Annual Report of the OSPAR Commission, 2001 – 2002

Contents

chapter 1

The OSPAR Commission

1. The OSPAR Commission ("OSPAR") is the means by which the countries of the North-East Atlantic cooperate in protecting their seas. It was created by the Convention for the Protection of the Marine Environment of the North-East Atlantic, which was opened for signature in Paris on 22 September 1992, and entered into force on 25 March 1998.

2. This Annual Report for the year 1 July 2001 – 30 June 2002 gives an overview of the way in which this cooperation has been organised, the progress that has been made, and the way in which future work will be approached.

The origins of the Commission

3. OSPAR is the latest stage in developments which began in the late 1960s.

The Oslo Convention

4. In 1967, the oil tanker *Torrey Canyon* ran aground on the Seven Stones reef to the south-west of England. This led to the release of 117 000 tonnes of oil into the sea, with disastrous consequences for the environment. These events proved to be a pivotal point for international cooperation to combat marine pollution in the North-East Atlantic. It ultimately stimulated the signature, in 1969, of the Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil (the "Bonn Agreement").

5. At the same time, concern about the effects of chemicals on the environment was leading to stricter controls over chemical waste. One reaction was the rapid growth in the dumping of such waste at sea. In 1968 the International Council for the Exploration of the Sea (ICES) drew attention to the vast quantities of waste which were being disposed of in this way.

6. Several initiatives by Governments resulted. The Nordic States met in January 1971, and agreed both to adopt bans on dumping toxic and persistent substances from their own ships, and to set up an international conference to consider an international agreement on the subject. The German Government was considering a similar initiative. Preparations were in hand for the 1972 United Nations Stockholm Conference on the Human Environment, and a meeting was organised in London in June 1971 to prepare material for that conference on the issue of dumping at sea.

7. Events then precipitated international action. A Dutch ship, the *Stella Maris*, sailed from the port of Rotterdam on 16 July 1971 to dump 650 tonnes of chlorinated chemical waste in the North Sea. The combined weight of public opinion and the views of the Governments of many North-East Atlantic countries obliged her to return to port on 25 July without carrying out the planned dumping. While this was happening, a meeting between Belgium, France, the Federal Republic of Germany, the Netherlands and the United Kingdom started on 23 July 1971 in Paris, as a result of the London meeting in June 1971, to develop a common position on the issue of dumping. The coincidence of the events led to agreement to develop international rules to control dumping at sea. In cooperation with the Nordic States, the Oslo Convention was negotiated and signed on 15 February 1972 - within eight months of these events. It entered into force on 6 April 1974.

The Paris Convention

8. In June 1972, the UN Stockholm Conference on the Human Environment adopted a declaration setting out the Stockholm Principles. Principle 7 states that "States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea."

9. To give effect to this principle for the North-East Atlantic, the French Government organised a diplomatic conference in Paris in December 1972. There was ready agreement to draw up an international agreement dealing with the prevention of marine pollution by discharges of dangerous substances from land-based sources, watercourses or pipelines, but the details proved more

complex to resolve than those of the Oslo Convention. Nevertheless, by June 1974, all the details had been resolved and the Paris Convention for the Prevention of Marine Pollution from Land-Based Sources was opened for signature. It entered into force on 6 May 1978.

The Oslo and Paris Commissions

10. The Oslo Commission was established to administer the Oslo Convention. Initially, the Commission's task was to regulate and control the dumping at sea of industrial wastes, sewage sludge and dredged material and the incineration at sea of liquid industrial wastes. The dumping of industrial wastes and sewage sludge and incineration at sea have now been phased out.

11. The Paris Commission was established to administer the Paris Convention. The Commission regulated and controlled inputs of substances and energy to the sea from land-based sources (via the atmosphere, rivers, or direct discharges) and also from offshore installations. The Commission was involved in a thorough review of the use and manufacture of various substances in order to establish the best environmental practice or best available techniques to prevent pollution. It also embarked on a series of measures to protect parts of the Convention area adversely affected by nutrient enrichment ("eutrophication"), which has been linked to accelerated growth of algae, blooms of toxic algae and oxygen depletion with consequent deaths of benthic organisms and fish. From the start, the Oslo Commission and the Paris Commission worked together, and set up a common secretariat, based in London.

The OSPAR Convention

12. With the approach of the twentieth anniversary of the Oslo Convention, there was general agreement that the Oslo and Paris Conventions needed to be updated, to take account of the developments in thinking about the protection of the marine environment. Accordingly, a review was put in hand to update and consolidate the Conventions.

13. This review culminated in a meeting of the Oslo and Paris Commissions at Ministerial level in Paris on 21-22 September 1992. This meeting was attended by Ministers responsible for the marine environment in the 14 States which were Contracting Parties or signatories to one or both of the Oslo and Paris Conventions, by Switzerland and by the relevant member of the Commission of the European Communities. The most important outcome of this Ministerial meeting was the adoption of a new Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention"), together with a Final Declaration and an Action Plan to guide the future work of the Commissions.

14. The main themes of the new Convention are set out in its recitals: the importance of the marine environment, the need for international cooperation to protect it, the developments in international law that led to Part XII (Protection and Preservation of the Marine Environment) of the UN Convention on the Law of the Sea, the need for more stringent measures in a regional context than are provided in conventions with a global scope, the consequent need for a new convention which addresses all sources of pollution of the marine environment and the adverse effects of human activities upon it.

15. The new Convention, amongst other things:

a. sets out a general obligation, in accordance with the detailed provisions of the Convention, to take all possible steps to prevent and eliminate pollution, to take the necessary measures to protect the North-East Atlantic against the adverse effects of human activities so as to safeguard human health and conserve marine ecosystems and, when practicable, to restore marine areas which have been adversely affected;

b. requires the application of:

   i. the precautionary principle;

   ii. the polluter pays principle;

   iii. best available techniques (BAT) and best environmental practice (BEP), including clean technology;

c. provides for the Commission established by the OSPAR Convention to adopt binding decisions;

d. provides for the participation of observers, including non-governmental organisations, in the work of the Commission;

e. establishes rights of access to information about the maritime area of the Convention; and

f. establishes the OSPAR Commission, as successor to the Oslo and Paris Commissions, to administer the Convention and to develop policy and international agreements in this field; the Commission is supported by an international secretariat based in London.

16. The most significant development in the new Convention was the scope it provided for new initiatives. The four annexes to the Convention cover the achievements under the Oslo and Paris Conventions:

a. Annex I: Prevention and elimination of pollution from land-based sources;

b. Annex II: Prevention and elimination of pollution by dumping or incineration;

c. Annex III: Prevention and elimination of pollution from offshore sources; and

d. Annex IV: Assessment of the quality of the marine environment.

New annexes and appendices can, however, be adopted to address problems in new fields. Nevertheless, the OSPAR Convention makes clear that questions related to the management of fisheries are appropriately regulated under international and regional agreements dealing specifically with such questions, and not under the OSPAR Convention.

17. Although the OSPAR Convention did not finally enter into force until early 1998, for all practical purposes, the Oslo and Paris Commissions have worked as one entity since 1992.

The Sintra Ministerial Meeting

18. To mark the entry into force on 25 March 1998 of the new Convention, a Ministerial Meeting of the OSPAR Commission was held in Sintra, Portugal, in July 1998. This meeting adopted a new Annex V to the OSPAR Convention, on the protection and conservation of the ecosystems and biological diversity of the maritime area.

19. Subject to special provisions to maintain the principle that the Convention does not deal with questions relating to the management of fisheries and to deal with the special features of maritime transport, this annex extends the competence of OSPAR to adopt programmes and measures to protect and conserve the ecosystems and biological diversity of the maritime area, to restore, where practicable, marine areas which have been adversely affected and to control relevant human activities.

20. In addition, the Sintra Ministerial Meeting adopted long-term strategies to guide the work of OSPAR. These are:

a. the OSPAR Strategy on the protection and conservation of ecosystems and biological diversity of the maritime area;

b. the OSPAR Strategy with regard to hazardous substances;

c. the OSPAR Strategy with regard to radioactive substances;

d. the OSPAR Strategy to combat eutrophication.

In 1999, in fulfilment of a commitment made at the Sintra meeting, the Commission further adopted:

e. the OSPAR Strategy on Environmental Goals and Management Mechanisms for Offshore Activities.

21. The outcome of the Sintra Ministerial meeting was summarised in the Sintra Statement which is available on the OSPAR website (www.ospar.org) and in the annual report for 2000-2001.

chapter 2

Hazardous Substances

The Strategy

22. The OSPAR Strategy with regard to Hazardous Substances sets the objective of preventing pollution of the maritime area by continuously reducing discharges, emissions and losses of hazardous substances, with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances.

23. As its timeframe, the Strategy further declares that the Commission will implement this strategy progressively by making every endeavour to move towards the target of the cessation of discharges, emissions and losses of hazardous substances by the year 2020.

24. The Strategy sets out a definition of hazardous substances, and provides that OSPAR will complete the development of a dynamic selection and prioritisation mechanism to select the hazardous substances to be given priority in its work. The implementation of the Strategy will concentrate on substances of the highest concern to the marine environment and make best use of resources. Effective action is to be taken when there are reasonable grounds for concern that hazardous substances introduced into the marine environment, or which reach or could reach the marine environment, may bring about hazards to human health, harm living and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects.

The Quality Status Report 2000

25. The main conclusions of the Quality Status Report 2000 (QSR 2000) (see chapter 7) on the identification of priorities for action on hazardous substances were that:

a. with sufficient resources to underpin the ambitious programme of work it implies, the OSPAR Strategy with regard to Hazardous Substances will provide a comprehensive and coherent approach to:
    i. identifying the hazardous substances of concern in relation to the OSPAR maritime area, ranking the priorities for action on them;
    ii. identifying their sources and the pathways by which they reach the marine environment; and
    iii. developing programmes and measures to achieve the aims of the strategy where adequate action is not being taken elsewhere;
b. it will be important to ensure that there is a corresponding effort in observing developments in the marine environment of the maritime area and in inputs to it, in order to chart the progress of the Strategy;
c. action was needed on certain specific points:
    i. in relation to antifouling treatments, the measures in PARCOM Recommendation 87/1 (on the use of tributyl-tin compounds) and PARCOM Recommendation 88/1 (on docking facilities) should be completed with the development of a measure on BAT for the disposal of organotin wastes resulting from the removal of such antifouling treatments from ships; and monitoring should be urgently undertaken on the impacts of alternatives to organotin antifouling treatments (for example, copper and booster biocides);
    ii. a review of action at the national level to implement PARCOM Decision 90/3 (emissions from mercury-cell chlor-alkali plants) and, if need be, OSPAR measures to facilitate this implementation;
    iii. an assessment of the implementation of PARCOM Decision 92/3 (phasing out of PCBs); and

iv. carrying forward work under the UNECE-LRTAP Convention on Persistent Organic Pollutants and completing the negotiations on a global convention on this topic under the aegis of the UN Environment Programme.

Summary of Progress 1998 - 2001

Identifying Chemicals for Priority Action

26. The Strategy, as adopted, contained both an initial version of the OSPAR List of Chemicals for Priority Action and a list of candidate substances for selection, assessment and prioritisation. Work was put in hand to review the candidate substances and other relevant lists of chemicals in order to review the List of Chemicals for Priority Action.

27. The first step was making an initial selection of the substances to be studied in more detail. This process was described in last year's annual report.

28. These substances were then ranked to establish which should be selected for priority action (again the process was described in more detail in last year's annual report). On the basis of this ranking and recommendations from the group of experts, OSPAR 2000 agreed that 7 substances of very high concern (having characteristics similar to those of Persistent Organic Pollutants, or meeting the most stringent cut-off criteria for persistence, bioaccumulation and toxicity) and 5 substances meeting less stringent criteria, but where there was clear evidence of use or environmental exposure, should be added to the OSPAR List of Chemicals for Priority Action.

29. OSPAR 2001 added 16 substances to the list. Two substances were added on the same basis as those already on the list. Although the other fourteen substances raised concerns as great as those already on the list, and were therefore appropriate for inclusion on this list, it was also clear that there is no current production or use interest in them. Since there is very limited, if any, exposure to them, there is no need for immediate action. Nonetheless, special arrangements were made to monitor and assess whether this remains the case.

Measures on specific substances or sectors

30. Work on specific substances or sectors is based upon:

a. developing Background Documents which describe the sources of hazardous substances and their pathways to the marine environment, quantify sources and assess the scale of the problems, assess what needs to be achieved, and develop options for measures;

b. agreeing descriptions of Best Available Techniques (BAT) and Best Environmental Practice (BEP);

c. adopting appropriate measures in the form of (binding) Decisions, (non-binding) Recommendations, and other agreements;

d. reviewing the measures adopted and assessing new monitoring information.

31. In 1999, 2000 and 2001, OSPAR addressed a number of sectoral themes: the emulsion poly-vinyl chloride (PVC) industry, the use of integrated crop management in reducing inputs of agricultural pesticides to the marine environment, and the Best Environmental Practice for the use of pesticides on amenity areas. It also addressed a number of specific substances: musk xylene; organic tin compounds; mercury; brominated flame retardants; nonylphenol/ nonylphenolethoxylates (NP/NPEs); pentachlorophenol (PCPs); polycyclic aromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); and short chain chlorinated paraffins (SCCPs).

Progress in 2001 - 2002 on Programmes and Measures

Identifying Chemicals for Priority Action

32. The work on the selection and prioritisation of hazardous substances continued. OSPAR 2002 agreed to publish on the OSPAR website the "OSPAR List of Substances of Possible Concern". These are 386 substances which are initially selected (on the basis of information on persistence, liability to bioaccumulate and toxicity) for the purpose of deciding whether they should be identified by the Commission for priority action. Data sheets for all these

386 substances are accessible on the OSPAR web site. Anyone interested in these substances who has any further or more recent information on them that might be useful in further work is invited to submit it to the Commission.

33. Procedures were established for (i) considering new information on substances already on the List of Substances of Possible Concern, (ii) selecting new substances of possible concern and for (iii) selecting substances via the Safety Net Procedure (that is, the procedure for identifying substances which do not meet the criteria on persistence, bioaccumulation and toxicity, but which nonetheless are of equivalent concern). On the basis of these procedures, the List of Substances of Possible Concern will be updated from time to time and the Commission will decide when a new ranking of this list should be carried out for a new round of the identification of priority substances. OSPAR 2002 agreed to publish the state of progress of these procedures together with the cut-off values for the selection criteria used in the initial selection procedure (as agreed by OSPAR 2001) in the form of a manual for the Dynamic Selection and Prioritisation Mechanism for Hazardous Substances (DYNAMEC). A summary of this DYNAMEC Manual is at Annex 1.

34. The work of reviewing the OSPAR List of Chemicals for Priority Action continued. On the basis of further work by the group of experts, OSPAR 2002 added 8 substances to the list. The current list is attached at Annex 2. Three of these substances or groups of substances (pentachloronaphthalene, naphthalene (chloro derivatives) and diosgenin) are classified as "no production or use interest" (see § 29 above). Two of the substances 1,5,9 cyclododecatriene and cyclododecane have been made subject to the special arrangements for intermediates described below. The other three (4-(dimethylbutylamino)diphenylamin (6PPD), trifluralin and clotrimazole) would be thoroughly investigated in the same way as the other substances on this list.

35. OSPAR 2001 had concluded that the appropriate priority action for substances on the OSPAR List of Chemicals for Priority Action will vary according to the circumstances. For chemicals which are used as intermediates in closed systems, OSPAR 2002 agreed that the appropriate actions are:

a. from time to time, Contracting Parties should include in their regular monitoring and surveys of intermediates in use, checks to see whether these chemicals are present and that the safeguards to avoid reasonable concerns that discharges, emissions and losses of the substances could reach the marine environment are still being met;

b. the observers representing the chemical industries should be invited to check from time to time whether their members know of any new production, import or use of these chemicals other than as intermediates in closed applications;

c. Contracting Parties should take the appropriate steps that are open to them to prevent the import or use, or the start of production, of these chemicals (other than as intermediates in closed applications) in circumstances in which they might reach and affect the North-East Atlantic;

d. Contracting Parties should ensure that, where any approval is sought from a public authority for an activity or development which could lead to discharges, emissions or losses of these substances to the maritime area, that authority should be able, and required, to take into account in its decision the need to control the risk of such discharges, emissions or losses to the maritime area;

e. every five years, commencing in 2003, Contracting Parties and, where appropriate, observers representing the chemicals industries should report to OSPAR:

   i. whether they have found any evidence that these chemicals are being produced, used or discharged without being subjected to safeguards to avoid reasonable concerns that discharges, emissions or losses of substances could reach the marine environment, and, if so, what action (if any) has been taken;

   ii. whether there have been any cases where applications have been made for approvals involving these chemicals, and, if so, what decision was taken.

36. OSPAR 2002, agreed, jointly with the European Community, to a common approach to the assessment of environmental risks to the marine environment. The final text of this will be settled

by a written procedure. OSPAR 2002 also agreed, in principle, on further guidance on the role of marine risk assessment within the framework of the OSPAR Strategy with regard to Hazardous Substances. When the final text of the common EU/OSPAR marine risk assessment methodology is settled, both guidance documents will be used as tools in the development of background documents on chemicals identified for priority action.

