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January 1981

PREFACE

Coastal nations' extensions of national jurisdication to 200 nautical miles, their claims of jurisdiction over marine scientific research, and the negotiations of the Third U.N. Law of the Sea Conference on marine scientific research have stimulated renewed interest by the U.S. oceanographic community in arrangements to facilitate distant-water oceanography. The bilateral agreement is one such arrangement. Against this background, the Ocean Policy Committee (OPC) of the National Research Council held a workshop in Miami in 1976 and concluded that the United States would have to negotiate agreements in order to safeguard marine science. Two years later, an OPC workshop in La Jolla, California, produced a more specific recommendation:

> That the Department [of State] enter into regional and bilateral negotiations with appropriate organizations and countries in order to facilitate the future conduct of marine scientific research in distant waters.[1]

[1]Ocean Policy Committee, Proceedings of a Workshop on Procedures for Marine Scientific Activities in a Changing Environment, January 9-11, 1978. (Washington, D.C.: National Academy of Sciences, 1978), p. 3.

The report of the workshop continued:

> Procedures for the conduct of marine scientific research more favorable than those specified in the ICNT [informal composite negotiating text], might be negotiated on a bilateral or regional basis. Such procedures could represent simplified and/or expanded arrangements in the mutual interest of both the researching and the coastal States. Agreements thus developed could clarify the items in Articles 249 and 250 of the ICNT or serve as operative mechanisms in the absence of a Law of the Sea (LOS) Convention.
>
> Agreements under such arrangements are independent of LOS but are encouraged in Articles 244 and 248. Bilateral or regional discussions and negotiations between the U.S. Government and other coastal States should be pursued and negotiated agreements should be implemented promptly. The U.S. delegations for these negotiations should include practicing scientists. The arrangements thus derived should be made available to all research vessel operators through UNOLS [University National Oceanographic Laboratory System] and the Department of State.[2]

An OPC Workshop on Coordination of International Oceanographic Research held in September 1979 in Newport, Oregon, considered bilateral and other arrangements for distant-water oceanography. Although there was still strong support for either formal or informal bilateral agreements at this workshop, a warning flag was raised. A draft workshop report (forthcoming) makes the point that during the workshop discussions, it was recognized that there will be increased costs associated with bilateral agreements for ocean research. It was also noted that if marine science bilateral agreements are negotiated, they must be supported by the scientific community. This support should be ascertained before discussions are held with the other country.

[2]Ibid., pp. 7-8.

On 20 September 1979, shortly after the Newport workshop, the Department of State's Bureau of Oceans and International Environmental and Scientific Affairs asked the Ocean Policy Committee to study bilateral agreements in marine science and to consider the future U.S. role in the Voluntary Assistance Program of the Intergovernmental Oceanographic Commission (see Appendix). The Marine Technical Assistance Group of the Ocean Policy Committee is considering the question of the Voluntary Assistance Program within the broader context of its study of the needs for future U.S. marine assistance to, and cooperation with, developing countries.

The request concerning bilateral agreements posed three basic questions:

1. When should a bilateral agreement be sought?
2. What benefits are expected to be obtained?
3. What costs are acceptable to achieve those benefits?

At its 6 February 1980 meeting, the Ocean Policy Committee's Freedom of Ocean Science Task Group (FOSTG) established an ad hoc committee to undertake the study.[3] This report was prepared after a meeting that included presentations by representatives of federal agencies that have concluded or are negotiating bilateral agreements in marine science.

[3]The ad hoc committee consisted of Donald Walsh, chairman, and John Craven, Roger Revelle, David Ross, and Manik Talwani; Mary Hope Katsouros provided staff assistance. The committee met with the following representatives of federal agencies: Howard April (NOAA), Louis Brown (NSF), William Erb (DOS), Eduardo Feller (NSF), James Hannaham (Navy), Frank Hersman (NSF), Robert Junghans (NOAA), Ned Ostenso (NOAA), Gerald Posner (NOAA), and William Sullivan (NOAA).

