

REPORT ON SCOR WORKING GROUP 39
SCIENTIFIC INVESTIGATION OF POLLUTION IN THE MARINE ENVIRONMENT
SUMMARY OF RECOMMENDATIONS

The following extracts are from the "Report of the ACMRR/SCOR/ACOMR Joint Working Party on Global Investigation of Pollution in the Marine Environment (GIPME)", published as FAO Fish.Rep.No. 112 (1971).

PREFACE

The Group of Experts on Long-Term Scientific Policy and Planning established by the Intergovernmental Oceanographic Commission proposed in November 1970 that the Commission should establish a Global Investigation of Pollution in the Marine Environment (GIPME) as a major project in its Long-Term and Expanded Programme of Oceanic Exploration and Research (LEPOR). Subsequently the Bureau of the Commission at its meeting with the Consultative Council in Bordeaux in March 1971 requested the Commission's scientific advisory bodies (SCOR, ACMRR and ACOMR), together with GESAMP, to cooperate in developing the programme elements of this global investigation and to prepare a working paper for consideration at the Seventh Session of the Commission to be held in November 1971.

In response to this request, the advisory bodies and GESAMP agreed to establish a Joint Working Party on the Global Investigation of Pollution in the Marine Environment with the following terms of reference:

1. To review relevant documents concerning programmes of scientific investigation of pollution in the marine environment.
2. To identify the lines of research that appear to be the most effective in such investigations.
3. To develop an outline for GIPME, including estimates of priorities and timing and of the facilities and manpower required, and to suggest institutional arrangements for the planning and coordination of the work and the allocation of responsibilities for parts of the programme among the various interested organizations.
4. To note the regional approach to the development of GIPME suggested by GESAMP and to (a) consider areas, additional to those named by GESAMP, in which investigations might be commenced at an early date, (b) bear in mind the need to enable the developing nations to take an active part in GIPME.

This group met at San Marco di Castellabate, Italy, from 11 to 16 October and in Rome on 18 October 1971. A list of the participants is given. Mr. A.J. Lee was appointed Chairman and Professor W.S. Wooster acted as Rapporteur. Excellent arrangements were provided by FAO and enabled the group to conduct its work expeditiously.

SUMMARY OF RECOMMENDATIONS

In considering the great variety of research efforts that will ultimately be required to answer the questions raised by man's increasing pollution of the ocean, the Working Group decided to identify a number of projects that should be initiated now. Some of these required elaboration by appropriate specialists, while others are ready for action by international organizations. Implementation of the proposals below, with the coordination of IOC, would compose the initial phase of GIPME.

The following recommendations were agreed:

1. That SCOR and ACOMR, in collaboration with the Commission on Atmospheric Chemistry and Radioactivity (of IAMAP) evaluate the problems involved in studying the transport of pollutants through the atmosphere and their transfer to the ocean, including the development of suitable sampling methods, and consider means for promoting their investigation, with the goal of achieving the capability of conducting a multiship observational programme by 1974.
2. That IOC consider the desirability and method of organizing an international multi-disciplinary study of River Inputs to Ocean Systems (RIOS) and that as an initial step the IOC Secretariat compile an inventory of present national and international programmes of river discharge study and measurement, including the monitoring of river-borne pollutants.
3. That SCOR, in cooperation with other interested scientific groups, examine the possibility of designing critical experiments to evaluate the rate and extent of vertical transfer of materials across the pycnocline by physical and biological processes.
4. That SCOR and ACMRR, in cooperation with other interested scientific groups, evaluate further the concept and design of a comprehensive investigation into the dynamics of ecosystems in relation to pollution, identify the methodological problems, and propose programmes for its implementation.
5. That GESAMP consider how best to promote the international exchange of information on research into the survival and fate of pathogenic bacteria and viruses in the marine environment.
6. That SCOPE, in cooperation with SCOR and ACMRR, be invited to arrange for consultation, coordination and information exchange on studies of pollutant concentrations in natural deposits and in marine and other organisms held in museum and other collections, paying particular attention to possible contamination and changes in composition with preservation and storage.
7. That ACMRR elicit, evaluate and disseminate information on biological accumulators of pollutants and encourage their use in monitoring programmes.
8. That a joint SCOR-ACMRR working group be established to review the various aspects of design and methodology in monitoring the biological effects of pollutants, to evaluate the research required to perfect methods for application in monitoring programmes, and to recommend ways whereby this research can be expedited through international cooperation.
9. That IOC encourage and coordinate national and regional programmes for marine pollution present state (base line) studies, giving due attention to the improvement and intercalibration of analytical methods and training in their use, and the exchange and evaluation of data and other results and information.
10. That IOC arrange now for scientists engaged in national and regional studies on present levels and/or effects of marine pollution to combine their findings in a preliminary report on the "health of the ocean".
11. That GESAMP (1) propose initial criteria to be met from the point of view of the marine environment in establishing test programmes for evaluation of product toxicity, and (2) in consultation with ICES and other appropriate bodies, prepare an initial list of biological criteria to be satisfied before approvals for ocean dumping should be issued.
12. That IOC promote the organization of networks of cooperating laboratories concerned with marine problems, on regional and subject bases, for the exchange of information, improvement and intercalibration of methods, provision of analytical services and coordination of scientific effort, training and education. Regional networks should be developed within the context of regional cooperative investigations and regional organizations where these exist. In the

case of subject networks, high priority should be given to (a) laboratories concerned with determining the effects of pollutants on marine organisms, and (b) laboratories concerned with development and application of methods for determining chemical pollutants in sea water, marine organisms and sediments.

13. That IOC in the first place explore the possibility of developing in a suitable location an International Institute of Tropical Oceanography whose functions would include education and training, and marine research. The research effort should include present-state baseline studies of marine pollutants and related problems. It could also include the study of structure and process characteristic of coral reefs and lagoons, and of mangrove associations. Eventually, several laboratories of this character may be required.

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ANNEX IX

REPORT OF MARINE GEOSCIENCE WORKSHOP HONOLULU 20-24 SEPTEMBER 1971

Introduction

At the SCOR Executive Meeting in Madrid in May 1971, it was decided that an international meeting should be held, before the convening of the 7th Session of the Intergovernmental Oceanographic Commission, of a group of experts who should exchange information on present knowledge and activities relating to the geoscience exercises proposed by GELTSPAP and the marine aspects of the Geodynamics Project and the IGCP, and who should prepare specific proposals for implementation of further cooperative investigations for consideration by the IOC and by National Committees of ICG.

Because of the Hawaiian Government's interest in oceanography, Hawaii being in a central position of the world's largest ocean, a kind invitation was issued by Dr. Craven, Dean of Ocean Science in Honolulu, for the small international group to meet in Hawaii in September. It was possible to collect a representative set of scientists from many countries and diverse earth science interests, although it is a pity that some invited members could not attend.