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# LAW OF THE SEA

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## HEARING

BEFORE THE

SUBCOMMITTEE ON OCEANS AND ATMOSPHERE

OF THE

### COMMITTEE ON COMMERCE

### UNITED STATES SENATE

NINETY-SECOND CONGRESS

SECOND SESSION

ON

### LAW OF THE SEA

OCTOBER 3, 1972

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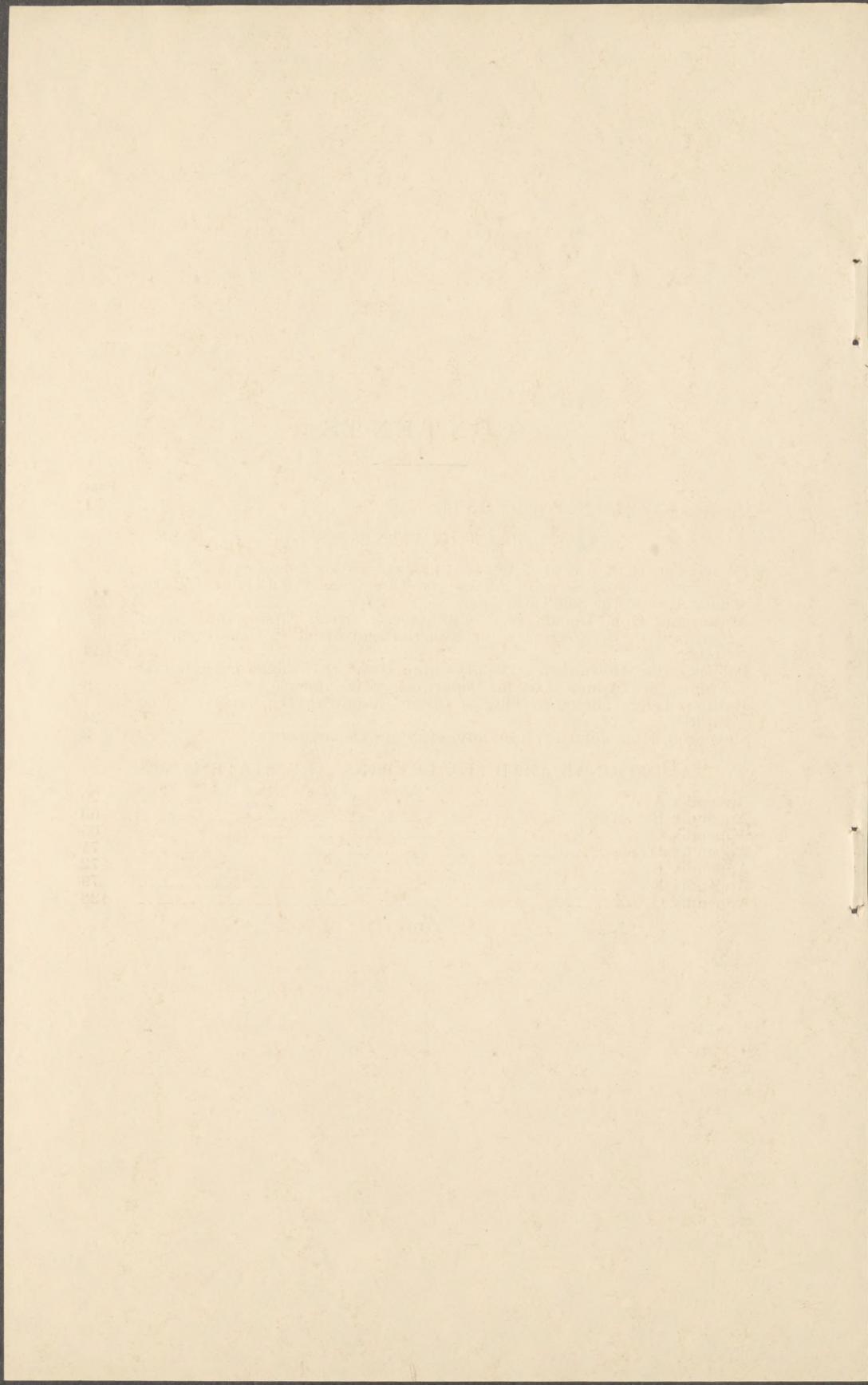
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# LAW OF THE SEA

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TUESDAY, OCTOBER 3, 1972

U.S. SENATE,  
COMMITTEE ON COMMERCE,  
SUBCOMMITTEE ON OCEANS AND ATMOSPHERE,  
*Washington, D.C.*

The subcommittee met at 10 a.m. in room 1202, New Senate Office Building, Hon. Ernest F. Hollings (chairman) presiding.

Present: Senators Hollings and Stevens.

## OPENING STATEMENT BY SENATOR HOLLINGS

Senator HOLLINGS. Good morning. The committee will please come to order.

This morning the Subcommittee on Oceans and Atmosphere begins an examination of a subject which is of critical importance to the many ocean-related interests of the United States—the forthcoming Law of the Sea Conference scheduled to be held next year.

The legal subjects up for consideration at this Conference are of great moment in these unsettled times of international law of the sea, which subjects include fishing jurisdiction, scientific research, marine pollution, breadth of the territorial sea, passage through straits, and the international regime for the deep seabed, among others.

The current debate over claims of extended fishery jurisdiction by coastal nations is well known. Conflict between these claims and fishery rights claimed in the same waters by other deepwater fishing nations has flared in the past and could explode in the future. Peaceful resolution of this conflict may well depend upon general agreement on fishery jurisdiction at the Law of the Sea Conference. At the same time overfishing of many valuable stocks of fish has increased the need for viable conservation measures.

Scientific investigation has always been the key to man's understanding of the mysteries of nature. At stake today, however, is the freedom to undertake basic scientific research in all parts of the world's seas. Many underdeveloped nations view scientific research with suspicion. Allaying these fears will be one of the essential tasks facing the U.S. delegation so that scientific research in the ocean may be conducted without unnecessary restriction.

Marine pollution has come to the forefront in this environmental age as the oceans have begun to show signs of deterioration. At the recent United Nations Conference on the Human Environment in Stockholm the international community has agreed to work collectively on this important world problem. The Law of the Sea Conference provides an opportunity to further the work begun in Stockholm.

Staff members assigned to this hearing: John Hussey and James P. Walsh.

The 1958 Conference on the Law of the Sea failed to establish a fixed limit for the width of the territorial sea. It is hoped this uncertainty will be resolved in 1973. Presently, it appears that most nations would agree with a 12-mile delimitation. But while there may appear to be agreement on extending the territorial sea, the question of the right of transit through straits which thereby become sovereign waters remains a difficult one.

Prescribing the machinery by which the resources of the deep sea bed are used for the "common heritage of mankind" promises to be the hardest task facing the conferees. An arrangement must be worked out which does not inhibit the discovery and exploitation of much-needed resources while at the same time providing the benefits to be derived from those resources to all nations.

There can be little doubt but that the outcome of this Conference will significantly affect the ocean activities of citizens of the United States, not only in coastal margins of our country, but also in the distant waters of the world.

The Senate Commerce Committee possesses a strong historical and jurisdictional interest for matters affecting the entire marine environment. Besides its fundamental concern for interstate and foreign commerce generally, the committee has particular responsibility for subjects concerning navigation of vessels, fisheries, scientific research, pollution of the marine environment, deep sea mineral production, and other related matters which bear upon this Nation's commercial interests. It can even be said that very little takes place in or on the oceans which does not come within the scope of the committee mandate.

It is the assigned duty of the Subcommittee on Oceans and Atmosphere to move to fulfill the full mandate of the main committee's oceans jurisdiction. As chairman of the subcommittee, I can say with assurance that our concern with the Law of the Sea Conference is, and will continue to be, an active one. There is simply too much at stake for members of this subcommittee, or, for that matter, for all Members of Congress, to ignore current and impending deliberations on the Law of the Sea.

The purpose of this hearing, then, is to review the recent history of the preparatory meetings of the Conference and to generally examine the U.S. positions on the legal issues before the Conference. The subcommittee will also be seeking to discern the potential effect of these deliberations on U.S. interests, particularly those of a commercial nature.

To further our knowledge of these matters, we have invited several members of the Interagency Task Force on Law of the Sea to discuss this subject with us today.

We are very glad to welcome the number one man in the administration on this particular subject, Hon. John R. Stevenson, who is the legal advisor for the State Department on Law of the Sea. Mr. Stevenson, we welcome you to the committee hearing this morning. We would be glad to hear from you at this time.

STATEMENT OF HON. JOHN R. STEVENSON, LEGAL ADVISER,  
STATE DEPARTMENT

Mr. STEVENSON. Thank you, Mr. Chairman. It is a pleasure to have this opportunity to appear before this subcommittee to review the current status of the Law of the Sea negotiations with particular reference to the forthcoming Conference.

With me are Ambassador Donald McKernan, Coordinator of Ocean Affairs and Special Assistant to the Secretary of State for Fisheries and Wildlife, Mr. Howard Pollock, a former Member of Congress and now the Deputy Administrator of the National Oceanic and Atmospheric Administration of the Department of Commerce, Mr. Stuart French, Special Assistant to the Assistant Secretary, Department of Defense for International Security Affairs and Director of the Law of the Sea Task Force of the Department of Defense. Finally, Mr. Leigh Ratiner, Director of Ocean Resources of the Department of Interior.

Senator HOLLINGS. Mr. Stevenson, do they agree with everything you say?

Mr. STEVENSON. We hope usually to arrive at common positions. That is, of course, the purpose of the interagency task force, to try to accommodate the total national interest rather than any one particular segment of it. I think we have been successful thus far in reaching agreement.

Senator HOLLINGS. I am glad to hear it. That is really one of our principal problems—to get a clear Government position for this subcommittee and Congress to follow I think you are more likely to do that than any particular individual we have with the administration so we will use you as our guidepost and argue with anybody else who wants to differ from that. Maybe we will find a reason for differing. But generally speaking, do you find support and concurrence from the several executive departments, Commerce, Interior, and all the rest? Are they following your lead?

Mr. STEVENSON. Yes, Mr. Chairman. I think naturally the different departments have different areas of particular responsibilities and they are natural advocates for those positions. They wouldn't be doing their job if they didn't. But I think we have been able to work out accommodations. It is the same problem you have internationally, trying to find an accommodation that takes into account the different interests involved.

Senator HOLLINGS. Are you able to put forth one fixed position for the administration and the United States in this Conference?

Mr. STEVENSON. Always, Mr. Chairman, we have definitely supported a common position once a decision has been taken. I think the discipline has been very good. Or to put it differently, the cooperation has been very good. And we will strive to support the agreed position.

Senator HOLLINGS. Very good. You may proceed.

Mr. STEVENSON. Let me say at this point, Mr. Chairman, that it was a pleasure to have Jake Dykstra with us in Geneva this summer as a representative of the Senate Commerce Committee. In addition, our

delegation benefited very greatly from the advice and cooperation of representatives of the U.S. industries affected by the Law of the Sea negotiations—fisheries, petroleum and hard minerals—industries in particular, and by representatives of the academic, legal, and scientific communities.

Mr. Chairman, the current Law of the Sea negotiations are at a key and critical juncture. It is nearly 2 years since the 25th United Nations General Assembly decided to convene a Conference on the Law of the Sea in 1973 and charged the U.N. Seabed Committee with preparing for that conference. The Seabed Committee held its fourth preparatory meeting this summer. The Conference resolution also provided for a review of this preparatory work by the 27th General Assembly which opened on September 19 and authorized that body to postpone the Conference if it found the preparations to be insufficient. This General Assembly must shortly decide on the precise date, place, and agenda of the Conference when it takes up the Law of the Sea item, probably in mid-November. The United States is currently considering what position our delegation will take at the United Nations Assembly regarding the Law of the Sea item.

Senator HOLLINGS. Now that is the very reason I went into that question. You are saying right there you find you are still considering what position our delegation will take. If I had to represent the United States and was asked, "What is the position of your Government?" I would want to know for sure. That is really what I want to hear from you this morning. What is really our Government's position?

In that context, I rather gain the impression from your statement that you are currently considering what position we will take. We haven't really determined a position, or have we?

Mr. STEVENSON. Well, Mr. Chairman, I think our position on the substantive questions has been now fairly clearly laid out, particularly at last summer's session, particularly a summary statement which I made in the main committee on our position on resources as well as confirming our position on navigation.

Senator HOLLINGS. You want to reserve some flexibility so you can negotiate if some adjustments need to be made during future negotiations, is that it?

Mr. STEVENSON. Certainly. I would like to request your permission to include those statements as part of the record because I think they do reflect our substantive position.

Senator HOLLINGS. They will be included. It will be very helpful to have those in the record.

Mr. STEVENSON. The position I am talking about now is really a narrower question and that is the question of the procedural decision with respect to whether the Conference will occur, and where it will take place. I would say that in general, there was wide acceptance at this summer's meeting of the proposition that a Conference will be held, although the committee, itself, made no specific recommendations as to timing and site.

There were, in fact, differing views expressed on the timing of the Conference. One suggestion that was fairly widely supported by those delegations which addressed the question was for having a meeting of the Conference in the fall of 1973 either during or immediately prior to the General Assembly in New York solely for the purpose of determining the officers and committee structure for the Conference.

Under this proposal, the substantive Conference work would begin early in 1974. I might say the chairman of the committee, Mr. Cernera Singh, does support this approach to the Conference work.

A smaller number of delegations expressed reservations about deciding this fall on a specific time and site for the Conference and favored one more year of preparatory work in the Seabed Committee before this question is taken up at the next General Assembly.

Regarding the site of the Conference, Chile extended an invitation to hold the Conference in Santiago, and Austria renewed its invitation, which it had previously expressed, for holding the Conference in Vienna. Among the developing countries, Kenya opposed the idea of having the Law of the Sea Conference in Geneva, while Australia indicated that, in their view, Geneva would be the most desirable site. There was considerable developing country support for holding the Conference in a developing country.

Mr. Chairman, let me turn now to a description of developments at this summer's Seabed Committee meeting. In general, the session was, I believe, marked by more intense and serious work than prior meetings, with a wider recognition of the need for a timely Law of the Sea Conference.

One example of the committee's greater dedication to work was the fact that there were simultaneous subcommittee and working group meetings throughout the session. General debate, which marked earlier meetings, has largely ended, and the statements made this summer typically contained concrete proposals or substantive comments on proposals already before the committee.

The adoption of the list of subjects and issues during the last week of the session was a high point of the committee's work. The way should now be clear for substantive discussion in Subcommittee II, which is concerned with the traditional law of the sea subjects, the territorial sea, international straits and fisheries. Moreover, the adoption of this list was, in my view, a significant psychological breakthrough which hopefully will end the excessive procedural debate which has occupied so much of the committee's time in the past.

A second highlight of the summer session was the performance of the working group of Subcommittee I which engaged in serious drafting of principles for a seabed regime and which produced a number of bracketed texts reflecting both areas of agreement and disagreement. The working group conducted its work with a minimum of theoretical argument and polemic statements. This was particularly important because a higher degree of technical preparation is required for drafting a seabed regime which involves defining the structure of an international organization and mining rules.

With respect to the status of basic issues in the negotiations, Mr. Chairman, I would say first that it is clear that 12 miles is the only figure on which general agreement is possible regarding the breadth of the territorial sea. Those countries which have in the past insisted on control of navigation and overflight beyond 12 miles have become relatively isolated in the negotiations. This situation is reflected most strikingly by the fact that a regional conference of Caribbean States and a regional private meeting of African law of the sea experts both taking place prior to the summer Seabed Committee meeting advocated international agreement on a 12-mile territorial sea.

On the other hand, while most states appear willing to confirm freedom of navigation and overflight beyond 12 miles, the question of transit through and over straits used for international navigation is more uncertain. A right of free transit, as proposed by the United States, is supported by the major maritime states, including both the United Kingdom and France which themselves border perhaps the busiest strait in the world, the Strait of Dover. However, Spain and a number of other straits states have indicated strong opposition to the free transit concept and favor, instead, a continuation of the regime of innocent passage in international straits. The great majority of developing countries which do not border straits have not taken a public position on this issue. Many developing countries did, however, support the formulation of the straits item proposed by some straits states in the procedural negotiations on the list of issues.

With regard to marine resources, a great majority of countries now appear willing to recognize broad coastal state economic jurisdiction beyond a 12-mile territorial sea. We ourselves indicated this summer more clearly than we have in the past our willingness to accept substantial coastal state economic jurisdiction in waters and seabed areas adjacent to the territorial sea as part of an overall law of the sea settlement.

However, we have emphasized that this resource management jurisdiction would have to be subject to certain international standards to protect the interests of other states in controlling pollution, in other uses of the area and in insuring the integrity of investment. With respect to fishing, we proposed that highly migratory species, such as tuna, be managed by international organizations and not by individual coastal states.

Furthermore, at all times we stressed the importance of establishing the principle of compulsory dispute settlement with respect to competing uses in the area of coastal state economic jurisdiction beyond the territorial sea.

Senator STEVENS. Mr. Stevenson, does this mean you have receded from what I call the three-tier concept as far as fishing is concerned, the coastal state having jurisdiction over the coastal species and also having jurisdiction over the anadromous fish such as salmon that spawn in the waters of the coastal states?

Mr. STEVENSON. No this continues to be our position; we, in fact, are saying we recognize broad coastal state management jurisdiction and a preference with respect to both the coastal species and the salmon throughout their migratory range, whereas in the case of the tuna, we favor international management. So we continue to adhere to the three-tier program as you characterize it.

Senator STEVENS. I am concerned that our representatives may not be articulating what we are talking about. I hope we are talking about conservation jurisdiction.

Mr. STEVENSON. We are talking about management for both purposes of conservation and for purposes of administering the coastal state preference with respect to the coastal species and the salmon which it has the ability to catch.

Senator STEVENS. All right, we can go into that later.

Senator HOLLINGS. Yes.

Mr. STEVENSON. I think that the statement on our resources position which I made this summer and the other statements specifically on

fisheries which Ambassador McKernan made which I requested permission to supplement the record, make clear our position. We also submitted articles which spell out in fairly concise language this concept.

Senator HOLLINGS. Could we make this part of the record also?

Mr. STEVENSON. We will submit those to be part of the record also.

Senator HOLLINGS. Thank you.

Mr. STEVENSON. Let me now turn in some detail to the activities of the different committees. First, the main committee worked more effectively this summer because the chairman used it as a means of keeping pressure on the various subcommittees to make progress, for example, by insisting on regular reports by the subcommittee chairmen. It was also in the main committee that some of the most important substantive statements were made. I have mentioned our major statement on U.S. resource interests in which we indicated that there could be no question of our sacrificing these important interests in the negotiations. At the same time, we reiterated the importance of accommodating our navigational interests in any final law of the sea settlement.

I think that this statement by the United States was very well received within the committee. A number of delegations indicated that they appreciated the frankness with which we described our national interests in living and nonliving marine resources.

A number of developing countries also made major statements on the question of coastal state resource jurisdiction. In addition, Venezuela reported on the results of the Santo Domingo Conference of Caribbean states in June where the patrimonial sea concept of coastal state economic jurisdiction beyond 12 miles was endorsed by a number of Caribbean countries. This was paralleled by a report of the meeting of private African law of the sea experts in Yaounde, Cameroon, which also endorsed the concept of an economic zone between 12 and 200 miles.

At the last meeting of the spring Seabed Committee session, the delegation of Kuwait introduced a moratorium resolution prohibiting exploitation of the deep seabed beyond national jurisdiction pending the establishment of an international regime. We had earlier feared and I believe we expressed this fear to members of the committee, that debate on this issue would disrupt constructive work at the summer meeting.

Fortunately, however, the moratorium issue was not discussed until very late in the session, and the Kuwait delegation did not press for a vote on its resolution. The moratorium resolution was included in the Seabed Committee report and action may be taken on it at the General Assembly this fall. We continue to take the position, which we restated this summer, with regard to the moratorium issue that resolutions on this subject are legally ineffective and disruptive of progress in achieving an international regime.

On a somewhat related matter, a number of countries argued in debate this summer that the seabed principles which were adopted by the General Assembly in 1970 without dissent somehow implied, because the principle that the seabed beyond the limits of national jurisdiction is the common heritage of mankind was included, somehow implied that by reason of this there could be no exploitation of the deep seabed until an international regime had been adopted. The United States, supported by a number of other countries, continued to take

the position that common heritage in no sense means common property.