Measures on specific substances

37. OSPAR 2002 continued to develop action on the substances on the List of Chemicals for Priority Action. It agreed to publish background documents on seven substances and also agreed what follow up action was needed on them. The substances and a brief description of the actions agreed are as follows:

a. cadmium:
   - support for action within the European Community for:
     - the amendment of Council Directive 91/157/EEC and Commission Directive 1999/51/EC with respect to a ban of nickel/cadmium (NiCd) batteries for most applications;
     - a review of controls on import and marketing;
     - the development of guidance on the use of sewage sludge in agriculture;
     - the establishment of common rules on cadmium content of phosphate fertilisers and fertilisers from animal origin;
     - ensuring that in BAT Reference Documents (BREFs) for waste incineration and other waste disposal activities cadmium emissions are minimised;
   - the development of initiatives to promote substitution of NiCd batteries;
   - the promotion of recycling and “clean technology” for batteries and solar cells;
   - the identification of the need for further work on the non-ferrous metal industry and the iron and steel industry;
   - the improvement of the management of tailings and waste rock from mining activities;
   - the review of monitoring activities, if required; and
   - a review of the situation at a suitable future date;

b. dicofol:
   - action by Contracting Parties to cancel authorisations for the use as plant protection agent;
   - a review of the 91/414/EEC Plant Protection Product dossier;
   - proper testing of the endocrine-disrupting potential of dicofol after such test methods for chemicals have been developed and agreed;
   - the development of a monitoring strategy;
   - a consideration of the scope for taking initiatives under the Stockholm POP Convention; and
   - a review of the situation at a suitable future date;

c. dioxins (PCDD and PCDF):
   - a review of progress under the EC strategy for dioxins, furans and PCBs and proposals for action to cover gaps of interest to OSPAR;
   - a review of whether any OSPAR action would be appropriate on non-IPPC and non-industrial sources;
   - the development of a monitoring strategy for these substances; and
   - a review of the situation at a suitable future date;

d. endosulphan:
   - support for action within the European Community:

  - to severely restrict, or to ban the use of endosulphan;
  - to assist in the work for the possible designation as priority hazardous substance on the list of priority substances under the Water Framework Directive;
- Contracting Parties to report on remaining permitted uses;
- the development of a monitoring strategy taking into account that Contracting Parties:
  - who permit use, or receive loads from others, should monitor and report endosulphan and its metabolites;
  - who permit use, should report sale/use statistics;
- a review of the situation at a suitable future date;

e. hexachlorocyclohexane (lindane):
- assist the EC on work for the possible designation of all HCH isomers as priority hazardous substances on the list of priority substances under the Water Framework Directive;
- to note the end of agricultural use in June 2002;
- a review of the effect of EC measures and consideration of the need for OSPAR action on remaining uses;
- development of a monitoring strategy;
- coordinate efforts towards severe restriction or ban of all uses under the UN-ECE LRTAP framework;
- coordinate efforts to include lindane in a revised list of POP substances under the Stockholm Convention;
- a review of the situation at a suitable future date;

f. lead and organic lead compounds:
- review progress of the EC study on lead in ammunition and fishing sinkers which may be considered under the marketing and use directive 76/769/EEC;
- examination of reports on the substitution of lead in PVC and the substitution of lead in paints;
- examination of a report on the uptake of lead and other trace component from barite in marine organisms from the offshore industry;
- the development of a monitoring strategy taking into account the need for better monitoring arrangements of secondary sources of pollution and to include in the Joint Assessment and Monitoring Programme (JAMP) arrangements for the collection of data on lead-leaching from coastal waste-disposal sites;
- assist the EC on work for the possible designation of lead and its compounds as priority hazardous substances on the list of priority substances under the Water Framework Directive;
- a review of the situation at a suitable future date;

and

g. methoxychlor:
- to note the phase-out as agricultural pesticide under the Plant Protection Products Directive 91/414/EEC;
- recommendation to Contracting Parties who are not EU/EEA Member States to follow the EC phase out and report accordingly;
- Contracting Parties to ensure that national authorities responsible for the regulation of human and veterinary medicines are aware of the background document and report accordingly;

- to invite the European Agency for the Evaluation of Medicinal Products to keep OSPAR informed on any consideration of future proposals to authorise methoxychlor;
- the development of a monitoring strategy;
- a consideration of the scope for taking initiatives under the Stockholm Convention on POPs;
- a review of the situation at a suitable future date.

38. The executive summaries of these background documents are reproduced at Annex 3. OSPAR 2002 also agreed that all these background documents should be drawn to the attention of other relevant international forums.

Measures on the primary aluminium industry

39. OSPAR 2002 agreed to publish a background document on discharges and emissions from the sector of the primary aluminium electrolysis industry using the Söderberg technology. The executive summary is at Annex 4.

40. OSPAR 2002 also adopted OSPAR Recommendation 2002/1 on Discharge Limit Values for Existing Aluminium Electrolysis Plants. This Recommendation supplements OSPAR Recommendation 98/2 on Emission and Discharge Limit Values for Existing Aluminium Electrolysis Plants by covering discharges to water from existing aluminium electrolysis plants. It does not apply to anode-baking operations.

Measures on crematoria

41. OSPAR 2002 agreed to publish a report on mercury emissions from crematoria and their control in the OSPAR Convention area. This work follows up the OSPAR background document on mercury published in 2000, in which crematoria were identified as a significant source of mercury inputs to the sea. The report also describes various abatement techniques which are available for reducing mercury emissions from crematoria and the costs associated with installing these.

Measures on the chlor-alkali sector

42. OSPAR 2001 had noted that there was no consensus for the development of a new OSPAR measure for the chlor-alkali industry, nor any support for an additional measure to strengthen the existing measure by a binding OSPAR Decision to phase out the mercury-cell process by 2020. In the absence of such a consensus, OSPAR acknowledged that PARCOM Decision 90/3 on Reducing Atmospheric Emissions from Existing Chlor-Alkali Plants remained valid, and had to be implemented.

43. A report format for national implementation reports on this measure was agreed. Implementation reporting should focus on compliance and the need to obtain further information on how national policies with respect to the phasing out of mercury cell chlor-alkali plants will be implemented. Reports will be submitted for the first time in 2003.

Work carried out in OSPAR and the EC on BAT/BEP

44. OSPAR 2002 set up an intersessional correspondence group to consider how to make the best use of developments and measures on BAT/BEP measures and diffuse pollution within the EC framework and OSPAR in achieving the OSPAR objectives for hazardous substances.

Progress in 2001 - 2002 on monitoring and assessment

Riverine and direct inputs

45. OSPAR 2002 agreed to publish the Report for 2000 on the comprehensive study of riverine inputs and direct discharges (RID) from Contracting Parties which are coastal states of the maritime area. Input data for substances carried to the maritime area of the OSPAR Convention by rivers and direct discharges are important in that they are one of the key pathways between the sources of substances of concern and their presence and effects in the maritime area. For the 2000 study, data sets on riverine inputs and direct discharges were provided by Denmark,

Germany, Ireland, the Netherlands, Norway, Portugal, Sweden, Spain and the United Kingdom. Only riverine inputs were reported by Belgium[1] and France (nutrients and suspended matter only). Iceland[2] did not provide input data for 2000. (The study covers both hazardous substances and nutrients. The results on nutrients are dealt with in the chapter on eutrophication.)

46. The geographical coverage for 2000 has improved compared to the coverage in previous years. Spain has increased the number of RID catchments for which data is reported. This additional input information produces an apparent increase in total inputs. This is, of course, not a "real" increase and should be discounted in assessing the data. Significant gaps still, however, occur in the data from several Contracting Parties. The part of the maritime area best covered remains the OSPAR Region II, the Greater North Sea, and especially the main body of the North Sea, although even here gaps still exist. The reporting of mandatory and voluntary determinands in 2000 was also improved in comparison with 1999. However, several Contracting Parties did not report data for all mandatory parameters. All reporting Contracting Parties provided data on inputs of heavy metals with the exception of Denmark and France. There are a number of gaps as regards the reporting of data for inputs of γ-HCH and/or PCBs (Denmark, France, Ireland, Norway, Portugal and Sweden for all inputs, and the Netherlands for direct inputs) and suspended particulate matter (Denmark, Sweden for rivers). A number of additional parameters, not obligatory under the RID programme, were reported by Norway. Norway has reported on inputs from fish-farming because in Norway this activity contributed a significant part of the inputs of nitrogen and phosphorus.

47. Table 1 shows a summary of direct and total waterborne inputs for these regions in 2000. Figure 1 shows graphically input data for 1990-2000 for cadmium, mercury, lead and copper.

---

1 Previously existing direct discharges no longer exist.

2 Iceland stated in 1988 that it had no plans to monitor riverine inputs; however, Iceland announced in 1996 that it was setting up a monitoring plan which would also result in calculation of riverine inputs.

Table 1: Direct and total waterborne inputs to the Greater North Sea and the Celtic Seas in 2000

Sea Area			Cd [t]	Hg [t]	Cu [t]	Pb [t]	Zn [t]	g-HCH [kg]	PCBs(1) [kg]	NH4-N [kt]	NO3-N [kt]	PO4-P [kt]	Total N [kt]	Total P [kt]	SPM(2) [kt]
North Sea															
	Kattegat	(lower estimate)	0,6	0,12	44	12,4	144	NI	NI	2,2	50	0,7	74	1,8	0,0
		(upper estimate)	0,6	0,12	44	12,4	144	NI	NI	2,2	50	0,7	74	1,8	0,0
	Skagerrak	(lower estimate)	2,5	0,7	139	44	519	33	0	3,9	36	0,7	71	2,5	555
		(upper estimate)	2,5	0,8	139	44	519	33	0	5,1	36	0,7	71	2,5	558
	North Sea	(lower estimate)	19	7,2	966	863	4413	378	179	60	682	35	910	59	8202
	(main body)	(upper estimate)	36	7,9	981	897	4471	638	1074	61	688	36	916	60	8302
	Channel	(lower estimate)	0,7	0,03	78	24	235	13	0	26,8	148	9,4	210	14,7	1134
		(upper estimate)	0,9	0,06	78	26	236	24	50,7	26,8	148	9,4	210	14,7	1136
Irish Sea		(lower estimate)	2,8	0,6	139	141	815	10	4	13	65	6,3	71	9	665
		(upper estimate)	4,2	0,8	141	146	821	88	426	13	66	6,5	71	9	671
Celtic Sea		(lower estimate)	2,6	0,1	120	69	854	11	6,5	10	115	5,3	73	7,1	1171
		(upper estimate)	5,7	0,2	122	94	854	60	131	10	115	5,3	73	7,1	1171

Note: Some Contracting Parties have not submitted information on direct inputs because under the current Principles of the Comprehensive Study, these inputs do not fall under the 90 % (of total inputs) monitoring requirement.

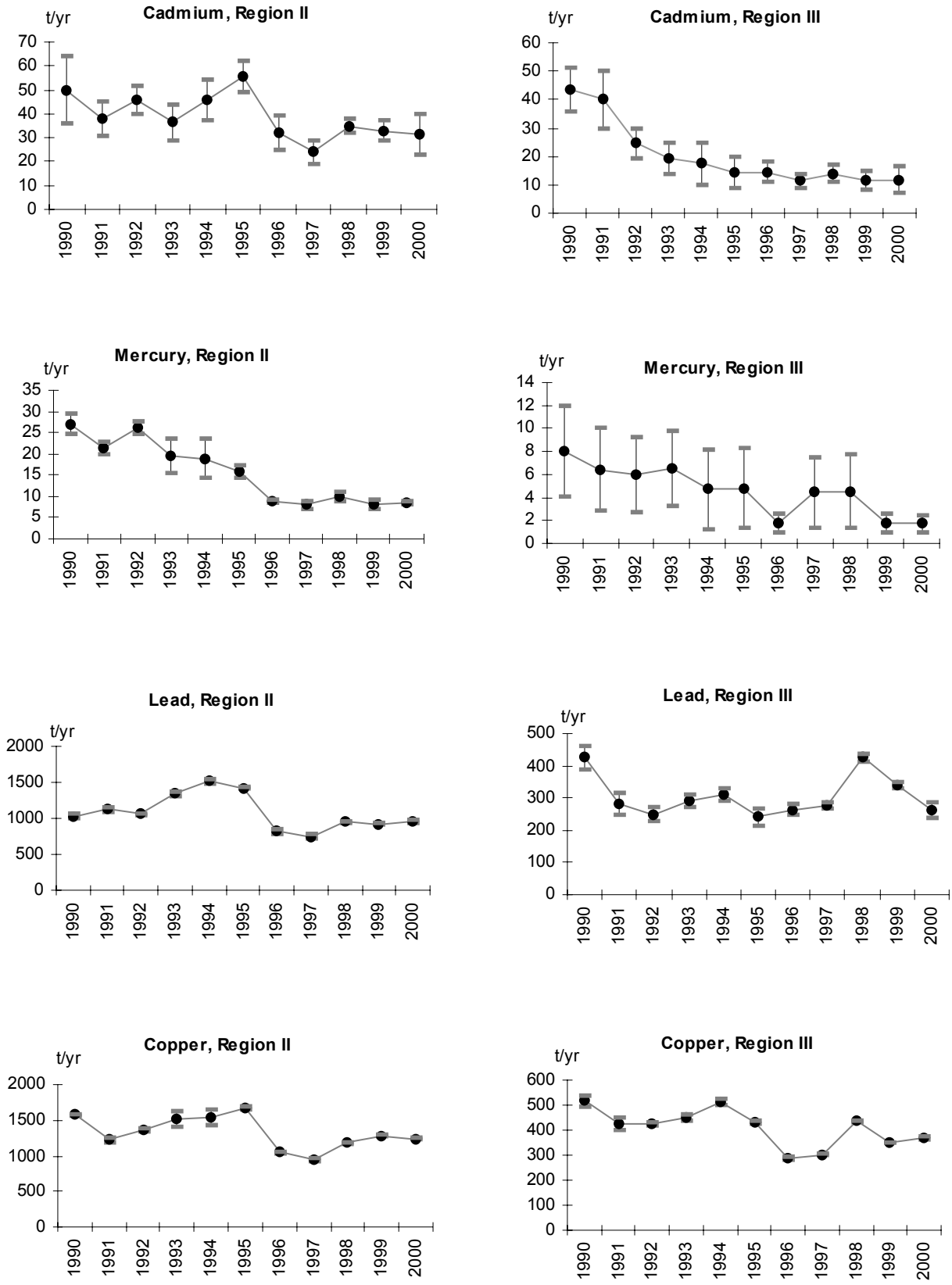

Figure 1

Graphical representation of input data for 1990-2000 for cadmium, mercury, lead and copper

Comprehensive Atmospheric Monitoring Programme (CAMP)

48. OSPAR 2002 approved a report on the results of monitoring undertaken for CAMP during 2000. The programme calls for mandatory monitoring of a range of nutrients, heavy metals and organic compounds in precipitation and air, and encourages participation in a voluntary monitoring of additional compounds. Monitoring should be conducted at monitoring stations located in proximity to the coast. Most stations do meet the ten kilometre objective. The station furthest from the coast is located some 26 kilometres inland.

49. A larger number of stations have reported than in previous years. All countries submitted data. Participation in the mandatory programme for components in precipitation is reasonable. However, some toxins, e.g. γ-HCH and mercury, are not widely monitored. Consideration may be given to increased monitoring of these components. Monitoring of airborne compounds is at a similar level of compliance. Rather less attention is given to the voluntary programme, notably the precipitation element in which organic substances feature.

50. Metal and organic concentrations are frequently below the detection limits of analytical devices. In some cases detection limits are unusually high. Side-by-side samples analysed at different laboratories yield large differences in estimates. Similarly, there are clear differences in the estimates provided by different countries which may well reflect factors other than differences in environmental occurrences.

51. The geographical, temporal and component coverage of the air quality programme has improved in recent years and, together with good efforts by Contracting Parties in reviewing historical data submissions, the air database is now capable of allowing temporal and spatial assessments of pollutant supply.

Coordinated Environmental Monitoring Programme (CEMP)

52. The Environmental Assessment and Monitoring Committee (ASMO) adopted Technical Annexes to the JAMP Guidelines for monitoring contaminants in sediments, both on the normalisation of contaminant concentrations and on analytical methods for the determination of metals in sediments.

53. With the adoption of these Technical Annexes, the obstacles to the application by Contracting Parties of the JAMP Guidelines on monitoring contaminants in sediments have been removed and Contracting Parties can begin monitoring under the CEMP from 1 January 2003.

54. ASMO also adopted a revised Technical Annex 3 (TBT-specific biological effects monitoring) to the OSPAR Guidelines for Contaminant-specific Biological Effects Monitoring. All Contracting Parties, with the exception of Sweden, were either already monitoring, or would be able to commence monitoring in 2003, of TBT concentrations in sediments and TBT-specific biological effects under the CEMP.

Joint assessment of inputs to and concentrations in the marine environment

55. Contracting Parties completed a number of joint assessments in 2001 and 2002. On the basis of this work, ASMO agreed in principle that the joint/integrated assessment approach should be promoted and embodied in the JAMP. However, recognising that, in certain circumstances, joint/integrated assessment may not be practicable because of resource implications and/or the lack of adequate data sets. ASMO recommended that Contracting Parties should individually or jointly seek to determine, and then focus on, those areas where joint (integrated) assessment is practicable and will contribute to the overall assessment of the maritime area and/or evaluation in terms of meeting the objectives of the respective OSPAR Strategy.

Chlor-alkali industry

56. OSPAR also published a report on mercury losses in 2000 from the chlor-alkali industry. This included data on the reduction in mercury emissions since 1990 (see figure 2) and showed that all the mercury-cell chlor-alkali plants operating on the territory of OSPAR Contracting States comply

with the limit value for air emissions (established by PARCOM Decision 90/3) of 2 g of mercury/tonne of chlorine produced; actual values range from 0,13 to 2,0 g per tonne. The extent to which these values are considered to reflect BAT in general or only for individual plants concerned is not clear. However, the EC Reference Document on Best Available Techniques in the Chlor-Alkali Industry (August 2000) identified best available techniques which result in emissions that are much lower than the limit value of 2 g Hg/t Cl_2 specified in PARCOM Decision 90/3. The report also showed:

a. after several years of more or less stable mercury-cell-based production capacities, these chlorine production capacities have further decreased in 2000; capacity reductions in Germany and the Netherlands seem to be mainly responsible for this decrease;

b. mercury losses through product, waste-water and air have slightly decreased from 1999 to 2000, except for the UK, for which a slight increase is indicated (as already observed for 1999); this is due to a temporary problem of the water supply and maintenance activities in one plant. Air emissions from three plants in Spain indicate a substantial decrease due to technical improvements in these plants with a view to further reducing these emissions;

c. over the years, atmospheric emissions of mercury have been significantly reduced. Subsequent to 1998, however, UK air emissions have slightly increased.

Whole effluent assessment

57. OSPAR 2002 agreed to publish a "Survey on Genotoxicity Test Methods for the Evaluation of Waste Water within Whole Effluent Assessment". This survey serves as a supplement to the background document concerning the development of programmes and measures relating to whole effluent assessment published by OSPAR in 2001. The executive summary from the report is reproduced at Annex 5.

