NORTH SEA ENVIRONMENT
REPORT No 1

NORTH SEA TASK FORCE FIVE YEAR PLAN 1989-93

NORTH SEA TASK FORCE
OSLO AND PARIS COMMISSIONS
INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA

E. JASPERS
I 2400
Tel. 059/32 37 15

NORTH SEA ENVIRONMENT REPORT NO. 1

NORTH SEA TASK FORCE

FIVE YEAR PLAN 1989 - 1993

LONDON
AUGUST, 1989

NORTH SEA TASK FORCE
OSLO AND PARIS COMMISSIONS
INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA

The North Sea Task Force was established following a Ministerial Declaration made at the Second International Conference on the Protection of the North Sea held in London on 24 - 25 November 1987. Its aim is to enhance scientific knowledge and understanding of the North Sea environment, to provide more consistent and dependable data and to permit links between contaminant inputs, concentrations and effects to be established with greater confidence. The Task Force membership includes the eight North Sea states: Belgium, Denmark, the Federal Republic of Germany, France, the Netherlands, Norway, Sweden and the United Kingdom, as well as representatives from the European Economic Community, the International Council for the Exploration of the Sea and the Oslo and Paris Commissions. Observers from other countries also participate in Task Force meetings.

The Paris Commission was established by the Convention for the Prevention of Marine Pollution from Land-Based Sources, commonly called the Paris Convention, which was opened for signature in Paris on 4 June 1974. The Convention entered into force on 6 May 1978. It has been signed by the European Economic Community and Luxembourg and ratified by the following states: Belgium, Denmark, France, the Federal Republic of Germany, Iceland, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom.

The Oslo Commission was established by the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, commonly called the Oslo Convention, which was opened for signature in Oslo on 15 February 1972. The Convention entered into force on 6 April 1974. It has been ratified by the following states: Belgium, Denmark, Finland, France, the Federal Republic of Germany, Iceland, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom.

The International Council for the Exploration of the Sea (ICES) was founded in 1902 to coordinate marine scientific research in the North Atlantic. In 1964, the Convention of the International Council for the Exploration of the Sea was concluded, which entered into force on 22 July 1968. Present members of ICES are: Belgium, Canada, Denmark, Finland, France, German Democratic Republic, the Federal Republic of Germany, Iceland, Ireland, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, the United Kingdom, the USA and the USSR.

ISBN 1872349 00 5

FOREWORD

The Ministerial Declaration of the Second International Conference on the Protection of the North Sea, held in November 1987, identified shortcomings in scientific knowledge of the North Sea environment. This was particularly apparent for trends in inputs, linking inputs to actual contaminant levels and the environmental impact of contaminants. The North Sea Task Force (NSTF) was established to carry out work leading, on a reasonable time-scale, to a dependable and comprehensive statement of circulation patterns, inputs and dispersion of contaminants, ecological conditions and effects of activities in the North Sea. A Five Year Plan was devised to coordinate efforts to meet this objective by the end of 1993 when a new Quality Status Report for the North Sea will be published. The Plan has five main elements:

Task 1	Prepare new Quality Status Report for the North Sea in 1993;
Task 2	North Sea Coordinated Monitoring;
Task 3	North Sea Coordinated Modelling;
Task 4	Coordination of North Sea Research Effort;
Task 5	Special Projects.

This report describes the main features of the NSTF Five Year Plan, how the tasks relate to each other and the time-scales over which the main elements will be carried out. Its main function is to inform a wide audience of the work of the Task Force and, in particular, to allow member countries and organisations to plan for the provision of the necessary manpower and funding resources over the five years of the Plan.

The report was prepared by the Task Force Secretary, Mr. S. G. Carlyle, in close consultation with the Task Force Bureau which comprises Mr. P. Hoogweg (Chairman), Dr. J. E. Portmann (Vice-Chairman), Dr. J. F. Pawlak (ICES Environment Officer)and Mr. P. A. Hayward (Secretary, OSPARCOM).

TABLE OF CONTENTS

INTRODUCTION

1. The Ministerial Declaration of the Second International Conference on the Protection of the North Sea (known as the London Declaration) identified shortcomings in scientific knowledge of the North Sea environment. This was particularly apparent for trends in inputs, linking inputs to actual contaminant levels and the environmental impact of contaminants. It was agreed, therefore, that a coordinated scientific research programme needed to be developed for the North Sea to provide more consistent and comparable data and to permit links between contaminant inputs, concentrations and effects to be established with greater confidence. Such knowledge was seen to be necessary to allow strategic decisions on environmental protection to be made and to assess the effectiveness or otherwise of measures already taken.

2. The North Sea Conference considered that the best way to tackle the shortfall in knowledge about the North Sea environment would be to establish a special task force which would have the following objective:

> **"To carry out work leading, in a reasonable time-scale, to a dependable and comprehensive statement of circulation patterns, inputs and dispersion of contaminants, ecological conditions and effects of human activities in the North Sea."**

The Conference requested the International Council for the Exploration of the Sea (ICES) and the Oslo and Paris Commissions (OSPARCOM) to consider together the optimal means to achieve this objective through establishing a special working group to be known as the North Sea Task Force (NSTF). Membership of the Task Force would include the eight North Sea States (Belgium, Denmark, the Federal Republic of Germany, France, the Netherlands, Norway, Sweden and the United Kingdom) as well as relevant representatives of the Commission of European Communities. Representatives from OSPARCOM and ICES would also participate in the Task Force. It was further agreed that other OSPARCOM states may participate in Task Force meetings as observers, as further regional sea initiatives are envisaged.

3. It was agreed that the Secretariat for the Task Force would be based within the Oslo and Paris Commissions, working in close cooperation with the International Council for the Exploration of the Sea. The results of discussions on how the Task Force should be established and on its modus operandi are summarized in Annex 1. This was agreed by both the Oslo and Paris Commissions as well as by the International Council for the Exploration of the Sea during the second half of 1988.

4. At the First Meeting of the Task Force in December 1988, it was agreed that it should seek to:

1. provide an organizational framework for discussion and exchange of views between policy makers and scientists, with the aim of attaining the respective aims of the two groups;

2. screen and co-ordinate scientific work relevant to the North Sea carried out within the framework of OSPARCOM and ICES;

3. provide interim reports on selected subjects as and when necessary to the Commissions, to ICES, and to the North Sea Conferences;

4. produce a new assessment of the North Sea (Quality Status Report) in 1993;

5. fill the gaps in knowledge identified by the previous Quality Status Report and the London Declaration in 1987 (see Table 1).

Table 1

GAPS IN SCIENTIFIC KNOWLEDGE OF THE NORTH SEA

1. A need for better quality input data.

2. An improved understanding of nutrient dynamics and in particular their relation to occurrences of exceptional algal blooms.

3. More epidemiological information and a greater understanding of the factors causing diseases in marine organisms, including fish, birds and mammals.

4. An increased knowledge of the different ways in which classes of contaminants behave in the North Sea, and their sources and fates.

5. An assessment of the critical load of nutrients and persistent, bioaccumulable and toxic substances (metals and organic compounds).

6. More information on the levels of contaminants in the marine environment obtained on an internationally comparable basis.

7. More knowledge of general ecosystem effects, on plankton, on benthos, birds, fish and mammals, and especially on North Sea seal stocks.

8. Increased emphasis on quality assurance of mathematical models used in North Sea assessments.

9. Other specific problems: for example the problem of estimating inputs of contaminants to coastal waters from estuaries; the significance of sediment movement in the context of contaminant transport.