Let me turn briefly again to Subcommittee I. This subcommittee working group worked most effectively and intensively under a very energetic chairman. The working group resolved its procedural problems in 1 day largely because of the very constructive attitude of the African delegations. The mood in the working group was serious, and there was a clear desire to move ahead with the very difficult drafting of a seabeds regime. While there were no concessions or final compromises on important points, differences among delegations were at least narrowed and the way prepared for meaningful negotiations in the future.

With respect to Subcommittee II, its principal accomplishment was the adoption of the list of subjects and issues which marked the end of a long procedural debate which, much to our regret, had consumed all too much of the subcommittee's time. The list which was before the subcommittee at the beginning of the summer session had been put forward by a group of 52 developing countries, together with Spain, Yugoslavia, Rumania, and Iceland. It had been put forth initially near the end of the March Seabed Committee meeting. The United States, and a number of other developed countries, did not consider the list as proposed by the cosponsors to be balanced and, in fact, believed that certain items on the list which were of particular interest to us and others were formulated in a prejudicial manner.

Without going into great detail, I would like to mention the two items on the list which proved the most difficult to negotiate. The first such item concerning coastal state resource jurisdiction has been posed on the initial list in terms only of an exclusive economic resource zone. Of course, we and others felt that this formulation would prejudice discussion of the nature of internationally agreed limitations which might be imposed and which we favor imposing on the exercise of coastal state economic jurisdiction. Moreover, emphasis on the term "zone," particularly a fixed mileage zone, tended to ignore proposals of some countries, including the United States, for other types of coastal state resource jurisdiction. The developing countries who favored an exclusive resource zone formulation on this list of issues were unwilling to accept any change in the item because they felt that a modification would detract from the integrity of the economic zone concept as they saw it.

Agreement was finally achieved by adding another item dealing with other types of coastal state resource jurisdiction or coastal states rights beyond the territorial sea, including preferential rights or non-exclusive economic jurisdiction. This item will be considered concurrently with that on an exclusive zone. Taken together, these two items will allow consideration of a number of approaches to the coastal state resource jurisdiction problem.

The second difficult item to resolve related to transit through international straits. The list as originally proposed referred only to innocent passage through straits, and it was entirely clear that this was included because Spain and some other straits states cosponsoring the list wanted to exclude discussion of a right of free transit through straits. We sought a more balanced formulation of the straits item which would permit discussion of our proposal for free transit which is supported by a number of other major maritime countries.

Following the personal efforts of the chairman of the Seabed Committee to reach an agreed solution, a compromise was finally achieved to include as part of the straits item, in addition to the reference to innocent passage, another subitem on passage: "Other related matters including the question of the right of transit." We accepted this formula along with the other delegations we had worked with to achieve a balanced list. These countries were the United Kingdom, France, the Soviet Union, Poland, Japan, and the Netherlands.

Subcommittee II heard a number of significant proposals, usually more concrete in nature than those presented at prior sessions of the subcommittee. While some developing countries continued to take the position that Subcommittee II should not discuss substance at all until the list was adopted, this was not the case.

A number of important proposals were made to the subcommittee while some substantive proposals which had been presented to the main committee were also discussed in the subcommittee.

With regard to straits, we presented a proposal designed to alleviate some of the concerns of states bordering straits with our draft article on free transit through and over international straits.

We proposed that a law of the sea treaty provide for mandatory observance by all surface ships of Intergovernmental Maritime Consultative Organization (IMCO) traffic separation schemes in straits and other congested areas, observances of International Civil Aviation Organization (ICAO) rules by state aircraft exercising a free transit right, and finally, strict liability for accidents caused by deviations from these internationally agreed rules.

Spain and Tanzania objected to our free transit proposal on a number of grounds, with Spain in particular, charging that we were seeking free transit for military purposes only. They also questioned why submerged submarines were excluded from application of the IMCO traffic separation schemes.

Tanzania objected to IMCO's power to legislate for coastal states not members of the organization. She also scored our strict liability proposals noting that compensation was a poor substitute for the prevention of accidents.

We responded in great detail to the Spanish and Tanzanian assertions and copies of those responses are included in the copies of the statements I am submitting for the record.

We also submitted a revised fisheries article reflecting the policy stated by Ambassador McKernan in the spring Seabed Committee meeting, adopting the principle of coastal state management jurisdiction and a preference with respect to all coastal species and anadromous species such as salmon throughout their migratory range.

Under our proposal, there would be an international arrangement for managing highly migratory species, such as tuna. This is the 3-tier approach Senator Stevens earlier referred to.

Canada circulated a working paper on fisheries which was similar in concept to our fisheries proposal since it provides for different treatment of fish according to their biological characteristics including their migratory habits.

Reflecting the results of the Yaounde meeting of African law of the sea experts which I mentioned earlier, Kenya submitted detailed

draft articles on an exclusive economic zone which provide for coastal state sovereign rights over resources out to 200 miles. This proposal was supported by India and a number of other countries, and Mexico publicly welcomed the similarity between Kenya's proposal and the Santo Domingo Declaration of Caribbean States.

The Kenyan proposal and the Santo Domingo Declaration are similar in some basic respects since they both contemplate a 12-mile territorial sea with an exclusive coastal state resource zone extending to 200 miles. However, there are differences as well. With regard to the seabed, the Santo Domingo Declaration would extend national jurisdiction to embrace the entire continental margin which is where most of the ocean's petroleum resources are believed to be. Thus coastal states would have sovereign resource rights in coastal areas of the margin beyond 200 miles where their margin extends beyond that distance. The African proposal, on the other hand, would limit coastal state exclusive resources jurisdiction to 200 miles for all purposes. Further, the African proposal suggests some type of preferences for other countries in the region; this regional aspect is absent from the Caribbean countries' proposal. Both the Kenyan draft articles and the Santo Domingo Declaration contemplate coastal state pollution jurisdiction in the area of coastal state resource jurisdiction.

Australia and New Zealand also jointly proposed a coastal state resource zone, but indicated that it should not be exclusive. They did not indicate any precise boundary for this zone, although it was clear from their statements that they intended a broad area of coastal state jurisdiction.

At the other end of the spectrum, Japan submitted a proposal for a high seas fishery regime which provides for preferential right for developing countries in fisheries beyond a 12-mile territorial sea and a very limited preference for developed states in their coastal fisheries.

The Soviet Union submitted proposals on both straits and fisheries. Their straits proposal was notable in that it defined straits used for international navigation—and thus straits in which a right of free transit would exist—as straits connecting two parts of the high seas. This definition would exclude straits connecting the high seas and the territorial sea of a foreign state, such as the Straits of Tiran, which are covered by the definition of straits used for international navigation in the 1958 Geneva Convention on the Territorial Sea. The Soviets in their statement also distinguished between straits essential for navigation and other straits not important for international navigation.

In presenting their draft article on straits, the Soviets also spelled out in some detail what they mean by a right of free transit. In our public statements, we have indicated that we are talking only about a limited right of transit through a strait and not a high seas freedom of navigation in a strait.

The Soviets in their article went further and specified a number of activities that would not be permissible in exercising the free transit right, and for example, such as carrying on military maneuvers.

The Soviet fishing proposal is particularly adverse to U.S. fishing interests. On the one hand, it would give a preference only to developing countries with respect to coastal species. Thus this preference would not be available to the United States and Canada off whose coasts the Soviets conduct a large part of their distant water fishery.

Second, the Soviet proposal while recognizing a preference with respect to salmon for all states, including United States and Canada, in whose waters the salmon spawn, does not extend that preference throughout the full migratory range of the salmon. Thus, other countries could fish for salmon on the high seas, beyond the area of coastal state management. Finally, there is no special treatment whatsoever for tuna in the Soviet proposal.

Representatives of the People's Republic of China attacked the United States and the Soviet Union for plundering the world's fishery resources at the expense of the developing countries. We continued to deplore polemic approaches to Law of the Sea issues in the work of this committee.

Turning now to Subcommittee III, Subcommittee III continued its debate on marine pollution and scientific research. We urged the subcommittee to focus its work on drafting basic legal principles to be derived from the Stockholm Declaration on the Human Environment. We also urged the subcommittee to concentrate on the problem of pollution from vessels and particularly stressed the importance of the work of IMCO in this area. However, we stated our view that IMCO should give greater attention to some of the problems of coastal states with respect to pollution control, and we suggested some specific areas in which we would favor additional IMCO action.

With respect to pollution from seabed exploitation, we have taken the position, for which I think there is a great deal of support, that this is best dealt with in Subcommittee I in the context of developing a regime for the seabed rather than as part of the general discussion on pollution.

Subcommittee III also established a working group on marine pollution which did not get underway until the very end of the session. Its mandate is to develop draft treaty articles on marine pollution, and it has asked the members of the Seabed Committee to submit written proposals in this regard by January 15 of next year.

The U.S. delegation made two statements this summer on scientific research. Prof. John Knauss of the University of Rhode Island, who serves on our Law of the Sea Advisory Committee and was on the U.S. delegation at last spring's Seabed Committee meeting, made an excellent statement on the importance and utility of scientific research. Ambassador McKernan made the first full statement of the U.S. Government position on scientific research, stressing our interest in maintaining the maximum freedom of marine scientific research as well as the importance of transferring research skills and technology to developing countries.

Mr. Chairman, that concludes my review of the July-August U.N. Seabed Committee meeting and our appraisal of important developments at this meeting.

Thank you very much.

I or my colleagues will be pleased to amplify any of these points or respond to any questions that you might have.

Senator HOLLINGS. The National Advisory Committee on Oceans and Atmosphere, Mr. Stevenson, had some concern in their report to the President and the Congress, about the outcome of the conference relative to U.S. interests.

Do you share that same concern?

Mr. STEVENSON. Mr. Chairman, I think we all are concerned that the next Law of the Sea Conference should be a successful conference. I think this is most important. And I think that the role of this preparatory work in leading to a successful conference is very crucial.

All members of our task force are in agreement that the next year's Law of the Sea preparatory work will be critical to a successful conference.

Senator HOLLINGS. You mentioned Spain in several points in your statement, and also Tanzania, but not Morocco. What is the Moroccan position on the other side of the Strait of Gibraltar?

Mr. STEVENSON. Morocco's position has been basically similar to Spain's although it was only recently in this summer's session that they amplified to a great extent their position.

Senator HOLLINGS. How is the United States going to approach the issue of these offshore artificial islands such as the one contemplated for powerplant facilities off New Jersey?

Will the construction of these structures affect the delineation of baselines or what would be the U.S. position?

Mr. STEVENSON. We are definitely developing a position in an inter-agency task force on that at this time. And I hope we will be able to give you a more definitive answer early next year.

Senator HOLLINGS. But that answer will not be formulated until the early part of next year?

Mr. STEVENSON. No, sir.

Senator STEVENS. Mr. Stevenson, are you saying that we really cannot expect too much to come out of the Law of the Sea Conference in 1973?

Mr. STEVENSON. Senator, I think the general feeling amongst those delegations that spoke last summer was that we need two more preparatory sessions prior to the conference, and our delegation and our industry advisory committee feel very strongly that we also need constructive intersessional work in order to have a successful conference.

This would mean that the minimum schedule that would provide for this is something along the lines proposed by the chairman of the committee, and which was supported by most of the delegations that spoke, which would have the real substantive work done in 1974, beginning early in 1974.

Senator STEVENS. With regard to the seabed, I don't see that there is any great urgency. I understand technology isn't reaching the problems of the continental margin yet, anyway. However, with regard to fisheries, it seems to me that if we have any further delay, we may reach the point where our fisheries resources are so far depleted that agreement internationally won't do us any good.

Mr. STEVENSON. We have, throughout the negotiations, stressed this point ourselves, Senator.

This is why we were so concerned about the delay of the substantive discussion of fisheries in Subcommittee II, and we are constantly fighting for a fisheries working group to be established.

Senator STEVENS. Is there any possibility we could separate the fishing concepts from the law of the sea and press ahead with those and leave the problem of straits and the problem of the seabed for the later conferences that you mentioned?

Mr. STEVENSON. Our original proposal, Senator, did contemplate approaching these different problems in so-called manageable packages.

But there was virtually no support, except from the Soviet Union and one or two other maritime states, for that approach.

The overwhelming sentiment is to have a comprehensive approach. And I think, in addition, that those countries which favor this approach do so because they were not participants in the prior conferences, because they were not fully independent or because they think it best serves their interests. I think it's fair to say that there are also a great many countries that feel with the increasing complexity of the uses of the sea, where it's being used for many different purposes at the same time, that you have to have a more comprehensive approach or you don't adequately deal with the problem.

I think it's also fair to say that many feel that the only way to get overall general agreement to a law of the sea settlement is to make it a single treaty so that countries can't pick and choose what they like and not subscribe to what they dislike.

I might say, though, on the question of preparation that as far as the technical drafting and the production of new articles, that it's in the seabed area where most of this has to be done.

And that's the area where there has been more work because Subcommittee I hasn't been held up by this procedural logjam.

With respect to fisheries, the actual drafting is not so complicated or difficult once you have agreement. And, as I indicated, there has been a good deal of agreement among the vast majority of the countries in terms of a general direction on fishing, although there are still very strongly held different points of view.

But I think that there is substantial determination in the committee, I think increasingly so among the African and Asian countries, to reach agreement.

Senator STEVENS. I see Mr. McKernan is going to present a statement. I am sure he will adequately represent the position of the United States with regard to fisheries.

I read in all the Eastern papers about these great fishing fleets that are supposed to be off the east coast and they don't even realize what's off the west coast in terms of the North Pacific.

A billion and a half pounds of pollack alone in one year, according to the statistics I received, were taken by foreign fishing fleets. The hag are gone entirely. There is great pressure on herring. Yet, we still seem to be negotiating. Most of the fishermen think we are negotiating for military rights and the seabed development of minerals. Meanwhile the fishing interests will be completely depleted by the time we get around to even talking. The fisheries situation is analagous to the Paris peace talks, in terms of deciding what the size of the table should be, before we get around to talking and really doing something about the fishing.

The Japanese, Koreans, and Russians are utilizing monofilament nets that they are bringing into our waters. We find more and more that they are being cut loose. One of them was found anchored with a radio buoy, so they could go back and pick it up.

Such conservation practices used by these foreign nations in the North Pacific will mean that before agreements on straits, military aspects of the right of free passage, and seabeds are reached, we are not going to have any fisheries left.

My feeling, which I think is reflected in the attitude expressed by the fishing organizations, is that these issues should not be put to-

gether. The United States should be pushing to separate the fishing aspects from these other concepts, which will take years to work out.

Senator HOLLINGS. I understand Ambassador McKernan does not have a prepared statement but will answer questions.

Could he come forward now and be seated with you, Mr. Stevenson, so maybe he can answer the Senator's questions here and find out where he fits in your priority?

Is he a head of minerals and oil, or is he third or last or where?

Mr. STEVENSON. Let me say before Ambassador McKernan speaks, as we said earlier, we are trying to accommodate all the U.S. vital interests and not sacrifice one for the other.

Senator HOLLINGS. What is your comment on Senator Stevens observations?

**STATEMENT OF HON. DONALD L. MCKERNAN, COORDINATOR OF OCEAN AFFAIRS AND SPECIAL ASSISTANT TO THE SECRETARY FOR FISHERIES AND WILDLIFE, DEPARTMENT OF STATE**

Mr. MCKERNAN. Thank you, Mr. Chairman.

The United States has attempted to give attention to the very large fleets of foreign nations fishing off the west coast of the United States as well as off the east coast.

In fact, we have a number of arguments with the Soviet Union and Japan, attempting to protect the interests of the United States fisherman on the west coast of the United States and Alaska.

We are intending to renegotiate these arguments within the next few months, in fact. And recently we visited Alaska and consulted with Alaskan fishermen as to how best to proceed in our next round of agreements with Soviet Union and Japan to even better protect the interests of American fishermen.

Now, it's true, as the Senator has stated, that the Soviet Union and Japan are taking very large quantities of fish in the North Pacific and Bering Sea. In fact, they are taking much larger quantities than the U.S. fishermen are.

But, for the most part, we have attempted to keep these foreign fishermen off of species of primary concern to the United States. Now, we haven't been totally successful.

Present arrangements are imperfect. But we have attempted to keep them away from fishing areas and on species of primary economic importance to the United States.

And in the case of Alaska, pollack, for example, we do not have a fishery for Alaskan pollack, so our primary concern there is to try and see that these foreign fishermen conserve the resources.

And we are trying to set up arrangements to exchange information and work with their scientists to make certain that there is conservation of these resources.

Nevertheless, basically of course I agree with Senator Stevens, that more needs to be done to protect the interests of our fishermen and we are trying to do so through the law of the sea.

Mr. Chairman, I would like to make one more comment in support of what Mr. Stevenson has said, and in answer to a question raised by Senator Stevens.

And that is that why don't we separate the fishing issue, for example?

I think if we take a look at the 1958 convention we have another reason for going the route that we have chosen. The 1958 convention on living resources has only been ratified by some 30 or 35 nations. And only two or three of these are really high seas fishing nations.

The nations of most concern to the United States, Japan and the Soviet Union, for example, did not find all aspects of that convention well suited to their interests and so they have never ratified it.

So I want to indicate that I favor the point of view, the approach that Mr. Stevenson has mentioned, and I think that if we want to get agreements that will be recognized by a larger number of nations, particularly those that are interfering with our fishing interests.

Thank you, Mr. Chairman.

Senator STEVENS. I appreciate that statement, Mr. Chairman, and I, of course, have great confidence in Mr. McKernan.

Congress has declared a moratorium on the taking of ocean mammals. Their food chain is the pollack and the bottom fish—both which the Japanese, Russians, and Koreans are taking.

Ocean mammals are now going to reproduce in unlimited numbers depending on their food chain. We have got, I think, a new competitor in the North Pacific and Bering Sea—the ocean mammal that is not subject to any kind of taking to protect his own food chain. And at the same time the Russians and Koreans are coming in there in great strength every year.

We are still a developing country as far as the fisheries of this nation are concerned. We have never developed our fisheries the way we should. And yet we are saying that the developing countries can have some sort of priority in terms of developing their fisheries. On the other hand, we, as a developed country who has ignored our fisheries, are going to be penalized now under these concepts, as I understand them, in terms of any type of recognition of our rights to our own fisheries.

I see you both looking straight at me on that point, but that's the way I understand the situation.

No one can say that the Alaska fishery is a developed fishery as far as the United States is concerned. It is a developing fishery as far as Russia and Korea and Japan are concerned, but we have ignored it.

Senator HOLLINGS. Give us generally the differences between the philosophies of the developing nations and those of the developed nations. In all of those negotiations what are considered developed and undeveloped nations, what is the difference?

Mr. STEVENSON. Well, I think that in this area, while you do have certain issues where there is a difference between the developed and developing countries as such, you have many other differences which cut across that particular division.

For example, you have the land locked, shelf-locked countries, which are very numerous indeed in a continent such as Africa, which have a different interest than the coastal developing countries. They have, in fact, have organized their own group to reflect their interests.

They are different interests as far as maritime freedom is concerned, depending on states' location.

So it is not only a developing-developed division, although that, of course, continues to be one of the important dividing lines.

With respect to Senator Stevens' statement I want to be very clear that the U.S. present fisheries proposal does not make a distinction in

terms of the preference of the coastal state with respect to coastal species and with respect to salmon, or with respect to the coastal state management and conservation jurisdiction, between developed and developing states.

This is, in fact, the distinction that the Soviet Union and Japan have been making and that is why we regard their proposals as completely unsatisfactory from the standpoint of the U.S. fishing industry.

Mr. MCKERNAN. If I could just make two remarks, Mr. Chairman, with respect to Senator Stevens' statement. He certainly is, in my judgment, an expert in this field in his own right, and I agree with him that Alaska in many respects is developing fisheries and is in areas where great development in this field can take place.

Once again, our proposal provides for coastal state control over coastal fisheries themselves and, for all practical purposes, all the resources of interest for Alaskan fishermen would be under the control of the United States for conservation purposes at least, and where we have an economic interest, that is where we are fishing the resources, we would have preference over any foreign fishing of those resources.

Senator STEVENS. I understand that and our people are very happy about that. At least it begs the question in terms of the area in which the coastal state will have primary jurisdiction of coastal species. Yet you have not defined any season in this concept. I have been asked if this refers to coastal species within the 12-mile limit, or does it mean the coastal species that are being taken by the fisheries at the coastal state. Is there some sort of grandfather right concept that is being established now, for instance, by the Japanese and Russians in terms of some of these species meaning, that, even if your new proposal is accepted, they would still maintain a right to continue the exploitation of our coastal species?

