, O and R, will also contribute to assessments at European and global level.

THEME B: BIOLOGICAL DIVERSITY AND ECOSYSTEMS

Starting points

58. Annexes II and V of the OSPAR Convention and the Biological Diversity and Ecosystems Strategy provide the basis for this part of the programme. Although the focus has to be largely on individual human activities, the effect on the marine ecosystems can only be considered as a whole, and this must be borne in mind in all assessment and monitoring work. The following issues will be addressed:

a. What human activities occur, what is their extent, intensity and duration, and are they changing?

b. What are the distributions of species and habitats and what is the ecosystem structure and function. Are they changing? What impacts are there on species and habitats, and are they changing?

i. How can ecosystem health be assessed in order to determine the extent of human impact?

ii. Which species and habitats are threatened and/or subject to rapid decline?

c. How far can effects on biological diversity or marine species and habitats be linked, wholly or partly, to a specific cause, and can these causes in turn be linked to individual, or combinations of, human activities (including those not already being assessed under the JAMP)?

d. What human activities adversely affect specific species, communities and habitats, or specific ecological processes which are of concern because they are threatened and/or subject to rapid decline?

59. The human activities to be considered are:

1. Sand and gravel extraction
2. Dredging for navigational purposes
3. Dumping of wastes and other material including dredged material at sea
4. Dumped past chemical and conventional munitions
5. Exploration for oil and gas and placement of structures for the exploitation of oil and gas
6. Underwater noise
7. Placement of cables and pipelines (Any assessment of this activity will include an assessment of the scope for action under other international law)
8. Construction or placement of artificial reefs
9. Installations and structures – offshore windmill farms
10. Construction or placement of structures other than oil and gas and offshore wind-farms including artificial islands
11. Land reclamation
12. Coastal defence
13. Tourism and Recreational activities (these activities will be examined with the aim of identifying whether specific activities within this group would require a further assessment)
14. Mariculture
15. Fisheries[3]
16. Maritime transportation[4]
17. Marine litter
18. Trend analysis and collective impact of the above activities on the OSPAR maritime area

Tools

60. The tools that are available or under development include:

a. Criteria for the selection of threatened and/or declining species and habitats (in accordance with paragraph 2.2(b) of the OSPAR Biological Diversity and Ecosystems Strategy);

b. The OSPAR List of threatened and/or declining species and habitats;

c. The EUNIS marine classification system (under further joint development between EEA, ICES and OSPAR);

d. JAMP Guidelines on quality assurance for biological monitoring;

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[3] See OSPAR Convention Annex V Article 4(1) on questions relating to the management of fisheries.

[4] See OSPAR Convention Annex V Article 4(2) on questions concerning maritime transportation.

e. Hydrodynamic models;

f. Guidelines for quality assurance of analytical methods for estimating substances in dredged material;

g. Biogeography of the OSPAR Maritime Area by Dinter (2001)

61. Over the programme period, the following further tools will be prepared:

BT-1: Ecological quality objectives, initially as part of the pilot project for the North Sea. (less advanced EcoQOS will be developed under a second phase);

BT-2: Operational EUNIS classification at the level required for mapping and assessment;

BT-3a: JAMP Guidelines for monitoring progress towards individual ecological quality objectives (these will be particularly relevant to BM-3(a)

BT-3b: JAMP Guidelines for monitoring changes over time in species and habitats on the OSPAR List of threatened and/or declining species and habitats (these will be particularly relevant to BM-3(b).

BT-4 Guidelines for reporting changes in the level and nature of the human activities listed in § 59; The work done or to be done on this is set out in column 1 of Appendix 3..

Information collection

62. In addition to the general sources of information mentioned in paragraphs 54 and 55, the available sources of information include:

a. an inventory of marine protected areas (MPAs);

b. ICES fisheries databases;

c. OSPAR annual reporting on dumping of wastes at sea (mainly of dredged materials), an OSPAR reporting system for dumping operations at sea;

d. a database on windmill farms;

e. the inventory of dumped munitions;

f. ICES reporting system for sand and gravel extraction.

63. Over the programme period, the following additional products will be prepared or implemented:

BM-1: GIS-based habitat maps for the OSPAR maritime area,;

BM-2: Appropriate systems for collecting data/information on non-indigenous species. This should be done as part of the work on the implementation of the IMO Ballast Water Convention;

BM-3a: Monitoring arrangements for the application of agreed ecological quality objectives;

BM-3b: Monitoring strategies for the types of species and habitats that have been placed on the OSPAR List of threatened and/or declining species and habitats[5],

BM-4 Monitoring/reporting systems for human activities listed in § 59; The work done or to be done is set out in column 2 of Appendix 3

[5] This list is subject to further and continuous review against the agreed Texel-Faial Criteria for the selection of threatened and/or declining species and habitats.