5. It was also agreed that, in meeting these aims, the Task Force should develop a coordinated scientific programme to carry out the work outlined in Annex G of the London Declaration (see Appendix 1). In essence, this means carrying out a number of parallel activities aimed at providing a comprehensive regional assessment of the North Sea in 1993 or, perhaps, to coincide with the staging, if agreed, of the Fourth North Sea Conference. The parallel supporting studies include the following:

(i) Preparing a new Quality Status Report

- based on data gathered on a sub-regional basis and assessments of the North Sea as a whole, drawing upon results from tasks (ii) - (vi) below;

(ii) Monitoring

- gathering more information, on a comparable basis, on the inputs to, and distribution of, contaminants in the North Sea;

(iii) Modelling

- using the data to feed mathematical computer-based assessment models to describe the behaviour and impact of contaminants in the North Sea;

(iv) Conducting research into specific aspects of the North Sea environment

- hydrography, plankton, benthos, fish and fisheries, birds and mammals to fill gaps in scientific knowledge (see Table 1);
- processes affecting biogeochemical cycles of contaminants, eg uptake and excretion by organisms and deposition in sediments;
- processes relevant to nutrient cycles, including biological aspects and means of characterization of key fluxes;

(v) Conducting targeted assessments

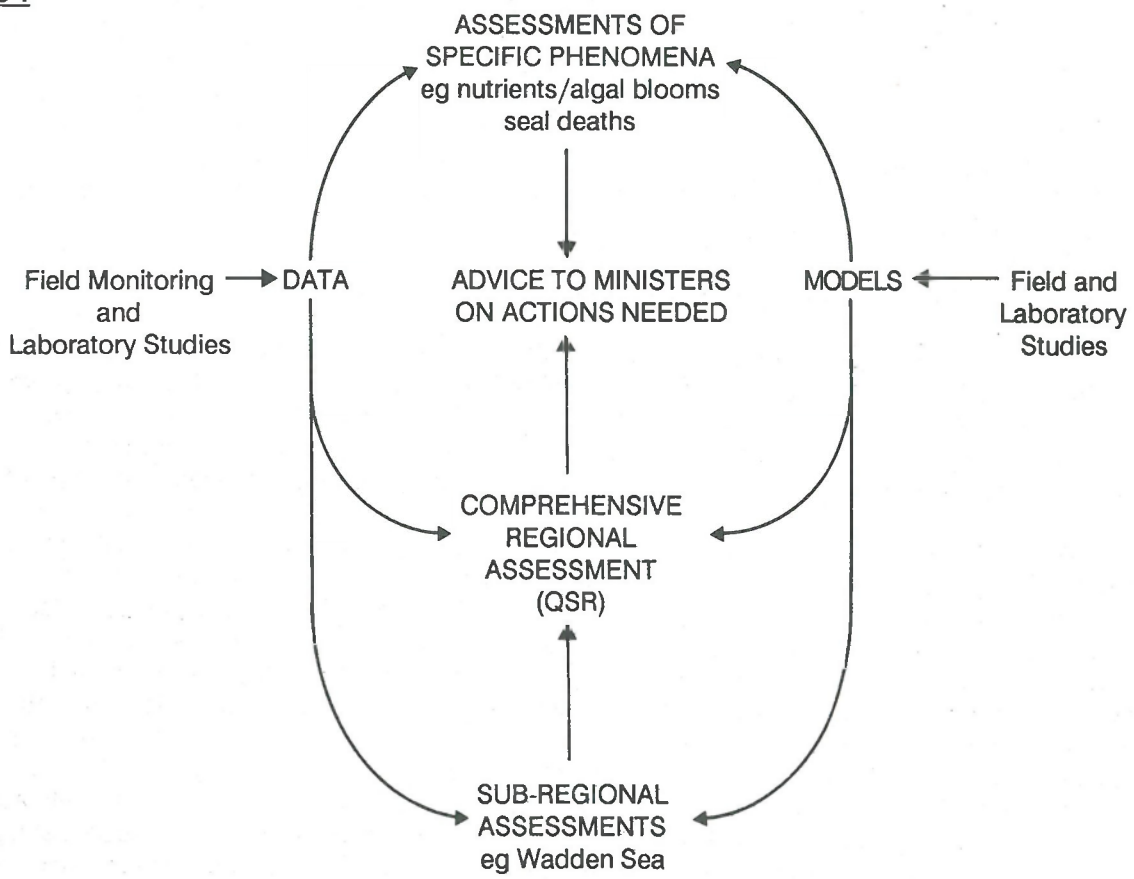
- specific topics such as the behaviour of nutrients in the North Sea environment;
- particular areas of the North Sea known to be particularly susceptible to pollution;

(vi) Analysis of policy implications of new QSR

- prepare advice to ministers on actions needed to prevent pollution of the North Sea.

6. Each of the above activities cannot be separated entirely from the others. Figure 1 gives a diagrammatic representation of this relationship, ie:

Figure 1



FIVE YEAR PLAN 1989 - 1993

7. The Task Force has given considerable thought to how its objectives can be achieved and how the proposed activities can be coordinated. These discussions reached their culmination at the Second Meeting of the Task Force when a Five Year Plan of activities was adopted. A summary of the main activities, the timescales over which they will be carried out and deadlines, is presented in Annex 2. This shows how the main components of the plan interact in attaining the overall objective: to prepare in a reasonable timescale a dependable and comprehensive statement of circulation patterns, inputs and dispersion of contaminants, ecological conditions and effects of human activities in the North Sea.

8. The Plan has five main elements, each as shown in Figure 1, related to the others:

Task 1 Prepare new Quality Status Report for the North Sea in 1993;

Task 2 North Sea Coordinated Monitoring;

Task 3 North Sea Coordinated Modelling;

Task 4 Coordination of North Sea Research Effort;

Task 5 Special Projects.

9. The main element of the Plan is Task 1, the preparation of a new Quality Status Report (QSR) for the North Sea in 1993. This is where the Task Force will concentrate its effort. The results of monitoring (Task 2), modelling (Task 3) and research activities (Task 4) as well as from special projects (Task 5) will be used to compile the QSR and to support any recommendations. Not all the tasks can or even need to be carried out directly by the Task Force. Only Tasks 1 and 5 are of necessity Task Force specific. The other tasks may be most conveniently carried out by existing groups, in particular the relevant working groups of OSPARCOM and ICES. However, what needs to be clear at an early stage is the allocation of responsibilities for carrying out particular tasks and that those groups assigned responsibilities are aware of the needs of the NSTF and the overall time-scales.

Task 1: Preparation of NSTF Quality Status Report

10. A primary responsibility of the Task Force is the production of an holistic assessment of the North Sea based on data acquired using internationally comparable methods, the use of state-of-the-art computer modelling techniques and the results of the latest research into the North Sea environment. This assessment will form the basis of the next Quality Status Report of the North Sea to be published towards the end of 1993.

11. Both an holistic assessment of the whole of the North Sea as well as separate sub-regional assessments will be prepared in parallel. In view of the considerable natural variations among sub-regions of the North Sea, the latter provides an opportunity to take account of local variations in hydrography, biology and levels of contamination. Figure 2 shows the sub-regions of the North Sea adopted by the Task Force based on these natural variations. This approach also recognizes that much data, such as those on atmospheric inputs, can only be gathered on a North Sea wide basis. From a practical standpoint the different priorities attached to certain sub-regions by North Sea states is recognized. Table 2 gives a list of the sub-regions, the countries most interested in them and the Lead Country. The latter will play a central role in coordinating data gathering and preparing sub-regional assessments. Hence, the net result will be the publication of a comprehensive Quality Status Report for the North Sea based on an holistic assessment and, where considered worthwhile, the publication of separate sub-regional assessments.