Mr. MCKERNAN. You have asked really two important questions, Senator. In the first question the answer is that our particular proposal would give the coastal state control of coastal species wherever they are found.

Now, these species would be identified perhaps in an appendix to the article itself, and they would include such species as Alaska pollack, ocean perch, flounders, halibut, and other species of interest and economic concern to Alaskans potentially, or in fact being used right at the present time.

Senator STEVENS. Let me interrupt. Even if they went beyond the 200-mile limit, if they were considered coastal species in the case of halibut who do move considerable distances, they would still be subject to the jurisdiction of the United States under your approach?

Mr. MCKERNAN. Yes.

Now, in terms of resources not fully used by the United States, this is an important concept from the standpoint of the United States.

As you well know, Senator, one of our largest and most important fisheries is the shrimp fisheries of the Gulf of Mexico, Caribbean, and northeastern South America, and to provide some little protection for that important fishery, we have provided that resources not used by the coastal state should be available for other states. This gives some protection for our shrimp fishery.

It also then would allow the full development of the food resources of the ocean. No nation could essentially set up a fence around a certain part of the ocean and allow these renewable resources to lie fallow and

the food resources themselves to be wasted. It would insure that we could have an even and full development of the food resources of the ocean consistent with good conservation of course as regulated by the coastal states.

Senator STEVENS. My second question referred to the establishment of fishing rights by these nations within the coastal States' jurisdiction under your coastal species concept. Will they prevail?

Mr. MCKERNAN. We have suggested that some consideration be given to long-standing traditional fisheries, and we have suggested that perhaps the conference itself should consider that question.

My own point of view is that where there are large investments by high seas fishing nations some consideration of phaseout or buyout consistent with the rights we have indicated for the coastal States should be considered.

It seems to us only a fair, reasonable way to give some consideration, but we haven't spelled that out in our article. We have preferred to simply provide for that to be fully considered by the Conference, for example, by a working group on fisheries as suggested by Mr. Stephenson.

Mr. STEVENSON. There was one further point the Senator made which we should clarify. Within 12 miles the coastal state would have exclusive jurisdiction. We are talking about the regime for the area beyond 12 miles where we would have this preferential and management jurisdiction.

Senator STEVENS. I understand that, but my people raised the question of how you are going to define the species and, as I understand it now, you attach a list of the species that are subject to coastal state jurisdiction without regard to the 12-mile limit.

Mr. MCKERNAN. Yes.

Senator STEVENS. Let me say that we are delighted with the species concept because it might see the restoration of some fishing grounds.

What is the support for the anadromous fishing concept, the second tier of the species concept as far as you have been able to determine? Do you think we will be able to hold that position and protect salmon stocks even after they go beyond the 200-mile limit?

Mr. MCKERNAN. I think that there is a pretty good chance that the nations of the Northern Hemisphere will vote preponderantly in favor of this concept of the coastal state controlling anadromous species wherever they migrate.

For example, the Northwest Atlantic Fisheries Commission composed of 15 nations has recently gone on record giving the coastal state control over Atlantic salmon. Now, there were some dissenters from that in the North Atlantic, but a preponderance of the North Atlantic nations, nations bordering the North Atlantic, voted in favor of this concept that has been developed by the United States and Canada.

Obviously, as Mr. Stevenson mentioned, the Soviet Union has an interest in this and has favored this concept. Japan, of course, has a different point of view because they have a high, very active high seas fishery in the North Pacific Ocean.

Senator STEVENS. Do the Russians support us on this concept?

Mr. MCKERNAN. Yes, they are in favor of a total ban on high seas fishing for salmon.

Senator STEVENS. Thank you.

Thank you very much, Mr. Chairman.

Senator HOLLINGS. As to the position of the United States, Mr. Stevenson, are we in a ball game whereby adhering to the rules we have got a chance of winning?

You mentioned the landlocked and underdeveloped nations, and I believe before I head into a political arena I'd like at least a head count in order to have some idea of where I am headed and if there is any chance of prevailing. I note, for example, the vote taken in 1970 which established the concept of the common heritage of mankind of the seabed beyond the limits of national jurisdiction. That was passed without dissent.

Then you particularly pointed out the language differentiation which interpreted common heritage as by no means referring to common property. And we see proposed the matter of a moratorium by Kuwait. Fortunately they didn't have a vote, but apparently if they wanted one they could have had one.

Are we working in a situation, as you see it, where the developing nations are seeking to advance their own economic development, and where it would be possible that U.S. interests would not be protected?

We apparently don't have a veto. All we have is one vote. What is the situation along this line?

Mr. STEVENSON. Well, I think the first general point that I would like to make, Senator, is that we are negotiating a treaty. We are not concerned with the adoption of legislation. And this treaty will be very ineffective and not accomplish the purposes of the developing countries if it is a treaty that is unacceptable to the major maritime and developed countries of the world.

So that while you are quite correct that we are faced with a one nation, one vote problem, I think the more responsible developing country leaders realize that they won't be achieving their objectives unless we do arrive at an accommodation.

I think the second point is that in many areas there is an emerging consensus.

As I mentioned earlier, I think the 12-mile territorial sea is very widely supported. I think that in the area of coastal State economic management jurisdiction there is a growing consensus along very general lines.

Will still have our differences. We say we will accept, and in fact we favor from our own standpoint in many cases in order to protect our own domestic industries, coastal State resource management. And the negotiation of the sort of international elements we want within that jurisdiction seems to me at least an achievable negotiating probability.

Now, there remain difficult problems. You referred to the deep seabed. And there are difficult problems because there is a sharper difference in the developing and developed country points of view in the deep seabed.

We and the other developed countries take the position that we do not want an international organization to have a monopoly on the exploitation of this area. We want private enterprise and individual countries to be able to participate under international regulation and with reasonable contribution to the international community. This is a difficult negotiation problem, but it is one on which some progress was

made last summer and which I think will be one of the critical issues in the coming year.

Senator STEVENS. I am very grateful to you for your explanation.

Senator HOLLINGS. We thank you very much, Mr. Stevenson and Mr. Ambassador.

Do you wish to add anything else?

Mr. McKERNAN. No; thank you.

Mr. STEVENSON. Always a pleasure to meet with you gentlemen.

Senator HOLLINGS. We appreciate your being here this morning.

Senator STEVENS. Off the record, Mr. Chairman.

(Discussion off the record.)

Senator HOLLINGS. Mr. Pollock, We would be glad to welcome our former colleague Mr. Howard Pollock, the Deputy Administrator of NOAA. Do you suppose you could tell us whether or not, Mr. Pollock, the U.S. economic and commercial interests, the fisheries that you represent, do you think they are being sold out for defense interests? Do you feel the priority of the economic and fishery interests in the United States are being protected in these negotiations or what observations would you like to make?

**STATEMENT OF HON. HOWARD W. POLLOCK, DEPUTY ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE**

Mr. POLLOCK. Well, Mr. Chairman, first I would concur with all the statements that have been made by Jack Stevenson and by Ambassador McKernan.

We do have diverse interests in the United States and all of us that are on the U.S. delegation, that are on the executive committee of the Law of the Sea Task Force, are trying to resolve all of these problems.

No, I don't think it is a correct statement to say that the economic interests are being sold out for the defense interests. They are all vital ones and we are trying to work out a means by which we can preserve the best concepts for each of the interests of the United States.

Senator HOLLINGS. Well, specifically, in the report by the National Advisory Committee on Oceans and Atmosphere, which really is a creature of yours as much as of the Congress—

Mr. POLLOCK. We provide administrative support for them. They are an independent committee, of course, Mr. Chairman. A creature of the Congress, reporting directly to the Congress and to the President.

Senator HOLLINGS. Well, they made the statement recently, "We conclude that the present situation is unsatisfactory internationally and current U.S. procedures will not suffice to achieve the U.S. policy goals."

What do you have to say about that? How could they unanimously find that?

Mr. POLLOCK. Well, Mr. Chairman, I think I should be candid to say that at the time that the Law of the Sea executive committee presented a position to the NACOA committee, they were in their early stages of organization. We have had several international meetings and a whole series of intergovernmental meetings before and since that time. And I think perhaps the NACOA committee at that time didn't get a full

grasp from our own presentation of the intricacies of the problems we have in trying to preserve a diverse number of U.S. interests.

Senator HOLLINGS. What is the public input into this effort now being made on the Law of the Sea? Do you find that economic, fishing, and other interests of the United States, including those of the public, are having an opportunity for input or consideration?

Mr. POLLOCK. Yes, Mr. Chairman, the advisory committee that Jack Stevenson talked about before is a committee of the State Department, organized by the State Department, of industry, of people from the hard rock minerals industry, from the oil industry, from the fishing industry, from academia, from the scientific community, and we have, I think, very fine and capable people from all over the Nation on the advisory committee. As Mr. Stevenson was saying, we found it to be very important to not only have them meet in their respective sub-groups but to meet together so that there's a cross-fertilization of ideas.

These meetings go on regularly and I think there is a very good input to the executive committee of the Law of the Sea Task Force through this medium.

In addition, in NOAA, as you are aware, we have a fisheries advisory committee group there also. We do meet with them intermittently as we do with the NACOA committee.

So I think there is an excellent opportunity from the various strata in the American society in industry and academia both to get adequate input.

Senator HOLLINGS. We in the Congress have to watch carefully you know. We tried to get Don McKernan into NOAA. Then the State Department grabbed him off by making him ambassador.

We had Leigh Ratiner in Defense; now he is with the Interior; we are having a hard time holding on, finding out really where things are at.

Mr. POLLOCK. We haven't lost him, we have given him different perspective in Interior.

Senator HOLLINGS. Well, I mentioned the offshore powerplant in New Jersey. There has not as yet been a policy statement on that. Howard Hughes, I understand by newspaper accounts, has himself an offshore mining operation somewhere in the Pacific. Both the Interior and NOAA have been interested in this.

But what about the credibility of the United States overall in this Conference? Should we worry about the underdeveloped nations? Might not the underdeveloped nations take the position that the United States is not really trying to obtain a treaty, that the United States is begging for time, going into the oceans with powerplants, running Howard Hughes off into the Pacific, talking about treaties and everything else like that, but all the time they are exploring and have no idea of coming to the table to formulate a treaty?

Mr. POLLOCK. I do not think there is any question of credibility on the part of the United States, Mr. Chairman. We have pushed for an early conference. I think all of the developing nations know we want an early conference. We have made a number of trips to a variety of countries all over the world in order, No. 1, to understand what their problems were and No. 2, to make sure that they understand the presentations that we have made in the international forum.

We have tried to explain our species approach on fishing as an example. We have tried to explain the concerns that we have in freedom

of transit through straits, and the concerns that we have for ocean mining and for the regimes of the seabed.

And I do not think there is a question of credibility. I think the developing nations do have some suspicions of any developed country because they do not have the fishing fleets, the capability in the scientific research areas, nor the mobility of vessels or techniques for seabed mining or Continental Shelf drilling that developed nations have.

And I think there are other countries that are more interested in delaying the conference than we are, although not too many in the total number of countries involved in the U.N. Seabeds Committee. I think most nations wish for an early conference.

Senator HOLLINGS. Good.

Mr. STEVENSON. I think I, a sort of subrosa, that we are sort of passing over the major issue which is the difference between the so-called narrow shelf concept and the wide shelf concept and what happens in terms of U.N. jurisdiction and all that with regard to going beyond the final definition of national jurisdiction as far as the seabed is concerned.

Has that been involved in your discussions as you have gone around the world too?

Mr. POLLOCK. Yes, indeed, Senator. There are many cross currents and contradictions of international interests in the context of the subjects involved in the law of the sea forum. It is not just the developed versus the undeveloped nations. It is the landlocked and shelf-locked nations versus those that do have deep oceans. There are differences in the fishing community between the distant water fishermen and the coastal fisheries. There are a whole set of cross purposes.

And, yes, indeed, we have discussed these differences with other nations, and part of the reason for our visits to discuss the matter is to try to understand the problems the other nations have, so that we can attempt to resolve this whole series of intermingled problems. We do have to get support for this.

This was mentioned by Mr. Stevenson before, and I think it is very important—if we arrived at a—final series of conventions on these different subjects, and the major nations or a majority of the nations chose not to support them, they would be of little value.

We do have to have international support, and therefore while we have some very real, very poignant problems of our own, I think we have to understand and try to accommodate those of the other countries, or we are not going to have an international agreement.

Senator STEVENS. As I understand our situation today, under the Truman doctrine our own domestic industry could develop the area off the United States as far out as technology would permit it to do so. And that is a springing jurisdiction that keeps going further as our technology increases. Have we at all abandoned that concept in these negotiations so far?

Mr. POLLOCK. I am getting into a field that probably Mr. Stevenson ought to be answering but I would respond by saying that that was back in 1945 I believe and since that time 2 years ago President Nixon talked in a vein which really contravenes that concept in the sense of saying that everything beyond the 200-meter isobar should be the heritage of mankind.

Until we establish a law of the sea forum that is internationally acceptable, I would presume that our U.S. position still follows the conventions adopted in 1958 and 1960.

Senator STEVENS. How about that, Mr. Stevenson? Until there is an agreement, does the President's declaration which I consider to be a narrow shelf concept, override the Truman doctrine that was espoused in the 1940's as far as our natural resources in industries developing the seabed off the United States?

Mr. STEVENSON. Well, Senator Stevens, this is going back to an issue that we discussed in the past. I think as you know there are differences between lawyers as to what the Truman declaration, itself, meant, and what its incorporation in the 1958 Continental Shelf Convention meant, because the 1958 Continental Shelf Convention does give the coastal state sovereign rights over the seabed resources to 200 meters and beyond 200 meters as far as the area is susceptible of exploration, but within the limits of adjacency. It has to be an adjacent area.

And there has been this dispute between what you characterize as the narrow shelf and the wide shelf approaches as to how far the coastal state sovereign rights extended.

Now, our position internationally is that since there is uncertainty as to the position beyond 200 meters—and this is one of the most important reasons for having international agreement on this limit of coastal state economic jurisdiction—we feel that we need an international solution.

In other words, the 1958 conference not only failed to specify a 12-mile territorial sea limit or any territorial sea limit, but it also failed to give a precise answer to this question of coastal state resource jurisdiction.

Now, I think that what we are proposing internationally, in effect, is a proposal which would give the coastal state the basic resource management jurisdiction over the seabed and would give the coastal state the right to decide who and how it is exploited.

We have made it clear that we do not want international rulemaking as far as the mining code type of provisions for exploiting this area is concerned.

We are concerned solely as I mentioned earlier with a few, what we consider fundamental, international limitations on the coastal state management jurisdiction. We want some minimum pollution standards because what one country does on its continental shelf can very well pollute the whole ocean and we feel there should be minimum pollution standards.

We want protection of other uses of that area so coastal States won't use their resources management jurisdiction to interfere with other uses.

We feel it is important as far as the U.S. energy position is concerned that there be reasonable investment protection so that where, for example, our private enterprise is permitted to engage in production on a foreign country's continental margin, that once that country has taken the decision to let the company come in and specified the terms, there will be some reasonable protection, reasonable integrity of investment.

I think this is very important to us and I think it is also important to them in order to get the sort of capital that will be necessary for the development of those very important resources.

We also feel that compulsory dispute settlement in this area is very necessary so that we can have any disputes that do arise, disputes for example between conflicting uses of this area, settled in a legal, nonpolitical atmosphere.

Senator STEVENS. That is very good. I appreciate your clarification.

If I were a judge, I would say I still don't know where the Truman doctrine is today in terms of jurisdiction beyond the 200-meter limit. As far as the extending jurisdiction under that doctrine, it referred to the area to any distance capable of exploitation.

Are we still going to allow our people to go beyond 200 meters if we get this agreement?

Mr. STEVENSON. Let me clarify two points, Senator.

In the first place, in the original Truman declaration there was a simultaneous press release that talked about 600 fathoms, so that the question of whether you went beyond 200 meters was certainly ambiguous because they were talking about the Continental Shelf, not the continental margin.

Second, the relevant legal position right now is not the Truman doctrine but the 1958 convention. I mean, when we got the 1958 convention we agreed on that as being the regime. And as I pointed out to you, there is this difference of opinion as to what the so-called exploitability language of the 1958 convention means.

And our position has been that the only satisfactory solution to that is an international agreement.

Now, if we don't get international agreement, we will have to reconsider our position.

Senator HOLLINGS. Barring international agreement, what does the U.S. Government guarantee Howard Hughes in the offshore mining operation of the Pacific?

Anything at all?

Mr. STEVENSON. I am not personally familiar with the Howard Hughes operation. Let me say this, though, that it has been our position, as reflected in President Nixon's 1970 statement, that as far as the deep sea bed is concerned, until an international regime is established, traditional high seas freedom principles permit individual countries to go forward with activities, as long as they reasonably respect any activities of other countries.

We have stated that position on numerous occasions, chiefly in the context of this moratorium debate, where other countries have said there should not be exploitation.

And we have indicated it is our position that exploitation can go forward.

President Nixon indicated that it should be subject to the regime to be established. We don't want to be in the position of, in effect, preventing the establishment of an international regime.

There is nothing in our view of the law to prevent exploitation until an international regime is established.

Senator HOLLINGS. Thank you both very, very much, again.

Thank you, Mr. Stevenson.

Thank you, Mr. Pollock.

The committee will next hear from Mr. Leigh Ratiner, Director, Office of Ocean Resources, Department of the Interior.

That is good, Mr. Stevenson, keep your seat right there, please. We will probably be coming back to you.

Mr. Ratiner, we welcome you back to the committee.

Are you the Director of Office of Ocean Resources?

**STATEMENT OF LEIGH RATINER, DIRECTOR, OFFICE OF OCEAN RESOURCES, DEPARTMENT OF THE INTERIOR**

Mr. RATINER. Yes, Mr. Chairman.

Senator HOLLINGS. When was that Office instituted?

Mr. RATINER. That Office was established in March of this year.

Senator HOLLINGS. Do you have a prepared statement?

Mr. RATINER. No, I don't, Mr. Chairman. I am here to answer your questions.

Senator HOLLINGS. Tell me today what you think about the narrow shelf versus wide shelf? What is your view?

Mr. RATINER. Mr. Chairman, my view remains exactly as it was several years ago when I last appeared before you.

At that time the United States was proposing that there be a trusteeship zone which extended to the edge of the continental margin. This is neither a narrow shelf, nor a broad shelf proposal. It is a proposal in which all U.S. interests would be adequately protected.

The United States proposal today continues to be for an intermediate area in which the coastal state would have significant resource management jurisdiction, but would contain the international elements that Mr. Stevenson described earlier, thus allowing important United States interests to be protected within that coastal area.

So the size of the zone is the same today as it was then. I continue to support it.

Senator HOLLINGS. Regarding an offshore mining endeavor, what permits would be issued by the Department of Interior, if any?

Would you have anything to do with that at all?

Mr. RATINER. Mr. Chairman, with respect to the oil and gas resources of the Continental Shelf, the President's May 23, 1970, statement said that it did not want to discourage offshore development.

If a permit were requested for an area beyond 200 meters on the Continental Shelf, it would be duly considered in the Department of Interior in conformity with the Outer Continental Shelf Lands Act, and implementing regulations.

The only difference there would be with respect to such a permit, is that, pursuant to the President's policy, it would have to be subject to the regime to be agreed upon in the International Law of the Sea Conference.

With respect to deep sea mining, the United States does not presently have the authority to issue permits for that activity. By the same token, that activity is not prohibited, in our view, by international law and certainly not by any domestic statute or regulation.

Accordingly, anybody interested in deep sea mining is free now to go out and do it.

Senator STEVENS. So in the first instance, you would obtain revenue for the United States, but I take it there would be a question as to

whether it might be impounded for a later authorized international regime.

In the second issue, when you go beyond the Continental Margin, there would be no return at all to the United States or anyone under the present circumstances of this development, is that right?

Mr. RATINER. Unless the United States issued permits, or had the legal right to do so, that would be the case.

We would not collect any revenues whatever.

Senator HOLLINGS. Do you feel that the oil and gas interests of the United States are being properly protected by our Department of State representative, Mr. Stevenson, in these negotiations on the Law of Sea Conference?

Mr. RATINER. I most certainly do, Mr. Chairman.

Senator HOLLINGS. You are pleased with all the work he has done, is that right?