Assessments

64. Over the programme period the following assessments will be produced, culminating in the general assessment of the quality status of the OSPAR maritime area and its sub-regions:

BA-1: An assessment in 2005 of the pilot project on ecological quality objectives for the North Sea;

BA-2 Evaluation of the results of the EcoQO system by 2009 as a contribution to the development of the Quality Status Report 2010

BA-3: An assessment in 2008 of the changes in the distribution and abundance of marine species in relation to changes in hydrodynamics and sea temperature;

BA-4: An assessment in 2009 of the status of the species and habitats that have been placed on the OSPAR List of threatened and/or declining species and habitats, in the light both of the relevant selection criteria and relevant agreed ecological quality objectives.

BA-5: A series of assessments for the human activities listed in § 59 according to the timetable set out in column 3 of Appendix 3;

BA-6: A trend analysis in 2008 of all the different human activities listed in § 59 and their collective impact on the OSPAR maritime area.

THEME E: EUTROPHICATION

Starting points

65. The Eutrophication Strategy and the Common procedure for the identification of the eutrophication status of the maritime area (Common Procedure) provide the basis for this part of the programme. The overall objective is the achievement in 2010 of a healthy marine environment where eutrophication does not occur. In the programme period, the progress made towards achieving this overall objective will be evaluated.

66. Therefore, the following issues will be addressed:

a. The main anthropogenic sources of nutrients are e.g. agriculture, sewage, aquaculture, industry, transport, energy production and consumption. What are the levels of discharges, emissions and losses from such sources, and what are the pathways to the marine environment?

b. Are these anthropogenic sources of nutrients and/or the associated inputs changing in nature, timescale or magnitude and what are the implications for achieving the target of a healthy marine environment where eutrophication does not occur?

c. What is the eutrophication status of the different parts of the OSPAR maritime area, i.e. what are the problem areas, the potential problem areas and the non-problem areas with respect to eutrophication? What are the developments in such problem areas and potential problem areas of the factors covered by the Comprehensive Procedure of the Common Procedure?

Tools

67. The tools that are available or under development include:

a. monitoring guidelines, quality assurance (QA) and reporting procedures for CAMP, CEMP (including Nutrient monitoring programme), RID;

b. Guidelines on harmonised quantification and reporting procedures for nutrients (HARP-NUT);

c. the Common Procedure and the harmonised assessment criteria, their respective assessment levels and classification within the Comprehensive Procedure;

d. models;

e. JAMP Guidelines on quality assurance for biological monitoring);

f. PARCOM Guidelines for the calculation of mineral balances.

68. Over the programme period, the following further tools will be prepared:

ET-1 JAMP Guidelines by 2004 on monitoring frequency and spatial coverage for nutrients and eutrophication parameters (≡ part of AT-3);

ET-2 A revision as necessary of existing JAMP guidelines and development of new guidelines where they do not already exist, by 2004, to enable monitoring of progress towards individual ecological quality objectives for nutrients and eutrophication effects;

ET-3 A future development by 2004 of the HARP-NUT guidelines on harmonised quantification and reporting procedures for nutrients;

ET-4 A further development where required by 2005 of ecological quality objectives for nutrients and eutrophication effects;

ET-5 Further developed harmonised assessment criteria by 2006, together with their respective assessment levels and classification within the Comprehensive Procedure of the Common Procedure;

ET-6 JAMP Guidelines by 2006 for the integrated assessment of emissions, discharges, losses and inputs to, and concentrations and effects in, the marine environment (≡HT-6);

ET-7 An overview by 2006 of predictive models for eutrophication assessment and nutrient reduction scenarios; including transboundary fluxes within the OSPAR maritime area, and of the possibilities of adopting relevant models for use by OSPAR Contracting Parties;

ET-8 A future development by 2006 of the HARP-NUT guidelines on harmonised quantification and reporting procedures for nutrients.

Information collection

69. In addition to the general sources of information mentioned in paragraphs 54 and 55, the available sources of information include information collected under the HARP-NUT guidelines to facilitate, amongst other things, reporting on progress towards achieving the 50% reduction in nutrient inputs when producing implementation reports on PARCOM Recommendation 88/2.

70. Over the programme period, the following additional products will be implemented:

EM-1 A collection of information in 2004 on emissions to air and atmospheric deposition (via EMEP, EPER);

EM-2 Coherent arrangements by 2004 for the collection of monitoring results required to assess progress towards achieving agreed ecological quality objectives for nutrients and eutrophication effects;

EM-3 A collection of information in 2006 on emissions to air and atmospheric deposition (via EMEP, EPER);

EM-4 A collection of information in 2008 on emissions to air and atmospheric deposition (via EMEP, EPER).

