

International Council for the
Exploration of the Sea

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Fisheries Improvement Committee



POLLUTION OF THE NORTH SEA - REPORT OF AN AD HOC MEETING HELD
AT LOWESTOFT, 25 - 26 March 1971

The meeting which was chaired by the Chairman of the Consultative Committee, Mr. A. J. Lee, was attended by representatives of Belgium, Denmark, France, Germany, Netherlands, Norway, Sweden and United Kingdom, and a representative of FAO (see Annex 1). Following the adoption of a Draft Agenda for the meeting and the appointment of Dr Portmann (United Kingdom) as Rapporteur, the Chairman outlined the various events behind the decision to call the meeting and gave brief details of those that had followed subsequently.

The first suggestion that ICES should sponsor a survey of toxic and persistent chemicals in the North Sea came from Dr Cole (United Kingdom), following upon the recommendations of the FAO Technical Conference on Marine Pollution and its Effects on Living Resources and Fishing. He wrote to the Chairman of the Consultative Committee who strongly supported his request. As a result the General Secretary acting on the instructions of the President of ICES circulated member governments inviting them to send representatives to a meeting to discuss the possible setting up of a survey of pollutants in the North Sea.

The Chairman pointed out that in addition to FAO Conference Recommendations Nos 2 and 3 which called for pollution control, particularly of enclosed sea areas such as the North Sea, based on scientific data and monitoring, various bodies (e.g. GESAMP and IOC) had passed similar resolutions. He also mentioned the proposal by Germany for a convention on North Sea pollution control. In concluding his opening remarks, the Chairman stated that it was quite clear that many organizations were pressing for work on pollution in the North Sea and that in his view ICES was the best organization in terms of experience and organizational capacity to carry out such work. This feeling was echoed by all the participants.

In order to assess the present state of knowledge on pollution of the North Sea and as a preliminary to the formal identification of pollutants requiring attention it was suggested that each national delegation should give a brief statement of existing or proposed national programmes. From the reports that followed, it became clear that several countries were already conducting investigations into pollution levels in the North Sea. The United Kingdom, Netherlands

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and Sweden were already monitoring the levels of organochlorine pesticide residues, PCBs and certain metals, particularly mercury, in fish caught in the North Sea or adjacent waters. Belgium proposed to start a major survey of metals in fish in 1971 as part of her National Programme of Pollution Research. Norway and Germany proposed to start similar work in the near future and Norway already had, in co-operation with Sweden, a survey in progress for aliphatic chlorinated hydrocarbons. Some countries (e.g. UK, Netherlands, and Belgium) were starting surveys of metals in sea water in 1971. Although neither Denmark nor France were planning pollution investigations in the North Sea, both countries were interested in the planning of any international survey of the North Sea and would welcome the setting up of such a programme.

In addition to these existing or projected monitoring studies of the North Sea, several countries were investigating the toxicity, behaviour and fate of pollutants discharged to the North Sea. Studies were also in progress in some countries with the aim of accurately determining the polluting loads entering the sea from their shores either by direct discharge or via rivers.

The only existing international programme of work concerning the North Sea is that of OECD on the occurrence of pesticides. This programme involves the analysis of wildlife samples by laboratories in several countries and the meeting noted with interest the importance placed on intercalibration of methods.

At the conclusion of these background-setting statements the meeting agreed that an International Programme to study the Pollution of the North Sea and its Effects on Living Resources and their Exploitation was required and that this could best be organised by ICES. As a first step it was agreed that the limits of the North Sea should be defined as that area included in ICES statistical Areas IVa, b, and c and IIIa. However, it was generally agreed that these boundaries should not be considered to be strictly limiting since the investigations should follow the directions indicated by the scientific problems rather than be limited by geographical boundaries. Thus if the investigations indicated the necessity, the area could be extended northwards into the Norwegian Sea or south-westwards into the English Channel. It was generally agreed that, because they were the main areas where pollutants enter the sea, the coastal waters should be studied in greatest detail but not to the exclusion of the offshore areas.

There was a considerable amount of discussion regarding the various aspects of pollution which should be studied, the following suggestions being among those put forward:

- 1 Studies of the rates of input of pollutants.
- 2 Detailed investigations of the hydrography of the North Sea.
- 3 Studies of the physical, chemical and biological fate of pollutants.
- 4 Studies of the modes of transport of pollutants.