Mr. RATINER. Yes, I am, Mr. Chairman.

Senator STEVENS. I am happy to see that office created in Interior and I am hopeful that the resource agencies will have a voice in what is being done through you, Mr. Ratiner.

I think they have been neglected in the past, to a great extent, as we developed some of these policies, so I am very pleased to see we have got an advocate there.

You came from the Department of Defense, as I recall from our meeting, isn't that correct?

Mr. RATINER. That is correct, Senator.

Senator HOLLINGS. And what staff does the Office of Ocean Resources have in the Department of Interior?

Mr. RATINER. We have three full-time people, a geologist and economist, as well as my deputy, and we are on the staff of the Assistant Secretary of Mineral Resources.

So in terms of manpower, we have an opportunity to call upon any body in the Interior Department that can be helpful.

Senator STEVENS. We are hearing a lot about advocacy these days. We have got environmental advocates and consumer advocates, and all kinds of advocates throughout the Government.

Would you say that your role is to be an advocate for the resource agencies within the Interior?

Mr. RATINER. Well, I suppose the most accurate statement would not be that I was an advocate for a particular interest, but first someone—

Senator STEVENS. I am not talking about interests. I am talking about those agencies, the Bureau of Mines, Geological Survey, and the others who have expertise in these areas on a governmental concept. I don't think they have really been represented in these talks.

Mr. RATINER. They are being fully utilized now.

My function is to bring to bear all of the expertise in the Interior Department on our international negotiations, as well as to be an advocate for the resource interests of the United States that is with respect to mineral resources.

And indeed, the Bureau of Mines and Geological Survey have both supplied people to my office. The economist that I mentioned is from the Bureau of Mines, and the geologist is from the Geological Survey.

Senator STEVENS. Thank you very much.

Senator HOLLINGS. Thank you very much, Mr. Ratiner.

We appreciate your appearance and anything else you want to submit later for the record.

Mr. RATINER. Thank you, very much.

Senator HOLLINGS. Thank you, sir.

Mr. Stuart P. French, principal assistant to the Assistant Secretary of Defense for International Security Affairs and Director of the Defense Department Law of the Sea Task Force.

**STATEMENT OF STUART P. FRENCH, PRINCIPAL ASSISTANT TO  
THE ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL  
SECURITY AFFAIRS AND DIRECTOR OF THE DEFENSE DEPARTMENT  
LAW OF THE SEA TASK FORCE**

Mr. FRENCH. Yes.

Senator HOLLINGS. Mr. French, we welcome you.

I should, perhaps, have asked you all to come up with Mr. Stevenson. I take it you are in agreement with Mr. Stevenson's presentation?

Mr. FRENCH. Absolutely, sir.

Senator STEVENS. Things are too pleasant around here today. What has happened to the traditional battle between the Department of Defense and the Department of Interior?

Has someone sublimated these differences down there?

Mr. FRENCH. No, indeed, sir.

However, there was a statement made during the course of your hearings this morning that I would like to clarify somewhat, whereby it was suggested that resource interests were being sacrificed by the Department of Defense for security interests.

I assure you that is not so. The Department of Defense supports the President's oceans policy which in effect holds that there are certain resource interests and certain national security interests that a law of the sea treaty simply must accommodate. The Department of Defense fully supports that position.

This is why we are in agreement with everything Jack Stevenson has said this morning.

Senator HOLLINGS. We get the feeling that you are all like returning POW's, you have a sort of overall consideration for the fellows left behind.

Mr. FRENCH. Well, not totally as there is another problem, I suppose, at least within the Defense Establishment.

In terms of the article in the treaty dealing with international straits, our national security interests require submerged transit of submarines and overflight of aircraft in straits that will become territorial seas if 12 miles becomes the agreed breadth of the territorial sea.

The degree of confidence we in Defense have that this treaty will indeed accommodate those objectives, at this point in time, is considerably less than that of other members of the delegation. We are not altogether too optimistic.

However, we do have another year of preparatory work, and I would think that we can gain some kind of an indication as to how this straits issue is trending between the blocs of the less developed countries and the maritime nations.

Senator HOLLINGS. Would you go along on a compromise of innocent passage through the Straits of Gibraltar or not?

Mr. FRENCH. We could not accept merely innocent passage through the Straits of Gibraltar from a security standpoint.

Senator HOLLINGS. Do you think Mr. Stevenson's feelings are as strong?

Mr. FRENCH. Yes, sir; he is a very good advocate of the U.S. position. Senator STEVENS. I am delighted to see the apparent, and I say that advisedly, unanimity on our present position.

Maybe it is to our advantage not to raise those upside-down flags right now. But I can't quite find myself ready to agree that all of these past differences have been so resolved.

Senator HOLLINGS. Mr. French, do you have with you anything further you wish to add?

Mr. FRENCH. Nothing further, no, sir.

Thank you.

Senator HOLLINGS. We appreciate your appearance, too.

Thank you.

The committee will be adjourned.

(Whereupon, at 12 noon, the committee was adjourned.)

1870  
The first of the year was a very quiet one, and the  
business was not very brisk. The weather was  
very cold, and the people were not very  
inclined to go out. The business was not  
very brisk, and the people were not very  
inclined to go out.

The second of the year was a very quiet one, and the  
business was not very brisk. The weather was  
very cold, and the people were not very  
inclined to go out. The business was not  
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The third of the year was a very quiet one, and the  
business was not very brisk. The weather was  
very cold, and the people were not very  
inclined to go out. The business was not  
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The fourth of the year was a very quiet one, and the  
business was not very brisk. The weather was  
very cold, and the people were not very  
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very brisk, and the people were not very  
inclined to go out.

## ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

### APPENDIX A

STATEMENT BY HON. CHRISTOPHER H. PHILLIPS, ALTERNATE U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE I, JULY 26, 1972

Mr. CHAIRMAN: We have studied with interest the report of the Secretary General entitled, "Additional Notes of the Possible Economic Implications of Mineral Production from the International Sea Bed Area," introduced on July 19 by the distinguished representative of the Secretary General, Mr. P. de Seyne. We believe that this document and the earlier study on this subject submitted in the summer session 1971 as document A/AC.138/36 are a valuable source of information for the work of this committee. We fully appreciate the difficulties of rapidly assembling information on such a complex subject in such a pioneering field as ocean mining from conflicting and often erroneous data sources. The Secretary General is to be congratulated for making significant progress in the assembly of useful information.

We have also considered most carefully the statements made on July 25 by the distinguished representative of Chile and by the distinguished representative of Japan. These statements show some of the problems of interpretation of the Secretary General's report and the difficulties of finding trustworthy primary data sources for such studies. Because of these difficulties, we respectfully suggest that in any future studies of this kind the reports be organized to separate reliable source data in a clear fashion from the more speculative data—which must, of course, be resorted to in such a new field. Similarly, the interpretation of data should be clearly separated from the data itself. These measures will assist us all in achieving a clear perspective with regard to both possible and, we must emphasize, probable economic implications.

We find the statement made by the distinguished representative of Japan at yesterday's session particularly illuminating and helpful. We strongly agree with his comment that, "Any estimates, therefore, of the economic implications of the production of minerals from the seabed on the markets of land-based minerals cannot but be of a purely hypothetical nature, and as such we appreciate the estimates of the Secretariat." However, we will return to this point later in our statement in order to present our views regarding the relative cost advantage of land-based minerals over seabed minerals, particularly with respect to manganese nodules. We also concur with his view that the possibility exists of discouraging seabed mining by the imposition of restrictive controls and that this would act to the detriment of the international community as a whole. We will also comment further on *this* point.

We also concur with the distinguished representative of Japan's statement regarding the experimental nature of the CLB test and the predicted technical performance of the test equipment. The CLB tests are clearly of a rather preliminary nature. In addition, we find the statement just made by the distinguished representative of the UK to be extremely useful, and we share the concerns expressed.

Our study of A/AC.138/73 discloses a number of other areas where additional data may be useful or where corrections of information appear required. An example of such are paragraphs 17, 18, 19 and 20 on metallurgical processing. These paragraphs suggest that the metallurgical problem is completely solved and a variety of techniques have been successfully proven. While it is true that there have been many laboratory and even some small scale pilot tests run, there is no *commercially* proven process. In fact, some processes such as those described in paragraph 19 are clearly economically unsatisfactory.

We do not propose to discuss this at length in this intervention but do indicate our willingness to cooperate fully with the secretary general in his future work to assist him in this most difficult task of obtaining a firm data base for his studies.

The question of the relative costs of seabed minerals, particularly those derived from manganese nodules, compared to continental minerals is a fundamental one in our deliberations. We believe that there may be some confusion on this subject. Paragraph 84 of the Secretary General's report, which the distinguished representative from Chile commented on yesterday, says and we quote, "It follows from the foregoing that the greater availabilities and presumed lower marginal costs associated with the production of minerals from the seabed . . ." We point out that both "greater availabilities" and "presumed lower marginal costs" are assumptions and not facts. It is not our intent to debate these ideas (although we believe them to be highly speculative at this time), but only to emphasize their basic importance in assessing economic impact.

It has not yet been proven that ocean minerals can actually compete at present real price levels. The development problems of ocean mining and processing of nodules have not been solved and there is not even a demonstration scale plant to prove out costs. Therefore, the real cost structure is unknown and speculative cost estimates are based on the successful completion of development in the manner now predicted. These cost estimates are suitable only for justification of prospecting and research and development activities. It is only when development is completed that real costs can be estimated with any degree of confidence. Of course it is well-known that brilliant, creative technical men are often too optimistic in their predictions of cost.

This optimism is present in some of our ocean mining technologists and we must be careful not to create severe economic-political problems by a false view of the economics of ocean mining. Realistic cost estimates recognize the inherent difficulty and high cost of ocean mining and the complex and expensive metallurgical processing required. These estimates indicate that, with the richest manganese nodule deposits and completely successful development, it is unlikely that investment in a nodule project could be justified at less than present prices for copper and nickel and perhaps even higher prices will be required. Thus, it is quite improbable that nodule minerals can displace present production and the best that can be hoped is that it will compete with a share of the growth of the need for metals and help supplement our dwindling and ever high cost continental sources. With respect to manganese and cobalt, it does not appear that the production costs of these metals will be particularly low and in fact, the opposite appears to be true. The marginal cost of recovering manganese is very high and such manganese cannot compete with the low cost manganese from terrestrial sources used in almost all applications. It is noted that the ore grade and the particular set of nodule components would probably make nodules uneconomical to process for low-cost manganese even if the nodules were delivered free to a producer's dock. There are proposals for producing electrolytic grade manganese for the relatively limited markets for this high cost material. However, this high cost manganese is not competitive in the major manganese market. Cobalt recovery appears more practicable than manganese. However, such recovery is costly and the marginal costs of cobalt production do not provide much, if any, incentive to cobalt recovery.

Thus, the implied assumption that seabed minerals will be cheaper than existing land supplies is questionable, certainly in the foreseeable future. Ocean minerals will not displace land supplies. A more accurate portrayal of events would be as follows: The long-term trend is that minerals from all sources become harder to find, become lower in grade, and more expensive to mine and process. At the same time demand for minerals is increasing exponentially. For example, substantial average growth rates on the order of 4 to 5% for copper and 5 to 7% for nickel are predicted. Somewhat smaller, but still appreciable growth is predicted for other components. The long term trend then is that the costs of production and the prices charged are gradually rising. When this cost curve rises to a point permitting exploitation of more expensive mineral sources, then these more expensive resources will be exploited if the demand and supply balance permit. Ocean minerals fit this scenario and the trend lines are just reaching the point of exploitation and only with respect to copper/nickel, certainly not with respect to copper alone or with respect to manganese alone. Thus, ocean mineral exploitation appears completely unlikely to affect the economics of current mineral production and will only slowly have a real effect on the development of future mineral supplies in a way which seems beneficial to the world.

If seabed minerals are eventually to be produced and revenues generated for the maximum benefit of mankind, a long period of development free from excessively restrictive regulation may be necessary. Restrictive controls on production at this early stage of a new and untried technology may prove to be counter-productive. It is our task to understand these relationships and forge a regime that will bring these minerals to the use of the world.

Thank you, Mr. Chairman.

U.S. MISSION,  
U.S. INFORMATION SERVICE,  
*Geneva.*

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STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE II, JULY 28, 1972

Mr. CHAIRMAN: Nearly one year has passed since my delegation submitted to this Subcommittee draft treaty articles relating to the breadth of the territorial sea and international straits. My statement of August 3, 1971 contained in some detail the reasons for our proposals. I want to reiterate at this time that the objectives of these draft articles constitute basic elements of United States Oceans Policy.

Today, we want to fulfill the commitment we made when we tabled our draft article regarding straits to accommodate the legitimate concerns of coastal States, particularly those which adjoin straits, regarding navigational safety. The United States Government hopes that the proposals we will make today regarding both this matter and the question of liability will significantly alleviate those concerns and thus assist in resolving one of the most difficult issues facing this Subcommittee. It is also our intention to make proposals in Subcommittee III in the next several days concerning marine pollution. These proposals obviously relate to these same coastal State concerns.

The right of free transit we are seeking to have incorporated in a law of the sea treaty is one which already exists in straits which would be affected by a general extension of the territorial sea to 12 miles. This right is a simple and limited one of transit which would apply to international straits as defined in the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone. In order to achieve this treaty right, the United States is willing to forego the other high seas freedoms of navigation and overflight which we consider to exist now in straits wider than six miles.

Mr. Chairman, I wish to emphasize that the United States is not seeking, through our straits proposal, the right to navigate unsafely or to pollute. We, like many other straits States, have beaches and estuaries which could be damaged if transit is not exercised safely and with regard for the marine environment. In this regard, when exercising the right of free transit, my Government has indicated its willingness to observe reasonable traffic safety regulations which are consistent with the basic transit right. My delegation firmly believes that the safety standards to be applied in straits should be established by international agreement and should not be unilaterally imposed by the coastal State. There are two specialized agencies of the United Nations which, because of their long experience and expertise, are in our view best suited to establish the necessary international standards. These bodies are the Intergovernmental Maritime Consultative Organization (IMCO) in the case of ships, and the International Civil Aviation Organization (ICAO) in the case of aircraft.

With particular respect to ships, the list of IMCO achievements in the area of navigational safety is an impressive one. It has produced the basic international conventions on the safety of life at sea, load lines, tonnage measurement of ships, special trade passenger ships, prevention of pollution of the sea by oil, and the International Regulations for Preventing Collisions at Sea, known as the Rules of the Road. Its maritime safety committee meets regularly to consider refinements to established safety standards and to consider new standards. In this regard, IMCO is presently preparing for a conference later this year to deal with amendments to the Rules of the Road. We believe that IMCO has demonstrated the commitment and expertise necessary to devise navigational safety standards and that, therefore, the international community should continue to rely on it for primary responsibility in this area. However, we also share the view that IMCO must take positive steps to protect the particular interests of coastal States regarding navigational safety and pollution control.

Mr. Chairman, in light of the considerations I have mentioned, the United

States is prepared to make the following specific proposal regarding safety of navigation by ships in straits and other areas of heavy sea traffic:

We propose that the law of the sea treaty provide that all surface ships proceeding through areas for which international traffic separation schemes have been developed shall be obliged to respect such schemes in accordance with the rules and procedures established by IMCO and in the International Regulations for Preventing Collisions at Sea.

The procedures within IMCO for establishing traffic separation schemes and the manner in which they operate are described in the very useful paper IMCO submitted to Subcommittee III this week. There are already seventy-five separation schemes developed by IMCO and in effect in areas of heavy ship traffic throughout the world. They are designed to reduce the risk of collisions in congested areas by separating surface traffic into designated lanes or zones. While several of the existing schemes apply in straits, including such major and particularly busy straits as Dover, Gibraltar, and Hormuz, I want to make clear that our proposal would apply to all areas of heavy traffic where traffic separation schemes are now or will be in effect. In this latter regard, we hope that IMCO would establish separation schemes in all areas where they are necessary.

As the IMCO paper points out, one important difficulty at present is that these schemes are not binding. Thus, a single ship travelling the wrong way in an area where a traffic separation scheme applies clearly creates a significant risk of collision and possible pollution and interference with navigation. We fully support the resolution in IMCO recommending that member governments make it an offense to proceed against traffic where an IMCO separation scheme is in effect. We also support the new proposed Rule 11 for the Rules of the Road which would have essentially the same effect for all surface ships as the proposal we are making today.

In view of the very technical nature of this subject and the fact that it has not been addressed here before, the Subcommittee may wish to consider inviting IMCO experts to explain in detail how separation schemes control traffic in congested areas.

We are not proposing, Mr. Chairman, that the Law of the Sea Conference establish new traffic separation schemes or change existing ones or deal with other technical problems best handled by IMCO. Rather we are proposing that the law of the sea treaty provide that the IMCO rules on traffic separation schemes be made binding on the parties to the law of the sea treaty. This approach is similar to that contemplated in the 1958 High Seas Convention which requires adherence to generally accepted international standards regarding the use of signals, maintenance of communications and the prevention of collisions at sea.

Mr. Chairman, the application of international navigational safety standards in straits used for international navigation necessarily requires that such standards be enforced. Under the terms of the United States straits proposal the right of free transit would be ensured, but a coastal State has enforcement rights with respect to violations of its laws and regulations over ships exercising their right of free transit through territorial seas in straits. In serious cases the coastal State may find it necessary to arrest the ship or, in the case of a warship, to require it to depart. Similarly, coastal States would have the right to enforce mandatory internationally agreed traffic safety schemes in the territorial seas in straits against any ship that does not comply with those schemes.

I would like to turn now, Mr. Chairman, to the question of free transit by aircraft over international straits and the internationally agreed safety regulations which the United States believes should apply to aircraft. The right of all aircraft, scheduled, non-scheduled, privately owned, and state, including military, aircraft, to overfly the sovereign airspace, including the airspace over the territorial sea, of a country depends on obtaining the consent of that country. Civil aircraft already have international navigation transit rights over the national territory of other States under the International Civil Aviation Organization (ICAO) Convention and the International Air Transit Services Agreement. Such rights are not, however, available to state aircraft under the ICAO Convention or Air Transit Services Agreement, and thus the United States has proposed that a right of free transit be guaranteed for such aircraft when overflying international straits. In this connection we have emphasized that, under the United States draft article on straits, States which adjoin straits need not route state aircraft over the strait itself but may establish a suitable corridor over land areas, for example in existing air lanes. The free transit right for aircraft is similar to the transit right proposed for ships and, in our view, is essential to preserve the high seas right of overflight which already exists over those straits which would be affected by extending the territorial sea to 12 miles.

With regard to air traffic safety measures, the International Civil Aviation Organization (ICAO) establishes standards and recommended practices and procedures which are applicable to all flights through international airspace by civil air carriers of the 124 States which are parties to the ICAO Convention. These carriers comply with a number of important types of ICAO traffic safety controls and requirements.

Under the terms of the ICAO Convention, those standards are not applicable to state aircraft. State aircraft are obliged only to observe "due regard for the safety of navigation of civil aircraft."

My Government realizes that nearly every State has an interest in assuring that aircraft navigation will normally be subject to air traffic safety control. Virtually all States have civil aircraft and are no doubt concerned about the potential hazard to them arising out of the risk of mid-air collisions. We have seriously considered these concerns, Mr. Chairman, and wish to make a proposal which we believe will contribute to ensuring the safety of overflight by aircraft exercising a right of free transit under the United States draft article on straits.

We propose that the law of the sea treaty provide that state aircraft exercising the right of free transit contained in the United States draft straits article will, first, normally respect International Civil Aviation Organization (ICAO) standards, recommended practices and procedures as they apply to civil aircraft over States is prepared to make the following specific proposal regarding safety of navigation of civil aircraft.

Mr. Chairman, I wish to note that our state aircraft, like our ships, have always operated in accordance with the highest degree of safe navigation standards. The proposals we have advanced today represent our assurance that they will continue to do so.

We believe the proposals we have outlined on transit by surface ships and aircraft, if adopted by the Law of the Sea Conference and widely observed, will substantially alleviate the possibility of accidents with resultant loss of life, property damage, and environmental pollution which some fear. We recognize that should accidents occur, however, States damaged thereby should be compensated. We also believe that users of straits should have a strong incentive to observe scrupulously the safety rules which we have proposed.