Assessments

71. Over the programme period the following assessments will be produced, culminating in the general assessment of the quality status of the OSPAR maritime area and its sub-regions:

EA-1 Assessments by 2004 of atmospheric emissions and modelled depositions of nutrients;

EA-2 Assessments by 2005 of temporal trends and (where relevant/possible) spatial distribution for the nutrients where periodic sampling and analysis is undertaken, in particular under CAMP, CEMP and RID;

EA-3 An assessment by 2005 of the pilot project on ecological quality objectives for the North Sea;

EA-4 An assessment in 2006 of the achievement of the 50% reduction target using information obtained through implementation reporting on PARCOM Recommendations 88/2 and 89/4;

EA-5 An assessment in 2006 of the expected eutrophication status of the OSPAR maritime area following the implementation of agreed measures;

EA-6 An assessment in 2008 of the eutrophication status of areas identified under the Common Procedure as problem areas and potential problem areas, and of any non problem areas where there have been changes which give grounds for concern.

EA-7 Assessments by 2009 of temporal trends and (where relevant/possible) spatial distribution for the nutrients where periodic sampling and analysis is undertaken, in particular under CAMP and RID;

THEME H: HAZARDOUS SUBSTANCES

Starting points

72. The Hazardous Substances Strategy provides the basis for this part of the programme. It operates at two levels: chemicals for priority action, and hazardous substances in general**.** The following issues will be addressed:

a. What are the concentrations in the marine environment, and the effects, of the substances on the OSPAR List of chemicals for priority action ("priority chemicals")?[6] Are they at, or approaching, background levels for naturally occurring substances and close to zero for man made substances?

b. For the individual OSPAR chemicals for priority action, what are the sources, what are the levels of discharges, emissions and losses, and what are the pathways to the marine environment? Are the discharges, emissions and losses from sources of these substances to the marine environment continuously decreasing, and are they moving towards the target of cessation by 2020?

c. Are there any problems emerging related to the presence of hazardous substances in the marine environment? In particular, are any unintended/unacceptable biological responses, or unintended/unacceptable levels of such responses, being caused by exposure to hazardous substances?

Tools

73. The tools that are available or under development include:

a. monitoring guidelines and reporting procedures for CAMP, CEMP and RID;

b. background/reference concentrations (BRCs) and ecotoxicological assessment criteria (EACs);

c. the EC/OSPAR marine risk assessment methodology;

d. models on the transport and fate of pollutants, and models of dispersion of accidental chemical spills.

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6 The OSPAR List of chemicals for priority action can be found at www.ospar.org, under measures (Agreement ref 2004-12).

74. Over the programme period, the following further tools will be prepared:

HT-1 A guidance by 2003 on a common framework for the establishment of monitoring strategies for each of the substances (or group of substances) on the OSPAR List of chemicals for priority action[7];

HT-2 Monitoring strategies by 2004[8] for each of the substances (or group of substances) on the OSPAR List of chemicals for priority action;

HT-3 Assessment tools by 2005[9] for pursuing the monitoring strategies for substances (or groups of substances) on the OSPAR List of chemicals for priority action. Such assessment tools will include updating of existing background/reference concentrations (BRCs) and ecotoxicological assessment criteria (EACs). They will also be consistent with equivalent tools (such as environmental quality standards) developed within the framework of other international organisations and similar systems dealing with the same substances;

HT-4 JAMP Guidelines by 2006 for pursuing the monitoring strategies for substances (or groups of substances) on the OSPAR List of chemicals for priority action;

HT-5 A review of the JAMP Guidelines by 2006 on biological effects monitoring and the integration with chemical monitoring;

HT-6 Development by 2006 of JAMP Guidelines for the integrated assessment of emissions, discharges, losses and inputs to, and concentrations and effects in, the marine environment (≡ET-6).

Information collection

75. In addition to the general sources of information mentioned in paragraphs 54 and 55, the available sources of information include:

a. the regular OSPAR Reports on the chlor alkali industry, the offshore industry, and the dumping of dredged material (and, to the extent that it occurs, other wastes);

b. the European Pollutant Emission Register[10];

c. the UN-ECE Pollutant Release and Transfer Register[11];

d. the progress report to the 5th North Sea Ministerial Conference and the underlying data collected via the HARP-HAZ system.

76. The existing OSPAR reporting systems will be modified to the extent that this is necessary as a result of the monitoring strategies adopted for the substances on the OSPAR List of chemicals for priority action. To ensure collection of comparable and useful data on emissions, discharges and losses, it is important to establish harmonised procedures for the reporting of data.

77. Over the programme period, the following additional products will be implemented:

HM-1 A series of information collection systems by 2005[12] that implement the monitoring strategies in respect of the priority chemicals (or groups of priority chemicals);

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[7] This guidance could also be used to support work carried out for the purpose of the selection and prioritisation of substances of concern (DYNAMEC) as and when future exercises of that kind are carried out.