Reporting on the implementation of measures

58. OSPAR 2002 agreed to publish overview assessments of the implementation of the following measures:

- PARCOM Recommendation 89/3 on Programmes and Measures for Reducing Mercury Discharges from Various Sources;
- PARCOM Recommendation 89/5 Concerning Refineries;
- PARCOM Recommendation 92/1 on BAT for Plants Producing Anodes and for New Electrolysis Installations in the Primary Aluminium Industry;
- PARCOM Decision 92/3 on the Phasing Out of PCBs and Hazardous PCB Substitutes;
- PARCOM Recommendation 92/5 Concerning BAT in the Pharmaceutical Manufacturing Industry;
- PARCOM Recommendation 92/8 on Nonylphenol Ethoxylates;
- PARCOM Recommendation 93/1 on the Limitation of Pollution from Existing Primary Iron and Steel Production Installations;
- PARCOM Recommendation 93/2 on Further Restrictions on the Discharge of Mercury from Dentistry;
- PARCOM Recommendation 94/1 on BAT for New Aluminium Electrolysis Plants;
- PARCOM Recommendation 94/2 on BAT and BEP for the Integrated and Non-Integrated Sulphite Paper Pulp Industry;
- PARCOM Recommendation 94/3 on BAT and BEP for the Integrated and Non-Integrated Kraft Pulp Industry;

- PARCOM Recommendation 94/4 on BAT for the Organic Chemical Industry;
- PARCOM Decision 95/1 on the Phasing Out of Short-Chained Chlorinated Paraffins;
- PARCOM Decision 95/2 on Discharge and Emission Limit Values for the Integrated and Non-Integrated Sulphite Paper Pulp Industry;
- PARCOM Decision 95/3 on Discharge and Emission Limit Values for the Integrated and Non-Integrated Kraft Pulp Industry;
- PARCOM Recommendation 97/2 on Measures to be Taken to Limit Emissions of Heavy Metals and Persistent Organic Pollutants due to Large Combustion Plants (≥50 MWh).

59. OSPAR 2002 agreed that in these overview assessments for Contracting Parties that had not submitted national implementation reports, the following note should be included “no evidence supplied that this measure has been implemented”. Even allowing for this, however, the reports show the substantial effort that has gone into implementing these measures and the substantial progress that has been made.

60. Following the discussions held at OSPAR 2001 on the need to improve implementation reporting, OSPAR 2002 further agreed that the Secretariat should continue to report to the Commission on progress of implementation reporting together with progress on other annual reporting tasks of Contracting Parties and that a next report on the timeliness in submitting reports should be laid before the Ministerial Meeting in 2003 to show the need for higher priority, and/or more resources, to be given to achieving OSPAR reporting requirements.

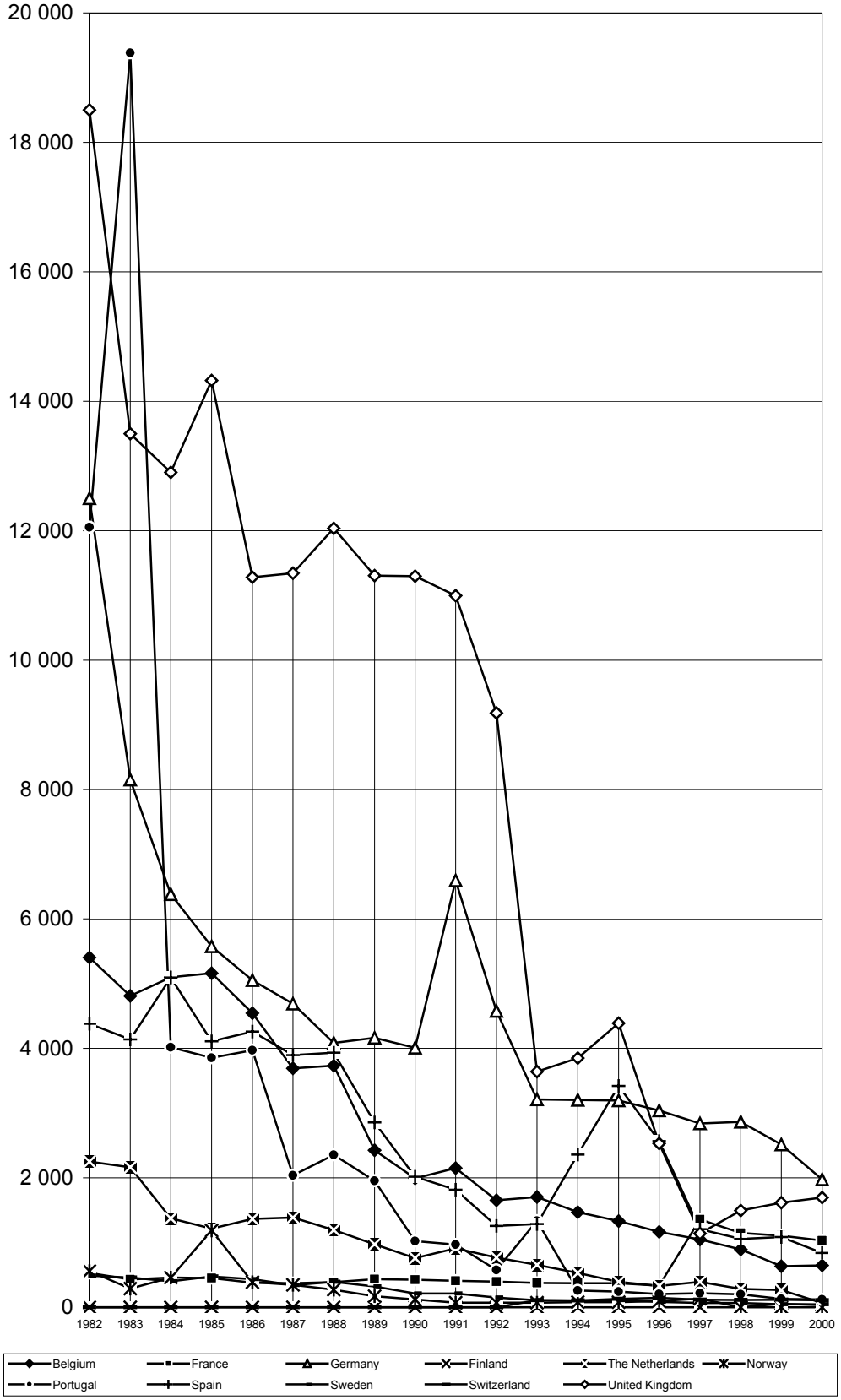

Figure 2: Mercury Losses through Product, Wastewater and Air

(in kilograms per year, sum of mercury losses to product and wastewater from national plants discharging into the OSPAR catchment area plus atmospheric emissions from all national plants)

chapter 3

Radioactive Substances

The Strategy

61. The OSPAR Strategy with regard to Radioactive Substances, including waste, sets the objective of preventing pollution of the maritime area from ionising radiation through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances. In achieving this objective, the following issues should, *inter alia*, be taken into account:

a. legitimate uses of the sea;

b. technical feasibility;

c. radiological impacts on man and biota.

62. As its timeframe, the Strategy further declares that by the year 2020 the Commission will ensure that discharges, emissions and losses of radioactive substances are reduced to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, emissions and losses, are close to zero.

63. The Strategy sets out a definition of radioactive substances, and provides that OSPAR will identify, assess and prioritise radioactive substances and/or human activities which give rise to concern about the impact of discharges, emissions or losses of radioactive substances. Effective action is to be taken when there are reasonable grounds for concern that radioactive substances introduced into the marine environment, or which reach or could reach the marine environment, may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between inputs and effects.

The Quality Status Report 2000

64. The main conclusions of the QSR 2000 (see chapter 7) on the identification of priorities for action on radioactive substances are that within the framework of the implementation of the OSPAR Strategy with regard to Radioactive Substances, it is important to develop environmental quality criteria for the protection of the marine environment from adverse effects of radioactive substances and to report on progress by 2003. The investigations of the significance of possible leakage from the sunken nuclear submarines and from old dumpsites should be continued. If appropriate, an adequate policy to prevent pollution from such sources should be developed and implemented.

Summary of Progress 1998 - 2001

65. A Progress Report on the implementation of the OSPAR Strategy with regard to Radioactive Substances was adopted by OSPAR 2000. Following the work carried out on this progress report, OSPAR 2000 adopted a Programme for the More Detailed Implementation of the OSPAR Strategy with regard to Radioactive Substances. This provides for the submission of national plans which will show how the elimination or reduction of radioactive substances from both nuclear and non-nuclear sources will be achieved to meet the 2020 goal on radioactive discharges, emissions and losses and will support the development of a collective overview of progress towards this goal. OSPAR 2000 and 2001 also adopted measures stressing the need for review of current authorisations for discharges and releases of radioactive substances from nuclear reprocessing plants. France and the UK abstained, and are not therefore bound by these measures, but they stated that they were carrying out reviews of the authorisations of their nuclear reprocessing plants.

Progress in 2001-2002 on Programmes and Measures

66. The work mainly focused on preparations for work required under the Programme for the More Detailed Implementation of the Strategy with regard to Radioactive Substances with a view to reporting on progress to the Ministerial meeting of the OSPAR Commission in 2003.

67. OSPAR 2002 noted the progress made by the three intersessional working groups on the establishment of baselines for discharges of radioactive substances, their concentrations in the marine environment and the resultant radiation doses to members of the public by which to evaluate progress in implementing the Strategy. OSPAR 2002 also urged Contracting Parties to finalise their national reports on the implementation of the strategy as soon as possible and tasked an Ad-hoc Woking Group on Radioactive Substances to examine these reports.

68. OSPAR 2002 agreed to publish a report on discharges of radioactive substances into the maritime area by non-nuclear industry. Submissions were received from Germany, Ireland, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom. The report has also drawn on additional sources of information, in particular the MARINA II study carried out for the European Commission. Although this report cannot provide a fully complete overview of the regulation of, and the discharges into the marine environment from, non-nuclear industry, however, it is sufficient to indicate broadly the sectors of industry which are the important sources of radioactive discharges. The executive summary is at Annex 6.

Progress in 2001-2002 on Monitoring and Assessment

Report on Liquid Discharges from Nuclear Installations in 2000

69. The data from Contracting Parties on liquid discharges from nuclear installations between 1989 and 2000 were assessed. The liquid radioactive discharges from nuclear installations in 2000 and for the period 1989 - 1999 are summarised in Table 2. The OSPAR Annual Reports for 1989 - 2000 on Liquid Discharges from Nuclear Installations form the basis for this assessment. Reported discharges from nuclear power stations, nuclear fuel reprocessing plants, nuclear fuel fabrication and enrichment plants and research and development facilities have been taken into account. Table 1 gives total alpha activity, tritium and total beta activity excluding tritium in TBq/y for each nuclear installation sector and the ratio as a percentage of the total discharge from all installations. To facilitate comparison of the discharges year by year, Figures 3 to 5 show temporal trends of total alpha, tritium and total beta excluding tritium for the period 1989 to 2000.

70. Both Table 2 and Figure 3 show a downward trend of the total alpha activity discharged from all nuclear installations for the period 1989 to 2000. Overall, discharges of alpha activity in 2000 were significantly lower than in 1999. The reason for this decline to 0,33 TBq/y is largely a result of lower total alpha releases from the nuclear fuel fabrication plant in Springfields, United Kingdom. The most significant contributors to the summed discharges are from the fuel fabrication plant at Springfields (0,17 TBq) and the reprocessing plant at Sellafield (0,12 TBq). Discharges from research and development facilities reduced in 2000 to 0,0019 TBq from the range 0,01 - 0,13 TBq over the period 1991 - 1998.

71. Figure 4 presents the discharges of tritium, in terms of activity. The tritium releases from all installations decreased from 18 870 TBq/y in 1999 to 15 911 TBq/y for 2000. This decrease is mainly due to the discharges from La Hague (1999: 12 900 TBq, 2000: 11 000 TBq). The reprocessing plants in La Hague and Sellafield contribute in aggregate, approximately 80,4 % of the overall discharges. Discharges of tritium from nuclear power stations and research and development facilities show no pronounced trend over the time period 1996 – 2000.

72. Figure 5 shows, that the sum of total beta activity excluding tritium from all nuclear installations has fallen significantly for the period 1989 to 2000, from 930 TBq (1989), 365 TBq (1995) down to 265 TBq (1998) and 171 TBq (2000). Since 1995, there has been a year on year decrease in the overall total beta activity discharged into the OSPAR maritime area. When compared to 1999, the overall decrease in 2000 was mainly the result of reductions in discharges from both Springfields (1999: 128 TBq, 2000: 71 TBq) and the reprocessing plant at Sellafield (1999: 110 TBq, 2000: 77 TBq), although this was partly offset by an increase in the total beta activity discharged from La Hague (1999: 15,8 TBq, 2000: 21 TBq), mainly attributable to the

radionuclides Ruthenium-106 and Rhodium-106. The discharge data in terms of total beta activity show a continuously downward trend for nuclear power plants and research and development facilities since 1997.

Table 2 Summary of Liquid Radioactive Discharges of Nuclear Installations, 1989 - 2000

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
TOTAL ALPHA												
All Nuclear Installations (TBq)	3,14	2,43	2,43	1,83	2,88	1,36	0,68	0,57	0,38	0,43	0,42	0,33
Reprocessing Plants (TBq)	2,7	2,2	2,2	1,7	2,7	1,1	0,47	0,32	0,23	0,22	0,17	0,157
% of all installations	86,0	90,6	90,6	93,0	93,7	80,9	69,1	56,1	60,5	51,2	41,6	47,7
Nuclear Power Plants (TBq)	-	-	-	-	-	-	-	-	-	-	-	-
% of all installations	-	-	-	-	-	-	-	-	-	-	-	-
Nuclear Fuel Fabrication (TBq)	0,41	0,21	0,15	0,10	0,08	0,16	0,12	0,12	0,12	0,20	0,24	0,17
% of all installations	13,1	8,6	6,2	5,4	2,8	11,8	17,6	21,1	31,6	46,5	57,7	51,7
Research and Development Facilities (TBq)	0,03	0,02	0,03	0,03	0,1	0,1	0,09	0,13	0,03	0,01	0,003	0,0019
% of all installations	0,9	0,8	1,2	1,6	3,5	7,3	13,3	22,8	7,9	2,3	0,7	0,6
TRITIUM												
All Nuclear Installations (TBq)	8036	7224	8797	7658	10902	12931	15040	16779	17991	16240	18871	16548
Reprocessing Plants (TBq)	5814	4959	6513	4969	7460	9770	12310	13500	14500	12800	15420	13300
% of all installations	72,4	68,6	74,0	64,9	68,4	75,6	81,9	80,5	80,6	78,8	82,1	80,4
Nuclear Power Plants (TBq)	2161	2164	2252	2665	3354	3044	2713	3264	3440	3430	3335	3241
% of all installations	26,9	30,0	25,6	34,8	30,8	23,3	18	19,5	19,1	21,1	17,8	19,6
Nuclear Fuel Fabrication (TBq)	-	-	-	-	-	-	-	-	-	-	-	-
% of all installations	-	-	-	-	-	-	-	-	-	-	-	-
Research and Development Facilities (TBq)	61	101	32	23,7	87,9	117,5	16,7	15	16	14	16	7
% of all installations	0,7	1,4	0,4	0,3	0,8	0,9	0,1	0,0	0,1	0,1	0,1	0,04
TOTAL BETA (OTHER RADIO-NUCLIDES EXCLUDING TRITIUM)												
All Nuclear Installations (TBq)	930	491	227	269	252	321	365	332	315	265	256	171
Reprocessing Plants (TBq)	690	384	178	134	170	195	243	169	167	112	126	98
% of all installations	74,2	78,3	78,4	49,8	67,4	60,8	66,5	50,9	53,0	42,4	49,1	57,5
Nuclear Power Plants (TBq)	7,6	10,3	3,8	8,8	11,1	2,8	3,4	5,2	7,4	2,0	2,0	1,2
% of all installations	0,8	2,1	1,7	3,3	4,4	0,9	0,9	1,6	2,3	0,8	0,7	0,7
Nuclear Fuel Fabrication (TBq)	114	92	38,9	120	63	114	112	150	140	150	128	71
% of all installations	12,2	18,7	17,1	44,6	25	35,5	30,7	45,1	44,4	56,6	50,0	41,6
Research and Development Facilities (TBq)	119	4,5	6,3	6,6	8,2	9,1	7,0	8,1	1	0,66	0,36	0,30
% of all installations	12,8	0,9	2,8	2,4	3,2	2,8	1,9	2,4	0,3	0,2	0,1	0,2