To meet these problems, the United States has two specific suggestions. Both are aimed at strengthening the premise that application of internationally agreed safety standards, such as those my Delegation has proposed, is preferable to and can be more effective than unilateral coastal State regulation. First, the law of the sea treaty should provide for strict liability for all vessels, including warships, for accidents caused by deviations from traffic separation schemes established by the Intergovernmental Maritime Consultative Organization. Second, the law of the sea treaty should provide for strict liability for state aircraft, exercising the right of free transit, for accidents caused by deviation from International Civil Aviation Organization standards, recommended practices and procedures.

My Government is studying what the upper limits, if any, of liability should be, and we would be interested in the views of other delegations on this issue.

The proposals which my delegation has presented will, we hope, go far to meet the legitimate concerns of coastal States, and particularly straits States, regarding safety of navigation by ships and aircraft through and over straits. Therefore, my delegation welcomes and is prepared to take into account the views and suggestions of all the members of this Subcommittee regarding the approach we have outlined today. Only by establishing and maintaining a serious dialogue on this and other issues can this Subcommittee move toward an accommodation of the various coastal, maritime and international interests represented here.

Thank you, Mr. Chairman.

U.S. MISSION,  
U.S. INFORMATION SERVICE,  
*Geneva.*

STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE III, AUGUST 2, 1972

MR. CHAIRMAN: At the beginning of the deliberations of this Subcommittee, you directed our attention to certain documents and recommendations of the recent Stockholm Conference. In addition to the basic Declaration on the Human Environment, we have carefully examined the general principles for Assessment

and Control of Marine Pollution and certain other recommendations of importance in protecting and preserving the marine environment. We believe that the work of the Stockholm Conference was useful and important, and we agree with the Chairman that the relevant documents produced by that Conference should be carefully considered by this Subcommittee and should be used as guidelines for our future work on pollution of the sea.

The United States agrees fully with the emphasis placed by many countries at Stockholm and in these meetings on the importance of controlling marine pollution. We all realize that the problems involved are complex, that pollution of the oceans comes from many different sources and is of different types, and that action against it can best be taken by a combination of national, regional, and international actions. The Seabed Committee and the Law of the Sea Conference cannot be expected to deal with all of these problems and should not try to supplant other existing efforts, but there are certainly common problems of ocean pollution with which the Committee and the Conference will be in the best position to deal, and they should concentrate on these, taking fully into consideration other relevant actions.

With respect to Subcommittee III, we recommend that the Subcommittee focus its attention on basic legal principles dealing with marine pollution, which could well be drawn from the conclusions of the Stockholm Conference and form the basis for draft treaty articles of a general nature, and, where appropriate, that the Subcommittee consider specific and concrete problems. In our judgment, this combination of principles and pragmatism offers the best hope of real progress in controlling marine pollution and reducing it to a minimum. We also recommend that, in dealing with specific problems, this Subcommittee concentrate its attention on certain aspects of pollution from vessels; this will avoid unnecessary conflicts with the other Subcommittees and with other international activities and ensure thorough consideration of a subject on which concerted international action is required.

In this connection, we believe that neither the Seabed Committee nor the Law of the Sea Conference should try to deal with the massive and complex problems of land-based pollution. The technical competence required is, with all respect, beyond us, and, in any event, these problems must be handled primarily by national and local governments and through regional cooperation.

The question of pollution from exploration and exploitation of the Seabed is one which the Seabed Committee and the Law of the Sea Conference must resolve. However, we recommend that this be done in Subcommittee I, as it can scarcely be considered apart from the other elements of the Seabed regime. In this connection, it should be noted that the United States seabed proposal states in Article II that each Party to the Treaty shall be responsible to any other Party or its nationals for damages caused by activities which it authorizes or sponsors. In Subcommittee I we shall propose that a standard of strict liability apply to clean-up costs and pollution damage from seabed exploration and exploitation. We believe the risks of damage, the numbers of potential victims, and the possible difficulties in proving fault all justify a strict liability standard, and we hope it will receive support.

On the question of ocean dumping, we are generally satisfied with the progress that was made in the Reykjavik and London preparatory meetings. The draft articles produced in the meetings form a good basis for developing a convention on ocean dumping that would significantly improve the quality of the ocean environment. We believe the most useful action that the Seabed Committee could take on this subject at this session would be to express support for the plenipotentiary Conference to be convened by the Government of the United Kingdom later this year. Whether the subject will require further consideration by the Law of the Sea Conference will, of course, depend upon the outcome of the ocean dumping conference. We hope that the members of this Subcommittee will make a special effort to be represented at the London Conference.

Turning to the subject which I believe should be one of the principal concerns of this Subcommittee, pollution from vessels, I would begin by underlining an obvious fact—that such pollution is of several different types which must be addressed separately. This pollution is either intentional or accidental and may involve many pollutants in addition to oil. In this connection, further research is clearly necessary on the effects of the introduction into the oceans of various substances. Accidental pollution may usefully be further broken down for purposes of analysis into pollution resulting from inadequate regulatory standards in the design, construction, and operation of vessels, pollution resulting from maritime accidents (such as collisions and grounding), and other

pollution resulting from human error. As we consider specific proposals, it will be useful to keep these categories in mind to evaluate the probable effectiveness and comprehensiveness of the proposals.

Permit me to make a quick review of what has been done in recent years on the international level to control and minimize pollution from vessels. It goes without saying that improvements in national standards of ship design and construction and improvements in regulation of vessels by flag states have helped to cope with the risks of vessel pollution, but I shall limit this review to international, rather than national, action:

First, the 1954 Convention for Prevention of Pollution of the Sea by Oil, as amended in 1962 and 1969, requires each Party to enforce against vessels of its registry standards limiting the maximum rate of discharge of oil from vessels in navigation.

Second, the 1969 Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties allows coastal states to take emergency action under certain conditions against vessels on the high seas to prevent, mitigate, or eliminate a grave and imminent danger of oil pollution to their coastlines.

Third, the 1969 Convention on Civil Liability and the 1971 Brussels Convention on a Compensation Fund have established a system to compensate victims of oil pollution damage. This is accomplished by placing liability on the vessel owner in each case and establishing a fund to provide additional compensation to victims by means of contributions by oil cargo receivers.

Fourth, the 1971 so-called "important nature" amendments to the 1954 Convention established new regulations on ship design and construction effecting large tankers. For practical purposes these amendments have applied since January, 1972.

Finally, the International Maritime Consultative Organization (IMCO) is presently considering proposals to extend the principles of the Intervention Convention, the Civil Liability Convention, and the Compensation Fund Convention to pollution caused by certain substances other than oil and is preparing for an International Conference on Marine Pollution, scheduled for 1973, which is expected to (a) prohibit all intentional discharges of oil wastes which could pollute the seas; (b) take further steps to minimize accidental oil spills (including new regulations concerning vessel design and equipment, revisions in navigation rules, new schemes for traffic separation, and new procedures for oil transfers); and (c) expand controls to hazardous cargoes other than oil.

Permit me now to review in summary form what we believe to be the most important steps that remain to be taken.

First, the work that IMCO has in train should be strongly supported. Whatever criticisms one may hear of IMCO, it has been the forum in which the achievements I have just summarized have been realized. Building upon that past work and present planning it should be possible for all interested governments to use IMCO to push forward rapidly with these projects. In this connection, I would note that the Seabed Committee and the Law of the Sea Conference could usefully urge all those countries which have not adhered to or ratified the various IMCO Conventions to give serious consideration to adherence or ratification. I would particularly suggest this with respect to the 1969 Intervention Convention, the 1969 Civil Liability Convention, and the 1971 Compensation Fund Convention. The Committee and the Conference could also usefully endorse the expansion of the liability and compensation concepts of these Conventions to cover other hazardous substances.

Second, we believe greater consideration should be given to coastal state concerns and proposals. We would urge the Seabed Committee to urge IMCO to do this and to study specific regional or local vessel pollution problem areas. The Committee might also usefully recommend to IMCO the continuation and expansion of its training programs for the nationals of developing countries.

Third, we believe all new commercial tankers should be required to carry an International Tanker Construction (Pollution Prevention) Certificate. A proposal to this effect has been made by IMCO, and we urge that it be adopted and included in the convention to be concluded in 1973 on vessel pollution.

Fourth, port states should be required by international agreement to verify possession of an International Tanker Construction Certificate by all new commercial tankers entering their ports and to refuse entry to any such tanker not possessing the certificate. IMCO has proposed requiring verification by port states, and we shall propose that refusal of entry be made mandatory for non-compliance, except, of course, in the case of *force majeure*. Moreover, we believe port states should be authorized to go behind the certificate and inspect any

such tanker entering its ports if there are reasonable grounds for believing that it is not actually in compliance with the construction standards. Should non-compliance be ascertained, the port state could then require necessary repairs or refuse port entry. We intend to make proposals to this effect in IMCO.

Fifth, all ships proceeding through areas to which international traffic separation schemes apply, as described by the representative of IMCO last week, should be required to respect them in accordance with the rules and procedures established by IMCO and the International Regulations for Preventing Collisions at Sea. We believe the Law of the Sea Conference should include this requirement in the treaty it produces and should also prescribe strict liability for all vessels for accidents caused by deviations from traffic separation schemes. We intend to discuss these ideas further in Subcommittee II, as well as in this Subcommittee.

Sixth, we believe the 1969 Intervention Convention should be expanded to apply to hazardous substances other than oil and that consideration should be given to expansion of the criteria governing instances in which states can act, including possibly a broadening of the concept of "maritime casualty". We intend to pursue these subjects in IMCO.

Finally, we believe the Seabed Committee and the Law of the Sea Conference should develop draft treaty articles stating the general principles governing the common effort to ensure that man's use of the oceans and their resources is carried out in harmony with the environment and with a minimum risk of pollution. We would reiterate that this effort should not try to deal with the complex problems of land-based pollution. The recent Declaration on the Human Environment and the twenty-three Principles for Assessment and Control of Marine Pollution approved by the Stockholm Conference clearly form the basis for this work.

In view of these actions taken or in prospect, we believe the following conclusions with respect to pollution from vessels are sound and warrant support by this Subcommittee.

First, much useful action has already been taken to control pollution from vessels, but more needs to be done. We are all aware of the serious dangers presented by such pollution, particularly from the construction of larger tankers and the rapid increase in maritime commerce. To meet these dangers adequately requires our concerted efforts.

Second, IMCO should be urged to proceed with its work in this field as rapidly as possible and to give additional consideration to the needs of coastal states.

Third, the Law of the Sea Conference should support and supplement IMCO and its work and should not try to replace it. The Committee and the Conference are the proper forums for the development of treaty articles establishing basic policies, but work which requires continuing technical expertise and involves detailed regulation is clearly inappropriate for the Law of the Sea Conference.

Finally, pollution from vessels is a subject requiring careful balancing of interests, rights, and obligations among maritime, shipping, and coastal states. Control of such pollution must be by international agreement in order to ensure an acceptable balance. Therefore, while we sympathize with and share the concerns which have produced proposals such as the three principles on the rights of coastal states to which the distinguished representative of Canada, Mr. Beesley, referred in his statement to this Subcommittee on July 20, 1972, we cannot accept that approach. Vesting large discretion and powers in coastal states would not be likely to result in the striking of a proper balance of interests, or in coping with pollution in the open ocean beyond whatever zone of control were established, and it could lead to the type of conflict which it is the main purpose of this Committee and the Law of the Sea Conference to avoid. Moreover, in view of the actions and proposals I have outlined, I believe the needs of coastal states for increased protection against pollution from vessels can and will be met without resort to dangerous methods of self help. I am convinced that temptations to leave the urgent and important problems of marine pollution to coastal states must be resisted. We must recognize and act on the fact that only concerted international action can hope to be adequate to meet the common danger.

Thank you, Mr. Chairman.

STATEMENT BY PROF. JOHN A. KNAUSS, DEAN, GRADUATE SCHOOL OF OCEANOGRAPHY, UNIVERSITY OF RHODE ISLAND, KINGSTON, R.I., U.S.A., BEFORE SUBCOMMITTEE III OF THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, AUGUST 3, 1972

THE NATURE, CHARACTERISTICS, AND OBJECTIVES OF SCIENTIFIC RESEARCH

*I. Objectives of scientific research*

To a scientist, the primary objective of scientific research is to better understand the natural world in which we live. Man is distinguished from other animals by his continuing curiosity about the world around him and his ability to explain that which he observes. To many, man's greatest achievement has been his success in gaining an ever better understanding of the natural world. The task of ocean science is to observe, to explain and to eventually to understand the natural world.

Society supports science for a variety of additional reasons. Ocean science research makes contributions to society in many areas. It contributes to improved forecasting techniques for storm damage along the coast and at sea. Knowledge gained through scientific research is essential for the wise development and management of the ocean and its resources. Ocean research is becoming critically important in the control of global pollution and protection of the environment. Marine research underway today may in the future lead to the development of useful drugs and medicines, to the prediction and possible control of earthquakes and the earthquake generated tsunami wave. Finally, of course, scientific research contributes indirectly to the exploitation of the extractive resources of the ocean.

All of the technological and economic advances of modern times have been based on the findings of science. A strong case can be made for the thesis that if it were not for the advancements in technology generated by science there would probably be no need for a new law of the sea conference. As long as the development of ocean resources was as limited as it was thirty years ago the need for a more complex law of the sea was less obvious.

The distinction between the primary objective of science and the importance of the results of science to society should be noted. For example, because science has led to a wider use of ocean resources, some see a direct relationship between scientific research and resource exploitation. There is indeed a relationship, but it is not a direct one. The findings of science may suggest where to look for fish or oil, but the commercial development of these resources requires a developmental program that extends well beyond the scope of scientific research. In Section IV of this paper I attempt to distinguish between the role of scientific research and that of exploratory development in the areas of extractive resource exploitation.

In the sections that follow I would like to outline some of the ways marine scientific research provides useful information to man for better understanding his world and the potential benefits that can stem therefrom.

*II. Global pollution*

A basic problem in oceanography is the study of the movement of material from the land to the ocean and the distribution of this material within the ocean. Sediment and other material move down the rivers and estuaries to the sea. A surprisingly large amount of material is carried seaward by the winds. Once in the ocean, this material is redistributed by ocean currents, often materially changed by chemical processes, and reworked by biological organisms.

The growing interest and concern about marine pollution makes these studies of increasing importance. The oceans of the world, especially their edges, are receiving ever increasing quantities of the wastes of man from ever increasing uses of materials and combustion of fossil fuels. The releases to the marine environment are in part deliberate and in part inadvertent. As a consequence, the compositions of seawater, of sediments and of marine organisms are being altered. Such heavy metals as lead and mercury, such synthetic organic chemicals as DDT and the polychlorinated biphenyls (PCB) and petroleum products are

building up in the various parts of the ocean. Threats to man's continued well-being, to the community health of marine populations, and to the non-living resources of the sea are posed. Some beaches have been soiled, a few bird populations decimated, and some commercial fish rendered inedible through the impact of man's discards. As a result of inadequacies in the management of oil transport and of near-shore extraction, these activities have been seriously curtailed in some areas.

The tracing of pathways into and through the marine environment for such material as lead, mercury, petroleum, and DDT is complex and difficult. Our knowledge of so-called "natural processes," such as the factors controlling the distribution of silicon in the ocean, is still inadequate. Thus, oceanographers do not have sufficient knowledge to predict the pathways and the effects of pollutants generated by man.

Major programs in this field are presently underway; many are a part of the Long Range and Expanded Program of Oceanic Research sponsored through the Intergovernmental Oceanographic Commission (IOC) of UNESCO. For summary purposes open ocean pollutants can be grouped in four categories: petroleum, halogenated hydrocarbons such as DDT and PCB, heavy metals such as lead and mercury, and nutrients such as phosphate and nitrate.

(1) Petroleum: A growing body of data indicates that petroleum is a serious contaminant in some parts of the world's oceans. The presence of petroleum in the marine environment may be accounted for by such acute events as an accidental spill during the transportation of petroleum or an oil well blow out. Less dramatic but more important contributors of petroleum to the sea are industrial and municipal effluents, tanker losses at sea and in port, losses associated with normal oil-field production, and particles transported from land by the atmosphere.

Recent data indicate that petroleum has entered the marine food chain at locations both in coastal waters and in the open ocean. Analysis of the community of organisms associated with Sargasso Weed in the Sargasso Sea has shown petroleum contamination, as have fish livers from the Western North Atlantic. Plankton tows from coastal waters of Texas and Louisiana, where there are off-shore oil platforms, have been shown to contain petroleum. Water samples in the vicinity of offshore oil platforms contain higher concentrations than open ocean samples.

Petroleum fractions interact with the marine organisms at many levels. It is important to emphasize that the more subtle interactions may often be the most serious. For example, an oil spill incident which kills a group of birds in a short time is very obvious and receives immediate attention. Less well known, but equally well documented, are reports of extensive lethal damage to marine communities which live on the bottom. The long-range persistence of certain oil components in the bottom sediments can be reflected by a drastically altered biological community more than two years after the spill. The impact of marine oil pollution on the terrestrial environment has also been reported; for instance, seaborne oil spills were implicated in the death of pine trees along the Italian coast.

A second level of interaction is in the area of sublethal effects on a species, effects which do not kill an individual but which render it less able to compete with individuals of the same species and of other species. Interactions which lower the viability of a species may require many generations to detect. They may produce serious alterations in a biological community before man's attention is directed to the problem. Therefore, it is necessary that we increase our understanding of the fundamental interactions of petroleum components with living organisms.

(2) Halogenated Hydrocarbons: In contrast to heavy metals, nutrients and petroleum, the halogenated hydrocarbons such as DDT and PCB found in the world oceans are almost exclusively man-made. Thus, the extent of man's contamination of the oceans by these synthetic chemicals can be directly measured. However, few measurements for halogenated hydrocarbons have been made as yet in seawater and the results of these are, at best tenuous.

DDT and PCB have been reported in marine plankton and in fish. The information on fish is the best documented. Concentrations of DDT and PCB have been measured in a variety of classes of fish from the North and South Atlantic, Denmark Strait, Gulf of Mexico, Caribbean Sea, Northeast Pacific, Scottish West Coast and the Baltic Sea. There are differences in distribution by location. The concentrations in the open-Atlantic fish are somewhat below those from coastal waters and enclosed or sheltered seas where the contributions from

continental runoff and industrial inputs are significant. The open sea probably receives these chemicals solely via the atmosphere. Ranges of PCB concentration values in organisms occurring in the open ocean overlap those from coastal and shelf environments. The chlorinated residues in South Atlantic deep water organisms are quite similar to those in the North Atlantic. This is surprising in view of the smaller land mass, and lower population and industrialization of the southern hemisphere; but it can be explained if you assume the primary pathway is from the land to the ocean via the atmosphere. On the other hand, seabirds which inhabit the South Atlantic contain lower levels of PCB than similar North Atlantic species. The reason for this discrepancy is not clear.

(3) Trace Metals: Alterations in trace-metal concentrations in the marine environment due to man's activity are difficult to establish inasmuch as the natural levels are often poorly known and when known show variations. At the present, measurement of concentration gradients from known pollution sources is the primary method of ascertaining trace-metal contamination in the marine environment. High trace-metal inputs into estuarine or coastal areas from industrial effluents as well as from river runoff have been observed.

While the direct input of pollutants from outfalls or dumping is of primary importance in coastal areas, atmospheric transport carries large quantities of a number of trace elements to the open oceans. However, only in the case of lead has the input been measurable in open-ocean waters so far. Concentrations of lead ten times higher in ocean surface waters than in deeper waters have been shown. Lead isotope ratios have established that the high surface concentrations are due to activities of man.

Man's impact on the distribution of mercury in the world's oceans is difficult to judge at this time. All available open-ocean water, sediment, and plankton data indicate that mercury levels are very low offshore and mercury pollution appears to be confined to a few coastal areas and estuaries. On the basis of available data, high inshore mercury levels found in larger fish, birds and marine mammals cannot be directly attributed to man's activities; these high levels may well be natural except where found in the vicinity of known mercury pollution sources. On the basis of our present fragmentary data, it appears that mercury pollution is a problem in some localized coastal areas. Mercury contamination in the open ocean has yet to be established.

Other trace-metals which may cause significant pollution problems include cadmium, arsenic, selenium, zinc, cobalt and antimony. However, there is little reliable data as yet concerning possible pollution problems related to these elements.