Table 2

AREA	INTERESTED COUNTRIES	LEAD COUNTRY
Area 1	N, UK	Norway
Area 2	N, UK	United Kingdom
Area 3	UK	United Kingdom
Area 4	NL, B, Fed. Rep. Germany, UK, Fr	Netherlands
Area 5	Fed. Rep. Germany, Dk, NL, N, S	Denmark
Area 6	N	Norway
Area 7'	All North Sea States	Federal Republic of Germany
Area 7"	All North Sea States	United Kingdom
Skagerrak/ Kattegat	S, N, Dk, Fed. Rep. Germany	Norway
Channel	Fr, UK, B, Fed. Rep. Germany	France/UK
Wadden Sea	Fed. Rep. Germany, NL, Dk	Dk, Fed. Rep. Germany, NL

12. Based on this approach a stepwise procedure to the preparation of the next QSR has been adopted:

Step 1 Data Collection

- general environmental data (ICES)
- inputs and some environmental data (OSPARCOM)

Step 2 Data Compilation

- ICES and OSPARCOM

Step 3 Data Evaluation

- ICES, OSPARCOM and NSTF

Step 4 (a) Multidisciplinary Holistic Assessment

- Task Force

(b) Sub-regional Assessments

- Lead Countries/Task Force

Step 5 Publication of NSTF Quality Status Report

Task 2: North Sea Coordinated Monitoring

13. The need for more comprehensive monitoring in the North Sea, to provide information on the distribution of contaminants and long-term trends, was prominent on the list of items highlighted in the Ministerial Declaration. The Task Force considered this need in some detail with the result that a "master plan" for monitoring of the North Sea has been adopted. The long-term objective is to develop an adequate breadth of coverage to provide the necessary information required to assess the condition of the North Sea, including investigations of trends in physical, chemical and biological parameters. The short-term objective is to prepare an updated assessment of the distribution of contaminants in the North Sea for the 1993 Quality Status Report. The latter will be achieved by an expanded programme of measurements to be made primarily in 1990 and 1991, although existing data will also be used when considered appropriate.

14. The NSTF Monitoring Master Plan builds upon existing monitoring programmes within the framework of the Joint Monitoring Programme of the Oslo and Paris Commissions, which covers mainly estuaries and coastal areas. A series of new offshore monitoring stations will be created to give a structured network so that the end result will be a clearer picture of the spatial distribution of contaminants across the whole of the North Sea. A list of substances to be measured on a mandatory basis in 1990 and 1991 has been agreed, together with a secondary list of substances to be measured wherever possible (see Table 3).

Figure 2

NSTF SUBREGIONS OF THE NORTH SEA

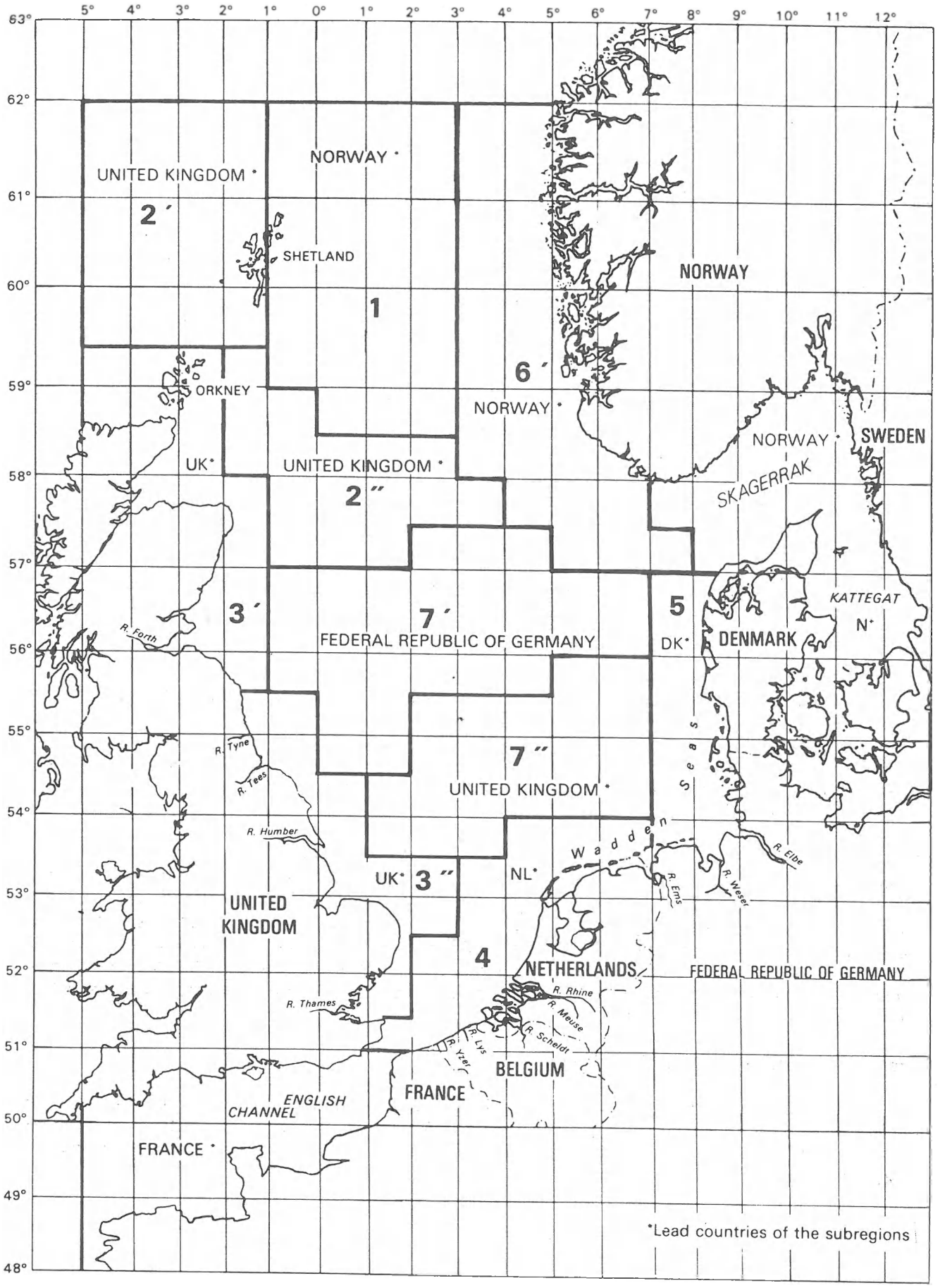


Table 3 - SUBSTANCES TO BE MONITORED

Substances to be measured on a mandatory basis in 1990/1991 in the appropriate matrix or matrices:

Heavy metals	Cadmium, mercury, copper, lead, zinc
Organics	PCBs (on an individual CB basis), alpha and gamma HCH, HCB

Substances to be measured wherever possible in 1990/1991, also in the appropriate matrix or matrices:

Metals	Nickel, chromium, arsenic
Organics	Polynuclear aromatic hydrocarbons, flame retardants (polybrominated biphenyls), dioxins, dieldrin/aldrin/endrin, triazine herbicides (atrazine and simazine), toxaphene, chlordane

15. In addition to the substances listed in Table 3, North Sea states are encouraged to carry out surveys of other compounds, such as those included by the UK in its "Red List" of substances dangerous to the aquatic environment. Also, biological effects monitoring is advocated at selected field stations, while a mandatory programme for the measurement of nutrients will be conducted within the framework of the Paris Commission's Working Group on Nutrients.