[8] Or, as appropriate, one year after the adoption by the Commission of an OSPAR Background Document on a priority substance.

[9] Or, as appropriate, one year after the adoption by the Commission of a monitoring strategy for priority substances that identifies the need to establish an assessment tool.

[10] See http://europa.eu.int/comm/environment/ippc/eper/index.htm

[11] Under development in the context of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), see http://www.unece.org/env/pp/prtr.htm.

HM-2 An information collection system by 2005 on results of biological effects monitoring in areas where such effects may occur because of the potential levels of contamination;

HM-3 When appropriate, identification of the likely impacts on the marine environment of substances recorded, *inter alia*, in source inventories, or identified by screening methods.

Assessments

78. Over the programme period the following assessments will be produced, culminating in the general assessment of the quality status of the OSPAR maritime area and its sub-regions:

HA-1 An assessment by 2005 of temporal trends and (where relevant/feasible) spatial distribution for the hazardous substances where periodic sampling and analysis is undertaken, in particular under CAMP, CEMP and RID;

HA-2 An initial assessment by 2005 of biological effects of hazardous substances in the maritime area;

HA-3 An assessment every 5 years of emissions, discharges and losses of chemicals identified for priority action. The first assessment will be finalised by 2008;

HA-4 A more elaborated assessment by 2009 of biological effects of hazardous substances in the maritime area;

HA-5 An assessment by 2009 of temporal trends and (where relevant/feasible) spatial distribution for the hazardous substances where periodic sampling and analysis is undertaken, in particular under CAMP, CEMP and RID;

HA-6 A general assessment by 2009 of the development in the quality status of the maritime area in relation to hazardous substances that should take into account the results of the assessments under HA-1 and HA-5, HA-2 and HA-4 and HA-3, and the results of any screening of levels of substances in the marine environment covered by HM-3.

THEME O: OFFSHORE ACTIVITIES

Starting points

79. The Offshore Oil and Gas Industry Strategy provides the basis for this part of the programme. The following issues will be addressed:

a. what activities of the offshore oil and gas industry may impact the marine environment and how are those activities changing?

b. what are the inputs of hydrocarbons and hazardous materials from offshore installations to the sea, and are they changing?

c. what are the concentrations of hydrocarbons and hazardous materials in environmental compartments – focusing on areas influenced by offshore installations – and are they changing?

d. what are the biological effects (on benthic communities, demersal and pelagic organisms, marine mammals and seabirds) and are they changing?

Tools

80. The tools that are available or under development include:

a. the OSPAR Guidelines for monitoring the environmental impact of offshore oil and gas activities;

b. models on the transport and fate of pollutants, and models of dispersion of accidental chemical spills;

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[12] Or as soon as practical after the adoption of the monitoring strategy.

c. a harmonised reporting system to compile the information collected by Contracting Parties on the basis of existing reporting formats for the submission of data for the annual OSPAR Report on discharges, waste handling and air emissions from offshore installations and through reporting formats for the regular submission of national reports on the implementation of OSPAR Decision 2000/2 and OSPAR Recommendations 2000/4 and 2000/5 (chemicals used and discharged), OSPAR Decision 2000/3 (organic phased drilling fluids (OPF) and OPF contaminated cutting) and OSPAR Recommendation 2001/1 (oil in produced waters).

81. Over the programme period, the following further tools will be prepared:

OT-1 Technical annexes to the Guidelines for monitoring the environmental impact of offshore oil and gas activities by 2004 covering the water column and other issues such as noise if deemed necessary;

OT-2 An agreed reference method by 2004 for the determination of dispersed oil content in produced water;

OT-3 A harmonised reporting system by 2004 to compile environmental monitoring data and information related to offshore oil and gas activities;

OT-4 An agreed reference method by 2005 for the determination of the content of aromatic hydrocarbons in produced water;

OT-5 Assessment tools by 2006 for the impact of hydrocarbons and chemicals from offshore installations.

Information collection

82. The principal existing information and data reporting system is the compilation and assessment of the information collected by the relevant Contracting Parties in accordance with the Guidelines on reporting discharges, waste handling and air emissions from offshore installations. In addition, information is being collected on the levels of contaminants in cuttings piles and their impact on the surrounding environment.

83. Over the programme period, this will be supplemented by:

OM-1 Information collection through a harmonised reporting system by 2006 to compile environmental monitoring data and information related to offshore oil and gas activities;

OM-2 Information collection through a harmonised reporting system by 2006 to compile the information collected by Contracting Parties on discharges of hydrocarbons from offshore installations (including major accidental losses of oil) and on chemicals discharged offshore.