(4) Nutrients: The effects of man's addition of inorganic phosphorous and nitrogen compounds to his local waters is one of the most striking examples of pollution. It leads first to increased biological productivity usually accompanied by a change in its character. The appearance of thick green scums of algae in ponds and rivers is typical. Intensive biological activity leads to an increasing rate of eutrophication, eventually to a decrease in oxygen and finally to the stinking smell of hydrogen sulfide which most equate with a "dead" environment.

Although the incidence and effects of increased nutrients are well documented in many lakes, rivers, fjords, estuaries and enclosed bays, evidence in coastal waters and the open ocean is minimal. However, recent investigations suggest there is now evidence for a slight increase in the nutrient content of the coastal water off the Northeast United States.

### *III. Ocean and weather forecasting*

If studies of ocean pollution are of great importance for man's survival, the set of studies that may have the greatest beneficial effects for all mankind are those related to ocean currents and the interaction of the ocean with the atmosphere. The ocean and atmosphere are coupled in a variety of complex ways. Practically all of the energy that drives the circulation in both the ocean and atmosphere comes from the sun. Most of the sun's energy is absorbed by the ocean and retransmitted to the atmosphere. In this sense the ocean drives the atmosphere. Similarly it is the winds of the atmosphere that determine the major currents of the ocean and thus the atmosphere drives the ocean.

Although the general principles of these interactions are reasonably well understood, the details are not. For example, changes in the weather over periods of one to two days frequently can be forecast without directly considering ocean-atmosphere interaction, but some of the major errors of these forecasts may result from lack of understanding of these interactions. It is believed that successful weather prediction in the five to ten day range requires knowledge of

the temperature in at least the top few meters of the ocean. For longer periods the role of the ocean at depths down to at least 100 meters is dominant. It has been hypothesized that shifts of major ocean currents or variations in the amount of heat stored in various portions of the ocean may be responsible for long-term weather abnormalities, i.e., droughts, floods, unseasonable warm summers, etc.

The complex interaction of ocean and atmosphere has been well documented in a few dramatic incidents such as the infrequent El Nino, an intrusion of warm water along the West Coast of South America, which results in widespread fish kills and changing weather patterns off Ecuador and Peru. It has been suggested that the "source" of El Nino is a change in the equatorial ocean circulation more than a thousand miles away. Another example of the interaction of the ocean and atmosphere is that the frequency and intensity of tropical typhoons and hurricanes has been associated with temperature variations in the upper 100 meters of the ocean.

Although individual research programs are generally limited to a particular part of the ocean, the problems are really global in scope. Many of the most important areas of study are relatively close to the coast, such as studies of the intense vertical mixing that occurs in winter in the Norwegian and Mediterranean Sea or the striking changes in direction and speed of the Somali current in response to the changing monsoonal winds. The response of the ocean to coastal upwelling is most important because of the fact that areas of upwelling are generally rich in fish. Yet upwelling itself depends on very large wind systems often a third the size of the North Pacific. These wind systems in turn are influenced by the underlying sea.

The development of better ocean instrumentation coupled with the growing capacity of computers to handle the very complex and lengthy calculations implicit in ocean-atmosphere interaction studies gives some hope that the understanding necessary for reliable long range weather and ocean predictions will be more than just a dream.

Probably the single most destructive weather phenomenon is the tropical cyclone, the hurricane as it is called in the North Atlantic, and typhoon in the Pacific and Indian Ocean. These giant storm systems are generated over the warm tropical waters of the ocean and move poleward. Their energy is derived initially from evaporation and later condensation of warm sea water. As they pass over land they begin to dissipate but in doing so can produce disastrous flooding. Whether man can ever hope to control these tropical cyclones is still uncertain. However, if he can dissipate them or alter their paths, it will probably be easier, and certainly safer, if he can do it before they have reached full strength and while they are over the open ocean. Scientists are presently attempting to learn the combination of meteorological and oceanographic factors that determine the formation, growth and movement of these giant storm systems.

Better understanding of ocean-atmosphere relationships is vitally important for those who use the sea. Each year hundreds of ships are lost at sea because of waves and storm damage. Even some of the largest tankers have been broken by the seas. Subtle changes in the ocean currents can decimate a fishery as easily as overfishing can. Frequently a shift in the geographic distribution of a particular species is our first indication of a climatic change.

Ocean scientists from many countries are studying these and many other problems in the complex spectrum of ocean atmosphere interactions. With some they may be successful (in terms of benefit to mankind) in a relatively few years. Others will take much longer.

#### IV. Relationship between science and the exploitation of extractive resources

Presently the most important extractive resources of the ocean are fisheries and oil and gas. There is increasing expectation that manganese nodules will become an important economic resource. While most persons would applaud the efforts of science in the studies of global pollution and environmental forecasting, many are concerned about the role of science in resource development. Since science does play a part in resource development, I would like to be as explicit as possible in attempting to define the relationship between *bona fide* scientific research and the further development necessary for the exploitation of these resources.

(1) *Oil and gas*.—Oil and gas are economic minerals that began as organic debris deposited within mainly marine sediments. Where found on land, they almost always are restricted to strata originally deposited on former shallow ocean floors. The bulk of the oil and gas resources remain in large filled sedimentary basins on the continental shelves and margins of the world. These are

the same boundary areas that are of interest to science for other reasons. They must be studied to learn the origin of continents and ocean basins. The broad structure of these areas is being investigated by oceanographic institutions using widely spaced geophysical traverses that include measurements based upon seismic reflection, seismic refraction, geomagnetics, and gravity supplemented by samples of surface sediments and rock outcrops.

Such studies have shown that continental margins have two major forms: simple sedimentary layers which slowly change character as one proceeds seaward, and barrier ridges that form basins or troughs in which thick sediments accumulate. The barrier ridges are basically due to folding and faulting of rock. Present knowledge indicates that most continental margins having barrier ridges occur around the Pacific Ocean or in smaller regions where the ocean floor is moving against and beneath the continents. Continental margins without barrier ridges are most common where there is no relative movement of the sea floor and continent.

The same studies of general structure serve to outline areas likely to be most productive of oil and gas. For example, the reconnaissance traverses that are 50-200 km apart are sufficient to portray the limits of larger sedimentary basins and to reveal areas in which no large basins are present. Thus these structural studies can eliminate those regions without large sedimentary basins from further immediate consideration as a potential supplier of oil and gas. The remaining regions, which may amount to about one third of the continental shelf area, justifies further study by those interested in finding oil.

Therefore, the data resulting from scientific investigations are of interest to both the scientific community and oil companies. Marine scientists are interested in the fundamental problems of the formation of continental shelves and margins and the processes that determine their present and past characteristics. By examination of these same data, oil companies can discover the areas which are unlikely to be worth further investigation. More important, they can also select areas worthy of further detailed exploration.

The difference between the goals and objectives of scientific research and those of oil and gas exploration should not be minimized. There is no known case of an oil company drilling a well solely on the basis of *bona fide* scientific research investigations. Before an oil company is justified in making the large investment necessary for exploiting oil it must have much more detailed information than that produced by scientific research. This information is gathered by oil companies or their service company representatives, nearly always on a proprietary basis. The information is gained from detailed traverses, generally at 10 km spacing or less and using highly sophisticated and expensive seismic reflection methods. It serves to locate folds and faults on which drill sites can be selected for actual testing of the strata for their content of oil and gas.

In the attached annex is a chart showing actual survey lines by oil exploration companies from one small portion of the Gulf of Mexico. In that region the survey lines are 1-2 kilometers apart. There are areas in the Gulf of Mexico, and other oil producing areas, where the lines are as close as a quarter of a kilometer. I know of no scientific research study which would have more than one at most two lines in an area of comparable size.

To scientists the difference is obvious between *bona fide* scientific research programs and those directed toward oil exploitation. Perhaps an analogy may help. A careful student of society may decide as he travels through the countryside that the girls in one village seem somewhat more gentle and perhaps more likely to have larger dowries than those from other villages. Although such information may be of interest to his bachelor acquaintances back home, it would be a highly imprudent young man who rushed off to the town and attempted to marry the first girl he saw. A more careful and systematic investigation of the situation is required if one wishes to insure a wife who is both pleasant and rich. It has been my observation that oil companies are never impetuous. Their investigations are careful and systematic. The observant parents should have no difficulty in distinguishing the omnivorous student from the serious suitor.

(2) *Manganese nodules*.—Manganese nodules on the deep ocean floor have been known for more than a century. Typically, manganese is about 20 percent by weight, and copper, nickel, and cobalt are 1.0 to 1.5 percent each. Although widespread in the ocean, manganese nodules are generally found at great depth and distance from shore.

The details of the processes by which manganese nodules are formed are still unclear, but we do know several of the necessary requirements for their forma-

tion. Since the manganese nodules form very slowly, nodules of any appreciable quantity can occur only where other sedimentation processes are very slow. A major source of sediment in the open ocean is the steady rain of shells from the surface waters. At shallow depths these shells are an important part of the ocean sediment. However, deeper than about 5 km. the calcium carbonate shells dissolve. A second major source of ocean sediment is the material brought to the ocean from the rivers on land. In general, the farther seaward one goes, the smaller the contribution to the deep ocean sediment of this land based material. Manganese nodules are most abundant on the Pacific Ocean floor because of its great depth and because of its perimeter of ocean trenches which trap much of the sediment flowing from the land down the continental margins.

Scientists are interested in a number of sedimentation problems on the ocean floor including a study of the processes by which manganese nodules are formed and the reasons for their distribution and observed mineral content. Data resulting from scientific investigation can suggest geographical areas that warrant further investigation, but the goals and objectives of scientific research do not justify the detailed surveys needed by the mining companies. As with oil, no mining company would make the necessary investment in developing a given area without first making its own very detailed survey of the ocean floor and assay of its mineral content.

(3) *Fisheries*.—Generally, the discovery and utilization of fisheries resources have proceeded quite independently of oceanographic science. Studies of coastal upwelling and biological productivity have suggested where fish stocks might be found. However, the development of a commercial fishery depends upon factors such as the size of the fish population, the ease with which they can be caught, and whether there is a ready market for the product. Experimental fishing, using commercial gear and techniques, is required to answer these questions. Such fishing is not scientific research.

Oceanographic research can be important in developing wise management practices for a commercial fishery. To date our contributions to management have been based almost entirely on studying the life history of important commercial species and on the statistical properties of fish populations.

As the world catch of fish increases and approaches the maximum sustainable yield the development of wise management becomes increasingly difficult. It is essential that scientists learn enough about the complex ecological interactions that they may contribute more meaningfully to the development of management practices.

A current trend in biological oceanography is to regard fish populations as having a potentially large impact on the nature of the environment in which they reside. For example, the anchoveta populations along the north coast of Peru are thought to condition the southward flowing water of the coastal undercurrent through their grazing and excretion activities in a manner highly beneficial to the microscopic plants that form the base of the marine food chain. Over the next decade, biological oceanographers can be expected to make total ecosystem investigations in coastal waters in which the fish populations are examined for a variety of functional roles in the ecosystem. In these total ecosystem studies the behavior of fish in response to perturbations of the system will undoubtedly receive considerable attention.

The results from these ecosystem studies are unlikely to direct fishermen to new stocks or to improve their techniques for harvesting them. However, the information developed in total ecosystems studies carried out in coastal waters is expected to be helpful in predicting the effects of various harvesting strategies on the major components of the ecosystem. In addition, the ability to predict the movement and effects of trace metal and man-made organic pollutants through ecosystems with important fisheries will be useful in applying controls necessary to avoid the destruction of the economic value of coastal fishery resources.

#### V. *Global tectonics*

To most scientists, the most exciting field of oceanography of the past decade has little or nothing to do with resource development and management, pollution, environmental forecasting or any of the other branches of oceanography that contribute to the benefit of mankind. But science also makes an important contribution to the human spirit by developing knowledge about the earth and the universe and man's place within it. In this context oceanography has played an important role in recent years by developing what appears to be irrefutable evidence for an old idea—continental drift. We now believe the earth's surface

to be made up of several rigid crustal plates, 50–100 km in thickness, which are essentially floating on the surface of our semi-molten earth. The plates are in motion with respect to each other, sometimes by as much as a few centimeters a year. Where they diverge, molten material moves up from the interior of the earth and cools to form new crust. Where they converge there is either mountain building or a situation in which one crustal plate slides under another plate giving rise to a deep sea trench. Where the plates move past each other they leave fracture zones or scars in the ocean bottom. The direction of these fracture zones can be used to infer the motion of the crustal plates. The boundaries of these plates do not necessarily coincide with the ocean-continent margin. The Pacific margins are plate boundaries; the Atlantic margins are not plate margins for the most part.

The primary basis for these ideas comes from studying the magnetic properties of rocks. As new crust is generated at the crests of mid-ocean ridges and as it moves laterally away from the ridges to make room for extrusion of newer crust, the direction of the earth's magnetic field is recorded in the cooling rocks. Measurements of the earth's magnetic field over the ridges and adjacent areas reveal patterns of variations which are associated with the reversals in the direction of the earth's field which have occurred periodically through geologic time. In effect, then, by measuring the earth's magnetic field one has the possibility of dating the time of crustal formation. These dates are the key to the knowledge of the history of the oceans.

In the Atlantic Ocean strips of various ages have been determined on either side of the Mid-Atlantic Ridge which runs down the center of the Atlantic Ocean. Strips of the same age were once together at the time of their generation at the ridge crest. Therefore, one can deduce the amount and direction of motion between the two sides of the ridge crest since that time, and derive the direction and speed of the drift of North America with respect to Europe and Asia since the opening of the Atlantic. In a similar way the details of the motion between South America and Africa can be deduced. One can go a step further and from the two sets of motion deduce the motion between Europe and Africa. Thus, studies of the magnetic field in the Atlantic Ocean can shed light on problems in land geology, such as the formation of the Alps.

Global tectonics is an exciting example of pure science which presently has no useful benefits to mankind as these benefits are usually defined. However, if a similar presentation were to be made 30 years from now I might not be able to use global tectonics as my example of pure science with no immediately foreseeable benefits. There are those who believe that this type of investigation will provide the basis by which we may someday predict earthquakes, and possibly control them. Perhaps an even more likely possibility is that global tectonics may provide us with a better understanding of the processes leading to the formation and location of important economic minerals.

#### VI. *International character of oceanography*

Attempts to describe the ocean and explain that which was observed can be found in the writings of nearly all the early explorers who sailed the oceans. However, if one defines oceanography as the systematic study of the global ocean, its boundaries, and the life within the ocean, the science is scarcely more than a hundred years old. Although nearly all fields of science are international the study of the oceans is particularly suited to programs of international cooperation. The scale of many ocean science problems are too large to be studied effectively by one laboratory or even by one nation. The International Council for the Exploration of the Sea was established in 1902. A year later an international committee began work toward preparation of charts of ocean depths based on soundings made by ships of different nations. The successors of these original *Carte generale bathymetrique des oceans* are still published through the International Hydrographic Organization in Monaco.

At the start of this century all of the oceanographic ships and most of the men were from the major maritime nations. It is still true today that the principal participants are countries such as the United States, Soviet Union, Japan, United Kingdom, Germany (both the Federal and Democratic Republics), Canada, Australia, France and the Scandinavian countries. But the number of developing countries with significant marine research programs is increasing steadily.

International cooperation is of several kinds. One of the most common, and frequently overlooked, is the participation of foreign scientists aboard research ships. The academic community of scientists in the U.S., of which I am a mem-

ber, recently completed an informal survey which showed that in 1971 some 259 scientists representing 46 countries participated in 94 research cruises which varied in length from about a week to several months.

A second such activity is the various international cooperative programs of oceanic research developed through the IOC. A number of developing countries participate in these programs. For example, although most of the research in the Cooperative Study of the Kuroshio and Adjacent Regions (CSK) is by the USSR and Japan, a recent CSK Newsletter reports receipt of data from South Korea, Malaysia, Singapore and Hong Kong. An earlier study, the International Cooperative Investigation of the Tropical Atlantic (ICITA) involved research vessels from Argentina, Brazil, Republic of Congo (Brazzaville), Nigeria, Republic of Ivory Coast and Spain, Ecuador, Peru and Chile made important contributions to the EASTROPAC investigation. Participants in the current Cooperative Investigation for the Caribbean and Adjacent Regions (CICAR) include Mexico, Cuba, Colombia and Venezuela. As a contribution to the Cooperative Investigation of the Northeast Central Atlantic (CINECA) scientists from Morocco are collating sea surface temperatures and providing surface temperature charts at two week intervals.

One of the most comprehensive international cooperative programs in recent years was the International Indian Ocean Expedition of 1962-1963. According to records, 36 ships from 13 nations contributed to this effort. The chart in the attached annex was published at the start of the program showing the proposed tracks of the participating ships. Under IOC sponsorship, the U.S. volunteered to develop an atlas of the physical and chemical properties of the Indian Ocean. This atlas has been recently published.

A third measure of international activity concerns data exchange. As a consequence of the International Geophysical Year in 1958 two World Data Centers in oceanography were established, one in Washington, D.C. (World Data Center A) and the other in Moscow (World Data Center B) financed by the U.S. and USSR respectively and operated under the guidance of the International Council of Scientific Unions and the Intergovernmental Oceanographic Commission. Oceanographic data contributed to World Data Centers become automatically available to scientific investigators or organizations in any country. Data is provided at cost of reproduction, but no charge is usually made to an individual or organization that has contributed data or publications to the Center. Often the exchange occurs through National Oceanographic Data Centers. At present 31 nations have formally established National Oceanographic Data Centers or Designated National Agencies.

The primary holdings of World Data Centers are temperature, salinity and other auxiliary information from oceanographic serial stations. The growth of these holdings is shown in the attached annex. Table 6 is from a recent publication from World Data Center A. It shows the countries which have contributed oceanographic station data to WDC-A since the Center was established. These World Data Centers are more than places where data are stored. There is a continuing demand for these data from many individuals and groups from many countries. Table 15 from the same publication shows the nations and organizations to which the WDC-A supplied data, publications or information during 1971.

In summary, oceanography has always been characterized by a high degree of international cooperation. The number of countries participating in oceanographic research has grown rapidly in the last dozen years. This trend can be expected to continue.

#### *VII. Special characteristics of ocean science*

Ocean science is complex and expensive both in terms of manpower and equipment. Most research vessels have at least as many crew members to run the ship as there are scientists and technicians to do the work. The ocean is a harsh environment and most scientific equipment must be especially designed for these conditions. Equipment used on shipboard or on buoys can cost many times that of comparable equipment for use on land and in shoreside laboratories.

Partly because of the heavy costs of working at sea, ocean scientists are under intense pressure to make the most of their opportunities. Initial planning for a project can begin several years in advance. As the time of the work draws closer, the plan becomes more detailed. However, scientists are reluctant to commit themselves to a specific detailed program of work beforehand. During the investigation, the data are evaluated and the details of the program are changed

accordingly. Occasionally, the shipboard results are so different than expected that major changes in the program are generated on the spot. In a field as expensive as oceanography, not to take advantage of every opportunity to learn more about the ocean would appear to be grossly inefficient.

In this respect ocean science is different from such activities as hydrographic surveying. The objective of an ocean survey is to systematically describe the environment. The objective of ocean science is to understand the environment. A certain amount of survey work is a by-product of most ocean science programs. Similarly the results of ocean surveys are an important ingredient in understanding the ocean. However, the rationales are different. Where a survey program would be faulted if it failed to follow the agreed-upon schedule of observations, a scientific investigation would be considered negligent if it failed to adjust its program to the opportunities at hand.

Although the techniques, disciplines and styles of the individual scientists and scientific organizations vary, scientists do not advocate secrecy. It is contrary to all they try to achieve. If this is truly the case, why are there problems sometimes about making data immediately available to all who wish it? Cost is only a small part of the problem, although admittedly some information is expensive to duplicate. From the scientist's view the matter is much more complex. A scientist's reputation is dependent upon his ability to collect and interpret information. He is reluctant to make public any information before he has had ample opportunity to examine it. More often than most of us care to admit, the data collected at sea are less than perfect. Some has to be discarded. Often whole programs have to be thrown out, or at least interpreted with considerable circumspection. Scientists and scientific organizations take considerable professional pride in the quality of data attached to their names. Amongst the community of scientists, it is well known that some individuals and some organizations are more careful than others. It takes longer to win a reputation for careful and meticulous work than to lose it.