16. It is intended that, subject to meeting certain criteria, existing data will be included in the preparation of a "snapshot" picture of contaminant distributions in the North Sea for the period 1990/91. All new data will be subject to rigorous quality assurance procedures adopted by the Task Force. These are based on recommendations by ICES and the Joint Monitoring Group of OSPARCOM. In addition, the Task Force is exploring the possibility of conducting large-scale surveys of the North Sea by single countries or laboratories to reduce the problems associated with ensuring data acquired by different laboratories are comparable.

Task 3: North Sea Coordinated Modelling

17. The need to further develop computer-based mathematical models is seen to be necessary for: (a) assessment purposes, making full use of an improved database; and (b) as management tools to determine the effectiveness of existing or planned input control strategies.

18. The Task Force has considered such needs and ways to promote the further development of mathematical models for assessments of the North Sea environment. In the short term, the Task Force's aim is to identify the questions for which mathematical models can be expected to assist in providing answers, in particular on the various physical, chemical and biological processes in the North Sea environment and which will help fill the present gaps in scientific knowledge.

19. To help identify these questions it is intended that an inventory of mathematical models relevant to the work of the Task Force will be prepared based on the results of a questionnaire to be completed by North Sea states. The results of this exercise will be used in preparing for a Task Force workshop on North Sea modelling to be held in 1990. The workshop will be used to develop an environmental modelling strategy for the Task Force, to identify modelling needs and to identify data needs to feed into the models. The future work of the Task Force in this area will be to develop sub-regional and regional modelling techniques by carrying out various quality assurance exercises including coordination of model verification and validation exercises among North Sea states. The results of the modelling activities will be used in the development of the sub-regional and regional assessments for incorporation into the Quality Status Report in 1993.

Task 4: Coordination of North Sea Research Effort

20. One of the primary aims of the Task Force is the enhancement of scientific knowledge and understanding of the North Sea environment. This is recognized as being a long-term goal relying mostly on results of recently initiated research and, therefore, the Task Force has taken initial steps to provide a framework for the coordination of North Sea research carried out in member countries. Particular emphasis is paid towards research aimed at filling gaps in scientific understanding (see Table 1). It is intended that a manual containing one-page summaries of research projects will be prepared by March 1990 and will be converted into a computerised database thereafter. The Task Force has also examined the potential for coordination of research cruise activities and annual reviews of proposed research will be carried out by the Task Force. Also ways will be sought to increase cooperation among researchers from different North Sea states working in similar fields, by holding a number of workshops on topical issues, particularly to help fill gaps in knowledge.

Task 5: Special Projects

21. The final task concerns special projects not falling within the province of Tasks 1 - 4. These include short-term goals, for example, providing reports to the Third Ministerial Conference on the North Sea (NSC3) on progress since the Second Ministerial Conference (NSC2) in addressing specific issues, such as, the occurrence of unusual algal blooms and seal deaths due to the epidemic in 1988. Also, stand alone projects highlighted as meriting special attention by the Task Force are included, for example, the behaviour of nutrients in the North Sea.

WORKING METHODS

22. Given these objectives and programme requirements, how are these to be achieved using the mechanism of the NSTF? It is clear that much relevant work is already being carried out within existing groups established by ICES, OSPARCOM and others. Hence, a combination of activities needs to be initiated where existing groups are made aware of the needs of the NSTF and agreement is reached on their providing particular inputs into the NSTF Programme. For example, the Joint Monitoring Group of OSPARCOM could help coordinate monitoring exercises in the North Sea. In other instances, where a specific need is identified and no suitable activity is found, new initiatives by the Task Force may be necessary using, as appropriate, one or more of the following mechanisms:

(i) expert groups to address specific issues and prepare advice for consideration within the main group;

(ii) workshops to address specific issues and inform fellow workers in North Sea states of progress of research;

(iii) scientific seminars or conferences to publicize the results of major pieces or programmes of research; or

(iv) inviting ICES and OSPARCOM to start new projects or to adjust existing research programmes.

23. Conferences and seminars are unlikely to be required during the early part of the Five Year Plan as few goals or milestones will be achieved in the short term. Conversely, there may be more of a need to convene expert advisory groups. These could meet during the main Task Force meeting or, if a particular topic is being addressed by other groups as part of a wider remit, separate joint meetings may be necessary. For example, it could be envisaged that an existing standing group established by ICES or the Commissions may already be considering a similar topic to one identified by the Task Force. It will be necessary to explore ways of avoiding duplication of effort while meeting the Task Force programme objectives within the agreed time-scales. The resultant information should allow a decision to be taken on whether an existing standing group can take on the new responsibility or whether a new initiative has to be taken. Annex 3 gives a list of ICES and OSPARCOM standing groups relevant to the work of the Task Force as an indication of the extent to which this may be necessary.

RELATIONSHIP TO THE NORTH SEA CONFERENCES (NSC)

24. Having been established in response to the request from the Second International Conference on the Protection of the North Sea (NSC2) in London, the Task Force should maintain close and special links with future North Sea Conferences. In particular, in order to meet its main objective and provide advice to the NSC, the major milestones should be timed to coincide with NSC meetings.

25. The next NSC meeting will be held in The Hague in March 1990. At the first meeting of the Task Force it was agreed that:

1. following the Third Meeting of the Task Force in September 1989, the Task Force Secretary should prepare a progress report, to be approved by the Chairman and Vice-Chairman, summarizing the measures which have been taken to implement the Ministers' request in the London Conference Declaration. This progress report will be made available by December 1989.

2. it was important to present Ministers with a brief (one page) summary of action on the following important issues:

   - algal blooms;
   - the death of seals;
   - information on sensitive issues on which progress has been made since the Second North Sea Conference.

NEXT STEPS

26. The Five Year Plan is deliberately outlined in simple terms to allow for a great deal of flexibility in most aspects, apart from when the final assessment has to be ready. The next step will be to allocate particular tasks to specific groups. Moves in this direction have already been made. For example, the Joint Monitoring Group of OSPARCOM has indicated its readiness to help organise a suitable North Sea monitoring programme and Lead Countries have been assigned. Similarly, Belgium and the EEC have indicated their willingness to help organize and coordinate the North Sea modelling effort.

SUMMARY

27. Two years after the Ministerial Declaration made at the North Sea Conference in London, where the establishment of a special working group to tackle the problems of the North Sea was advocated, the North Sea Task Force is now well established. It has a coherent programme of activities designed (a) to meet the primary objective of preparing a new Quality Status Report on the North Sea, with recommendations and advice to Ministers in 1993, and (b) the long-term objective of increasing scientific knowledge of the North Sea environment as a whole.

SELECTED REFERENCES

Melvasalo, T., Pawlak, J., Grasshoff, K., Thorell, L., and Tsiban, A. (Eds) 1981. Assessment of the Effects of Pollution on the Natural Resources of the Baltic Sea, 1980. Baltic Sea Environment Proceedings No. 5B. 426 pp.

ICES, 1987. Assessment of the Environmental Conditions in the Skagerrak and Kattegat. ICES Coop. Res. Rep. No. 149. 45 pp.

Dickson, R. R. and Boelens, R. G. V. (Eds.) 1988. The status of current knowledge on anthropogenic influences in the Irish Sea. ICES Coop. Res. Rep. No. 155, 88 pp.

Anon. 1987. Quality Status of the North Sea. A Report by the Scientific and Technical Working Group. Second International Conference on the Protection of the North Sea. UK Department of the Environment. 88 pp.

DOE,1988, Ministerial Declaration, Second International Conference on the Protection of the North Sea, London 24 - 25 November 1987.