Assessments

84. Over the programme period the following assessments will be produced, culminating in the general assessment of the quality status of the OSPAR maritime area and its sub-regions:

OA-1 An assessment by 2007 of the impact on the marine environment of offshore oil and gas activities;

OA-2 An assessment by 2007 of the possible effects of releases of oil and chemicals from any disturbance of cutting piles;

OA-3 An assessment by 2009 of the extent and impact of the offshore oil and gas industry, including the impacts on the marine environment of discharges of hydrocarbons and controlled offshore chemicals, both as they occur and from subsequent remobilization, together with an assessment of the significance for the marine environment of such impacts in relation to the natural changes which are occurring to the OSPAR maritime area.

THEME R: RADIOACTIVE SUBSTANCES

Starting points

85. The Radioactive Substances Strategy provides the basis for this part of the programme. The following issues will be addressed:

a. what are the anthropogenic sources of radionuclides, and are they changing?

b. what are the discharges, emissions and losses of radioactive substances from the nuclear and non nuclear sectors, and what are their temporal trends?

c. what are the concentrations of radioactivity in environmental compartments, and are they changing?

d. what are the biological effects of radioactivity, and are they changing?

86. Apart from the collection of information on liquid discharges of radioactive substances from nuclear installations, when the JAMP Strategy was adopted in 2003, there were no OSPAR monitoring programmes that provide data specifically for this section of the programme.

Tools

87. The available tools are, in effect, the methodology used for assessing radiological dose and marine transport models for radionuclides.

88. Over the programme period, the following further tools will be prepared:

RT-1 Baseline by 2003 for:

- discharges of radioactive substances;
- their concentrations in the marine environment;
- resultant doses to members of the public;

RT-2 Harmonised reporting procedures by 2004 for inputs of radioactive substances from the non nuclear sector

RT-3 Methods by 2006 for applying the baseline to the radionuclides iodine-129, carbon-14 and tritium, for dealing with exceptional discharges arising either from the decommissioning of nuclear installations or from operations to recover old waste, and for taking account of variability in the level of operation of installations.;

RT-4 Agreed trend-detection techniques by 2006 for application to the groupings of discharges and the radionuclides agreed by RSC 2005

RT-5 Environmental quality criteria for radioactive substances by 2007.

Information collection

89. The available sources of information and data reporting systems (with their own underlying tools) that contribute to this section of the programme include:

a. regular collection of annual data on liquid discharges of radioactive substances from nuclear installations, including evaluation by an expert panel;

b. the EC MARINA II Study.

90. Over the programme period, the following additional products will be prepared:

RM-1 Regular collection of data on discharges of radionuclides from non-nuclear sectors;

RM-2 A monitoring programme by 2004 for concentrations of radioactive substances in the marine environment

Assessments

91. Over the programme period the following assessments will be produced, culminating in the general assessment of the quality status of the OSPAR maritime area and its sub-regions:

RA-1 First Periodic Evaluation of Progress towards the Objective of the Radioactive Substances Strategy (concerning progressive and substantial reductions in discharges of radioactive substances, as compared with the agreed baseline) - by 2006.

RA-2 Second Periodic Evaluation of the Progress towards the Objective of the Radioactive Substances Strategy (concerning concentrations in the environment as compared with the agreed baseline and including an assessment (for those regions where information is available) of the exposure of humans to radiation from pathways involving the marine environment - by 2007.

RA-3 An assessment (for those regions where information is available) of the impact on marine biota of anthropogenic sources (past, present and potential) of radioactive substances - by 2008

RA-4 Third Periodic Evaluation of the Progress towards the Objective of the Radioactive Substances Strategy (being an overall assessment of radionuclides in the OSPAR maritime area) - by 2009

APPENDIX 1

DESCRIPTION OF THE REGIONS OF THE OSPAR MARITIME AREA

The OSPAR maritime area covers:

a. those parts of the Atlantic and Arctic Oceans and their dependent seas which lie north of 36° North and between 42° West and 51° East , but excluding:

   (i) the Baltic Sea and the Belts lying to the south and east of lines drawn from Hasenore Head to Gniben Point, from Korshage to Spodsbjerg and from Gilbjerg Head to Kullen,

   (ii) the Mediterranean Sea and its dependent seas as far as the point of intersection of the parallel of 36° North and the meridian of 5° 36' West ;

b. that part of the Atlantic Ocean north of 59° North and between 44° West and 42° West .

For the purposes of assessment the OSPAR maritime area has been divided into five sub-regions:

Region I: Arctic Waters

The region of the North-East Atlantic covered by AMAP from south of Greenland via Iceland, including the Faroes and along 62° North to the Norwegian coast.