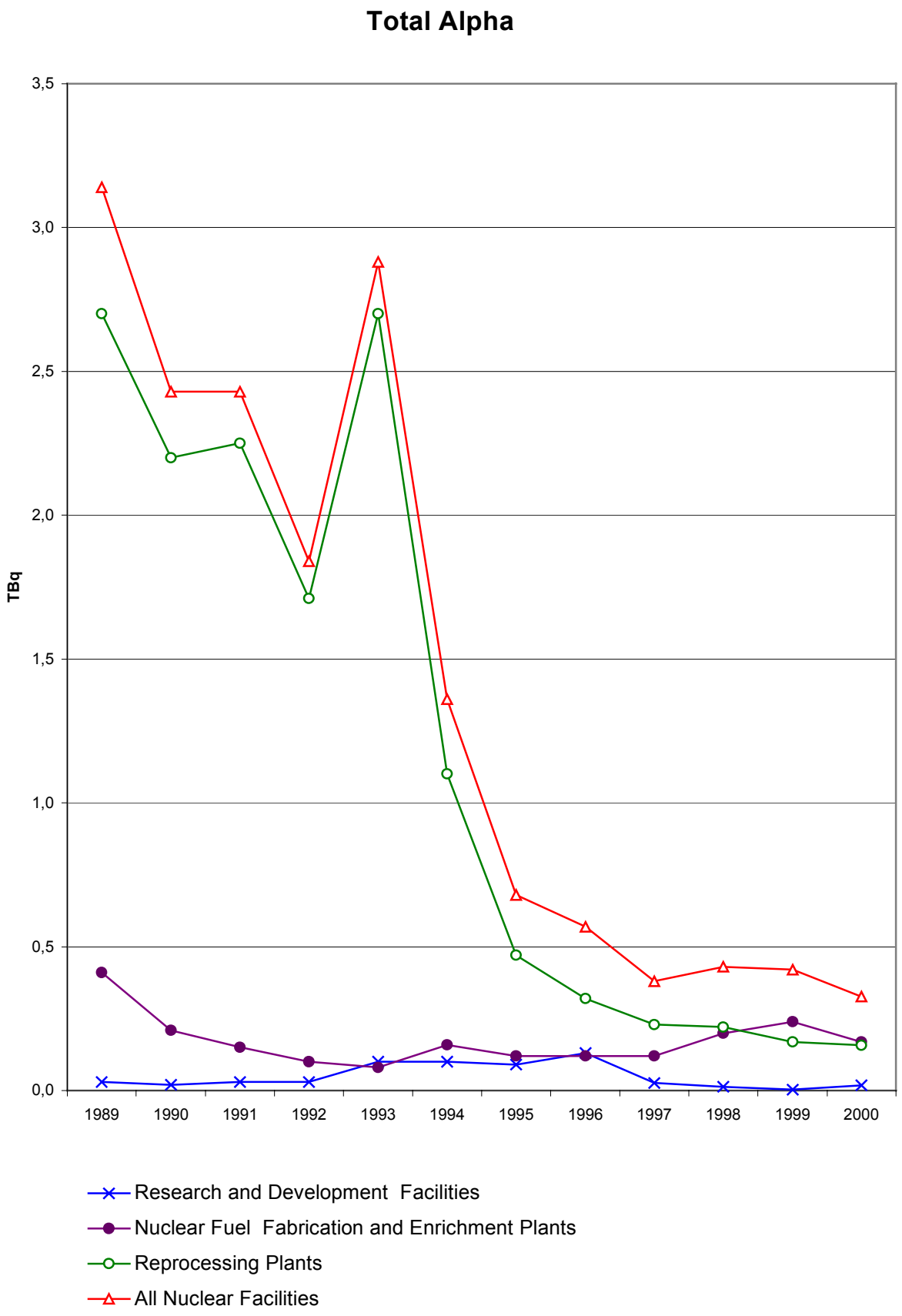

Figure 3 Annual releases of Total Alpha in liquid discharges from all nuclear installations of Contracting Parties to the OSPAR Convention, 1989 - 2000

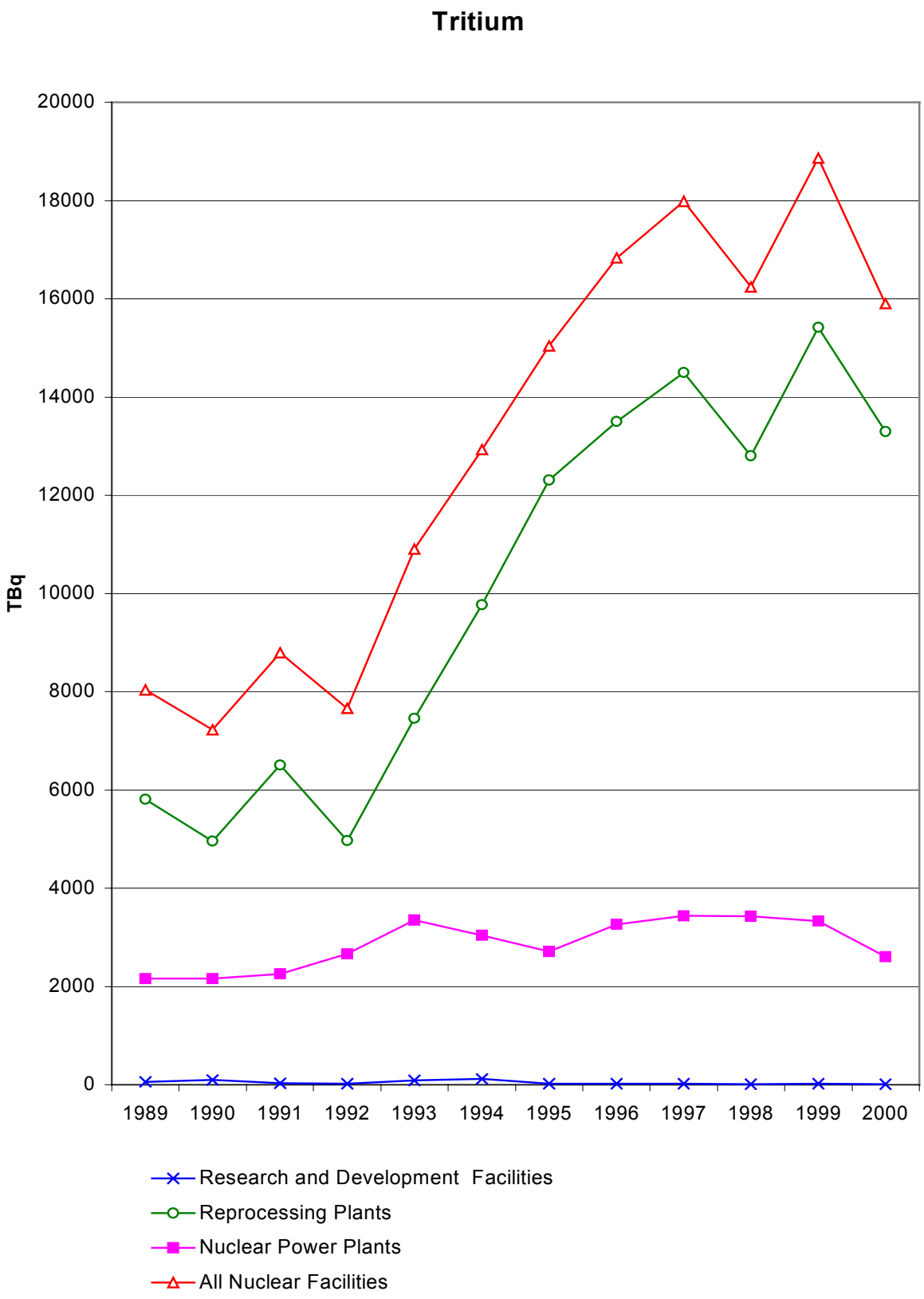

Figure 4 **Annual releases of Tritium in liquid discharges from all nuclear installations of Contracting Parties to the OSPAR Convention, 1989 - 2000**

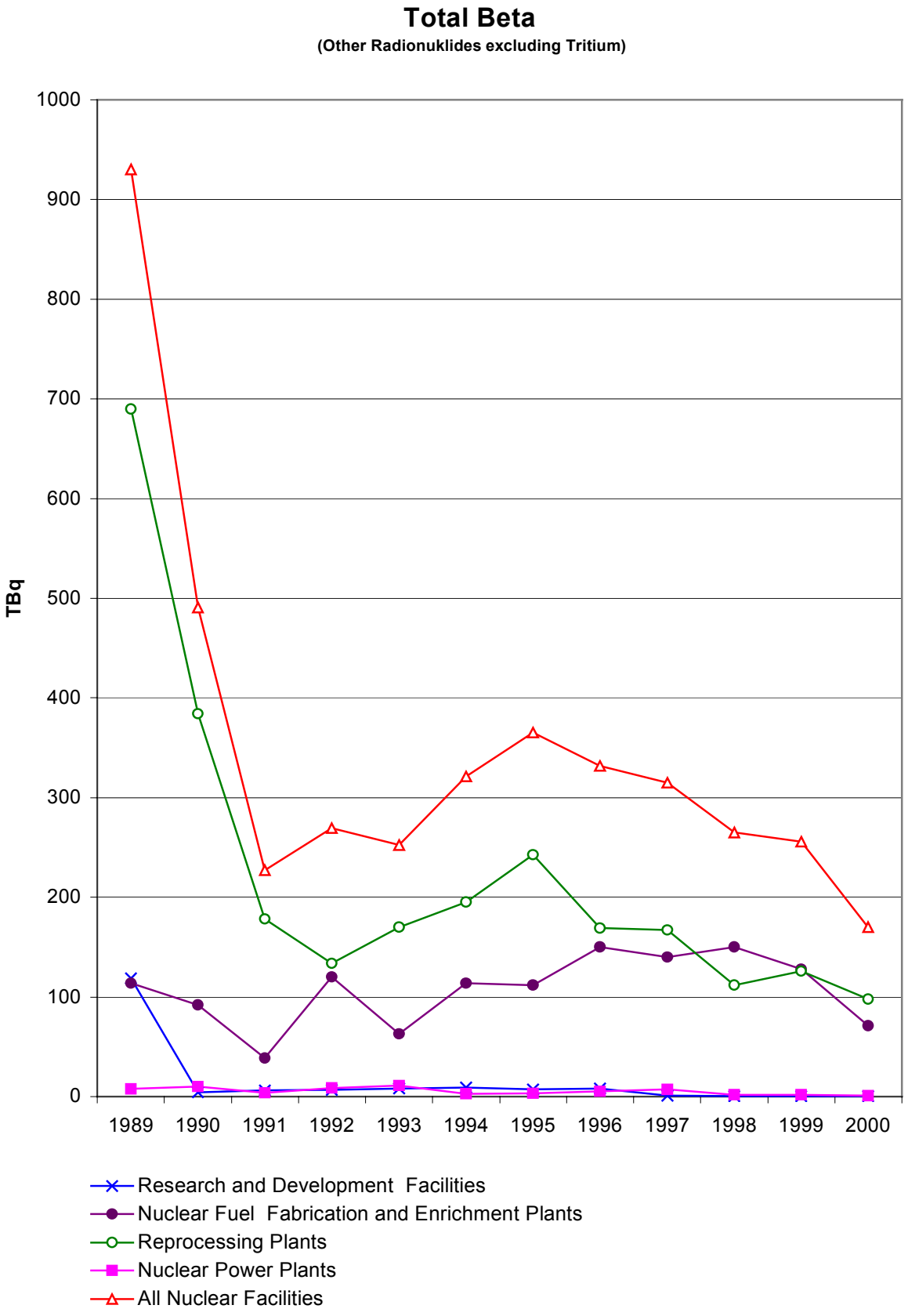

Figure 5 Annual releases of Total Beta in liquid discharges from all nuclear installations of Contracting Parties to the OSPAR Convention, 1989 - 2000

chapter 4

Eutrophication

The strategy

73. The OSPAR Strategy to Combat Eutrophication sets the objective of combating eutrophication in the OSPAR maritime area in order to achieve and maintain a healthy marine environment where eutrophication does not occur.

74. As its timeframe, the Strategy further declares that the Commission will implement this strategy progressively by making every endeavour to achieve, by the year 2010, a healthy marine environment where eutrophication does not occur. To this end, the Commission will identify by 2002 the eutrophication status of all parts of the maritime area and any additional programmes and measures deemed necessary to achieve the 2010 target.

75. The Strategy sets out a definition of eutrophication (based on identifying undesirable disturbances to the balance of organisms present in water and to water quality, and therefore referring to undesirable effects resulting from anthropogenic enrichment of water by nutrients), and provides that priority shall be given to:

a. the application of the comprehensive procedure as part of the Common Procedure for the identification of the eutrophication status of the OSPAR maritime area;
b. the development of appropriate reporting procedures;
c. the identification and quantification of the various sources of nutrients (e.g. by sector, sub-catchment, catchment, region, nation and/or other relevant subdivision);
d. the development of measures to combat eutrophication (including both a target-oriented approach and a source-oriented approach, the latter starting from the implementation of existing obligations and commitments).

The Quality Status Report 2000

76. The main conclusions of the QSR 2000 (see chapter 7) on the identification of priorities for action were that within the framework of implementing the Strategy to Combat Eutrophication, OSPAR Contracting Parties should give particular attention to pursuing, without delay, the target-orientated and source-orientated approaches of the strategy, and in particular:

a. implementation of existing measures aimed at reducing emissions, discharges and losses of nutrients from agriculture and urban sources. In this respect, emphasis should be placed on:
    i. increased effectiveness of the implementation of the Urban Waste Water Treatment Directive and the Nitrates Directive; and
    ii. mechanisms to reduce input from diffuse sources, particularly agricultural fertilisers, livestock and atmospheric deposition; and
b. the further development and application of the Common Procedure and the development and adoption of ecological quality objectives.

77. The existing monitoring activities should be harmonised throughout the maritime area in order to establish links between nutrient enrichment and eutrophication effects. Work to model the consequences of various reduction scenarios should continue in parallel with spatial surveys and laboratory experiments to obtain necessary data for validation and testing. There is a need for further research on a range of topics to improve understanding of the causes and dynamics of blooms, their potential links to eutrophication, toxin production by phytoplankton, and the accumulation of toxins in shellfish and other biota.

Summary of Progress 1998 - 2001

78. The Common Procedure for the Identification of the Eutrophication Status of the Maritime Area of the OSPAR Convention adopted by OSPAR in 1997 comprises two steps. The first step is

a Screening ("broad brush") Procedure to identify areas which in practical terms are likely to be non-problem areas with regard to eutrophication. The second step is the Comprehensive Procedure, which enables the maritime area to be classified in terms of problem areas, potential problem areas and non-problem areas with regard to eutrophication. In 2000 a report on the outcome of applying the screening procedure was finalised. This enabled the identification of the areas that will be subject to the Comprehensive Procedure. At the same time, a framework and stepwise procedure were agreed for preparing the overall assessment of the eutrophication status of the OSPAR maritime area, and the related and parallel development of Ecological Quality Objectives for nutrients and eutrophication effects. OSPAR 2000 also adopted OSPAR Guidelines for Harmonised Quantification and Reporting Procedures for Nutrients to be used on a three-year trial basis.

Progress in 2001-2002 on Programmes and Measures and Monitoring and Assessment

Nutrient monitoring programme

79. Contracting Parties continue to implement the nutrient monitoring programme taking into account the progress made on identifying problem, potential problem and non-problem areas with regard to eutrophication. There have been apparent significant declines in submissions of nutrient monitoring data to the ICES oceanographic database over the last decade. These declines present difficulties in achieving adequate data coverage for some parts of the OSPAR maritime area.

Comprehensive Procedure

80. OSPAR 2002 agreed on common assessment criteria, their (region specific) assessment levels and guidance on their use in the area classification within the Comprehensive Procedure of the Common Procedure (OSPAR agreement number: 2002-20). Contracting Parties will use these criteria and guidance in 2002 to complete their assessments of the eutrophication status of their parts of the maritime area under the Common Procedure.

81. A first draft assessment of the eutrophication status of the maritime area, will be submitted to OSPAR 2003.

Ecological Quality Objectives

82. Draft Ecological Quality Objectives (EcoQOs) for nutrients and eutrophication effects were further developed on the basis of the common assessment criteria agreed for the Comprehensive Procedure. These draft criteria were considered by the 5th North Sea Conference, which made recommendations regarding the further development of EcoQOs for the North Sea. OSPAR 2002 has taken these recommendations up in its work programmes from 2002-2003 onwards.

Quality Assurance

83. Guidelines on quality assurance for biological monitoring in the OSPAR area were adopted that had been prepared by the joint ICES/OSPAR Steering Group on Quality Assurance of Biological Measurements related to Eutrophication Effects in the North-East Atlantic (SGQAE).

chapter 5

Marine Biodiversity

The Strategy

84. The OSPAR Strategy on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area sets the objective of protecting and conserving the ecosystems and the biological diversity of the maritime area which are, or could be, affected as a result of human activities and of restoring, where practicable, marine areas which have been adversely affected, in accordance with the provisions of the Convention.

85. When the Strategy was adopted, Annex V to the OSPAR Convention had only just been adopted and was not in force. The OSPAR Commission therefore had no competence to adopt programmes and measures in this field, and the Strategy therefore confined itself, in effect, to providing that OSPAR would assess which species and habitats need to be protected and what human activities are likely to have an actual or potential adverse effect on those species and habitats or on ecological processes, and thus to preparing for the entry into force of the Annex.

86. Annex V entered into force on 30 August 2000, after ratification by Finland (4 February 1999), Spain (1 November 1999), Switzerland (11 February 2000), Luxembourg (14 February 2000), European Community (29 May 2000), the United Kingdom (29 June 2000) and Denmark (31 July 2000). During 2000 and 2001, Sweden (5 September 2000), Iceland (10 June 2001), Norway (22 June 2001), the Netherlands (25 July 2001) and Germany (14 December 2001) also ratified the Annex.

The Quality Status Report 2000

87. The QSR 2000 played a substantial role in the preparations for the entry into force of Annex V by identifying priorities for action. In particular, on capture fisheries, the QSR 2000 noted the general agreement that fisheries management and environmental policies must be further integrated, within the framework of the ecosystem approach. On other aspects of biodiversity, it noted that careful consideration is needed to avoid serious conflicts of interest between the need to protect designated conservation areas and pressure of human requirements for housing, leisure, etc, for the application of integrated approaches to coastal zone management and for action to protect marine biodiversity against the adverse effects of mariculture, extraction of sand, gravel and aggregates, dredging for navigational purposes, shipping and marine litter.

Summary of Progress 1998 - 2001

88. EcoQOs are seen as an important contribution to the development of operational objectives as part of an Ecosystem Approach to management. Both the concept of EcoQOs and their more precise definition have been developed through a number of routes, including workshops and specialist groups. Since 1999, OSPAR has coordinated the development of EcoQOs for 10 issues, focusing on the North Sea as a test case. This development work has been coordinated by the OSPAR Biodiversity Committee (BDC), with Norway and the Netherlands as co-leading countries, and with the assistance of ICES. BDC also invited the Eutrophication Committee (EUC) to develop EcoQOs for the four issues related to nutrients and eutrophication effects (EcoQOs-eutro) (see §82).

89. Article 4 of Annex V provides that, within the general framework of the 1992 OSPAR Convention on the Protection of the Marine Environment of the North-East Atlantic, "[…] where the Commission considers that action is desirable in relation to [...] a question [relating to the management of fisheries], it shall draw that question to the attention of the authority or international body competent for that question". In the light of its Quality Status Report 2000 on the North-East Atlantic, the OSPAR Commission has concluded that action is desirable on a number of issues relating to the state of commercial fish stocks and of deep-sea fish species in the North-East Atlantic. OSPAR therefore instructed its Chairman to write to the European Commission, the Icelandic Ministry of Fisheries, the Royal Norwegian Ministry of Fisheries, the North-East Atlantic

Fisheries Commission and the North Atlantic Salmon Commission to draw the conclusions of the QSR 2000 and the regional QSRs to their attention.