ANNEX 1

ESTABLISHMENT OF A MECHANISM TO IMPLEMENT THE PROVISIONS OF THE NORTH SEA CONFERENCE DECLARATION ON THE ENHANCEMENT OF SCIENTIFIC KNOWLEDGE AND UNDERSTANDING

Background

1. The Declaration prepared by the Second International Conference on the Protection of the North Sea emphasized "the need for further development of harmonized methods for monitoring, modelling and assessment of environmental conditions at the national and international level". It requested "ICES and the Oslo and Paris Commissions to consider together the optimal means to achieve these ends, including the possible benefits of a joint Working Group (or Task Force) established by the three bodies, and to organize a harmonized programme of studies taking into account the proposals made in Annex G" of the Declaration (attached at Appendix 1). It further requested these organizations "to prepare and publish, taking the 1987 Quality Status Report as a basis, further reports on the quality of the North Sea at regular intervals, perhaps every 5 years, commencing in 1991".

2. Taking account of the discussions at the preparatory meeting of the Task Force in March 1988, the Commissions concluded that from the scientific point of view it would be desirable to finalize the next Quality Status Report in 1993. It was recognized, however, that there may be a need to provide updated information for a Ministerial meeting in 1992, if such is arranged.

3. For the Third North Sea Conference, in 1990, it was suggested that the following information should be compiled by the Netherlands' Secretariat, in close cooperation with the Task Force:

(i) the most recent figures on inputs to the North Sea;

(ii) new information on shipping as a source of contamination, and

(iii) information needed to fill gaps in the 1987 Quality Status Report.

In addition, a report will be submitted to the Ministerial Conference on the progress of the work of the Task Force.

4. The Commissions and ICES agreed that many of the elements of the programme outlined in Appendix 1 are, to a greater or lesser extent, already components of existing ICES or Oslo and Paris Commission programmes. Accordingly, they considered that the work requested can and should be conducted mainly within the framework of the existing structures of these organizations, drawing as necessary upon the experience of other international organizations (e.g. IMO). However, to achieve increased coordination of activities, thereby ensuring the most effective application of resources to the requirements of the Second North Sea Conference, the Commissions and ICES adopted a mechanism for engendering closer cooperation.

5. To this end, the Commissions and ICES agreed that a special "North Sea Task Force" should be established to coordinate activities in relation to harmonized programmes of study and the preparation of regional assessments. This Task Force will comprise delegates from the eight North Sea States, the Commission of the European Communities, and representatives of ICES and OSPARCOM. These delegates, assisted by at most two experts each, should be sufficiently senior to assure the deployment of resources and compliance with reporting requirements, as necessary. Representation from ICES will include members of ACMP and, when necessary, the chairmen of key working groups. OSPARCOM representation will comprise the Chairmen of JMG, TWG and SACSA, plus representatives of appropriate subsidiary technical groups as necessary. The Secretariats of both organizations will also be represented. Representatives of other international organizations may be invited when appropriate. The Task Force will normally meet annually, but more frequently in initial years. It will elect its own Chairman and Vice-Chairman, who will both serve for an initial period of two years, subject to renewal if that is the wish of the Task Force. The OSPARCOM Secretariat will serve as the Secretariat for the Task Force.

6. Activities or tasks formulated under (b), (c) or (d) below may require ultimate approval by the Commissions and/or the ICES Council. Subject to this overriding control, the Task Force should be responsible for:

(a) developing and approving the protocol, i.e. the basic format and coverage, for a regional assessment (Quality Status Report) covering the North Sea;

(b) deciding on monitoring requirements, including new activities or investigations required to acquire the data needed for the assessment and the harmonization/quality control programmes required for new and relevant existing activities, and supervising the implementation and conduct of these activities;

(c) advising on the tasks that need to be undertaken by the appropriate OSPARCOM or ICES working groups and supervising their conduct; such tasks will include, for example, the compilation of input data and the assessment of their importance, the identification of temporal trends in levels of contaminants, and other relevant tasks. The Commissions agreed that, in order to operate effectively, the Task Force would have the authority to approach OSPARCOM working groups directly;

(d) advising on the research and other resources necessary to undertake the identified investigative work and on how they can best be deployed in order to achieve maximum cooperation and joint benefit;

(e) approval of the final detailed content of the regional assessment report, i.e. the interdisciplinary scrutiny of the collated report.

7. Each working group requested by the Task Force to contribute to the assessment report should be responsible for preparing appropriate draft material for that report. This is consistent with existent ICES practice and would certainly apply to tasks assigned to ICES working groups.

Notes

8. While this proposal is initially intended to provide a mechanism to implement the request of the Ministers of countries around the North Sea regarding the enhancement of scientific knowledge of that area, it might be expected to be of considerable interest toother Contracting Parties of both ICES and the Oslo and Paris Commissions. Consequently, the Commissions agreed that Contracting Parties to the Oslo and Paris Conventions which are not North Sea States should be invited to attend the Task Force meetings in an Observer capacity; it was also agreed that the Observers should be sent all documentation for the Task Force meetings. In the longer term, it may be considered

desirable to expand the geographical scope of this work, along with the countries represented on the Task Force and associated financial commitments, as the need to conduct regional assessments of other areas becomes apparent.

Definition of terms

9. In the context of this proposal, it is assumed that an "assessment" and the "purpose of the assessment" are defined as follows:

"Assessment"

An environmental assessment is an evaluation of the conditions and quality of the environment of a defined marine area; it identifies anthropogenically induced changes or disturbances to the ecosystem in that area. As an integral part, an assessment will lead to the production of a quality status report which will contain statements regarding the extent of scientific understanding of the area, including gaps in knowledge or issues of uncertainty.

"Purpose of assessment"

The results of an environmental assessment provide the basis for strategic analysis of the requirements for regulatory action necessary to protect the marine environment in a given area, particularly for determining the adequacy and/or shortcomings of existing environmental regulations and controls pertaining to the protection of the environmental health and quality of the marine environment. It can form the basis of appropriate management plans.

APPENDIX 1

REMIT FOR GROUP PLANNING AN INTERNATIONAL STUDY OF THE NORTH SEA

ANNEX G OF THE LONDON DECLARATION

1. In preparing the Quality Status Report, it emerged that although a great deal is known about the North Sea, there are still shortcomings in the data for certain contaminants. This became particularly apparent when looking for trends in inputs, linking these to actual contaminant levels and trying to link those in turn to environmental changes.

2. A co-ordinated scientific programme needs to be developed in the North Sea to provide more consistent and dependable data and to permit links between inputs, concentrations and effects to be established with greater confidence. Such knowledge is needed not only as a basis for further decisions but also to show the effectiveness or otherwise of measures already taken or planned.

Objectives

3. To carry out work leading, in a reasonable time scale, to a dependable and comprehensive statement of circulation pattern, inputs and dispersion of contaminants, ecological conditions and effects of human activities in the North Sea.