INTRODUCTION

Ocean phenomena do not respect political boundaries. Such phenomena must be studied in their entirety to understand both their fine-scale and their large-scale aspects. Often U.S. marine research to understand such phenomena must take place, at least in part, in waters off the coasts of other countries.

Whether or not a widely accepted Law of the Sea treaty emerges from present negotiations, marine scientists must assume that coastal state jurisdiction over marine scientific research is rapidly becoming the common law of ocean use. In order to ameliorate the effects of this new common law, it may be necessary to negotiate special bilateral research agreements between researching and coastal nations.

A basic assumption is that bilateral scientific agreements should provide specific benefits to both parties, probably at some cost to both parties. Bilateral agreements may vary in duration and scope and may be arranged between various agencies of government for many purposes. This report considers the rationale for seeking bilateral agreements for marine scientific research, the elements of a satisfactory agreement, and its costs and benefits.

For purposes of this discussion, the term "bilateral agreement" refers to any understanding, formal or informal, that may be established between the United States government and another country. It can take the

form of a treaty, a memorandum of understanding, or an exchange of diplomatic notes or letters.

Motivations for developing bilateral arrangements in marine science can be scientific or political or both. Scientific motivation may be based on the desire to make use of special scientific expertise and scientific resources available in one or both countries, or it may be based on the need to study ocean phenomena that have a particular geographic distribution.

Political factors may include the desire of the one nation to cooperate scientifically with the other. Political motives with no direct pertinence to marine science may also be a basis for bilateral negotiations. Although such political negotiations may have value to the overall international affairs of the United States, they are likely to have high costs and to provide little direct benefit to marine science and are not considered further in this report. Clearly, under many international circumstances, purely scientific bilateral arrangements may have ancillary political benefits. However, wherever science or technology is involved, for whatever purpose, the science should be of the highest possible quality appropriate to the situation.

As the United States initiates bilateral negotiations, a detailed analysis of research articles presented in the draft convention on the law of the sea should be consulted.[4] Such an analysis would provide a standard against which to gauge any given bilateral agreement. The U.S. interpretation of the provisions for marine scientific research in the final convention on the law of the sea would be especially important in negotiating bilateral agreements during the period following signature of the convention but before it enters into force. During this period, negotiations could help to establish the United States' interpretation. Consequently, the United States should prepare a clearly stated, detailed interpretation of the

[4]See, for example, Ocean Policy Committee, Analysis of Those Articles Affecting Marine Scientific Research in the Draft Convention on the Law of the Sea, (Informal Text). (Washington, D.C.: National Academy of Sciences, 1980).

articles of the draft convention, which may be modified during negotiations. If past bilateral arrangements had been based on such an interpretation, the U.S. position with respect to treaty provisions could have been strengthened.

WHEN AND WHERE SHOULD A BILATERAL AGREEMENT BE SOUGHT?

The United States should seek a bilateral agreement for marine research (1) when it is obvious that some form of cooperative arrangement between scientists of two countries will benefit science, or (2) when it is clear that there are special scientific benefits to be gained by the United States. Such benefits may include the opportunity to use specialized facilities or equipment possessed by the other country or the opportunity to carry out research in a scientifically important ocean area.

Generalized bilateral agreements covering procedures to be followed in all or most research projects should be sought when there is a high frequency of involvement of U.S. scientists with scientists of another country or when there is repeated need to engage in research in another country's economic zone or continental shelf. Such circumstances probably will exist with Canada, Mexico, and countries of the Caribbean. Given a high frequency of interaction, it will obviously be advantageous to have simplified and agreed upon procedures. Under other circumstances, bilateral agreements may or may not be project-specific, although project-specific arrangements may be easier to negotiate.