Region II: Greater North Sea

As defined for the purposes of the North Sea Conferences (but extended to cover the Kattegat) i.e.:

a. southwards of 62° North and eastwards of 5 °West, at the north-west side;

b. in the Kattegat, northwards of the line from Hasenore Head (DK) to Gniben Point (DK), and from Gilbjerg Head (DK) to Kullen (S);

c. eastwards of 5° West and northwards of 48° North, at the south side.

Region III: Celtic Seas

Western boundary: following the 200 m depth contour to the west of 6° West along the western coasts of Scotland and Ireland from 60° North to 48° North;

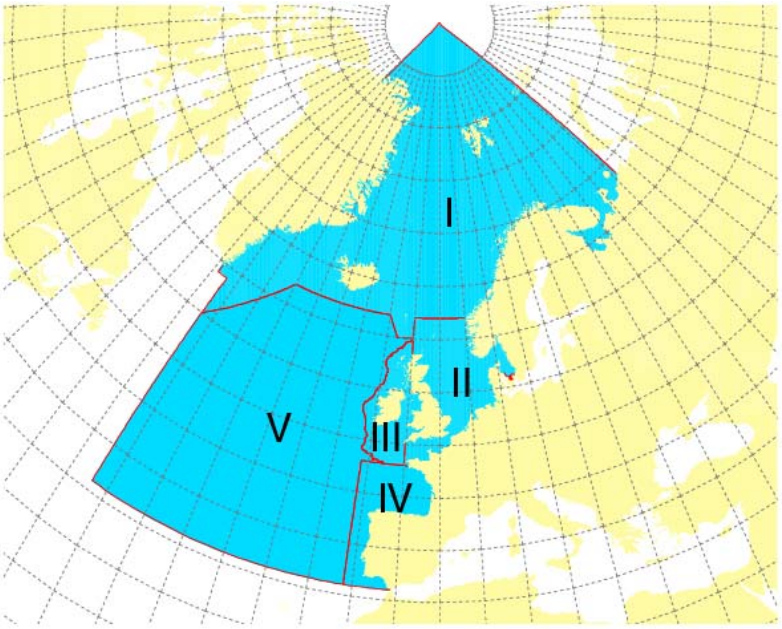
Eastern boundary: 5° West and the west coast of Great Britain from 60° North to 48° North.

Region IV: Bay of Biscay and Iberian Coast

The region to the south of 48° North, to the east of 11° West and to the southern limit of the maritime area.

Region V: Wider Atlantic

The region to the south of Region I, to the west of Regions II, III and IV and to the western and southern limits of the maritime area.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APPENDIX 2

ASSESSMENT SCHEDULE

2003

BA-5 First assessments on human activities listed in Appendix 3 – dumping of wastes at sea, miscellaneous offshore structures and installations, , sand and gravel extraction and tourism.

2004

BA-5 Three further assessment in the series of assessments for the human activities listed in Appendix 3- dredging for navigation, offshore wind-energy farms, tourism.

EA-1 Assessments of atmospheric emissions and modelled depositions of nutrients.

2005

BA-1 An assessment of the pilot project on ecological quality objectives for the North Sea, *and*

BA-5 One of the series of assessments for the human activities listed in Appendix 3 – mariculture.

EA-2 Assessments of temporal trends and (where relevant/possible) spatial distribution for the nutrients where periodic sampling and analysis is undertaken, in particular under CAMP, CEMP and RID.

EA-3 An assessment of the pilot project on ecological quality objectives for the North Sea.

HA-1 An assessment of temporal trends and (where relevant/feasible) spatial distribution for the hazardous substances where periodic sampling and analysis is undertaken, in particular under CAMP, CEMP and RID.

HA-2 An initial assessment of biological effects of hazardous substances in the maritime area.

2006

AA-1 An overview of OSPAR assessment work 1998 – 2006.

BA-5 Five of the series of assessments for the human activities listed in Appendix 3 - dredging for navigation, dumping of wastes at sea, dumping of munitions, underwater noise, cables and pipelines.

EA-4 An assessment of the achievement of the 50% reduction target using information obtained through implementation reporting on PARCOM Recommendations 88/2 and 89/4.

EA-5 An assessment of the expected eutrophication status of the OSPAR maritime area following the implementation of agreed measures.

RA-1 First Periodic Evaluation of Progress towards the Objective of the Radioactive Substances Strategy (concerning progressive and substantial reductions in discharges of radioactive substances, as compared with the agreed baseline).

2007

BA-5 Six of the series of assessments for the human activities listed in Appendix 3 – sand and gravel extraction, offshore windfarms, placement of structures, land reclamation, coastal defence, tourism.

OA-1 An assessment of the impact on the marine environment of offshore oil and gas activities.

OA-2 An assessment of the possible effects of releases of oil and chemicals from any disturbance of cutting piles.