A second part of the problem is interpretation. Although the careful handling of data is a necessary attribute of being a good scientist, it is not sufficient. A scientist's reputation is built upon his ability to synthesize and interpret information. Having spent many months planning and executing a program at sea, he is reluctant to make the data available to everyone before he has had sufficient opportunity to study it and reflect upon its meaning. Furthermore, most scientists are hesitant to set an arbitrary time on this period of interpretation. It can be as short as a few weeks or months. Sometimes it is years. In the latter case, it is usually because additional information (perhaps another field program) is required to complete the analysis. For both of these reasons most scientists are reluctant to release data which they have not screened for reliability and have completely analyzed for interpretation. However, these data do show up in the World Data Centers, albeit sometimes slowly.

Furthermore, scientists are prepared to make special arrangements for special circumstances. I do not know of any scientific group who would not be willing to make their raw data available immediately to groups such as the government geological or fisheries agencies in whose jurisdiction the work was done, if they could be given reasonable assurance that the data would be handled with discretion and not made public until such time as the scientists who gathered the information in the first place had had an opportunity to analyze it and vouch for its authenticity.

#### VIII. Summary

As man's use of the ocean increases, ocean science becomes more important, not less so. The marine environment is complex. It is also productive. We cannot expect to develop an adequate system of worldwide environmental forecasting or a capability of monitoring or controlling the growing pollution of our global environment without greatly expanded scientific investigations of ocean processes. Wise management of the oceans and efficient development of marine resources will require vastly greater knowledge than exists today. Continued and intensified scientific research is thus essential to optimize the development of the oceans for the benefit of all mankind.

Oceanography has always been an international science. International cooperation is increasing as is the number of nations with active programs in marine science. The world community of marine scientists, of which I am a member, can only hope that as a result of these deliberations on the law of the sea, *bona fide*, open scientific research will be facilitated and not hindered.

STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE II, AUGUST 3, 1972

The United States Delegation has earlier sought in Subcommittee II, as well as in the informal consultation group on the List of Subjects and Issues, to make clear how we view the questions raised by the List of Issues. We want to take this occasion to make clear to the full body of Subcommittee II the character of our views and the reasons for the strength with which we hold them.

We do so because we feel that the approach that some Delegations are taking with regard to the List is preventing a just and generally acceptable solution to this matter and, in our view, threatens the very core of the process of multi-lateral international lawmaking through the United Nations in which we are engaged.

I myself, Mr. Chairman, have been one of those in my country who has most actively sought to convince skeptics, both in our Congress and in the public at large, that through a United Nations Law of the Sea Conference, we have reasonable prospects of achieving, and in the interests of mankind must achieve, a generally acceptable and equitable comprehensive Law of the Sea Treaty. You will remember, Mr. Chairman, that we were one of the co-sponsors of the 1970 United Nations General Assembly Resolution calling for a Comprehensive Conference in 1973.

However, the voices of those who question, in view of the progress we have made to date, the desirability of a Law of the Sea Conference in 1973 are increasing both in number and magnitude. This does not disturb me unduly providing we promptly terminate the discussion of procedure in Subcommittee II and turn to substance as we are doing today. I have long been of the personal view that once governments took some of the hard political decisions required to reach a consensus, many of the technical details would fall into place quite rapidly. It is after all only in the realm of the seabeds regime that a large number of completely new treaty articles are called for. Fortunately it is in this area that we are making the best technical progress. With respect to other subjects—the territorial sea, straits and fisheries, for example—once the critical policy decisions have been taken, the relevant treaty articles need not be extensive nor their drafting very complex.

There is, however, Mr. Chairman, another kind of criticisms of the proceedings of this Committee which is much more serious—the charge of unfairness and of a double standard which would deny a number of states the opportunity at the Law of the Sea Conference to present their proposals and views on the same basis as other states and to negotiate for a reasonable and equitable accommodation that has some prospect of becoming a consensus.

The principal basis for this criticism is the procedure being followed in the protracted disagreement over the List of Subjects and Issues. Essentially, what is involved is a negotiating tactic in which a large group of countries arrive at a common position on an issue after extensive negotiations and discussions among themselves from which non-members of the group have been excluded. It is understood that the group will make no changes in their common positions so long as any members of the group, however few, object. The veto within the group effectively restricts exploration by the group as a whole of many areas of potential agreement with states outside the group and reduces the possibility of achieving constructive and generally satisfactory compromise. This negotiating tactic may have short-term political advantages for members of the group as, for example, in achieving a majority on a UN Resolution having strictly recommendatory effect. However, in international lawmaking this approach would be self-defeating for all states, not the least for members of the group itself.

As a practicing lawyer from private life only recently arrived in the world of diplomacy, I would like also to make a very personal observation: as deeply as I am convinced that a general comprehensive treaty modernizing the laws of the sea is the only solution that will prevent the unilateral partition of the oceans and avoid an escalation of international conflicts in the oceans, I can see no prospects of a favorable outcome if the negotiating tactics followed with respect to the list are carried over into our consideration of substantive law of the sea issues.

Now, Mr. Chairman, I would like to turn from the general considerations which explain my concerns to the specific question of the List of Subjects and Issues.

It must be stressed that General Assembly Resolution 2750, the "Conference Resolution", instructs the Seabed Committee to prepare "A Comprehensive List of Subjects and Issues Relating to the Law of the Sea." These terms of reference set down by the General Assembly bind this Committee. But formal and procedural considerations aside, the General Assembly's instruction recognizes, and wisely so, that the Law of the Sea Conference must have a meaningful and fair agenda. The Conference will be able to produce a modern, progressive and mutually satisfactory treaty or treaties capable of general acceptance throughout the community of nations if, and only if, each member state participating in the Conference has been afforded a full and equal chance to present its views and to seek support for the positions and treaty texts that it believes best serve the common interest. The function of the "Comprehensive List of Subjects and Issues"—which may become the agenda for the Conference—is, after all, to make possible and facilitate a fair and full discussion at the Conference.

It is in this open spirit that the United States has approached questions raised by the List of Issues. I have already pointed out in the informal consultations, by way of example, that, while the United States does not share the views of the Delegation of Peru, with regard to plurality of regimes in the territorial sea, we have no objection to including in item 2 a specific reference to the plurality concept. The United States and Peru are on opposite sides of the fence on this issue, but we do not in any way seek to prejudice this ability of the Delegation of Peru to present and discuss the concept of plurality of regimes. In the same manner on other issue, I recall, Mr. Chairman, that the Delegation of Mexico has made a similar comment on this aspect of the matter.

Mr. Chairman, we and other Delegations have proposed a number of amendments to the list of items introduced by the 56 powers. In some instances through mutual goodwill and flexibility there has been agreement on a generally acceptable item. However, in some instances we have come to understand that, drafting questions aside, the group of 56 wish to maintain their items as they have formulated them, and they have in this context referred to the integrity of these formulations. We do not quarrel with this point of view. But we ask that the same rights be extended to us. For example, if, as is the case, we consider that the 56-power formulation of item 4 covering straits does not adequately cover such concepts as free transit, we ask to be allowed to include our own item in the "Comprehensive List of Subjects and Issues." In view of the fact that a significant group of countries support the free transit concept, free transit must surely be regarded as an "issue", even though some Delegations may strongly disagree with the substance of our proposals.

During the July 31 meeting of the full Committee, we listened with attention to the wise words of our Chairman, Ambassador Amerasinghe, when he said that any Delegation that wishes a particular item included in the List of Issues should have an opportunity to do so. We think that his approach alone maintains every country's positions. We think that this is the only approach that meets the requirements of the General Assembly's "Conference Resolution".

More than that, Mr. Chairman, this approach can alone maintain the credit of the United Nations Conference on the Law of the Seas in the eyes of the world, for if one country or a number of countries believe that they will not be permitted at the Conference to advance national positions on a basis of equality with other Delegations then the Conference could accomplish nothing. We know full well that not every participant in the Conference is going to obtain the Agreement of the Conference to every one of its positions. We are willing to let the Conference participants decide in a fair and democratic way after hearing Delegations present the substantive merits of their proposals what should be the contents. We are not ready to acquiesce in a List of Issues that we consider denies us an opportunity to present our position on a basis of equality with others.

Mr. Chairman, I want to appeal to the fundamental sense of fairness of all Delegations. We ask only for treatment equal to that accorded to every other nation in presenting our position. We have sought to work for equal treatment for other Delegations, as we ask the courtesy of other Delegations in extending equal treatment to us.

Thank you Mr. Chairman.

U.S. MISSION,  
U.S. INFORMATION SERVICE,  
Geneva.

STATEMENT BY DONALD L. MCKERNAN, ALTERNATE U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE II, AUGUST 4, 1972

MR. CHAIRMAN: You will recall that in our March 29 presentation to this Subcommittee, I indicated a willingness on the part of my Delegation to consider several modifications to our original draft fisheries article. We have today submitted a revised fishery article which incorporates these modifications as another step in seeking a widely agreeable solution to the fisheries problems confronting the Subcommittee.

Our views on this vital and perhaps pivotal element of the negotiations before us have changed since we introduced our original draft one year ago. This change occurred as we listened to the statements of other representatives in this forum, participated in many frank consultations with other delegations, and diligently tried to accommodate our fisheries interests and those of other interested States.

We remain committed to the concept that both sound conservation and rational utilization must be linked directly to the biology and distribution of the living marine resources involved. Hence, our revised proposal not only continues to recognize, but indeed reemphasizes, the "species approach."

Our draft article of August 1971 relied heavily on international and regional organizations to implement the fishery regime we proposed. We continue to believe that such organizations will have a vital role in the future and our new article recognizes this role in both the conservation and utilization aspects of fisheries.

We have, however, also been persuaded by the compelling arguments, expressed so often in this Subcommittee, that the coastal state should have the right to regulate the fish stocks inhabiting the coastal waters off its shores as well as its anadromous resources. We also believe that inherent in this right of the coastal state would be a strong preference to the utilization of such stocks. Those are the particular resources upon which its coastal fishermen must rely for their livelihood and upon which its people rely for a substantial part of their nutritional requirements. Accordingly, our revised article would grant to the coastal state the authority necessary to regulate such stocks, to the limits of their range, as well as a right to reserve to itself all of the available catch its vessels are capable of harvesting. To assure that such authority is not misused, we further propose that the coastal state should have the obligation to notify, and consult with, other affected states prior to implementing any new regulatory measures.

With an ever increasing reliance on the sea to satisfy the world-wide demand for protein, a basic objective of any regime agreed upon in this forum must be to assure that all fish stocks are available for man's use. Therefore, a fundamental principle of our article is that of maximum utilization in which that portion of any stock which is not being utilized by local fishermen must be available to others. This provision will in no way prejudice the fishing interests of the coastal state, for it may reserve to its own use all of that particular resource it can catch; it simply insures that the living riches of the oceans will not be wasted.

The coastal State preference, though of highest priority, should be applied in a manner that takes account of the traditional fisheries of other nations and tries to minimize the immediate economic effect on them. In this regard, we have suggested that the particular formula for allocating the allowable catch between coastal state and traditional distant water fisheries should be negotiated within this Subcommittee.

When neighboring states, including those that are land-locked or otherwise limited in their access to living marine resources, find it to their mutual benefit to enter into reciprocal regional arrangements in order to more equitably share in the harvest of coastal resources inhabiting the waters near their shores, we believe that they should have the right to do so. We have, therefore, proposed that there could be an allocation from that portion of state and traditional fisheries, pursuant to such regional arrangements.

We remain firmly convinced that the highly migratory and truly oceanic species can only be properly regulated through international organizations because of their ocean-wide distribution and vast migrations, the temporary nature of their presence in the waters off any single state, and the well demonstrated economic fact that a viable fishery for such species must also be far ranging.

Our draft also recognizes the concern of many states that any fishery regime adopted must provide realistic enforcement procedures to assure that regulatory measures are complied with. In this regard, we propose, for those fisheries under

coastal state jurisdiction, not only coastal state inspection and arrest, but trial and punishment of the defending vessel as well, if the flag state has not established procedures of its own requiring compliance with legitimate coastal state regulations. Our draft also incorporates enforcement procedures and regulatory provisions that would strengthen the effectiveness of international organizations.

We remain firm in our belief that any fishery regime should contain provisions for the peaceful settlement of disputes. Our article contains such a standard. On the other hand, this provision should not present an obstacle to the timely application of conservation measures—hence, we have also suggested that the conservation regulations promulgated by a coastal state should remain in force pending the outcome of any dispute settlement procedure.

Finally, Mr. Chairman, we recognize that the rational management of fisheries requires money and technical expertise. We have provided for a reasonable fee, to be charged those States which harvest a resource under regulation by a coastal State, to help defray those costs, and for a register of experts who would be available to assist the coastal State in formulating effective conservation programs.

In closing, Mr. Chairman, I respectfully urge all delegations to study our proposal carefully, for we believe that it is a reasonable approach which accommodates the desires and needs of most States. My delegation is anxious to discuss the content of this draft and to that end we propose once more that a working group on fisheries be established immediately by this Subcommittee.

Thank you, Mr. Chairman.

AUGUST 4, 1972.

#### U.S. REVISED DRAFT FISHERIES ARTICLE

##### REGULATORY AUTHORITY

I. Authority to regulate the living resources of the high seas shall be determined by their biological characteristics and such shall be exercised so as to assure their conservation, maximum utilization and equitable allocation.

##### *II. Coastal and anadromous living resources*

The coastal state shall regulate and have preferential rights to all coastal living resources off its coast beyond the territorial sea to the limits of their migratory range. The coastal state in whose fresh or estuarine waters anadromous resources (e. g., salmon) spawn shall have authority to regulate and have preferential rights to such resources beyond the territorial sea through out their migratory range on the high seas (without regard to whether or not they are off the coast of said state).

A. The term "coastal resource" refers to all living resources off the coast of a coastal state except the highly migratory species listed in Annex A,<sup>1</sup> and anadromous resources.

B. The coastal state may annually reserve to its flag vessels, in accordance with this article, that portion of such coastal and anadromous resource as they can harvest.

C. Such coastal and anadromous resources which are located in or migrate through waters adjacent to more than one coastal state shall be regulated by agreement among such states.

##### *III. Highly migratory oceanic resources*

The highly migratory oceanic resources listed in Annex A shall be regulated by appropriate international fishery organizations.

A. Any coastal state party, or other state party whose flag vessels harvest or intend to harvest a regulated resource, shall have an equal right to participate in such organizations.

B. No state party whose flag vessels harvest a regulated resource may refuse to cooperate with such organizations. Regulations of such organizations in accordance with this Article shall apply to all vessels fishing the regulated resources regardless of their nationality.

C. In the event the states concerned are unable or deem it unnecessary to establish an international organization the resources shall be regulated by agreement or consultation among such states.

<sup>1</sup> Annex A not attached.

## CONSERVATION PRINCIPLES

IV. In order to assure the conservation of living marine resources, the coastal state or appropriate international organization shall apply the following principles:

A. Allowable catch and other conservation measures shall be established which are designed, on the basis of the best evidence available, to maintain or restore the maximum sustainable yield, taking into account relevant environmental and economic factors.

B. For this purpose scientific information, catch and effort statistics, and other relevant data shall be contributed and exchanged on a regular basis.

C. Conservation measures and their implementation shall not discriminate in form or fact against any fishermen. Conservation measures shall remain in force pending the settlement, in accordance with the relevant provisions of this Article, of any disagreement as to their validity.

## UTILIZATION AND ALLOCATION

V. In order to assure the maximum utilization and equitable allocation of coastal and anadromous resources, the coastal state shall apply the following principles:

A. The coastal state may reserve to its flag vessels that portion of the allowable annual catch they can harvest;

B. The coastal state shall provide access by other states, under reasonable conditions, to that portion of the resources not fully utilized by its vessels on the basis of the following priorities:

(1) states that have traditionally fished for a resource, subject to the conditions of sub-paragraph C;

(2) other states in the region, particularly landlocked states and other states with limited access to the resources, with whom joint or reciprocal arrangements have been made; and

(3) all states, without discrimination among them.

C. Whenever necessary to accommodate the allocations to the coastal states traditional fishing may be reduced, without discrimination among those states that have traditionally fished for a resource, in the following manner:

(Formula to be negotiated within Subcommittee II which takes into account the interests of traditional fishing states.)

States whose fishermen harvest a resource under regulation by a coastal state may be required, without discrimination, to pay reasonable fees to defray their share of the cost of such regulation.

## NOTIFICATION CONSULTATION

VI. The coastal state shall give to all affected states timely notice of any conservation, utilization and allocation regulations, prior to their implementation, and shall consult with other States concerned.

## TECHNICAL ASSISTANCE

VII. An international register of independent fisheries experts shall be established and maintained by the Food and Agriculture Organization of the United Nations.<sup>2</sup> Any developing state party to this convention requiring assistance may select an appropriate number of such experts to serve as a fishery management advisory group to that state.

## ENFORCEMENT

VIII. Actions under this paragraph shall be taken in such a manner as to minimize interference with fishing and other activities in the marine environment.

A. Coastal state—the coastal state may inspect and arrest vessels for fishing in violation of its regulations. The coastal state may try and punish vessels for fishing in violation of its regulations, provided that where the state of nationality of a vessel has established procedures for the trial and punishment of violations of coastal state fishing regulations adopted in accordance with this article, an

<sup>2</sup> The Subcommittee may wish, in accordance with paragraph 13 of General Assembly Resolution 2750 C (XXV), to invite the comments of the Director-General of the Food and Agriculture Organization of the United Nations on the ability of the Organization to assume such responsibilities.

arrested vessel shall be delivered promptly to duly authorized officials of the state of nationality for trial and punishment, who shall notify the coastal state of the disposition of the case within six months.

B. International fisheries organization—Each state party to an international organization shall make it an offense for its flag vessels to violate the regulations adopted by such organization in accordance with this article. Officials authorized by the appropriate international organization, or of any State so authorized by the organization, may inspect and arrest vessels for violating the fishery regulations adopted by such organizations. An arrested vessel shall be promptly delivered to the duly authorized officials of the flag State. Only the flag State of the offending vessel shall have jurisdiction to try the case or impose any penalties regarding the violation of fishery regulations adopted by international organizations pursuant to this article. Such State has the responsibility of notifying the enforcing organization within a period of six months of the disposition of the case.

#### DISPUTES SETTLEMENT

IX. Any dispute which may arise between states under this article shall, at the request of any of the parties to the dispute, be submitted to a special commission of five members, unless the parties agree to seek a solution by another method of peaceful settlement, as provided for in Article 33 of the Charter of the United Nations. The commission shall proceed in accordance with the following provisions.

A. The members of the commission, one of whom shall be designated as chairman, shall be named by agreement between the states in dispute within two months of the request for settlement in accordance with the provisions of this article. Failing agreement they shall, upon request of any state party to the dispute, be named by the Secretary General of the United Nations, within a further two month period, in consultation with the states involved and with the President of the International Court of Justice and the Director-General of the Food and Agriculture Organization of the United Nations, from amongst well-qualified persons being nationals of states not involved in the dispute and specializing in legal, administrative or scientific questions relating to fisheries, depending upon the nature of the dispute to be settled. Any vacancy arising after the original appointment shall be filled in the same manner as provided for the initial selection.

B. Any state party to proceedings under these articles shall have the right to name one of the nationals to sit with the special commission, with the right to participate fully in the proceedings on the same footing as a member of the commission but without the right to vote or to take part in the writing of the commission's decision.

C. The commission shall determine its own procedure, assuring each party to the proceedings a full opportunity to be heard and to present its case. It shall also determine how the costs and expenses shall be divided between the parties to the dispute failing agreement by the parties on this matter.

D. Pending the final award by the special commission, measures in dispute relating to conservation shall be applied; the commission may decide whether and to what extent other measures shall be applied pending its final award.

E. The special commission shall render its decision, which shall be binding upon the parties, within a period of five months from the time it is appointed unless it decides, in the case of necessity to extend the time limit for a period not exceeding two months.

F. The special commission shall, in reaching its decision, adhere to this article and to any agreements between the disputing parties implementing this article.

#### OTHER USES

X. The exploitation of the living resources shall be conducted with reasonable regard for other activities in the marine environment.

#### EXISTING CONVENTIONS

XI. The provisions of this article may be applied to fishery conventions and other international fishery agreements already in force.

U.S. MISSION,  
U.S. INFORMATION SERVICE,  
*Geneva.*

STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, PLENARY, AUGUST 10, 1972

MR. CHAIRMAN: In recent weeks, both you and your colleagues on the Bureau have emphasized that this is a critical session for the United Nations Seabed Committee. We agree. Therefore, we believe it is appropriate to consider the future of these negotiations and, in that context, the future of the Law of the Sea. It is over two years since President Nixon said:

"The stark fact is that the law of the sea is inadequate to meet the needs of modern technology and the concerns of the international community. If it is not modernized multilaterally, unilateral action and international conflict are inevitable."