Bilateral agreements as means to improve the procedures necessary for working in foreign coastal waters should be considered under the following circumstances:

1. When foreign or United States bureaucratic procedures can be simplified by a sufficiently detailed agreement.
2. When there has been repeated harassment of U.S. scientists by a coastal nation. (Such harassment may include excessive numbers of requests for information pertaining to research plans, continued dissatisfaction with the

fulfillment of obligations, interruption of research, and so on.)

3. When there have been repeated denials of requests for access to foreign waters.

Negotiations should be initiated first with countries where repeated access is desired (e.g., Canada, Mexico); where there are high-priority questions for marine science but where access is difficult (e.g., India) and U.S. scientific interest appears to be of considerable duration; and where there is a strong indication of foreign scientific interest.

In addition, whenever a bilateral arrangement affecting the oceans is negotiated, a marine scientific research component should be included.

BENEFITS

A bilateral agreement should yield benefits to both parties. The benefit to the coastal state need not be the result of marine scientific research per se. Both countries will pay a price for the establishment of a bilateral agreement and for the conduct of science under the agreement. Although it is clear that the United States will bear a substantial cost for initiating and operating under a bilateral agreement, the other country also will be expected to contribute to the development of the agreement and to the conduct of the science. Such contributions may include personnel and facilities, modification of clearance procedures, possibly the availability of ship time, and other logistic support. These can all be considered benefits to be derived from the agreement. They should enhance the scientific effort and, accordingly, the results of the research should be improved.

Regarded strictly from the point of view of U.S. scientists, a bilateral agreement should facilitate the planning, preparation, and conduct of scientific research. Restrictions over scientific operations should be lessened. Predictability should be improved with regard to clearance to conduct research and the satisfaction of obligations. Bureaucratic procedures should be simplified. Access to waters of a foreign coastal state should be assured.

The desirability of these benefits will vary with the country involved and the costs of achieving them. The degree of satisfaction to U.S. scientists will no doubt be different for each bilateral agreement.

COSTS

Bilateral agreements will not be inexpensive, but neither is operation under the draft convention on the law of the sea. The marine scientific community and the agencies that support its work will be required to pay significant costs not only in money but also in the time and effort required to conclude a bilateral agreement. Some of the costs will relate to the planning and negotiation of the agreement, and others will be continuing costs. An assessment of what each agreement may require should be made before negotiations begin and should include estimates of the scientific and diplomatic time and effort required as well as the financial costs of establishing and implementing the agreement. With such estimates in hand, the scientific community and the State Department must decide whether the agreement is worth the effort and whether negotiations should proceed.

After the decision to proceed, an expenditure of time and effort will be required of scientists, diplomats, and government officials to negotiate the agreement. Funds for this effort, including travel, should be derived from administrative sources (e.g., State Department or marine and scientific administrative offices) and not from scientific research funds.

The ongoing costs of operation under a bilateral agreement also will involve time, effort, and money. Because these costs generally will be directly related to the cooperative scientific aspects of the agreement, they will impinge on the working scientist. They will affect the plans and the conduct of research and may arise unexpectedly. In any event, they will need to be met if the agreement is to function.

Each bilateral agreement probably will be unique, depending on the operating institution and vessel(s) involved.

Specific financial limitations and sources must be determined before undertaking any cruise or expedition. Costs could include the following:

1. U.S. ship time and U.S. scientific effort for programs of primary interest to foreign scientists, but which are of only marginal interest to U.S. scientists. For example, it may be necessary to make scientific berths available on U.S. ships for scientists engaged in these programs.

2. Extension of cruise track and the time for such extensions. These are likely to be required to meet needs of programs in which foreign scientists have primary interest.

3. Costs of distribution, sharing, and copying of scientific samples and data. (Amounts and specifications should be spelled out in advance of each cruise, particularly with respect to samples.)

4. Costs of analyzing samples and data.

5. Special publication agreements, if any. (Are joint publications planned or required? Does one or another group of scientists from either country have special publication rights for certain data? If so, how long does such an agreement last?)