RA-2 Second Periodic Evaluation of the Progress towards the Objective of the Radioactive Substances Strategy (concerning concentrations in the environment as compared with the agreed baseline and

including an assessment (for those regions where information is available) of the exposure of humans to radiation from pathways involving the marine environment .

2008

BA-3 An assessment of the changes in the distribution and abundance of marine species in relation to changes in hydrodynamics and sea temperature.

BA-6 A trend analysis of all the different human activities listed in Appendix 3 and their collective impact on the OSPAR maritime area.

EA-6 An assessment of the eutrophication status of areas identified under the Common Procedure as problem areas and potential problem areas, and of any non-problem areas where there have been changes which give grounds for concern.

HA-3 The first 5-yearly assessment of emissions, discharges and losses of chemicals identified for priority action.

RA-3 An assessment (for those regions where information is available) of the impact on marine biota of anthropogenic sources (past, present and potential) of radioactive substances.

2009

BA-2 An evaluation of the results of the EcoQO system as a contribution to the development of the Quality Status Report 2010

BA-4 An assessment of the status of the species and habitats that have been placed on the OSPAR List of threatened and/or declining species and habitats, in the light both of the relevant selection criteria and relevant agreed ecological quality objectives.

BA-5 One of the series of assessments for the human activities listed in Appendix 3 - dumping of wastes at sea.

EA-7 Assessments of temporal trends and (where relevant/possible) spatial distribution for the nutrients where periodic sampling and analysis is undertaken, in particular under CAMP and RID;

HA-4 A more elaborated assessment of biological effects of hazardous substances in the maritime area.

HA-5 An assessment of temporal trends and (where relevant/feasible) spatial distribution for the hazardous substances where periodic sampling and analysis is undertaken under RID, CAMP and CEMP.

HA-6 A general assessment of the development in the quality status of the maritime area in relation to hazardous substances that should take into account the results of the assessments under HA-1 and HA-5, HA-2 and HA-4, and HA-3, and the results of any screening of levels of substances in the marine environment covered by HM-3.

OA-3 An assessment of the extent and impact of offshore oil and gas activities, including the impacts on the marine environment of discharges of hydrocarbons and controlled offshore chemicals, both as they occur and from subsequent remobilization, together with an assessment of the significance for the marine environment of such impacts in relation to the natural changes which are occurring to the OSPAR maritime area.

RA-4 Third Periodic Evaluation of the Progress towards the Objective of the Radioactive Substances Strategy (being an overall assessment of radionuclides in the OSPAR maritime area).

2010

AA-2 An assessment of the quality status of the OSPAR maritime area and of its sub-regions.

APPENDIX 3

JAMP Products on Human Activities in the Marine Environment

Guidelines for reporting changes in the level and nature of human activities (BT-4)	Monitoring/reporting systems for human activities (BM-4)	Assessment of human activities (BA-5) in 2003 to 2008
1. Sand and gravel extraction (Lead country: DK, [BE])		
Agreement to adopt ICES Guidelines (Reference number: 2003-15)	Annual data collection by ICES on sand and gravel activities	An ICES Cooperative Research report in 2003 on the effects of extraction of marine sediments on the marine ecosystem Further Assessment by 2007: An update of the ICES Cooperative Research report in 2006
2. Dredging for navigational purposes (Lead country: DE, NL)		
Not currently applicable	A one-off survey in 2006 to collect additional information through a questionnaire (ongoing)	A Background Document in 2004 assessing the environmental impacts on marine species and habitats of dredging for navigational purposes (published by OSPAR 2004) Analysis of the replies to the questionnaire on additional information An overview by 2007 of the impact of dredging activities on species and habitats
3. Dumping of wastes and other material including dredged material (Lead country: Expert Assessment Panel)		
Guidelines available in the Format for Annual Reporting on Dumping Operations at Sea (Reference number: 2004-05)	Annual reporting system in place on the dumping of wastes and other materials including dredged material	Assessments every three years of the OSPAR Reports on dumping of wastes at sea: An overall assessment in 2003 of the dumping of wastes at sea in the OSPAR area from 1995 to 2002 (published in 2003) An assessment by 2007 of the dumping of wastes at sea in the OSPAR area from 1995-2005 An assessment by 2009 (EIHA 2008) of the dumping of wastes at sea in the OSPAR area from 1995-2007[13]

[13] After 2009, the frequency of assessment should revert to the agreed 3-year cycle.