Elements in the Programme

4. The following are the proposed elements in the proposed programme:

(1) Agreement on the substances and/or parameters to be measured; the methods to be used to measure or calculate these; the frequency and location of sampling and/or measurement;

(2) A properly designed and managed quality assurance programme covering sampling and analysis for monitoring and research purposes;

(3) More and better quality data to be collected in a harmonized manner specifically for the purpose of defining conditions in the North Sea;

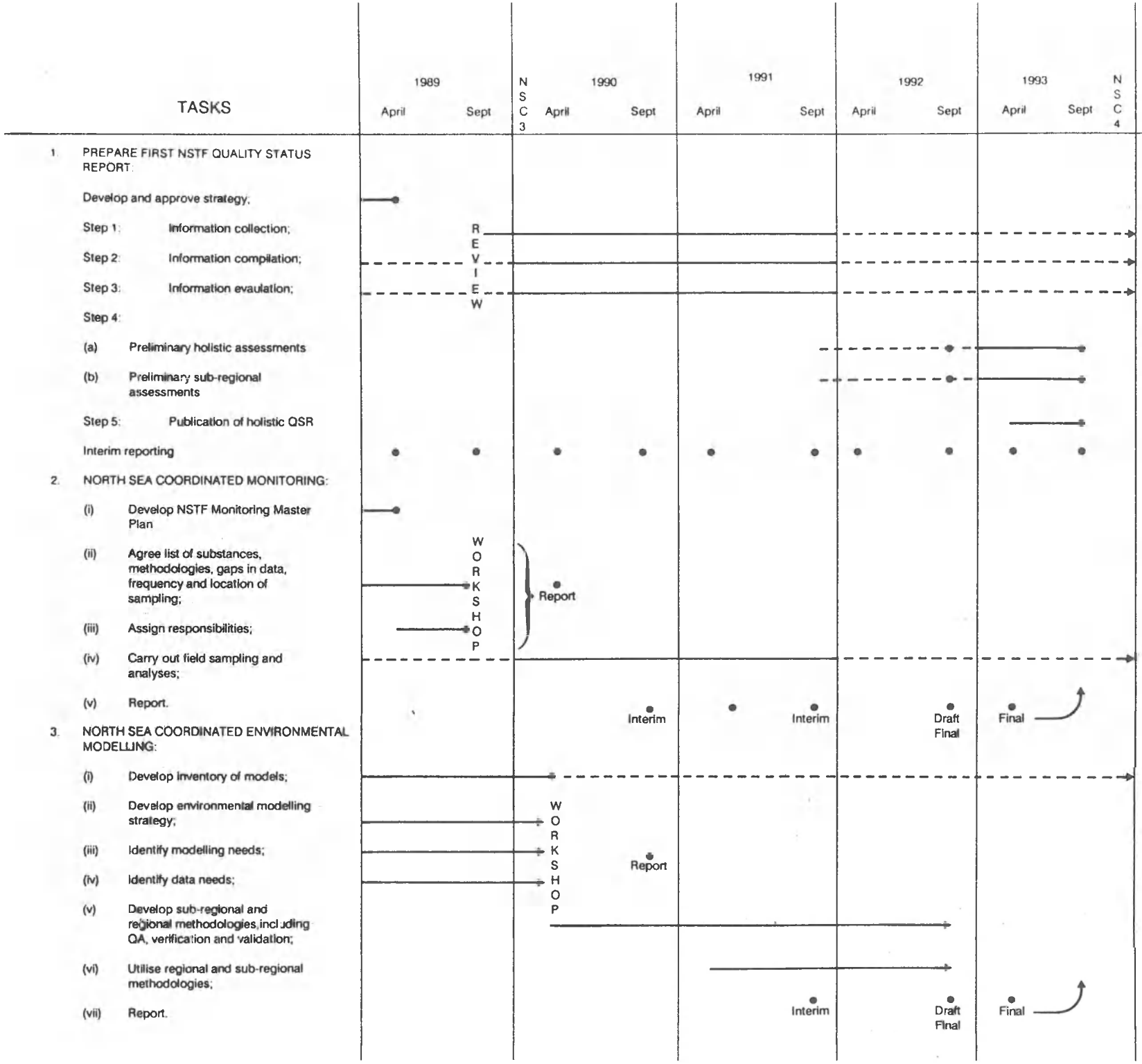
(4) Special programmes in specific areas of higher risk, eg the Wadden Seas, Kattegat, British estuaries;

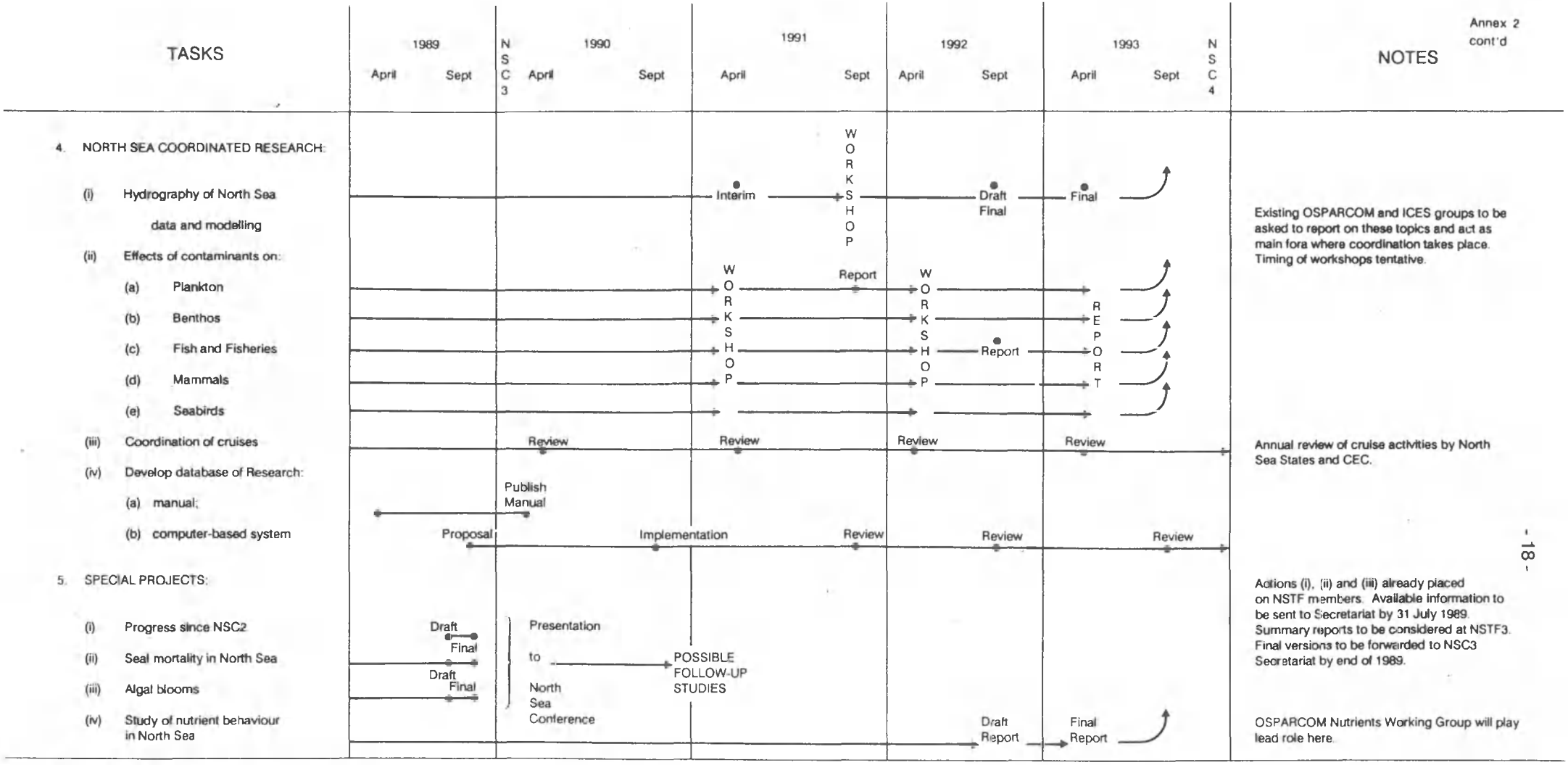
(5) The development of models for:

(a) assessment purposes which are able to make full use of the improved data base;

(b) as management tools to determine the effectiveness of existing or planned control strategies.

(6) Research to fill gaps in our knowledge of causal mechanisms needed for the interpretation of results from (1) to (5) above, and which will be of use to all North Sea states. The Quality Status Report identifies several such topics, eg impacts on marine ecosystems, indicators of biological change, fish diseases, nutrient enrichment, the development of techniques for assessing the dispersions of contaminants from sources, sediment movement.