6. Formal or informal training programs, required

   - to ensure that a high level of scientific effort is contributed by scientists of both countries.
   - as a cost of doing research in the coastal nation's exclusive economic zone.

The dollar cost of many of these elements can be estimated. Some of the funds may be available from administrative sources, but many must come from scientific sources. Because some of these costs will be incurred whether research is done with or without a

bilateral agreement, one goal of any bilateral agreement should be to reduce costs over the long term.

There may be scientific as well as financial limitations to the number of bilateral agreements in which the U.S. marine scientific community can be engaged. A continual review of the process and of the results will be required.

ELEMENTS OF A BILATERAL AGREEMENT

A bilateral agreement should yield both scientific and political gains. Although the parties to an agreement may share unequally in the expenditure of time, effort, and finances, each party must be able to balance its costs with the benefits to marine science.

Any bilateral agreement for marine research should be based on the following considerations:

1. Increased Cooperation -- The agreement should make further cooperation easier between scientists of the two countries. The exchange of marine scientific personnel between institutions should be facilitated.

2. Scientific Objectives -- The scientific objectives of a project or program may be different for U.S. scientists and for scientists of the host nation. These differences should be understood at the time the agreement is negotiated and should be spelled out as necessary.

3. A Minimum of Restrictions -- A bilateral agreement for marine science should reflect the mutual self-interest of the parties to it. Therefore, restrictions must be minimized. Those that are applied should be clearly identified at the time the agreement is signed.

4. Simplicity -- Some of the most successful bilateral agreements in the past have been concluded at a relatively low level (e.g., between two scientific institutions) and with few complexities.

5. Scientists' Involvement in Planning -- Scientists who will be participants in the bilateral agreement should be involved in the process of bilateral planning and negotiation.

6. Identification of the Lead Group(s) -- The bilateral agreement should make clear the lead group for each country, that is, what organization(s) will have the responsibilities for management of each country's involvement.

7. Third-Party Participation -- Insofar as possible, bilateral agreements should be negotiated with sufficient flexibility to permit participation by any institution in either country party to the agreement. Thus, a good bilateral agreement should promote increased participation.

8. Predetermined Time Frame -- The field program and preliminary reduction of data for each discrete scientific project carried out under a bilateral agreement should have clear beginning and ending dates. If extensions are needed, they should be negotiated. It should be recognized that scientific results of a project may be produced long after completion of the field work and the preliminary reduction of data, and that the dates when these results may be attained cannot be specified.

9. Plans for Termination -- Consideration must be given to the steps necessary if one of the parties wishes to terminate the agreement. A dispute-settlement process should be stipulated in the agreement. The agreement should be framed for a specific period, and its termination should be planned at the outset with due consideration to the possibility of renewal.

10. Shared Indirect Costs -- Indirect costs involving the negotiation and execution of bilateral agreements should be shared by agencies having political and scientific interests in these agreements. The negotiation of a bilateral agreement can often take a prolonged period of time. There needs to be

some estimate of these costs and an identification of a funding sponsor. Such costs may well come one to three years in advance of having a specific U.S. scientific program funded by the National Science Foundation, the Office of Naval Research, the National Oceanic and Atmospheric Administration, or other sponsoring agency.

11. Advantages for Research -- A bilateral agreement should be perceived by U.S. scientists as offering advantages over the draft convention on the law of the sea.

12. Predictability -- Expectations and obligations of both parties must be spelled out at the time the agreement is concluded to ensure mutual understanding of responsibilities, requirements, and performance.

13. Access -- The procedures by which U.S. scientists gain access to foreign waters should be made clear. The exchange of marine scientific personnel between institutions also should be facilitated.

14. Permission Mechanisms -- Both parties must have a clear understanding of procedures for obtaining clearance for ships in coastal waters, port visits, local support, air shipment of equipment (e.g., customs clearance), etc., before initiation of mutual research activities.