90. As part of the work to address the problems resulting from past dumping of munitions and chemical weapons, OSPAR 2001 published an overview of past dumping at sea of chemical weapons and munitions in the OSPAR maritime area. The overview, which gives details of the sites at which dumping has taken place, and the general nature of the material dumped, will be updated as new information is made available.

Progress in 2001-2002 on Programmes and Measures

Ecological Quality Objectives

91. OSPAR 2002 agreed on a background document on the development of EcoQOs, which set out the progress that had been made in developing EcoQOs within OSPAR. It formed the basis of a report to the 5th North Sea Conference, and the subsequent recommendations of the Conference on the further development of EcoQOs for the North Sea. The background document will be taken as the model for further work within OSPAR on the development of EcoQOs. The recommendations of OSPAR were taken up in the Bergen Declaration of the Fifth International Conference for the Protection of the North Sea (22/23 March 2002), which adopted a pilot project of EcoQOs for the North Sea and invited OSPAR, in conjunction with ICES and other relevant international bodies, to work towards a comprehensive system of EcoQOs for the North Sea by 2005.

92. A planning group will meet in 2002 to prepare for the further work on developing EcoQOs. It will consider a number of issues, including the links and consistency between EcoQOs and the requirements of the EC Water Framework Directive, the practical issues related to implementing the pilot project for the North Sea, and the likely political impact of the proposed EcoQOs.

OSPAR List of Threatened and Declining Species and Habitats

93. The work relating to threatened or declining species and habitats was taken forward in three related strands of activity: the completion of the Texel-Faial criteria for the selection of such species and habitats; the completion of the list itself, including a peer review by ICES to build consensus on the data on which the list would be based; and preliminary consideration of the further actions implied by the list. This work is planned to come to fruition at the OSPAR Ministerial Meeting in 2003.

Fisheries

94. The Directorate General Fisheries of the European Commission, the North Atlantic Salmon Commission (NASCO), the North East Atlantic Fisheries Commission (NEAFC) provided written responses to letters from the Chairman of OSPAR drawing attention to the conclusions on fisheries in the QSR 2000 (see § 89 above).

Marine Litter

95. Experience gained from the practical use of the protocol on marine beach litter monitoring during the four rounds of field surveys carried out had been positive and had led to its improvement. A global website on marine litter launched by UNEP GPA, the Swedish EPA and IMO includes extensive information on this project (http://marine-litter.gpa.unep.org).

Marine Protected Areas

96. The third OSPAR Workshop on marine protected areas (MPAs) took place in Fiskebäckskil, Sweden, on 11-14 June 2001. It completed work on guidelines on the identification and selection of MPAs and on their management. A further workshop took place in Roscoff, France on 9-12 July 2002 to develop and describe a common understanding of how MPAs can be implemented, based on specific examples, and produce an overall package on MPAs for adoption at the OSPAR Ministerial Meeting in 2003.

Offshore Windmill Parks

97. Contracting Parties responded to a questionnaire on offshore windmill parks, and further work was agreed on the basis of this information and a number of national plans or literature reviews for offshore windmill farms. This further work would consist of the development of a background document on problems and benefits associated with the development of offshore windmill parks, guidance on licensing procedures of offshore wind installations, and a database on authorised windmill installations.

Disposal of CO_2 at Sea

98. In view of a planned experiment in support of future use of ocean disposal of CO_2 generated as a waste from fossil fuel combustion as a climate change mitigation strategy in the OSPAR maritime area (west of Storegga in the Norwegian Sea), OSPAR 2002 agreed that it was desirable to establish an agreed position on whether experimental releases or placing of CO_2 in the sea at the seafloor (or into the seabed) was consistent with the OSPAR Convention and asked the Group of Jurists and Linguists (JL) to give advice on this question.

Progress in 2001-2002 on Monitoring and Assessment

Dumping of Wastes at Sea

99. OSPAR completed an Assessment of the Annual Reports on Dumping of Wastes in 1997 and 1998 and prepared the Annual Report on Dumping of Wastes at Sea for 1999. Future assessments of the Reports on dumping of wastes at sea will be prepared every two years covering the data available from at least the previous 4/5 years. Contracting Parties strengthened their commitment to the deadlines for the submission of data for future Reports on Dumping of Wastes at Sea.

100. A revised OSPAR system of reporting for dumping operations at sea was adopted for the year 2001 and thereafter. This included additional reporting requirements on quality assurance issues which would be used for promoting consistency in the quality of data submitted by Contracting Parties on analyses of dumped material. The amendments to the reporting format will be reflected in the OSPAR Guidelines for the Management of Dredged Material when they were next amended.

chapter 6

The Offshore Industry

The Strategy

101. The OSPAR Strategy on Environmental Goals and Management Mechanisms for Offshore Activities sets the objective of preventing and eliminating pollution and taking the necessary measures to protect the maritime area against the adverse effects of offshore activities so as to safeguard human health and of conserving marine ecosystems and, when practicable, restoring marine areas which have been adversely affected.

102. As its timeframe, the Strategy further declares that the Commission will implement this Strategy progressively and, in so far as they apply, following on and consistent with the commitments made in the other OSPAR Strategies.

103. The Strategy provides that OSPAR will address the programmes and measures:

a. needed to prevent, control and eliminate pollution under Annex III of the OSPAR Convention;

b. to be adopted under Annex V of the OSPAR Convention, once it has entered into force, following the identification of relevant human activities by the application of the criteria in Appendix 3 of the OSPAR Convention.

104. The implementation of the Strategy will concentrate on those offshore activities identified as being of greatest concern to the marine environment which could include, *inter alia*:

a. the use and discharge of hazardous substances, consistent with the OSPAR Strategy with regard to Hazardous Substances;

b. discharges of oil and other chemicals in water and from well operations;

c. emissions of substances likely to pollute the air, to the extent that they are not regulated by other international agreements;

d. flaring, to the extent that emission from flaring is not regulated by other international agreements;

e. the disposal of radioactive scales and sludges.

The Quality Status Report 2000

105. The main conclusions of the QSR 2000 (see chapter 7) on the identification of priorities for action with regard to offshore oil and gas were that in accordance with the OSPAR Strategy on Environmental Goals and Management Mechanisms for Offshore Activities, OSPAR should actively pursue the development and implementation by the offshore industry of environmental management mechanisms, including elements for auditing and transparent reporting, aimed at fulfilling the objective of this Strategy. Furthermore, competent authorities should continue efforts aimed at a greater public openness regarding their activities.

Summary of progress 1998 - 2001

106. One of the main outcomes of the Ministerial meeting of OSPAR 1998 was OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations, in which Contracting Parties reached agreement on this issue – an issue which had been hotly debated in the *Brent Spar* incident in 1995.

107. OSPAR 2000 adopted measures to set up a comprehensive system for the control of chemicals used and discharged offshore and measures to complete the system of control on drilling fluids and drill cuttings contaminated by them.

108. OSPAR 2001 adopted OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations. The overall goal of this Recommendation is to reduce the input of oil and other substances into the sea resulting from produced water from offshore installations, with the ultimate aim of eliminating pollution from those sources. Under the Recommendation each

Contracting Party should ensure that the total quantity of oil in produced water discharged into the sea in the year 2006 from all offshore installations under its jurisdiction has been reduced by a minimum of 15% compared to the equivalent discharge in the year 2000 from all offshore installations under its jurisdiction at that time.

109. Guidelines for Monitoring the Environmental Impact of Offshore Oil and Gas Activities were adopted by OSPAR 2001.

Progress in 2001-2002 on Programmes and Measures

Chemicals used and discharged offshore

110. As part of the set of measures and agreements under the system for the control of chemicals used and discharged offshore, the following agreements were adopted:

a. revised OSPAR guidelines for completing the Harmonised Offshore Chemical Notification Format;

b. revised OSPAR guidelines for toxicity testing of substances and preparations used and discharged offshore;

c. further guidance on the assessment of the toxicity of substances under the Harmonised Pre-Screening Scheme of OSPAR Recommendation 2000/4;

d. revised OSPAR list of substances/compounds liable to cause taint;

e. common interpretation on which chemicals are covered and not covered by the Harmonised Mandatory Control System under OSPAR Decision 2000/2.

111. A revised PLONOR List (List of Substances/Preparations Used and Discharged Offshore which are Considered to Pose Little or No Risk to the Environment) was adopted including acceptance criteria for new substances to be included on this list.

112. In the context of the system for the control of drilling fluids and drill cuttings, guidelines for the consideration of the best environmental option for the management of OPF-contaminated cuttings residue were adopted.

Produced water

113. OSPAR 2002 agreed to publish a background document concerning techniques for the management of produced water (first edition). This document is related to OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations. It contains brief descriptions of principles, basic elements and operational aspects of techniques which may be applied on offshore installations for the treatment of produced water. The executive summary is reproduced at Annex 7.

Progress in 2001-2002 on Monitoring and Assessment

114. A dialogue between OSPAR and the Bonn Agreement (Agreement for cooperation in dealing with pollution of the North Sea by oil and other harmful substances, 1983) for improved cooperation between both organisations has lead to a commitment from OIC 2002 which involves the collection of information from operators on oil spills from offshore installations during two periods in 2002 and 2003 in the geographical area of the Bonn Agreement Tour d'Horizon surveillance flights and the evaluation of the data collected, in order to identify discrepancies between the data sets of both organisations. The evaluation of a summary of this information on oil spills from offshore installations should support Contracting Parties' own oversight of oil spill reporting, and OSPAR in deciding whether there is a need to develop OSPAR measures to avoid/reduce spills.

115. This cooperation has also resulted in OSPAR 2002 commitment to support in the near future the Bonn Agreement with clear operational guidance on what discharges of oil in produced water from offshore installations are permitted in order to allow the operators of the Bonn Agreement's national operators of surveillance flights (*Tour d'Horizon*) to make an assessment whether visually detected oil pollution is legitimate or not.

chapter 7

Monitoring and Assessment

Obligations and Commitments

116. One of the new features of the 1992 OSPAR Convention was the general obligation to collaborate in regular monitoring and assessment of the state of the marine environment in the maritime area. Annex IV to the Convention provides for cooperation in monitoring programmes, joint quality assurance arrangements, the development of scientific assessment tools, such as modelling, remote sensing and risk assessment strategies, and the preparation of assessments.

117. In 1995 a Joint Assessment and Monitoring Programme was agreed to provide the basis for a comprehensive quality status report. In the Sintra Statement, Ministers noted the work in hand to produce this report, agreed a special budget for the Commission's work on it, and welcomed the idea of establishing, through it and the Joint Assessment and Monitoring Programme, a sound, scientific basis for identifying and prioritising future tasks in an overall comparative approach.

The Quality Status Report 2000

118. The QSR 2000 (QSR 2000), and its five supporting regional quality status reports, represented the first fruits of the work to fulfil these obligations. (These reports are published on the OSPAR website). It is the first attempt anywhere in the world to produce a detailed quality status report on such a large area of marine environment. Both the overall QSR 2000 and the regional reports follow the same structure. Following an introductory chapter, Chapter 2 gives an overview of the geography, hydrography and climatic conditions of the North-East Atlantic in order to give a baseline for the detailed descriptions of the physical, chemical and biological characteristics of the area presented in following chapters. Chapter 3 provides an outline of the most important human activities that influence the North-East Atlantic. Chapter 4 summarises information on the chemical aspects of the North-East Atlantic, focusing on inputs of contaminants and nutrients, and their concentrations in different environmental media and compartments. Chapter 5 deals with the biological features of the coastal and offshore ecosystems, focusing in particular on the causes, impact and implications of the changes that are occurring to their natural characteristics. Finally, Chapter 6 draws on Chapters 2 to 5 to identify trends, the effectiveness of measures and the major causes of any environmental degradation within the area and the managerial and scientific actions needed to redress this.

119. The overall assessment found in Chapter 6 of the QSR identifies, as far as is currently possible, the factors that govern environmental change in the various Regions, leading to a prioritisation of human pressures according to their impacts on the North-East Atlantic. This involved expert judgement for the identification and assessment of a variety of impacts, which differ in nature and importance, and in their spatial and temporal dimensions. The purpose of the conclusions and recommendations was to draw attention to problems and to identify priorities for consideration within appropriate forums as a basis for further work. The issues relevant to OSPAR's work have been noted in the previous chapters, in the context of OSPAR's work to address them.

The Joint Assessment and Monitoring Programme

120. The Joint Assessment and Monitoring Programme (JAMP) sets out the issues that are to be addressed by the JAMP in order to enable OSPAR to comply with the obligations under Annex IV of the Convention. Following the QSR 2000, the JAMP needed revision to take account of the sectoral strategies and the conclusions of the QSR 2000.

121. A near final draft of a revised JAMP was prepared by ASMO in 2002 following discussion of a first draft by the Strategy Committees. The new JAMP will be finalised during 2002/2003 through further consultation with the Strategy Committees and in particular with relevant inter-governmental organisations.

122. The current draft of the revised JAMP, although subject to further refinement in 2002/2003, will form the basis for taking forward OSPAR monitoring and assessment work in 2002/2003.

Release of monitoring data

123. Arrangements to govern the release of monitoring data by OSPAR and the data managers holding it on OSPAR's behalf were incorporated into the OSPAR Rules of Procedure (reference number: 2002-21) (see box "OSPAR Rules of Procedure on data release).

OSPAR Rules of Procedure on data release

The OSPAR Rules of Procedure have been amended to require the following principles and arrangements to be applied to all decisions on the release of monitoring data held by, or on behalf of, OSPAR:

Principles

1. OSPAR is committed to making as much information as possible publicly available, consistent with achieving other similarly important goals of public policy. The framework for this is set out in Article 9 of the OSPAR Convention.

2. OSPAR and its Contracting Parties wish to collaborate to the greatest possible extent with other agencies working in the field of monitoring and observing the marine environment. Such agencies include the International Council for the Exploration of the Sea, the European Environment Agency, the Barcelona, Helsinki and Black Sea Commissions, the Arctic Monitoring and Assessment Programme and the European Air Pollution Monitoring Programme.

3. Data-handling arrangements should ensure that properly documented, quality-controlled and comparable data sets are available for use both by those who need them for their work and by the public, safeguard the interests of the scientists who collect and interpret data, encourage scientific research, and assist the maintenance of sound, comprehensive, high-quality, accessible data banks, which can be relied on for their accuracy and integrity.

4. Data-handling arrangements should also make efficient use of resources and be clear and transparent, while protecting the privacy and confidentiality of individuals and commercial interests.

Collection and handling of data

5. The OSPAR monitoring programmes rely upon data derived from publicly funded monitoring by OSPAR Contracting Parties.

6. OSPAR will ensure that its specifications of programmes for collecting and evaluating data on the state of the marine environment, on the activities and measures which can affect it and on the activities and measures adopted under the Convention make proper provision for:

a. the design of monitoring activities;

b. reporting on the collection of data, including the identification of a thematic data centre to hold and manage the data;

c. the documentation, quality control and building of comprehensive data sets.

7. For the following programmes, these elements are set out in the following OSPAR Agreements (as they may be amended from time to time by agreements of OSPAR), and the following bodies (subject to any changes that may be made by ordinary agreements of OSPAR) fulfil the role of thematic data centre:

a. for the Comprehensive Atmospheric Monitoring Programme (CAMP)

the Principles for the Comprehensive Atmospheric Monitoring Programme (Agreement 2001-7);

thematic data centre: The Norwegian Institute of Air Research (NILU);

b. for the Coordinated Environmental Monitoring Programme (CEMP)

the Coordinated Environmental Monitoring Programme (Agreement 2001-8) and the Requirements for the Submission of National Comments to ICES when Submitting Monitoring Data (Agreement 2001-9);

thematic data centre: International Council for the Exploration of the Sea (ICES);

c. for the Comprehensive Study of Riverine Inputs and Direct Discharges (RID)

the Principles for the Comprehensive Study of Riverine Inputs and Direct Discharges (Agreement 1998-5);

thematic data centre: the OSPAR Secretariat.

8. For future OSPAR monitoring products specified in the Joint Assessment and Monitoring Programme, the OSPAR agreements on the form, timing and development of these products will ensure that these elements are adequately specified, together with the identification of a thematic data centre.

Release of data

9. Data from the CAMP and RID programmes are freely available once the annual data reports of these programmes have been finalised and published.

10. For CEMP data, OSPAR Contracting Parties will ensure that, when their national institutions provide data to the thematic data centre, there is agreement that the data provided may be released by the thematic data centre as soon as it has completed the necessary quality-control procedures.

11. Paragraph 10 shall not apply to meteorological or hydrographic data, if the release of that data is restricted by national legislation or international agreement.

12. For any future additional programmes for data collection and management, the OSPAR agreement establishing it shall specify whether the arrangements for data release are to follow the arrangements applying to RID and CAMP or the arrangements applying to CEMP.

13. In using data held by an OSPAR thematic data centre, Contracting Parties will ensure that all data of any given kind is treated and assessed in a consistent manner, irrespective of its source. This shall apply equally to the application of the procedures agreed to ensure an appropriate level of assurance of the quality of the data.

14. Where an OSPAR product is based on data subject to different levels of restriction on release, the most stringent level of restriction shall be applied to all the basic data on which that product is based.

Quality Assurance

124. ASMO adopted JAMP Guidelines on Quality Assurance for Biological Monitoring in the OSPAR Area, developed by the joint ICES/OSPAR Steering Group on Quality Assurance of Biological Measurements related to Eutrophication Effects in the North-East Atlantic.

chapter 8

Organisation

Contracting Parties

125. The Contracting Parties to the OSPAR Convention, and thus under article 10(1) the members of the OSPAR Commission, are: the Kingdom of Belgium, the Kingdom of Denmark, the European Community (represented by the European Commission), the Republic of Finland, the French Republic, the Federal Republic of Germany, the Republic of Iceland, Ireland, the Grand Duchy of Luxembourg, the Kingdom of the Netherlands, the Kingdom of Norway, the Portuguese Republic, the Kingdom of Spain, the Kingdom of Sweden, the Swiss Confederation and the United Kingdom of Great Britain and Northern Ireland.