Guidelines for reporting changes in the level and nature of human activities (BT-4)	Monitoring/reporting systems for human activities (BM-4)	Assessment of human activities (BA-5) in 2003 to 2008
4. Dumped past chemical and conventional munitions (Lead country: IE)		
Guidelines in 2004 for Fishermen on dealing with encounters, (agreement 2004-09).	OSPAR Recommendation 2003/2 on an OSPAR Framework for Reporting Encounters with Marine Dumped Conventional and Chemical Munitions Questionnaire on convention-wide practices and procedures in relation to dumped chemical weapons and munitions	Regularly updated information on the overview of dumped chemical and conventional munitions (as new information is available) Assessment of convention-wide practices and procedures in relation to dumped chemical weapons and munitions (published in 2003) Database on encounters reported in 2005 and 2008 through report on implementation of OSPAR Recommendation 2003/2
5. Exploration for oil and gas and placement of structures for the exploitation of oil and gas (Lead country: NO).		
Not currently applicable		An assessment by 2007 of the data collected by Norway through the questionnaire used for preparing the Background Document on Environmental Impacts of Oil and Gas Activities other than Pollution
6. Underwater noise (Lead country: DE)		
Not currently applicable	Not currently applicable	An initial comprehensive overview by 2007 of the environmental impact of underwater noise
7. Placement of cables and pipelines (Any assessment of this activity will include an assessment of the scope for action under other international law) (Lead country: DE, NO)		
Not currently applicable	Not currently applicable	An assessment by 2007 of the potential problems related to the placement of power cables excluding those related to oil and gas activities
8. Construction or placement of artificial reefs (Lead country: to be confirmed)		
OSPAR Guidelines on Artificial Reefs in relation to Living Marine Resources (Reference number: 1999-13)[14] .	Reporting requirement in place: a Contracting Party authorising the creation of an artificial reef should inform other Contracting Parties, through OSPAR, on that action and the reasons leading to it.	

[14] accepted by all Contracting Parties except Norway.

Guidelines for reporting changes in the level and nature of human activities (BT-4)	Monitoring/reporting systems for human activities (BM-4)	Assessment of human activities (BA-5) in 2003 to 2008
9. Installations and structures – offshore wind-farms (Lead country: UK assisted by DK, DE)		
Format and guidance notes for reporting annually to the OSPAR database on wind-farms	An annually updated database on wind-farms in the OSPAR maritime area.	A Background Document published in 2004 on the problems and benefits associated with the development of offshore wind-farms An assessment by 2007 of the environmental impact of offshore wind-farms
10. Construction or placement of structures other than oil and gas and other than wind-farms, including artificial islands (Lead country: UK)		
Not currently applicable	Not currently applicable	A general assessment by 2003 on the placement of structures (published in 2003) A revised assessment by 2007 on the placement of structures
11. Land reclamation (Lead Country: NL)		
Not currently applicable	A questionnaire in 2006 on CPs experiences of land reclamation	Assessment by 2007
12. Coastal Defence (Lead country: BE)		
Not currently applicable	A questionnaire in 2005/06 on existing coastal defence structures	An assessment by 2007 of the environmental impacts of coastal defence structures
13. Tourism and recreational activities (Lead country: ES)		
Not currently applicable	A questionnaire in 2005 to serve as the basis for the JAMP assessment of tourism	A Background Document in 2003 on the impact of tourism and a range of recreational activities (published by OSPAR 2003) A report in 2004 on sustainable tourism (published by OSPAR 2004 as an annex to the 2003 Background Document) Analysis of the replies to a questionnaire and an assessment in 2006 of the impact of tourism

Guidelines for reporting changes in the level and nature of human activities (BT-4)	Monitoring/reporting systems for human activities (BM-4)	Assessment of human activities (BA-5) in 2003 to 2008
14. Mariculture (Lead country: IE)		
	Format for reporting on the implementation on Recommendation 94/6 on BEP for the reduction of potentially toxic chemicals from aquaculture use.	A Background Document in 2005 on the impact of mariculture *Supporting assessments:* A report in 2000 on nutrient discharges from fish farming in the convention area An overview assessment in 2006 of the implementation of Recommendation 94/6 Reports in 2003 and 2008 on the implementation of the Common Procedure for Identification of eutrophication status of the maritime area
15. Fisheries		
Not currently applicable		A further assessment of impact of fisheries, including the environmental effects of new fisheries management actions and deep sea fisheries[15]
16. Maritime transportation		
Not currently applicable		A further assessment of impact of maritime transportation [16]
17. Marine litter (Lead country: SE)		
Harmonised procedures for surveys of beach litter (together with any further monitoring tools needed for this subject).	A monitoring programme for litter based on the experience of the pilot project (ongoing project on litter.	Annual reports on the OSPAR Pilot Project on Monitoring Marine Beach Litter A first assessment report by 2007on trends in quantities of different types of litter and sources of litter
18. Trend analysis and collective impact		
		A trend analysis in 2008 of all the different human activities listed in §59 and their collective impact on the OSPAR maritime area

[15] To be organised during 2006/2007

[16] To be organised during 2006/2007