15. Non-Disruption of a Cruise in Operation -- The agreement must ensure that once a research cruise is under way, the early termination of the cruise can occur only under the most dire circumstances. Dispute settlement should occur after the cruise and should not be a cause for interruption or termination.

16. Disposition of Data and Samples -- The intermediate and final disposition of samples and data must be clearly understood by both parties at the time the research plans are formulated.

17. Publication Rights -- Full and open publication of research results must be stipulated in any agreement negotiated on behalf of the U.S. academic marine research community.

SUGGESTED PROCEDURE FOR DEVELOPMENT OF A BILATERAL AGREEMENT

1. For a bilateral agreement between countries, the U.S. scientific community should prepare a document stating the needs for an agreement, the country with which the agreement is needed, and if possible, the key individuals involved in the United States and in the host country. This should not be required for a research agreement between scientists or between agencies.

2. The State Department should be informed of the perceived need either informally (phone call, letter, etc.) or formally by proposal. The department may formulate its own proposal. The proposal should include a statement of need, an assessment of the benefits and costs, and other information pertaining to the bilateral agreement. There may be many agreements, such as those between two institutions, of which the Department of State needs only to be informed. Therefore, the procedure outlined above would not be applicable.

3. The State Department should obtain scientific advice through an established advisory committee or such units of the National Research Council as the Ocean Sciences Board and the Ocean Policy Committee, or by establishing a special committee. A detailed assessment of possible benefits, costs, and negotiating positions should be prepared. If, on the basis of that document, the State Department decides to proceed, a plan for negotiation should be drafted for introduction to the host country.

4. Depending on circumstances, the State Department may advise U.S. scientists to begin informal discussions with scientists of the country in whose waters the research will be conducted.

5. The draft plan for negotiation should be given final approval by the State Department and its advisers. This strategy will include alternatives that can be

introduced, if necessary, in the negotiation. United States scientists, including those expected to participate in the performance of the research under the agreement, should participate in this planning phase as in other stages of the agreement's development.

6. On behalf of the United States scientific community, the State Department should formally approach the other country. It will be advantageous to the final scientific effort if the U.S. and host country scientists who are expected to participate in the bilateral agreement are involved in the negotiations. These negotiations should address matters of science, procedures, trade-offs, timetables, and so on.

7. Approval of the bilateral agreement by both nations concludes negotiations. The State Department should formally and publicly inform the scientific community of the existence and the nature of the new agreement. Procedures to be used by U.S. institutions should be clearly expressed to federal operating agencies and to academic oceanographic institutions.

APPENDIX

DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

September 20, 1979

Dr. Edward Miles
Dr. Paul Fye
Ocean Policy Committee
National Research Council
Washington, D.C. 20418

Dear Ed and Paul:

The purpose of this letter is to request that the Ocean Policy Committee (OPC) of the National Research Council (NRC) provide recommendations to the Department of State on two issues -- the terms of marine science bilateral agreements and whether the U.S. should support the Voluntary Assistance Program of the Intergovernmental Oceanographic Commission.

As you are aware, at present, many believe that some of our difficulties in conducting marine scientific research can be alleviated by concluding bilateral arrangements with selected countries. However, there has been no study to examine when a bilateral should be sought, what benefits are expected to be obtained, and what costs are acceptable to achieve those benefits. I hope that the OPC would address these questions.

Regarding whether the U.S. should support the IOC-VAP program, I hope that the Committee would examine:

(1) Whether direct bilateral mechanisms could be used instead; and,

(2) Which particular countries are likely candidates for receiving IOC-VAP funds?

Are there any indications that restrictions of oceanographic research in their waters will be eased by IOC-VAP grants, or are these grants designed to create a favorable atmosphere?

It is my understanding that both of these issues fall within the general purview of the OPC to develop recommendations for the Department of State with respect to U.S. policy for advancing the national position on marine scientific research. Some financial support is available and we look forward to a favorable response.

Sincerely yours,

Norman Wulf
Director, Office of Marine Science and Technology Affairs