Observers

126. Under article 11, the OSPAR Commission may, by unanimous vote of the Contracting Parties, admit as an observer any State which is not a Contracting Party to the Convention and any international governmental or non-governmental organisations, the activities of which are related to the Convention. Such observers are entitled to participate in meetings of the Commission, its main committees and its working groups.

127. The following international governmental organisations have been admitted as observers: the Arctic Monitoring and Assessment Programme (AMAP); the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS); the Baltic Marine Environment Protection Commission (the Helsinki Commission - HELCOM); the Barcelona Convention for the protection of the Marine Environment of the Mediterranean Sea; the Common Wadden Sea Secretariat (CWSS); the Cooperative Programme for Monitoring and Evaluation of Long-Range Transmission of Air Pollutants in Europe (EMEP); the European Environment Agency (EEA); the Intergovernmental Oceanographic Commission (IOC); the International Commission for the Protection of the Rhine against Pollution; the International Council for the Exploration of the Sea (ICES); the International Atomic Energy Agency (IAEA); the International Maritime Organization (IMO); the Organisation for Economic Cooperation and Development (OECD); the United Nations Environment Programme (UNEP).

128. Arrangements are being made for the Agreement for Cooperation in Dealing with the Pollution of the North Sea by Oil and Other Harmful Substances (the Bonn Agreement) and the OSPAR Commission to become formally observers at each other's meetings. Since the two organisations share a common secretariat, there has always been close cooperation.

129. The OSPAR Commission has decided to admit some international non-governmental organisations as general observers (who are entitled to participate in all aspects of the Commission's work which are not concerned with internal management or finance) and others as specialist observers who participate only in those aspects which are of concern to them. The general observers are: Bird Life International; the Conseil Européen des Fédérations de l'Industrie Chimique (CEFIC); Friends of the Earth; Greenpeace International; the International Association of Oil and Gas Producers (OGP) together with the Oil Companies' European Organisation for Environmental and Health Protection (CONCAWE); Kommunenes Internasjonale Miljøorganisasjon (Local authorities' international environmental organisation – KIMO); Seas at Risk; the Union of Industrial and Employers' Confederations of Europe (UNICE); and the World Wide Fund for Nature (WWF).

130. The specialist non-governmental observers are: the Advisory Committee on the Protection of the Sea (ACOPS); the Central Dredging Association (CEDA); the Confederation of European Paper Industries (CEPI); EuroChlor Federation; the European Apparel and Textile Organisation (EURATEX); the European Crop Protection Association (ECPA); the European Federation of Pharmaceutical Industries and Associations (EFPIA); the European Fertiliser Manufacturers Association (EFMA); the European Oilfield Speciality Chemicals Association (EOSCA); the European Soap and Detergent Industry (AISE); EUROPECHE (the Association of National Fisheries Organisations); the European Union of National Associations of Water Suppliers and

Waste Water Services (EUREAU); the International Association of Ports and Harbours (IAPH); the International Navigation Association (PIANC); the Union of the Electricity Industry (EURELECTRIC); the Union européenne des producteurs de granulats (UEPG); and the World Nuclear Association.

Working Structure

131. The working structure is specified in the Rules of Procedure. Under article 10(4), these require the unanimous approval of the Contracting Parties. Following the adoption of the OSPAR Strategies, the working structure has been revised to give a single subordinate body prime responsibility for each of the main themes of the Commission's work.

132. The OSPAR Commission meets regularly – at the level of officials – once every year, usually in late June. Following a reorganisation in 1999/2000, it is supported by six main committees: the Environmental Assessment and Monitoring Committee (ASMO); the Biodiversity Committee (BDC); the Eutrophication Committee (EUC); the Hazardous Substances Committee (HSC); the Offshore Industry Committee (OIC); and the Radioactive Substances Committee (RSC). Each of these usually meets once in each year's cycle of meetings, and is supported as necessary by working groups which prepare specific issues.

133. In addition, there are three other regular subordinate bodies. The Meeting of Heads of Delegations to the Commission consists of the heads of the Contracting Parties' delegations to the Commission and, where appropriate, their advisers. It meets usually twice a year to prepare issues for the Commission's meeting, to consider the implementation of the Commission's decisions and to advise on management and financial issues. The Committee of Chairmen and Vice-Chairmen consists of the Chairman of the Commission, the two Vice-Chairmen of the Commission and two of the Chairmen of the main committees selected by the Commission (currently the Chairmen of the Environmental Assessment and Monitoring Committee and the Hazardous Substances Committee). It meets as necessary to advise the Chairman and the Executive Secretary on their functions. The Group of Jurists and Linguists meets usually once a year to review the drafting of formal Commission instruments and to advise on legal questions.

Officers

134. The Chairman of the Commission is elected by consensus by the Commission. He or she serves for a two-year term, which may (in exceptional circumstances) be renewed once. He or she is assisted by two Vice-Chairmen, who serve for the same periods. The current Chairman is Mr Bob Dekker (Netherlands). The current Vice-Chairmen are Ms Lindis Nerbø (Norway) and Mr Victor Escobar (Spain). They were re-elected in June 2002. The Chairman presides over the meetings of the Commission, the Meeting of the Heads of Delegation to the Commission, the Committee of Chairmen and Vice-Chairmen and (unless he or she appoints someone else to do so) the Group of Jurists and Linguists. He or she is also authorised to take any initiatives which will promote the work of the Commission.

135. The chief executive officer of the Commission is the Executive Secretary, who is appointed by the Commission, by consensus, for a term of three years, which is renewable once only. He or she is assisted by four Deputy Secretaries, who are appointed on the same basis. The Secretariat also contains seven Assistants. During 2001/02, the Executive Secretary was Mr Alan Simcock (United Kingdom). The Deputy Secretaries were Ms Amparo Agraït (Spain), Mr Reinier Goud (Netherlands), Dr Dornford Rugg (United Kingdom), Mr Gert Verreet (Belgium) (until 31 August 2001) and Dr Suzanne Wiandt (Germany) (from 1 September 2001). The Assistants were: Ms Sylvie Ashe, Ms Paula Creedon, Ms Hélène Hughes, Ms Corinne Michel, Ms Barbara Middleton, Ms Lise Rossi and Ms Kati Rowson.

Finance

136. The Commission is financed by the Contracting Parties. The Commission's financial year is the calendar year. After a contribution from the United Kingdom of 80% of the rent of the Secretariat’s offices, contributions to the General Budget are apportioned between Contracting Parties as follows:

a. Tranche 1:

five-sixths of the amount to be contributed, or basic budget, is divided first in equal contributions of 2,5% by all Contracting Parties, and then, for all Contracting Parties except the European Community, according to the UN Scale of Assessment (which is based on GNP), subject to a maximum share of 22% of Tranche 1;

b. Tranche 2:

the remaining sixth, North Sea budget, is divided equally between the 8 North Sea riparian States.

Since the Secretariat is based in London, the General Budget is denominated in pounds sterling. In addition to the General Budget, there is regularly a Special Budget for the work done by the International Council for the Exploration of the Sea (ICES) (denominated in Danish kroner, since ICES is based in Copenhagen), and there can be other special budgets. The apportionment of contributions to a special budget is determined according to its purpose.

137. In 2001, the total expenditure was £844 438, and in 2002 the General Budget was £887 300. The General Budget approved for 2003 is £936 910. An outline of the income and expenditure for these three years is given in Annex 8. The ICES Special Budget was DKK 986 390 for 2001, and DKK 986 390 for 2002 and is DKK 1 035 389 for 2003.

138. The accounts of the OSPAR Commission are audited by the National Audit Office of the United Kingdom. All statements of accounts of the OSPAR Commission have been certified as presenting fairly the state of affairs of the OSPAR Commission and as having been properly prepared in accordance with the Financial Regulations of the Commission. The audit certificates have also stated that, in all material respects, the income and expenditure have been applied to the purposes intended by the Commission and that the financial transactions conform to the authorities which govern them. No observations have been made by the auditor.

annex 1

Executive Summary of the DYNAMEC Manual

Since September 1998, work has been undertaken within the OSPAR Commission to establish a dynamic selection and prioritisation mechanism for hazardous substances (DYNAMEC). During its first application, an initial selection procedure and a ranking procedure were developed and applied in a pragmatic way in order to identify priority substances from 2000 onwards and adding them to the OSPAR List of Chemicals Identified for Priority Action which was first established in 1998 (Annex 2 to the OSPAR Strategy with regard to Hazardous Substances).

Work in 2000-2002 on the further development of DYNAMEC has lead to the establishment of the OSPAR List of Substances of Possible Concern. This list which was agreed at OSPAR 2002 is a result of the initial selection and is published on the OSPAR web site with an invitation to those who have an interest in these substances to submit any new relevant information to OSPAR which might be useful for OSPAR's work on hazardous substances. To this end, data sheets for all substances of possible concern are also accessible on the OSPAR web site and reflect the current knowledge of OSPAR about the hazardous properties of these substances. On the basis of new information, the list will be updated from time to time. The OSPAR List of Substances of Possible Concern has replaced the OSPAR 1998 List of Candidate Substances (Annex 3 to the OSPAR Strategy with regard to Hazardous Substances).

Furthermore, procedures have been established for (i) considering new information on substances already on the List of Substances of Possible Concern and (ii) selecting new substances of possible concern for inclusion in this list. The cut-off values for persistence, bioaccumulation and toxicity (PBT) agreed by the OSPAR Commission in 2001 are used in these procedures. Where substances do not meet all the PBT criteria, they can be considered for inclusion in the List of Substances of Possible Concern via the Safety Net Procedure provided that suitable monitoring data and associated information are presented which demonstrate the presence of the substances in the marine environment. There is still a need to develop criteria for the inclusion of endocrine disrupting chemicals in the DYNAMEC procedure as they could be substances of an equal level of concern. The application of all these procedures requires a certain amount of expert judgement.

The OSPAR Commission will decide if and when an updated List of Substances of Possible Concern will be ranked on the basis of the EU Water Framework Directive Combined Monitoring-based and Modelling-based Priority Setting Procedure (COMMPS). Likewise in its first application for OSPAR, the algorithms and weighting factors of this procedure might need to be modified in order to render them more suitable for the marine environment. On the basis of the outcome of the ranking and suitable expert judgement, the Commission will decide on any further hazardous substance that should be added to the OSPAR List of Chemicals Identified for Priority Action and subsequently the further necessary actions required to achieve the objective of the OSPAR Strategy with regard to Hazardous Substances within its timeframe of 2020.

This publication draws together all the procedures and criteria developed in the framework of the dynamic selection and prioritisation mechanism for hazardous substances and serves as a manual for the application of the DYNAMEC mechanism. It will be updated as soon as changes are made to this mechanism.

annex 2

OSPAR List of Chemicals for Priority Action (Up-date 2002)

(see endnotes)

Type	Group of substances / substances	CAS No	EINECS No	Identified at†: Lead country: Background document
A: CHEMICALS WHERE A BACKGROUND DOCUMENT HAS BEEN OR IS BEING PREPARED				
Aromatic hydrocarbon	**4-tert-butyltoluene**	98-51-1	202-675-9	OSPAR 2000: Germany
Metallic compound	**cadmium**			OSPAR/MMC 1998: Spain: Published 2002 (ISBN: 0 946956 93 6)
Metal/organometallic compounds	**lead and organic lead compounds**			OSPAR/MMC 1998: Norway: Published 2002 (ISBN: 1 904426 00 X)
	mercury and organic mercury compounds			OSPAR/MMC 1998: United Kingdom: Published 2000 (ISBN: 0 946956 54 5)
Organometallic compounds	**organic tin compounds**			OSPAR/MMC 1998: The Netherlands: Published 2000 (ISBN: 0 946956 561) addressing TBT and TPT
Organic ester	**neodecanoic acid, ethenyl ester**	51000-52-3	256-905-8	OSPAR 2001: ‡
Organohalogens	**tetrabromobisphenol A (TBBP-A)**	79-94-7	201-236-9	OSPAR 2000: United Kingdom
	hexachlorocyclopentadiene (HCCP)	77-47-4	201-029-3	OSPAR 2000: The Netherlands
	1,2,3-trichlorobenzene	87-61-6	201-757-1	OSPAR 2000: Belgium & Luxembourg
	1,2,4-trichlorobenzene	120-82-1	204-428-0	OSPAR 2000: Belgium & Luxembourg
	1,3,5-trichlorobenzene	108-70-3	203-608-6	OSPAR 2000: Belgium & Luxembourg
	brominated flame retardants			OSPAR/MMC 1998: Sweden: Published 2001 (ISBN: 0 946956 70 7) addressing: polybrominated diphenylethers; polybrominated biphenyls; hexabromocyclo-dodecane
	polychlorinated biphenyls (PCBs)			OSPAR/MMC 1998: Germany & Belgium: Published 2001 (ISBN: 0 946956 78 2)
	polychlorinated dibenzodioxins (PCDDs) polychlorinated dibenzofurans (PCDFs)			OSPAR/MMC 1998: Denmark & Belgium: Published 2002 (ISBN: 0 946956 92 8)
	short chained chlorinated paraffins (SCCP)			OSPAR/MMC 1998: Sweden: Published 2001 (ISBN: 0 946956 77 4)
Organic nitrogen compound	**4-(dimethylbutylamino)diphenylamin (6PPD)**	793-24-8	212-344-0	OSPAR 2002: ‡
Organophosphate	**triphenyl phosphine**	603-35-0	210-036-0	OSPAR 2001: Germany
Organosilicane	**hexamethyldisiloxane (HMDS)**	107-46-0	203-492-7	OSPAR 2000: France

Type	Group of substances / substances	CAS No	EINECS No	Identified at†: Lead country: Background document
Pesticides/Biocides/ Organohalogens	**dicofol**	115-32-2	204-082-0	OSPAR 2000: Finland: Published 2002 (ISBN: 0 946956 97 9)
	endosulphan	115-29-7	204-079-4	OSPAR 2000: Germany: Published 2002 (ISBN: 0 946956 98 7)
	hexachlorocyclohexane isomers (HCH)			OSPAR/MMC 1998: Germany: Published 2002 (ISBN: 0 94695694 4)
	methoxychlor	72-43-5	200-779-9	OSPAR 2000: Finland: Published 2002 (ISBN: 0 946956 99 5)
	pentachlorophenol (PCP)			OSPAR/MMC 1998: Finland: Published 2001 (ISBN: 0 946956 74 X)
	trifluralin	1582-09-8	216-428-8	OSPAR 2002: Germany
Pharmaceutical	**clotrimazole**	23593-75-1	245-764-8	OSPAR 2002: France
Phenols	**2,4,6-tri-tert-butylphenol**	732-26-3	211-989-5	OSPAR 2000: United Kingdom
	nonylphenol/ethoxylates (NP/NPEs) and related substances			OSPAR/MMC 1998: Sweden: Published 2001 (ISBN: 0 946956 79 0)
	octylphenol	140-66-9	205-426-2	OSPAR 2000: United Kingdom
Phthalate esters	**certain phthalates: dibutylphthalate, diethylhexylphthalate**			OSPAR/MMC 1998: Denmark & France
Polycyclic aromatic compounds	**polyaromatic hydrocarbons (PAHs)**			OSPAR/MMC 1998: Norway: Published 2001 (ISBN: 0 946956 73 X)
Synthetic musk	**musk xylene**			OSPAR/MMC 1998: Switzerland: Published 2000 (ISBN: 0 946956 55 3) addressing musk xylene, musk ketone, moskene and musk tibetene
B: CHEMICALS WHERE NO BACKGROUND DOCUMENT IS BEING PREPARED BECAUSE THEY ARE INTERMEDIATES IN CLOSED SYSTEMS ψ				
Aliphatic hydrocarbons	**1,5,9 cyclododecatriene**ψ	4904-61-4	225-533-8	OSPAR 2002: not applicable
	cyclododecaneψ	294-62-2	206-033-9	OSPAR 2002: not applicable
C: CHEMICALS WHERE NO BACKGROUND DOCUMENT IS BEING PREPARED BECAUSE THERE IS NO CURRENT PRODUCTION OR USE INTEREST*				
Organohalogens	**2,4,6-bromophenyl 1-2(2,3-dibromo-2-methylpropyl) ***	36065-30-2	**252-859-8**	OSPAR 2001: not applicable
	pentabromoethylbenzene*	85-22-3	201-593-0	OSPAR 2001: not applicable
	heptachloronorbornene*	28680-45-7 2440-02-0	249-153-7	OSPAR 2001: not applicable
	pentachloroanisole*	1825-21-4	-	OSPAR 2001: not applicable
	polychlorinated naphthalenes*, δ			
	trichloronaphthalene*	1321-65-9	215-321-3	OSPAR 2001: not applicable
	tetrachloronaphthalene*	1335-88-2	215-642-9	OSPAR 2001: not applicable
	pentachloronaphthalene*	1321-64-8	215-320-8	OSPAR 2002: not applicable

Type	Group of substances / substances	CAS No	EINECS No	Identified at†: Lead country: Background document
	hexachloronaphthalene*	1335-87-1	215-641-3	OSPAR 2001: not applicable
	heptachloronaphthalene*	32241-08-0	250-969-0	OSPAR 2001: not applicable
	octachloronaphthalene*	2234-13-1	218-778-7	OSPAR 2001: not applicable
	naphthalene, chloro derivs. *	70776-03-3	274-864-4	OSPAR 2002: not applicable
Organic nitrogen compound	**3,3'-(ureylenedimethylene)bis(3,5,5-trimethylcyclohexyl) diisocyanate***	55525-54-7	259-695-6	OSPAR 2001: not applicable
Pesticides/Biocides	**ethyl O-(p-nitrophenyl) phenyl phosphonothionate (EPN)***	2104-64-5	218-276-8	OSPAR 2001: not applicable
	flucythrinate*	70124-77-5	274-322-7	OSPAR 2001: not applicable
	isodrin*	465-73-6	207-366-2	OSPAR 2001: not applicable
	tetrasul*	2227-13-6	218-761-4	OSPAR 2001: not applicable
Pharmaceutical	**diosgenin***	512-04-9	208-134-3	OSPAR 2002: not applicable

Endnotes

† The substances in this list were identified at the following OSPAR Commission meetings:

OSPAR/MMC 1998: Agreement reference number 1998-16 (Annex 2 to the OSPAR Strategy with regard to Hazardous Substances);

(Note: When identifying the substances or groups of substances, OSPAR/MMC 1998 has not allocated CAS and EINECS registration numbers. Background documents adopted by the OSPAR Commission for these substances or groups of substances may indicate which substances have been addressed so far by OSPAR)

OSPAR 2000: Agreement reference number 2000-10 (subsequently superseded); OSPAR 2001: Agreement reference number 2001-2 (subsequently superseded); OSPAR 2002: Agreement reference number 2002-18.