It was agreed that the first stage of the programme should be a Base-Line Survey. The meeting discussed which pollutants should be surveyed and whether to assign priority to assessment of pollutant levels in fish or in (a) some other indicator species (b) water (c) sediments. It was finally agreed that commercially exploited fish were of major concern and that, in addition, locally confined fish stocks that might act as indicators of pollution should be studied.

It was decided that there was no need to carry out a Base-Line Survey of radioactive materials in the North Sea since the discharge of radioactive wastes was rigidly controlled by national legislation, and both IAEA and ENEA have firm proposals covering the various aspects of radioactive waste management and registration of discharges. Moreover, surveys have been carried out for some years past and a time series of data is steadily evolving.

The meeting considered what pollutants should be included in the proposed study and it was finally agreed that these should include (a) petroleum (b) chlorinated aromatic hydrocarbons such as DDT and its metabolites, dieldrin and PCBs (c) halogenated hydrocarbons in general and particularly the chlorinated aliphatic waste products of PVC manufacture (d) metals, particularly mercury, lead, copper, zinc, cadmium and manganese. It was generally felt that nutrient salts were unlikely to be a major problem in the near future but that they merited further investigation.

An attempt was made to assign some degree of priority to these pollutants but this was finally abandoned when it became clear that there was a lack of ready knowledge as to the ability and total analytical capacity of the various countries in terms of numbers of samples which could be analysed in order to undertake the various studies required. It was therefore agreed that an early meeting of a group of analysts and biologists appointed at national level and fully acquainted with such matters, would best be able to resolve these difficulties. This group should, if it considered it to be necessary or desirable, include additional pollutants or possibly preclude listed materials at least temporarily. It should, for example, deal with petroleum only when countries have progressed towards the development of national programmes.

Conclusions and Recommendations

The ad hoc meeting considered that in any survey which might be started, pollutant levels in food fish should be given first priority. This should be followed, or if possible accompanied by, measurement of the same pollutants in suitable indicator organisms (locally confined fish stocks and seals were mentioned as possible species), sea water and sediments. Investigations should also be made on the physical, chemical and biological fate of pollutants and their rates and modes of transport in the North Sea. It was also considered that a detailed and accurate knowledge of the rates of input of the various pollutants was essential if a true understanding of their fate was to be achieved.

The timing of the proposed Base-Line Survey was discussed and it was agreed that it should be initiated as soon as possible, but that a start would have to await the formal authorization of the study as a whole by the Council. As a preliminary to the survey, it was agreed that certain preparatory steps could be taken before the next full Council Meeting.

The ad hoc meeting therefore agreed to request that the Bureau at its meeting in May should recommend to the Council that it should sponsor an International Study of Pollution of the North Sea and its Effects on Living Resources and their Exploitation and that this study should start with a Base-Line Survey. As a preliminary to such a survey the Bureau should establish a Working Group which would meet during summer 1971 in order

- (a) to co-ordinate present national programmes of analysis for toxic materials in food fish and local stocks of non-commercial fish,
- (b) to consider what would be necessary in order to expand these programmes to afford coverage of the whole North Sea and what capability there was at national level for such expansion.

As a further preliminary the UK, Belgium and Netherlands should be asked to co-ordinate their 1971 national programmes on metals in sea water in the Southern Bight and to carry out intercalibration exercises so that the outlines of the distribution of various metals in this area becomes known by the 59th Statutory Meeting of the Council (27 September - 6 October). The Bureau should also arrange a meeting of a Coordinating Group for the International Study of Pollution of the North Sea at the time of the 59th Statutory Meeting.

In addition, in the light of its discussions the meeting further suggested that at the 59th Statutory Meeting of the Council:

1. The Plankton Committee be asked to examine the problem of possible eutrophication in the North Sea in relation to nutrient salt levels both locally and over the sea as a whole.
2. The Marine Mammals Committee be asked to examine the possibility of using seals from colonies around the North Sea as indicators of pollutants, some of which they may concentrate by virtue of their position in the food chain.
3. The Hydrography Committee be asked to consider extending its present investigations in the North Sea so as to afford a better understanding of the rates of transport and dispersal of pollutants by physical processes.
4. The Council should initiate an investigation into the sources and rates of input of pollutants to the North Sea. Inputs from outfalls, rivers and the atmosphere, as well as by dumping, should be evaluated.

A. J. Lee: Chairman

J. E. Portmann: Rapporteur

NORTH SEA POLLUTION MEETING: FISHERIES LABORATORY, LOWESTOFT, 25-26 March 1971

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