TASKS
1989
April
Sept
NSC 3
1990
April
Sept
1991
April
Sept
1992
April
Sept
1993
April
Sept
NSC 4
NOTES
1. PREPARE FIRST NSTF QUALITY STATUS REPORT:
Develop and approve strategy;
Step 1: Information collection;
Step 2: Information compilation;
Step 3: Information evaulation;
Step 4:
(a) Preliminary holistic assessments
(b) Preliminary sub-regional assessments
Step 5: Publication of holistic QSR
Interim reporting
REVIEW
Quality Status Report prepared by NSTF based on the Five Year Plan.
Strategy approved at NSTF2 (April 1989) and Step 1 to be started at NSTF2. Step 1 means collection and evaluation of data on an individual disciplinary basis but with sub-regional and overall assessments in mind.
Different countries or organizations to be assigned task of coordinating sub-regional data gathering and assessments ie:
Area 1: Norway; Area 2: UK; Area 3: UK; Area 4: Netherlands; Area 5: Denmark; Area 6: Norway; Area 7: Fed Rep of Germany; Area 7: UK; Skagerrak/Kattegat: Norway; Channel: France/UK; Wadden Sea: Denmark, Fed Rep of Germany, Netherlands.
2. NORTH SEA COORDINATED MONITORING:
(i) Develop NSTF Monitoring Master Plan
(ii) Agree list of substances, methodologies, gaps in data, frequency and location of sampling;
(iii) Assign responsibilities;
(iv) Carry out field sampling and analyses;
(v) Report.
WORKSHOP
Report
Interim
Interim
Draft Final
Final
Existing OSPARCOM groups, especially JMG, will play a lead role here. Joint NSTF/JMG monitoring workshop proposed for October 1989 to finalize Tasks 2 (i) and 2 (ii) and prepare for 1990 field monitoring.
Coordination of cruise activities important here.
3. NORTH SEA COORDINATED ENVIRONMENTAL MODELLING:
(i) Develop inventory of models;
(ii) Develop environmental modelling strategy;
(iii) Identify modelling needs;
(iv) Identify data needs;
(v) Develop sub-regional and regional methodologies including QA, verification and validation;
(vi) Utilise regional and sub-regional methodologies;
(vii) Report.
WORKSHOP
Report
Interim
Draft Final
Final
Modelling workshop organized by Belgium in cooperation with the CEC proposed for Feb/March 1990 meeting to review results of Task 3 (i) and to carry out Tasks 3 (ii), 3 (iii) and 3 (iv). Also to plan 3 (v).
CEC can play leading role in coordinating modelling via the MAST programme.
Modelling methodologies to be used in support of sub-regional and regional assessments.



Explanatory Notes

(i) Workshops mostly to be held in conjunction with main NSTF meetings in April and September each year (approximately). Format may change but usually a one-day workshop of invited and submitted papers. The workshops will act as the main means of reporting results and preparing recommendations and advice. A draft report will be prepared for consideration at the subsequent NSTF meeting.

(ii) Five Year Plan is not a fixed programme but may change according to future needs, new priorities, funding levels etc. Its primary purpose is to give an overall picture of future NSTF activities so that the necessary budgetary and manpower resources can be made available.

ANNEX 3

Existing Groups that may Provide Inputs to the NSTF Programme

Relevant groups of the Oslo and Paris Commissions:

Standing Advisory Committee for Scientific Advice (SACSA)

Technical Working Group (TWG)

Joint Monitoring Group (JMG)

Working Group on Nutrients

Working Group on Atmospheric Inputs

Working Group on Oil Pollution

Ad Hoc Working Group on Monitoring

Relevant ICES Working Groups

The following ICES Working Groups are concerned, in at least some of their work, with issues relevant to marine environmental conditions and the impact of contaminants:

Advisory Committee on Marine Pollution (ACMP)

Marine Environmental Quality Committee (MEQC)

Marine Chemistry Working Group (MCWG)

Working Group on the Baltic Marine Environment (WGBME)

Working Group on Marine Sediments in Relation to Pollution (WGMS)

Working Group on the Statistical Aspects of Trend Monitoring (WGSATM)

Working Group on Biological Effects of Contaminants (WGBEC)

Working Group on Pathology and Diseases of Marine Organisms (WGPDMO)

Working Group on Environmental Assessments and Monitoring Strategies (WGEAMS)

Benthos Ecology Working Group (BEWG)

Working Group on Shelf Seas Oceanography

Working Group on the Effects of Extraction of Marine Sediments

Working Group on Environmental Impacts of Mariculture

Working Group on Harmful Effects of algal Blooms on Mariculture and Marine Fisheries

Phytoplankton Ecology Working Group

Study Group on the Toxicology of Acid Rain and its Effects on Salmon

Study Group on Patchiness Investigations in the Baltic

Study Group on the Effects of Contaminants on Marine Mammals

Working Group on Oceanic Hydrography

Study Group for the Application of Aerospace Remote Sensing

ANNEX 4

STEP-WISE PROCEDURE TO THE PREPARATION OF THE NSTF QUALITY STATUS REPORT IN 1993

Step 1: Environmental Data Collection

A checklist of information requirements should be prepared and approved by the Task Force. The checklist will be prepared taking into account a thorough review of existing data collection, assessment and research programmes. This information should be sent to ICES (environmental data) or OSPARCOM (input and some environmental data) as appropriate. This can be on a national, sub-regional or larger basis. The coordination of this submission of information will be in accordance with Table 2 (of main document). Existing procedures for information collection will be continued and the necessary coordination carried out by the Secretariat. This process should begin with existing data and continue with the compilation of data arising from any new monitoring, modelling and research activities created for the North Sea.

All data produced since the last QSR should be reported including relevant data sets from large projects or programmes (national, sub-regional or for larger areas). Special consideration should be given to those aspects that can only be studied on a North Sea wide or holistic basis, for example, hydrographic, climatic or atmospheric input data. Where possible, data sets shall be accompanied by comments on quality assurance activities carried out during their preparation. Also special attention should be paid to coastal zones.

Step 2: Data Compilation

The information from Step 1 will be tabulated and checked by ICES and OSPARCOM, as appropriate, to ensure that the data as described are correct. Statistical analyses are helpful here, for example, to produce graphical representations of the data.

Step 3: Data Evaluation

The information compiled under Steps 1 and 2 should be evaluated by competent scientists working within specific disciplines, eg hydrography, ecology, contaminant behaviour etc. Evaluations will be carried out by existing ICES and OSPARCOM groups or if necessary by the Task Force or by expert groups or by individual specialists brought in to consider specific topics.

Step 4: (a) Multidisciplinary Holistic Assessment
(b) Sub-regional Assessments

(a) The Task Force will use the information compiled, evaluated and assessed under Steps 1 - 3 to make a preliminary holistic assessment combining the data on a multi-disciplinary basis so that the Task Force can assign responsibilities for implementing follow-up actions in preparation for the final assessment. The precautionary approach would need to be taken into account when preparing the assessment and making recommendations for future work.

(b) In parallel with the preliminary holistic assessment, sub-regional studies will be carried out by the groups of countries identified in Table 2. These shall be carried out according to guidelines and specific questions drawn up by the Task Force. For example, Area 4 might, in particular, be studied in detail by scientists from Belgium, France, the Federal Republic of Germany, the Netherlands and the UK, with overall coordination provided by the Netherlands delegation. Although Table 2 defines lead and interested countries for specific sub-regions of the North Sea, this does not exclude other countries from participating in the assessment. For example, for the Skagerrak,

the Federal Republic of Germany might wish to participate. Detailed studies may be initiated through bilateral or multilateral arrangements directly between countries concerned and reported to NSTF as appropriate, or they can be initiated by the NSTF itself.