ψ The identification of these substances and the consequent action required is explained in § 7.6 of the OSPAR 2002 Summary Record. In brief, these substances have rankings in terms of persistency, liability to bioaccumulate and toxicity which are of equal concern as the other substances on this list. However, to the best of OSPAR's knowledge, on the basis of information from industry, OSPAR accepts that this substance is produced and used exclusively as an intermediate in closed systems in the production of other substances, under conditions where the safeguards applying are sufficient to avoid reasonable concerns that discharges, emissions or losses of the substance could reach the marine environment. Therefore, every five years, commencing in 2003, Contracting Parties and, where appropriate, observers representing the chemicals industries should report to OSPAR:

a. whether they have found any evidence that these chemicals are being produced, used or discharged without being subjected to safeguards to avoid reasonable concerns that discharges, emissions or losses of the substances could reach the marine environment, and, if so, what that evidence is, and what action (if any) has been taken;

b. whether there have been any cases where applications have been made for approvals involving these chemicals, and, if so, what decision was taken.

* The identification of these substances and the consequent action required is explained in § 4.13 of the OSPAR 2001 Summary Record. In brief, these substances have rankings in terms of persistency, liability to bioaccumulate and toxicity which are of equal concern as the other substances on this list. However, to the best of OSPAR's knowledge, there is no current production or use in the OSPAR states. Therefore, every five years, commencing in 2003, Contracting Parties and, where appropriate, observers representing the chemicals industries should report to OSPAR:

a. whether they have found any evidence that these chemicals are being produced, used or discharged, and, if so, what that evidence is, and what action (if any) has been taken;

b. whether there have been any cases where applications have been made for approvals involving these chemicals, and, if so, what decision was taken.

‡ These substances have currently no lead country to further the work within OSPAR and will have to be considered at a later date.

δ Polychlorinated naphthalenes should be treated as a group of substances (OSPAR 02/21/1, § 7.7).

annex 3

Executive Summaries: Background Documents on cadmium, dicofol, endosulphan, hexachlorocyclohexane, lead and organic lead compounds, methoxychlor; PCDDs and PCDFs

Cadmium

Cadmium is a metallic element which in this form is rarely found in the environment. It occurs in the form of salts and the mobility in the environment and the effects on the ecosystem depend to a great extent on the nature of these salts in combination with other elements such as oxygen, chlorine or sulphur. The zinc-cadmium ratio is very important as the toxicity and accumulation of cadmium increase significantly due to zinc deficiency. Low levels of cadmium can produce long-term adverse effects, especially in animals and humans. Cadmium was included in 1998 in the OSPAR List of Chemicals for Priority Action.

Cadmium is used in the production of batteries, in intermediates and catalysts for electroplating, in pigment in paint, in stabiliser for plastic, in photographical processes and in dyes. More than 80% of the global production of cadmium in 1998 was derived from mining, smelting and refining of zinc. The rest was recovered in secondary processes whilst recycling cadmium from products. In 1998, primary production of cadmium in seven OSPAR states amounted to almost 5000 tonnes per year. Direct and riverine inputs of cadmium contributed 50 tonnes to the maritime area. Atmospheric emissions were 66 tonnes and the atmospheric inputs contributed 60 tonnes to the maritime area. Dredged material dumped into, or relocated in the maritime area contained 39 tonnes. Important sources of cadmium are primary iron and steel industry, non-ferrous industry, road transport, combustion of fuel in power plants, commercial, domestic and industrial combustion processes and other sources such as extraction of fossils, solvent use, waste treatment and disposal, and agriculture.

Sediments in lakes and rivers contain up to 5 mg Cd per kg. Marine sediments contain 0,03-1,0 mg/kg. Cadmium concentrations in rivers have been found at levels of 10-100 ng/l and in seawater 5-20 ng/l. Cadmium concentrations in marine organisms are usually higher than in fresh water organisms. The same pattern occurs in older and juvenile organisms. Cadmium is liable to bioaccumulate in liver and kidney of vertebrates. Higher cadmium residues in biota are generally associated with industrial and urban sources. Up to 1996 there have been significant decreases of cadmium concentrations in mussels at the Netherlands', Norwegian, Scottish and French coast. However an increase has been detected at the south coast of Portugal (1,3-3,1 mg/kg dw). Elevated cadmium levels have been detected in liver and kidney of pelagic seabirds and mammals such as white-beaked dolphins and pilot whales.

Action so far has been mainly carried out in several international forums such as OECD, EC and OSPAR; the latter two having established a suite of regulations addressing cadmium. A risk assessment for cadmium under the EC existing substances regulation is currently being carried out. Cadmium and its compounds are included in the list of priority substances under the EC Water Framework Directive as priority hazardous substances.

The action recommended is: to assess the need for further action in non-ferrous metal production and processing and the secondary iron and steel industry; to develop regulations for the management of wastes and toxic tailing spills from mining activities and to consider financial incentives to support the substitution of cadmium in products; to promote EC action on revising Council Directive 91/157/EEC and Commission Decision 1999/51/EC in order to ban the marketing and use of NiCd batteries; to focus on recycling campaigns for batteries and solar cells including the participation of consumers; to promote substitution in other products and review the actions in the EC risk assessment report on cadmium when it becomes available; to pay sufficient attention to the levels of cadmium authorised from emissions of IPPC-related installations for waste disposal; to review environmental assessments and controls imposed on wastes arising from mining activities; to invite the EC to consider to ban the import and marketing of products; to invite the EC to consider development of guidance on the use of sewage in agriculture and the adoption

of common rules on the cadmium content of phosphate fertilisers in the EC; and to ask other relevant international forums to take account of this background document.

Dicofol

Dicofol belongs to a group of chlorinated hydrocarbons and is produced from DDT; its chemical structure is therefore related to DDT and it has similar properties. The main source of dicofol in the environment is its use as a plant protection product; a miticidal pesticide and acaricide used on a wide variety of fruits, vegetables, ornamentals and field crops. Dicofol is very toxic to aquatic organisms, highly bioaccumulative and degrades moderately slowly in soil and sediments. It also possibly has endocrine-disrupting properties. There is an indication that dicofol is transported through the air and may effect the North East Atlantic from sources outside the OSPAR area. Dicofol was included in the OSPAR List of Chemicals for Priority Action in 2000.

A total amount of over 2 700 tonnes of dicofol is used around the world each year. European production amounts to 1 500-1 800 tonnes per year in one factory in Spain. All dicofol is formulated in one plant in Italy. The use of dicofol is mainly registered in Southern European countries. The current use of dicofol in Western Europe is 290 tonnes per year.

Monitoring data of dicofol in Europe is rather scarce. In a Californian catchment area where dicofol is used, river water had concentrations with peaks of 2,5 ng/l; sediments contained 23,7 ng/l and benthic clam, *Corbila fluminea*, had concentrations of 97 ng/g, which was 15% of the amount of DDT accumulated in the same species. Other monitoring studies in the USA showed 0,1 mg/kg in aquatic invertebrates and 0,05-0,1 mg/kg in fish. In an important agricultural area in Spain dicofol was monitored in river water. In Greece, maximum concentrations of 2,2 µg/kg were found in sediments; however the concentration in river water was less than 0,1 µg/l.

Although dicofol is not authorised by several Contracting Parties, there is no ban or restriction at Community level. The use is only allowed in Belgium, France, Portugal and Spain. Further developments in the use will depend on whether dicofol will be included in Annex I of Council Directive 91/414/EEC concerning the placing on the market of plant protection products. No notifications have been made for inclusion of dicofol into any of the annexes of the Biocides Directive 98/8/EC and therefore biocidal products containing dicofol can no longer be authorised by EU Member States.

The action recommended is: where marketing is permitted to consider to cancel authorisations; to review the situation with respect to dicofol in 2005 when a complete dossier under Council Directive 91/414/EEC is available; to require that dicofol should be tested in accordance with agreed guidelines for detecting endocrine-disrupting potential in case a decision to include dicofol on Annex I of Council Directive 91/414/EEC were to be taken; and to ask other relevant international forums to take account of this background document and consider coordinated efforts by Contracting Parties in UNECE-LRTAP and UNEP POPs Convention.

Endosulphan

Endosulphan belongs to the group of chlorinated hydrocarbon containing a sulfite group (synthetic cyclodienes) and technical endosulphan consists of a 2:1 mixture of the α- and β-isomer. Endosulphan is used as a contact insecticide on a wide variety of insects and mites, predominantly in temperate, subtropic and tropic climatic zones. Endosulphan and its metabolite endosulphan sulphate are highly persistent substances in soil and sediment. Endosulphan is highly bioaccumulative at constant exposure and very toxic to all organisms. Endosulphan and endosulphan sulphate are potentially endocrine disrupting chemicals. OSPAR identified endosulphan in 2000 as requiring priority action, and it was therefore included in the OSPAR List of Chemicals for Priority Action.

Endosulphan is registered in Europe for more than 40 years. The current use in OSPAR states in Northern Europe is about 37 tonnes per year; the OSPAR States in Southern Europe have a consumption of 306 tonnes per year and the predominant use in the OSPAR area is in Spain. Other OSPAR states that still have uses of endosulphan are Belgium, France, Portugal and Switzerland. The main uses are in agriculture; the non-agricultual uses have ceased.

Endosulphan occurs in concentrations up to 0,06 µg/l in water and 81,6 µg/kg in sediments (90 percentiles). It is therefore found at concentrations which may cause harm to organisms in rivers and sediments. It is semi-volatile, its half-life in air is 9-27 days and it is found in the Arctic. Long-range atmospheric transport is therefore likely.

Seven out of nine countries bordering the North Sea achieved the 50% reduction target for endosulphan between 1985 and 1999/2000. This included significant reductions in France and the United Kingdom, whilst the use had ceased in Denmark, Germany, the Netherlands, Norway and Sweden. Only Belgium and Switzerland did not yet achieve the reduction target. Endosulphan is under re-evaluation for a possible inclusion in Annex I of Council Directive 91/414/EEC concerning the placing on the market of plant protection products. A decision is expected in May 2003. Endosulphan is on the list of priority substances of the Water Framework Directive 2000/60/EC and will be reviewed shortly for identification as priority hazardous substance.

The action recommended is: to invite the European Commission to severely restrict, or to ban the use of endosulphan under Council Directive 91/414/EEC; in the meantime, Contracting States to inform OSPAR what uses remain permitted and what controls they will apply to these uses; Contracting States permitting continued use or those that expect to receive transboundary loads from neighbouring countries, to continue or initiate monitoring of endosulphan and its metabolite endosulphan sulphate; in the case of continued permitted use, to collect and report statistics on the quantities sold and used; to assist the European Community with the identification of endosulphan as a priority hazardous substance under the Water Framework Directive; and to ask other relevant international forums to take account of this background document.

Hexachlorocyclohexane

Lindane is the common name for the γ-isomer of hexachlorocyclohexane (HCH) and is used as an insecticide. Lindane contains more than 99% γ-HCH. Priority was given to lindane in the 1992 OSPAR Action Plan, and it was therefore included in 1998 in the OSPAR List of Chemicals for Priority Action. Technical HCH also contains the other isomers but they do not possess a significant insecticidal activity. The use of technical HCH is generally prohibited in Western Europe and North America. Therefore, only lindane is considered in depth in this background document. Lindane is stable in fresh water as well as in seawater. It is removed through secondary mechanisms such as adsorption on sediment or via fish through the gills, the skin or ingestion. Degradation takes place much faster under anaerobic conditions than in the presence of oxygen. A limited degradability has been demonstrated and the occurrence in remote areas is due to long-range transport. Lindane occurs in different compartments and trophic levels of the Arctic and is accumulated by species at low trophic levels, while the biomagnification potential is low at the upper end of the food web. A number of ecotoxicity data for lindane are well within the range of OSPAR Ecotoxicological Assessment Criteria (0,5-5 µg/l), which are used for the identification of areas of concern.

Lindane is a contact insecticide with a widespread use in agriculture and forestry, for seed treatment and soil application, in household biocidal products, as a textile preservative and as a wood preservative. Lindane has been intensively used for many years since 1949 but has been replaced in most applications by pyrethroids and other insecticidal chemicals in recent years. From an estimated use of nearly 7900 tonnes in 1970 in Europe, the use decreased to about 2300 tonnes in 1996. France was a major user in the period 1992-1997, with an average consumption of 1600 tonnes per year, compared to an average of 2130 tonnes per year in Europe. In France, the consumption of lindane ceased in 1998.

The emissions of lindane to air in 15 OSPAR states were estimated at 733 tonnes in 1997. The atmospheric input into the North Sea was about 2,5-5 tonnes, and direct discharges and riverine inputs were estimated at 0,95-1,1 tonnes. Seawater in the Atlantic contains between 0,016 and 4,4 ng lindane per litre (on average 0,6 ng/l). Concentrations in the Central North Sea are 0,3-1,3 ng/l (on average 0,8 ng/l), while the concentrations are decreasing from the Southern North Sea (3,4 ng/l), via the German Bight (1,8 ng/l) to the north-western North Sea (0,3 ng/l).

Lindane has been regulated in several international forums. Lindane is one of the chemicals on the list of the UNEP Convention for Prior Informed Consent (PIC) and several countries have prohibited the import of lindane. Products containing less than 99% γ-HCH are banned under Council Directive 79/117/EEC. Eight of the nine countries bordering the North Sea have achieved the 50% reduction target for discharges/emissions of lindane in the period 1985-1999/2000. This included significant reductions in the United Kingdom, while use have ceased in Denmark, Germany, France, Norway and Sweden. The reduction target has not yet been achieved by Belgium and the Netherlands; however, in the Netherlands the authorisation for lindane has expired in 1999. Spain has no longer authorised lindane and Switzerland has severely restricted its use. The use of lindane will cease in the EU in June 2002 due to regulations under Council Directive 91/414/EEC concerning the placing on the market of plant protection products. Hexachlorocyclohexane has been identified as a priority hazardous substance under the Water Framework Directive 2000/60/EC.

The action recommended is: whilst noting the phase out of lindane in the EU, to focus attention on all the other HCH-isomers, to assist the European Commission in monitoring any problems with these isomers in the marine environment and to seek to achieve controls to reduce discharges and emissions; by the end of 2004 to review the likely achievements of these controls and consider the need for further OSPAR action with respect to any remaining uses; to undertake co-ordinated efforts within the framework of the UNECE-LRTAP and UNEP POP Conventions; to continue to monitor lindane in riverine inputs and direct discharges and in atmospheric inputs to the sea, in water, sediment and biota; and to ask other relevant international forums to take account of this background document.

Lead and organic lead compounds

Lead is a naturally occurring heavy metal. It is persistent and cannot be degraded in less harmless products. Lead is an acute toxic compound for mammals and aquatic organisms and can cause blood-related diseases, damage to the immune defence system and is suspected to have carcinogenic properties. It is also toxic to reproductive processes. Studies have shown the effects of lead in marine organisms such as accumulation in mussels and estrogenic effects on fish. Lead occurs in a number of compounds and in various chemical groups. Dissolved lead is considered the most hazardous form. Lead and organic lead compounds were included in 1998 in the OSPAR List of Chemicals for Priority Action.

The total production of lead in Europe in 2000 was 1,556 million tonnes, 0,652 million tonnes of which originated from primary production through mining and non-ferrous metal processing; 0,904 million tonnes originated from recycling processes. Lead is used in a large number of applications as metallic lead in batteries and accumulators, lead shots, boat keels, building materials but also in products such as paint, leaded petrol, glass, electronic and electric equipment, plastic, ceramic products. Other sources that may adversely affect the environment are production processes such as non-ferrous metal production, mining, glass production and recycling processes, ceramics production, offshore industry and waste incineration and disposal. Major sources of discharges of lead to water in countries bordering the North Sea are zinc production, offshore industry (natural component in barite use for drilling) and municipal waste water. Major sources of emissions of lead to air are road transport (despite a significant decline due to unleaded petrol), primary and secondary production of lead, copper, nickel and zinc, generation of power through the combustion of fossil fuels.

Monitoring of lead is carried out on a regular basis in OSPAR. In general, loads of heavy metals from rivers and outfalls have been very stable during the 1990s, in particular in the North Sea. For lead there is a decreasing trend in Arctic Waters, the Celtic Seas and the Bay of Biscay and the Iberian Coast. Concentrations are fairly stable in the Greater North Sea. However, data show elevated concentrations of lead, as well as for cadmium, mercury and copper in sediments close to coastal sources. In mussels, however, the trend shows significant decreases along the German, Spanish and Norwegian coast and in the Dogger Bank.

Lead discharges and emissions have been regulated in several international forums such as the UNECE LRTAP Convention and the European Community. There are a large number of Council

Directives regulating discharges and emissions of lead, regulating lead in products and fuels, etc. Lead is also under review on the list of priority substances of the Water Framework Directive 2000/60/EC with a view to its possible identification as a priority hazardous substance. All countries bordering the North Sea have achieved the 70% reduction target for lead discharges and emissions in the period 1985 to 1999/2000.

The action recommended is: to give focused consideration on the current use of lead in the production of PVC and on the current use of lead in the production of paint including proposals for any relevant, practicable and cost-effective measures to promote substitution; to invite the European Commission to report on progress and results of the forthcoming study of potential marketing and use restrictions of lead in ammunition and fishing sinkers; to review available evidence of the uptake of lead and other trace contaminants in marine organisms from barite used in the offshore industry and possible substitutes in drilling fluids; to continue monitoring of lead in the marine environment; to recommend that the findings in this background document should be used to decide whether lead should be designated as priority hazardous substance under the Water Framework Directive; and to ask other relevant international forums to take account of this background document.

Methoxychlor

Methoxychlor is a chlorinated methoxyphenylethane used as an insecticide whose activity is due to either contact with or ingestion by the targeted pest. It is persistent, it bioaccumulates and is very toxic to aquatic organisms. It has potentially endocrine-disrupting properties and it was included in the List of Chemicals for Priority Action in 2000.

Methoxychlor could reach the environment through the use as a plant protection product, as a veterinary product and as a biocide. The use of methoxychlor stopped in most countries around 1999. In the United Kingdom the use was already prohibited in the 1970s. Germany and Belgium prohibited the use in 1995 and 2000. There is only a marginal use remaining in forestry in Spain.

Methoxychlor has been detected in surface water in Belgium in very low concentrations (6-14 ng/l). In France concentrations were found up to 0,01 µg/l (90 percentile) in surface water and groundwater. In the United Kingdom concentrations were between 0,1 and 0,5 µg/l in a limited number of samples of surface water.

The EC has not banned or restricted the use of methoxychlor. However, the chemical industry has agreed on a voluntary withdrawal of methoxychlor from the market and it is therefore expected that it will be phased out in July 2003 under Council Directive 91/414/EEC concerning the placing on the market of plant protection products. This does not exclude that methoxychlor could be used again under Council Regulation (EEC) 2377/90 laying down a Community procedure for the establishment of maximum residue limits of veterinary medicinal products in foodstuffs of animal origin.

The action proposed is: whilst noting the phase out of methoxychlor under Council Directive 91/414/EEC as an agricultural pesticide, non-EU/EEA Member States to pursue national measures to the same effect; to invite the European Agency for the Evaluation of Medicinal Products to inform OSPAR on any proposals for future use; to make national authorities for the approval of human and veterinary medicines aware of this background document; to invite the EC to consider a prohibition under Council Directives 76/769/EEC and 79/117/EEC; to insist on testing of methoxychlor in accordance with agreed guidelines for detecting the endocrine-disrupting potential of chemicals before any future approval; and to ask other relevant international forums to take account of this background document and consider coordinated efforts by Contracting Parties in UNECE-LRTAP and UNEP POPs Convention.

PCDD and PCDF

Polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) are two groups of tricyclic, chlorine-substituted, organic compounds. The number of chlorine substituents on the benzene rings may range from one to eight, which means 75 theoretical possible PCDDs and 135 possible PCDFs congeners, identified in general by the name “dioxins”. Dioxins are

non-polar, lipophilic and persistent organic pollutants (POPs), which are able to biomagnify and bioconcentrate in the food web and cause a whole spectrum of potentially serious health problems.

Dioxins are mainly formed as unintentional by-products in heating and combustion processes involving organic matter, chlorine compounds and a catalyst, e.g. copper, or in the production of certain chlorinated chemicals and pulp bleaching. Formation of trace concentrations of dioxins may take place in any fire or combustion process based on natural or man-made organic materials. The presence of chlorinated organic compounds, such as chlorophenols, chlorobenzenes, chlorodiphenyl ethers and polychlorinated biphenyls (PCBs) may accelerate the dioxin formation.

Because dioxins are found in the environment as various different congener mixtures, a variety of toxicity equivalency systems have been developed in order to simplify the assessments of impacts and to compare results and trends. These systems express the toxicity of each dioxin congener relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (e.g. toxicity equivalency factors (TEF), TCDD equivalents (TEQ), etc.). Due to the extremely low water solubility, very low concentrations of dioxins are found in the water phase, but an accumulation in sediments is detected. Dioxin levels in fish and aquatic organisms vary according to the species and area. In Norway, in polluted areas, concentrations of dioxins of 5,45 to 506 ng N-TEQ/kg fresh weight have been found in marine fish and shellfish; in non-polluted areas concentrations were 0,07 to 5,6 ng N-TEQ/kg fresh weight. In particular marine mammals at the upper end of the food web can contain high dioxin levels, e.g. the dioxin level in blubber of ringed seals caught in Sweden was 6 - 217 ng N-TEQ/kg fresh weight.

The main existing international agreements on dioxins are: the UN ECE protocol on POPs requiring mandatory control measures and establishing emission limit values (ELV), and the UNEP POPs Convention requiring measures for reducing or preventing releases of dioxins to the environment. EC Directives on integrated pollution prevention and control, on the incineration of wastes and the Seveso Directives are also relevant. A communication on a EU strategy on PCBs, dioxins and furans was adopted by the European Commission in 2001 identifying a number of gaps in the achievement of the objectives set up in EU legislation, the fifth Environment Action Programme, and identifying gaps in knowledge. The communication implies an integrated and systematic approach to reduce the presence of PCBs, furans and dioxins in the environment and the necessity to identify short- to medium term and long-term actions, in particular with regard to establishing maximum limits in food and fodder.

The action recommended is: to review the implementation of the communication on a EU strategy on PCBs, dioxins and furans; to review what action might be appropriate in such areas and sources not covered by integrated pollution prevention and control systems in particular with regard to contaminated waste and the promotion of substitution of materials, products and processes leading to the unintentional formation of dioxins and furans; and to ask other relevant international forums to take account of this background document.

annex 4

Executive Summary: Background Document on Discharges and Emissions of Polycyclic Aromatic Hydrocarbons (PAHs) from Primary Aluminium Electrolysis, Soederberg Technology

OSPAR Recommendation 98/2 on Emission and Discharge Limit Values for Existing Aluminium Electrolysis Plants requires that the Commission evaluate the need and timing of an additional OSPAR measure concerning limit values with respect to discharges of Polycyclic Aromatic Hydrocarbons (PAHs) (as $Borneff_6$) to the aquatic environment from Soederberg plants.

This report includes a presentation of the results of a monitoring campaign, a description of technologies used at plants and the conclusions from the measuring campaign, and a justification for setting discharge limit values for PAHs into water.

Over the period 1996 - 1999, standardised sampling of PAH emissions to air and discharges into water have been conducted at six Norwegian aluminium plants with Soederberg technology. The focus has been on emissions in pot room ventilation air and discharges into water from seawater scrubbers. For comparison between plants of PAH emissions to air and discharges to water, it was imperative that standardised procedures for sampling, sample preparation and analysis were followed at all stages. Based on relevant Norwegian Standards, a description of practical methods for sampling, sample preparation and analysis of PAHs at aluminium plants has been produced, a description of which is attached to this report.

The average level of emissions to air of particulate PAH_{16} from all six plants was 280 g per tonne aluminium produced and the average level of total PAH_{16} was 638 g per tonne aluminium. The variations in emissions to air have been large from plant to plant and from year to year. All the components in PAH_{16} could be detected in the particulate fraction of the emissions to air. The component benzo(a)pyrene constituted on average 5% of PAH_{16} in the particulate fraction. The components fluoranthene and benzo(bjk)fluoranthene constituted each 15-20% and dominated quantitatively the particulate fraction. In the gaseous fraction of the emissions to air, only four of the most volatile components in PAH_{16} could be detected. On average for all plants, the component phenanthrene alone constituted 66% of the gaseous PAH emissions to air. No benzo(a)pyrene could be detected in the gaseous fraction of the emissions to air. Due to analytical difficulties, the $Oslo_{11}$ selection of PAH components should be omitted in future reporting of PAH emissions to air from aluminium electrolysis plants.

When using a single component as an indicator for PAH emissions or discharges, it must be remembered that the inaccuracy in analysis is far greater for one single component than for the sum of a selection of components. Because of the short half-lives of the gaseous components, it may be advantageous to focus the future emission sampling of ventilation air from Soederberg pot rooms on particulate emissions only. Future reporting of PAH emissions to air should be based on PAH_{16} / benzo(a)pyrene.

From the three aluminium plants with seawater scrubbing of ventilation air, the discharges of total PAH_{16} were on average 84, 72 and 17 g per tonne aluminium, respectively. The corresponding values for $Borneff_6$ were 28, 25 and 6 g per tonne aluminium. A considerable amount (50-70%) of the PAHs in the discharge water is in the dissolved fraction. It has been previously documented that the dissolved fraction of PAHs in effluents may be harmful to marine organisms in the recipient. It is therefore necessary to employ sampling methods that include the dissolved fraction of PAHs in effluents. Reporting should be based on $Borneff_6$ / PAH_{16}.

On the basis of the findings in this report, the Commission has adopted a supplementary measure: OSPAR Recommendation 2002/1 on Discharge Limit Values for Existing Aluminium Electrolysis Plants.

annex 5

Executive Summary: Survey on Genotoxicity Test Methods for the Evaluation of Waste Water within Whole Effluent Assessment

This survey on genotoxicity test methods for the evaluation of waste water within whole effluent assessment (WEA) supplements the OSPAR Background Document concerning the Elaboration of Programmes and Measures relating to Whole Effluent Assessment (2001).

Genetic hazard assessment deals with changes in genetic material of organisms, either human or other natural origin. Although considered an important element of the basic mechanisms of evolution, mutations often have a more detrimental effect on individuals and their offspring, and may adversely affect populations. There is consensus about a close association of DNA damage, mutations and the induction of various types of cancer. In eco-genotoxicity, possible effects of mutagenic/genotoxic substances on populations and ecosystems are investigated. This report gives an overview on genotoxocity test methods and their application to monitoring and assessment of waste water.

Mutagenicity testing has been performed with all types of organisms. For monitoring purposes higher organisms (eukaryotes) were exposed to the environmental compartment "*in situ*" or in laboratory tests "*in vivo*". Mutagenicity represents permanent changes to single genes or chromosomes, while genotoxicity focuses on primary damage of DNA. Some of the methods applied to environmental samples are based on corresponding OECD and EC guidelines used for chemical assessment, but others have not yet been standardised.

The bacterial Ames, *umuC* and SOS chromo assays have been applied predominantly to waste water samples. Tests with eukaryotic cells or organisms might be more relevant for human and ecological risk assessment, but generally they are much more time-consuming. Several tests have been developed using the integrity of DNA as an unspecific endpoint of genotoxicity e.g. Comet Assay, Alkaline DNA-eluation assay, DNA alkaline unwinding assay, UDS-assay; the Comet Assay probably the most cost-efficient test among these. Most eukaryotic mutagenicity tests detect macro damage of chromosomes in the visible light microscope following appropriate staining (Chromosomal aberration, Micronucleus assay, SCE assay). Plants, amphibians, fish and permanent mammalian cell lines such as V79, CHO or CHL, but also marine and fresh water mussels have been used as test organisms.

For genotoxicity testing, surface water samples were often highly concentrated in order to enhance sensitivity. However, this can lead to unrealistically high and ecologically irrelevant exposure concentrations, and comparison of different study results remains therefore difficult.

Genotoxicity test results are reported for a broad range of industrial and municipal effluents and results from some exemplary sectors are described in this report. As a rule, no genotoxic and mutagenic effects can be measured in domestic waste water in the inlet and outlet of municipal treatment plants. Mutagenic effects have been found in waste water from the textile industry and hospitals as well as in waste water from the pulp and paper and chemical industry.

"Genotoxicity backtracking" has been applied successfully, i.e. to assess the relative contribution of disinfectant by-products to the total mutagenicity of drinking water. Further more, the origin of genotoxity in river water has been assigned to single substances (chromium, nitroarenes, aromatic amines, PBTA-1). Also azo dyes have been determined as the principal source of mutagenicity in waste water of textile finishing. Fluoroquinolone antibiotics were found to cause genotoxicity in waste water from hospitals. Numerous studies are available on the ability of eliminating genotoxins by treating municipal waste water.

Although the potential hazard of genotoxins to the environment needs further clarification, the need to consider genotoxicity and mutagenicity testing in WEA is widely acknowledged. It is accepted that an individual test covers only one definite endpoint. Several researchers have advocated to use a test battery of one bacterial and one eukaryotic test system following the

approach used in chemical risk assessment. From a scientific point of view, further studies considering genotoxicity backtracking and/or higher test organisms should be performed in particular in those cases that show positive results in a first survey with bacterial tests.

annex 6

Executive Summary: Report on Discharges of Radioactive Substances into the Maritime Area by Non-nuclear Industry

Following the publication of an OSPAR report in 1997 concerned principally with discharges from the phosphate fertiliser industry, OSPAR agreed that further work was required to identify and quantify discharges of radioactive substances from other sectors of non-nuclear industry into the marine environment. In addition, it was agreed that the opportunity should be taken to obtain information on the regulation of non-nuclear industry by Contracting Parties and that the information and data should be submitted by way of a questionnaire in a format agreed beforehand by the Contracting Parties. This report describes the information and data obtained and brings up to date information on discharges by the phosphate industry.

Submissions were received from Germany, Ireland, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom; countries which did not respond were Belgium, Denmark, Finland, France, Iceland and Portugal. As a result, this report cannot provide a fully complete overview of the regulation of, and the discharges into the marine environment from, non-nuclear industry within the OSPAR area, however it is sufficient to indicate broadly the sectors of industry which are the important sources of radioactive discharges. The report has also drawn on additional sources of information, in particular the MARINA II study carried out for the European Commission.

All Contracting Parties have in place systems for regulation of discharges from non-nuclear premises and most have provisions for exempting certain industries in accordance with EU Council Directive 96/29/Euratom. The instrument of control is generally an authorisation, or other form of permit, containing discharge limits; the form of limits varies and may take the form of discrete values for the discharge of individual radionuclides, or groups of radionuclides, over differing time periods or may be a limit on radioactivity concentrations in discharges. The limit-setting process also varies, however most countries appear to relate limits to public dose or dose-derived secondary limits. Around 50% of countries require some degree of reporting to regulatory authorities, of actual or estimated discharges, the amounts of radioisotopes brought onto sites, or the number of administrations of radionuclides to hospital patients.

Discharges from most non-nuclear sectors are made to public sewers which then discharge, after treatment, to rivers or direct to the sea. Data in the submissions received indicate that the medical sector is dominant in terms of overall activity in discharges. A wide range of radionuclides are used in healthcare; most radionuclides used in this sector are of short half-life, the most significant entering the marine environment being technetium 99m and iodine 131.

The longer-lived radionuclides are those of natural origin such as radium 226 and radium 228, lead 210 and polonium 210. The premises discharging these are in the extractive (or related) sector, from either historic onshore mining practices or from (generally) offshore oil and gas exploration and production facilities. Disposals of phosphogypsum from the phosphate ore processing industry into the marine environment in the OSPAR area have now ceased.

Information from the European Commission's MARINA II study has been made available for purposes of comparison with the results of this study for OSPAR. This has provided an opportunity to include, for the sake of completeness, an estimate of discharges of alpha-emitting radionuclides in produced water from offshore oil and gas installations. In addition, broad estimates of the total discharges from other non-nuclear sectors are presented, albeit with admittedly large imprecision, thus giving order of magnitude figures for discharges from all non-nuclear sectors. These are compared with data previously reported to OSPAR for discharges from nuclear installations into the OSPAR area. On the basis of the information in the MARINA II report, estimated discharges in 1999 of alpha emitting radionuclides by the extractive sector and phosphate ore industry were considerably larger than discharges from the nuclear industry. For total beta activity and tritium the nuclear industry discharges exceed those from the non-nuclear sector. The estimates for non-nuclear sectors are subject to considerable uncertainty due to the paucity and variability of data

submitted, and further work would be necessary to refine the numerical values if more robust assessments of activity discharged from this sector were required.

annex 7

Executive Summary: Background Document Concerning Techniques for the Management of Produced Water (1st edition)

This background document is related to OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations. It contains brief descriptions of principles, basic elements and operational aspects of techniques which may be applied on offshore installations for the treatment of produced water.

An overview of various techniques for the removal of heavy metals, dissolved oil, dispersed oil and offshore chemicals from produced water is presented in Table 1. For a number of techniques that are currently available or emerging for the treatment of produced water from offshore oil and gas installations as part of a BAT/BEP solution, fact sheets are presented. A short description of principles, basic elements, operational aspects and other factors relating to each type of these systems is presented in the tables A – 1 to C – 14. An overview of the techniques for which fact sheets have been prepared is presented in Table 2. This table contains examples of techniques that are currently available or emerging for the treatment of produced water from offshore oil and gas installations as part of a BAT/BEP solution.

Although the physical and chemical principles of techniques described are generally applicable, the technical and economical features mentioned in the current version of this background document draw mainly on experience principally of operations in the southern North Sea which is predominantly a gas province with some oil and with relatively low volumes of produced water. The validity of the cost and technical data is therefore limited, and this should be taken into account when evaluating the applicability of techniques in other areas and in other circumstances.

It is the intention that this background document be revised to include data on applicability of techniques for a wider scope of offshore oil and gas (e.g. large oil fields in the central North Sea). Furthermore this background document is intended to be updated regularly in order to allow for the inclusion of descriptions of new techniques when these emerge.

annex 8

Outline of the Income and Expenditure of the OSPAR Commission

EXPENDITURE

OSPAR Actual Expenditure 2001 £		OSPAR Approved Budget 2002 £	OSPAR Approved Budget 2003 £	*OSPAR Approved Budget 2003 Euros**
594 625	1 Staff Costs	604 675	632 300	*1 012 755*
46 758	2 Travel and Subsistence	45 000	48 000	*76 882*
21 629	3 Translation Services	15 000	20 000	*32 034*
65 786	4 Office Services	79 900	73 050	*117 004*
95 974	5 Accommodation and Equipment	126 925	142 000	*227 441*
1 270	6 Hospitality Expenses	1 100	1 350	*2 162*
5 447	7 Audit Fee	5 200	5 700	*9 130*
9 473	8 Management of CAMP data	9 500	10 000	*16 017*
840 962	ESTIMATED GROSS EXPENDITURE	887 300	932 400	*1 493 425*
1 233	Contribution to W.C.F.	0	4 510	*7 224*
842 195	TOTAL BUDGET	887 300	936 910	*1 500 649*

FORECAST INCOME FOR 2003

	Forecast Income 2002 £	Forecast Income 2003 £	*Forecast Income 2003 Euros*
Contributions from Contracting Parties	887 300	936 910	*1 500 649*
Bank interest received	15 000	15 000	*24 025*
Sales of publications	2 500	1 000	*1 602*

* For information only

Exchange rate: 1£ = 1,6017 Euros as at 21 May 2002