Step 5: Publication of NSTF Quality Status Report

The final report will be published in 1993 as one overall holistic assessment, supplemented, as appropriate, by more detailed reports on sub-regions

PARTICIPANTS IN THE NORTH SEA TASK FORCE

CHAIRMAN

Mr. P.H.A. Hoogweg	Ministry of Transport & Public Works Rijkswaterstaat, Tidal Waters Division P.O. Box 20907 2500 EX The Hague THE NETHERLANDS

BELGIUM

Dr. G. Pichot	Management Unit of the North Sea Mathematical Models (MUMM) Ministry of Environment Gulledelle 100 B - 1200 Brussels BELGIUM
Dr. W. Vyncke	Ministry of Agriculture; Rijksstation voor Zeevisserij Ankerstraat 1 B - 8400 Oostende BELGIUM

DENMARK

Mr. K.F. Jorgensen	Ministry of the Environment National Agency of Environmental Protection Strandgade 29 DK-1401 Copenhagen DENMARK
Mr. T.E. Korkman	National Agency of Environmental Protection Strandgade 29 DK - 1401 Copenhagen K DENMARK
Mrs. H. Munk Sorensen	Århus County Administration; Environmental Office Lyseng Alle 1 8270 Hojbjerg DENMARK
Mr. H. Karup	National Agency of Environmental Protection Strandgade 29 DK-1401 Copenhagen K DENMARK

EEC

Mr. J. Vaccarezza

Commission des Communautés Europeènnes;
Direction Environnement; DG XI
200 Rue de la Loi
B - 1049 Bruxelles
BELGIUM

Dr. G. Müller

Commission des Communautés Européennes
Direction générale XI
Rue de la Loi 200
B - 1049 Bruxelles
BELGIUM

FEDERAL REPUBLIC OF GERMANY

Dr. T. Pommeranz

Bundesministerium für Umwelt
Naturschutz & Reaktorsicherheit
Postfach 12 06 29
D - 5300 Bonn 1
FEDERAL REPUBLIC OF GERMANY

Dr. B. Bayer

Umweltbundesamt
Wasserwirtschaft III 3.1
Bismarckplatz 1
D - 1000 Berlin 33
FEDERAL REPUBLIC OF GERMANY

Mr. H. Carlson

Deutsches Hydrographisches Institut
Bernhard-Nocht-Strasse 78
D - 2000 Hamburg 4
FEDERAL REPUBLIC OF GERMANY

FRANCE

Mr. J-M. Massin

Ministère de l'Environnement; Direction de
l'Eau et de la Prevention des Pollutions
et des Risques
14 Bd du Général Leclerc
F - 92524 Neuilly sur Seine Cedex
FRANCE

Mr. P. Michèl

Institut Français de Recherches pour
l'Exploitation des Mers (IFREMER)
Centre de Nantes
B.P. 1049
F - 44037 Nantes
FRANCE

Dr. P. Chardy

IFREMER Centre de Brest
Dt Environnement
B P 70
F - 29263 Plouzane
FRANCE

ICES

Dr. J.F. Pawlak	Environment Officer ICES Palaegade 2 DK-1261 Copenhagen K DENMARK
Dr. J. Portmann *(Vice-Chairman)*	c/o Ministry of Agriculture, Fisheries and Food Fisheries Laboratory Remembrance Avenue Burnham on Crouch Essex CM0 8HA UNITED KINGDOM

THE NETHERLANDS

Mr. Ph.M. van der Haer	Ministry of Transport & Public Works; Rijkswaterstaat, Head Division P.O. Box 20906 2500 EX The Hague THE NETHERLANDS
Mr. B.A. Bannink	Rijkswaterstaat, Tidal Waters Division P.O. Box 20907 NL - 2500 EX The Hague THE NETHERLANDS
Mr. J. Visser	Ministry of Transport & Public Works c/o Rijkswaterstaat, Tidal Waters Division P.O. Box 20907 NL - 2500 EX The Hague THE NETHERLANDS

NORWAY

Mr. J.H. Koefoed	State Pollution Control Authority P.O. Box 8100 Dep. N - 0033 Oslo 1 NORWAY
Dr. T. Bokn	Norwegian Institute for Water Research P.O. Box 33, (Brekkevn 19) Blindern N - 0313 Oslo 3 NORWAY
Mr. T. Johannesson	State Pollution Control Authority P.O. Box 8100 Dep. N - 0032 Oslo 1 NORWAY
Mr. L-O. Reiersen	State Pollution Control Authority P O Box 8100 Dep N - 0032 Oslo 1 NORWAY

NORWAY cont'd

Mr. S. Borgvang	State Pollution Control Authority P O Box 8100 Dep N - 0032 Oslo 1 NORWAY
Mr. H. Skjodal	Institute of Marine Research P O Box 1870 Nordnes NORWAY

OSPARCOM

Mr. P.A. Hayward *(up to August 1989)* Ms. C. Nihoul *(from August 1989)*	Secretary of the Commissions 48 Carey Street London WC2A 2JE UNITED KINGDOM
Dr. R.J. Otter *(Chairman of TWG)*	Department of the Environment Room A416, Romney House 43 Marsham Street London SW1P 3PY UNITED KINGDOM
Dr. H. Bergmann *(Chairman of JMG)*	Bundesanstalt für Gewässerkunde Postfach 309 D - 5400 Koblenz FEDERAL REPUBLIC OF GERMANY

SWEDEN

Mr. R. Ferm	National Environment Protection Board Box 1302 S-171 25 Solna SWEDEN
Dr. P. Olsén	National Environment Protection Board Technical Dept. Box 1302 S-171 25 Solna SWEDEN

UNITED KINGDOM

Dr. P.C. Reid	Department of the Environment Room A 217, Romney House 43 Marsham Street London SW1F 3PY UNITED KINGDOM
Mr. H. Cleary	Department of the Environment Room A217, Romney House 43 Marsham Street London SW1P 3PY UNITED KINGDOM

UNITED KINGDOM cont'd

Dr. J. Davies

Department of the Environment
Room A 217, Romney House
43 Marsham Street
London SW1P 3PY
UNITED KINGDOM

Dr. R.J. Pentreath

Ministry of Agriculture, Fisheries & Food
Directorate of Fisheries Research
Lowestoft
Suffolk NR33 0HT
UNITED KINGDOM

SECRETARIAT

Mr. S. Carlyle

The North Sea Task Force
The Oslo and Paris Commissions
New Court
48 Carey Street
London WC2A 2JE
UNITED KINGDOM

OBSERVERS

IRELAND

Mr. D. Rothwell

Department of the Marine
Leeson Lane
Dublin 2
IRELAND

PORTUGAL

Mr. J.L. Cardoso

Comissiao Nacional contra Poluicao do Mar
Marinha - Instituto Hidrografico
Rua Das Trinas 49
1296 LISBOA CODEX
PORTUGAL

NORTH SEA MINISTERS' CONFERENCE

Mr. H. van Hoorn

North Sea Ministers' Conference
P.O. Box 5807
2280 HV Rijswijk
The Netherlands

For further information about the work of the North Sea Task Force, or to obtain additional copies of this report, please contact:

The Secretary
North Sea Task Force
New Court
48 Carey Street
LONDON WC2A 2JE

Tel: 01-404 0169
Telex: 21185 BOSPAR G
Fax: 01-831 7427

Price, including postage and packing: £3.00

ISBN 1872349 00 5