Mr. Chairman, if we are to find negotiated, international solutions to the law of the sea, we must do two things promptly.

First, we must all be prepared to accommodate each other's interests and needs. We are preparing a comprehensive law-making treaty to govern not only the conduct of sovereign States and private persons in the ocean, but also the natural resources of an area comprising two-thirds of the earth's surface. Its effectiveness will depend in large measure on the extent to which it represents a consensus of all, rather than a group of States. To achieve this, we must identify those national interests that are of fundamental importance to each of us, and avoid time-consuming and potentially divisive debate on less important matters.

Second, we must achieve agreement before events overtake our ability to do so. I cannot stress too strongly that none of us can or should stop technology and its use. If we act wisely and in a timely manner, we can ensure by agreement that the technology will be used in a manner that provides maximum benefit for all mankind.

Our efforts here, Mr. Chairman, are known to many people in my own country and in many others represented here today. The people who use the seas, and the people whose livelihoods either now or in the future depend on the sea, are watching us. In the United States there is a growing uneasiness about our work. Most Americans concerned with the sea are dedicated to multilateral solutions to problems which have international ramifications, but they are becoming increasingly skeptical about the chances for success. Other delegations here may perceive similar development taking place in their own countries. We must not allow confidence to be shaken in our ability to negotiate timely solutions to the problems we face.

Against this background, I would like to comment on some aspects of the substance of these negotiations.

Ocean uses can be divided into two broad categories: resource uses and non-resource uses. The first group principally concerns fishing and seabed resources. The non-resource uses include such important interests as navigation and overflight, scientific research and the preservation of the ocean environment.

The view of my delegation on non-resource uses have been clearly stated on a number of occasions. It is our candid assessment that there is no possibility for agreement on a breadth of the territorial sea other than 12 nautical miles. The United States and others have also made it clear that their vital interests require that agreement on a 12-mile territorial sea be coupled with agreement on free transit of straits used for international navigation and these remain basic elements of our national policy which we will not sacrifice. We have, however, made clear that we are prepared to accommodate coastal State concerns regarding pollution and navigation safety in straits and have made proposals to that effect in Subcommittee II.

The views of my delegation on resource issues have also been stated on a number of occasions. Unfortunately, some delegations appear to have the impression that maritime countries in general, and the United States in particular, can be expected to sacrifice in these negotiations basic elements of their national policy on resource. This is not true. The reality is that every nation represented here has basic interests in both resource and non-resource uses that require accommodation.

Accordingly, we believe it is important to dispel any possible misconceptions that my government would agree to a monopoly by an international operating agency over deep seabed exploitation or to any type of economic zones that does not accommodate basic United States interests with respect to resources as well as navigation. I would like to amplify this point with a few remarks on some of these basic elements.

*Coastal resources generally*

Mr. Chairman, in order to achieve agreement, we are prepared to agree to broad coastal State economic jurisdiction in adjacent waters and seabed areas beyond the territorial sea as part of an overall law of the sea settlement. However, the jurisdiction of the coastal State to manage the resources in these areas must be tempered by international standards which will offer reasonable prospects that the interests of other States and the international community will be protected. It is essential that coastal State jurisdiction over fisheries and over the mineral resources of the continental margins be subject to international standards and compulsory settlement of disputes.

*Seabed resources—coastal areas*

We can accept virtually complete coastal State resource management jurisdiction over resources in adjacent seabed areas if this jurisdiction is subject to international treaty limitations in five respects:

1. *International treaty standards to prevent unreasonable interference with other uses of the ocean.*—A settlement based on combining coastal State resource management jurisdiction with protection of non-resource uses can duly be effective if the different uses are accommodated. This requires internationally agreed standards pursuant to which the coastal State will ensure, subject to compulsory dispute settlement, that there is no unreasonable interference with navigation overflight and other uses.

2. *International treaty standards to protect the ocean from pollution.*—As a coastal State, we do not wish to suffer pollution of the oceans from seabed activities anywhere. We consider it basic that minimum internationally agreed pollution standards apply even to areas in which the coastal State enjoys resource jurisdiction.

3. *International treaty standards to protect the integrity of investment.*—When a coastal State permits foreign nationals to make investments in areas under its resource management jurisdiction, the integrity of such investments should be protected by the treaty. Security of tenure and a stable investment climate should attract foreign investment and technology to areas managed by developing coastal States. Without such protection in the treaty, investment may well go elsewhere.

4. *Sharing of revenues for international community purposes.*—We continue to believe that the equitable distribution of benefits from the seabeds can best be assured if treaty standards provide for sharing some of the revenues from continental margin minerals with the international community, particularly for the benefit of developing countries. Coastal States in a particular region should not bear the entire burden of assuring equitable treatment for the landlocked and shelf-locked States in that region, nor should they bear the entire burden for States with narrow shelves and little petroleum potential off their coast. The problem is international and the best solution would be international. We repeat this offer as part of an overall settlement despite our conclusion from previous exploitation patterns that a significant portion of the total international revenues will come from the continental margin off the United States in early years. We are concerned about the opposition to this idea implicit in the position of those advocating an exclusive economic zone.

5. *Compulsory settlement of disputes.*—International standards such as those I described are necessary to protect certain noncoastal and international interests, and thus render agreement possible. Accordingly, effective assurances that the standards will be observed is a key element in achieving agreement. Adequate assurance can only be provided by an impartial procedure for the settlement of disputes. These disputes, in the view of my delegation, must be settled ultimately by the decision of a third party. For us then the principle of compulsory dispute settlement is essential.

*Seabed resources—Deep seabeds*

In many respects, the deep seabeds present the newest and most exciting aspects of our work. Although we cannot agree that international law prohibits the exploitation of deep seabed resources in accordance with high seas principles, we fully share the desire to establish an equitable, internationally agreed, regime for the area and its resources as the common heritage of mankind. The sooner we do so, the earlier we will terminate essentially divisive and counter-productive disputes over the present legal status of deep seabed exploitation as well as over the position taken by some delegations, with which we have consistently disagreed, that common heritage means the common property of mankind.

Our interest in the prompt establishment and effectiveness of an equitable international regime for the seabed is demonstrated both by the comprehensive draft treaty we presented two years ago and by President Nixon's statement that any prior exploitation of the deep seabed area must be "subject to the international regime to be established."

The basic interests we seek to protect in an international seabed regime are reflected in the five points to which I referred earlier, coupled with our proposal for international machinery to authorize and regulate exploration and use of the resources of the area. An effective and equitable regime must protect not only the interests of the developing countries but also those of the developed countries by establishing reasonable and secure investment conditions for their nationals who will invest their capital and technology in the deep seabeds. In order to provide the necessary protections for all nations with important interests in the area, it is also necessary to establish a system of decision making which takes this into account and provides for compulsory settlement of disputes. We do not regard these objectives as inconsistent with the desire of other countries for equitable participation in deep seabed exploitation and its benefits.

Finally, Mr. Chairman, it is our view that the benefits to be derived from the operation of this new treaty should only be made available to those nations who are prepared to ratify or accede to it. Those benefits, as all of us in this room know, are manifold. New technology for mining in the seabeds is rapidly opening up new prospects for important mineral supplies. As development proceeds, vast new ideas will emerge as man begins the serious exploration of the ocean and its resources. Mining in the oceans will generate revenues as well. All these benefits, Mr. Chairman, should be shared. We are capable in this Committee of making the decisions which will enable these benefits to be realized, but we must get about the business of making these decisions promptly or we will be precluded from doing so.

#### *Fisheries*

With respect to fisheries, our basic interest is to assure rational use and conservation of all fish stocks. To achieve this, we believe coastal States should have substantial jurisdiction over all fisheries, including anadromous species, except where the migratory habits of certain fish stocks dictate another system—for example, the highly migratory tuna should be managed pursuant to multilateral arrangements. In coastal areas jurisdiction should be limited by such international standards as would assure conservation and full utilization of the living resources.

It is widely understood that the United States shares the interests of many other coastal States. However, the fact that over 80% of our fisheries are off our own coast does not mean that we are prepared to abandon the remaining 20%—the distant-water segment of our industry. There are reasonable ways to accommodate the interests of both coastal and distant-water fishing States and to assure the kind of special cooperation between States in a region that many delegations have urged. We believe that a solution of the fisheries problem should take into account the migratory habits of fish and the manner in which they are fished. Thus, we can support broad coastal State jurisdiction over coastal and anadromous fisheries beyond the territorial sea subject to international standards designed to ensure conservation, maximum utilization and equitable allocation of fisheries, with compulsory dispute settlement, but with international regulation of highly migratory species such as tuna.

Our detailed proposals on this matter have been elaborated further in Subcommittee II. The proposals reflect our continuing belief that both sound conservation and rational utilization must take into account the biology and distribution of living marine resources. But they also respond to the expressed desire of coastal States for direct regulatory authority and preferential rights over coastal and anadromous fisheries. However, it is fundamental that fish stocks must be conserved, and that there must be a maximum utilization of stocks not fully utilized by local fishermen. Moreover, account should be taken of traditional fishing activities of other nations, as well as the desire of States to enter into special arrangements with their neighbors. We remain convinced that highly migratory oceanic species can only be properly regulated through international organizations. It is our hope that our new proposals will move the Committee closer to a solution to the complex fisheries problems involved.

#### *Conclusion*

Mr. Chairman, I would like to conclude my statement with some general comments. While my delegation must confess its disappointment in our progress

to date, we must also point out those areas where we believe important progress has been made.

Looked at from a broad perspective, we see various signs that make us cautiously optimistic. It is clear that the negotiating positions of various States are now substantially closer together than their juridical positions. This is particularly the case with respect to the width of the territorial sea and coastal State jurisdiction over resources beyond the territorial sea.

Mr. Chairman, I welcomed the interesting reports of the distinguished representatives of Venezuela and Kenya on the results of the Santo Domingo Conference of Caribbean States and the Yaounde Seminar of African countries. While applauding their contribution to the continuing development of a generally acceptable agreement, I should point out they do not fully take into account a number of the factors I have discussed earlier in this statement. I note in particular the absence of any reference to international standards and dispute settlement procedures applicable to coastal State resource jurisdiction and of any distinction in the treatment of living resources based on their migratory characteristics. However, these documents certainly provide a starting point for serious negotiations and, if harmonized with my own delegation's statement today, there might be a potential for merging together in a new treaty what are otherwise widely disparate positions. Perhaps then the very beginnings of an outline might emerge which could become the basis for a successful 1973 Conference. I hope so, Mr. Chairman.

Another source of hope is the work of Subcommittee I. We have given priority to the negotiation of the regime and we are beginning to see not only concrete results but an open and constructive negotiating atmosphere. The distinguished representative of the Cameroon, Chairman of the First Subcommittee, and your distinguished colleague from Sri Lanka, Chairman of the Working Group, have through their tireless efforts helped break new ground in this Committee which makes us believe that where there is political will, our negotiations will bear fruit.

This new political will, however, must infuse our work in the other subcommittees as well and it must occur now. The "list" must be disposed of and work begun on the drafting of articles. We are confident, Mr. Chairman, that once such work begins it will move rapidly and a successful conference will be within our grasp. But if we wait longer, Mr. Chairman, we wonder longer, Mr. Chairman, we wonder if a successful conference will ever be possible. Let us all begin to work now to avoid such a tragedy.

Finally in closing, Mr. Chairman, I want to express to you the sincere appreciation of my delegation for your wisdom, guidance and firm leadership through what we hope will be one of the most important and successful negotiations to have taken place in our times. We wish you continued success at this endeavor and will give you all our support.

Thank you, Mr. Chairman.

U.S. MISSION,  
U.S. INFORMATION SERVICE,  
Geneva.

STATEMENT BY HON. DONALD L. MCKERNAN, ALTERNATE U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE III, AUGUST 11, 1972

#### SCIENTIFIC RESEARCH

MR. CHAIRMAN: Previous statements to this Subcommittee by Professor John Knauss of the University of Rhode Island during this session and by other speakers in this and earlier sessions, emphasized the importance of marine science research in terms of the production of knowledge beneficial to all mankind. From these statements we have learned, *inter alia*, that the beneficial effects of marine science research reach throughout the globe, wherever man is affected by climate and weather and harmed by natural disasters; wherever damage is done to the marine environment by man or by the elements; or wherever man seeks better means toward effective and wise use and regulation of ocean peace and its resources.

The sea is a critical component of an eco-system that reaches every corner of the globe. It produces large quantities of living and non-living resources. Furthermore, it is an efficient and essential means of transportation and communication. Better understanding of the sea is, thus, of vital importance to every nation whether coastal or landlocked, developed or developing.

The United States considers that the quest for knowledge throughout the ocean is not only a necessity for all the important reasons stated above, but in the area beyond the territorial sea, it is also a right which should not be diminished or abridged by the restrictive actions of states, coastal or otherwise, except as recognized by international law. The United States believes that to facilitate the investigative process that makes possible the benefits outlined above, and others as well, it is in the common interests of everyone to accept rules that maintain maximum freedom to conduct scientific research in the ocean.

The great usefulness and productivity of the marine environment are matched, or exceeded, by its extreme complexity. An adequate system for monitoring or controlling the growing pollution of the global environment cannot be developed without greatly expanded understanding of the physical, chemical and biological processes that operate in the oceans. Full and wise development of marine resources and the preservation of the marine environment will require vastly greater knowledge and understanding of the ocean than we now possess. Only through combined and intensified scientific research will it be possible to optimize the development of the ocean for the benefit of all mankind.

The structure of the natural world transcends man-made boundaries, hence much of the scientific research in the ocean must necessarily involve investigation of phenomena that have no relation to these boundaries. Access to all parts of the sea is, thus, essential to achieve a better understanding of natural processes occurring therein. It is the United States view that international arrangement should maximize freedom of access for these investigations in order to facilitate the gaining of this understanding. Restrictions serve to impair the value of scientific investigation and to impede its contribution to the benefit of all mankind.

At the same time that the common interest in facilitating scientific research is protected through provisions for free access, there are corresponding common interests in protection of the interests of coastal states in adjacent ocean areas and in building and strengthening marine science skills and capabilities where these are lacking or deficient. With respect to the first of these, the interests of coastal states appear to be, primarily, those of assuring that investigations do not prejudice coastal state control over resource exploitation in areas in which the extractive resources are subject to its jurisdiction. The United States believes that this need can be accommodated to the satisfaction of all.

We would note that there is already general agreement on certain fundamental principles applicable to certain areas. It may be recalled that in the Declaration of Principles embodied in UNGA Resolution 2749 (XXV), applying to the seabed beyond national jurisdiction, paragraph 10 provides that states shall promote international cooperation in scientific research exclusively for peaceful purposes: (a) by participation in international programs and by encouraging cooperation in scientific research by personnel of different countries; (b) through effective publication of research programs and the dissemination of research results through international channels; and (c) by cooperation in measures to strengthen research capabilities of developing countries, including the participation of their nationals in research programs. The Resolution also states that no scientific research activity shall form the legal basis for any claims with respect to any part of the area or its resources. The United States has previously indicated that it wholeheartedly supports this principle, and we have stated our view that implicit in the obligation to promote international cooperation in scientific research is an undertaking on the part of states not to interfere with scientific research conducted with a view to open publication.

The principle of freedom of research is applicable in the waters beyond the territorial sea. While we understand that the Convention on the High Seas is variously interpreted by some states, we believe this principle is one of the freedoms of the sea recognized by international law. Obviously, it is to be exercised by all states with reasonable regard to the interests of other states in their exercise of the freedoms of the high seas. The United States believes this principle of freedom of scientific research continues to serve the interests of all states, developing as well as developed.

In order to assure that the interests of all states and peoples are adequately safeguarded, it is the United States view that the scope of the concept of research and the authority over research could usefully be clarified. The following discussion therefore introduces some concepts that are somewhat new on the international scene. The purpose of introducing these ideas is to provide a balanced protection of interests between all states and to set forth clearly a

position for scientific research that accommodates the interests of all groups as we understand these interests.

We would begin by distinguishing between open scientific research and commercial exploration. The criteria which characterize open research are that it is intended for the benefit of all mankind, involves open participation in planning and conduct of research programs, and also prompt availability and full publication of results. Such research should be conducted so as not to cause significant harm to the environment. Open research does not include the taking of resources in commercial quantities, nor does open research confer any rights for commercial exploration or exploitation of resources.

Without precisely defining commercial exploration at this time, we can say that it is characterized by restrictions on publication and on availability of data and samples and does not necessarily involve open participation in planning and conduct of the work. Commercial exploration should also be conducted so as not to cause significant harm to the environment.

Considering the various areas of jurisdiction, the most important ocean area to most coastal states is its territorial sea. The U.S. recognizes, as do all states, the right of the coastal state to prohibit or to permit open research within the territorial sea which the United States has proposed be limited to a maximum of 12 miles. We all can foresee situations, as have occurred in the past, wherein the coastal state might well see advantage in having open research undertaken in its territorial sea by a research vessel of another nation. And for the purpose of facilitating open research, my delegation would hope that the coastal state would permit such activities within its territorial sea in accordance with generally acceptable guidelines. What then should the guidelines be for the conduct of open research in this area? We would suggest that the state requesting permission to do open research within the territorial sea should apply the following guidelines: (1) give reasonable advance notice of a request to carry out research within the territorial sea, a period of 60 days normally being adequate; (2) provide an opportunity for the coastal state to participate or be represented in the research, and have access to all scientific equipment aboard the vessel; (3) assure that the coastal state will be furnished copies of all data on request, and have the right of access to study the samples not feasible to duplicate; (4) assure that significant research will be published in the open scientific literature; and (5) assure that these scientific activities will present no significant hazard to the resources or other uses of the territorial sea. Beyond the territorial sea there will be areas of limited national jurisdiction. The continental shelf is one of these. The 1958 Convention on the Continental Shelf contains language concerning scientific research which remains satisfactory if implemented in the spirit intended. For any other areas of limited jurisdiction or specialized competence, now existing, or which may be created, there should be minimal restrictions upon the conduct of research. Thus, if a coastal state exercises certain resource responsibilities delegated to it by international agreement, this committee might usefully consider whether or not another state wishing to undertake open research relating to such responsibilities should be required to meet some or all of the same criteria as those we have suggested for research in the territorial sea. It is to be presumed that research meeting any such criteria would be freely permitted.

It is clear that the conduct of commercial exploration in the territorial sea and in areas subject to limited national jurisdiction in most cases should be subject to the regulations of the coastal state.

In areas beyond limited national jurisdiction all research should continue to be conducted without interference. Deep sea drilling which may entail significant harm to the marine environment should be subject to reasonable international standards.

The United States delegation believes that the above concepts and principles fully protect the interests of all states both in facilitating marine science research and in assuring coastal states that their interests are being met. However, as important as it is to provide a legal framework promoting the common interests of all states in marine science research, the US delegation considers it essential also to emphasize the great value and need for international cooperation. As Professor Knauss stated in an earlier intervention, the conduct of scientific research at sea is characteristically an international enterprise in which the participation of the ships and nationals of many states is common. The furtherance of international cooperation calls for concerted action on a bilateral, regional and broad multilateral basis. In recent months one phase of scientific research at sea, namely that concerning marine pollution, has come into special

prominence and is of unusual interest to the Subcommittee because it deals with the other main subject of the Subcommittee's concern. Reflecting this prominence and emphasizing the need for cooperative action, the Stockholm Conference on the Human Environment recommended that governments collectively endorse the following general principle:

"Every state should cooperate with other states and with competent international organizations with a view to the development of marine environment research and survey programs and systems and means for monitoring changes, in the marine environment, including studies of the present state of the oceans, the trends of pollution effects and the exchange of data and scientific information of the marine environment. There should be similar cooperation in the exchange of technological information on means of preventing marine pollution including pollution that may arise from offshore resource exploration and exploitation."

My government endorses this principle.

Finally, Mr. Chairman, as regards the other main common interest of coastal states mentioned earlier, the enhancement of their marine science capabilities, I would like to make a few introductory remarks. I would hope that this Subcommittee might discuss this subject in more detail later. There have been numerous statements before this Committee that indicate the need and the desire of many developing states to build or to strengthen capabilities in marine science and technology. The United States shares this concern and believes that effective action should be taken on an urgent basis to cooperate with those states who are developing their expertise in marine science and their capability to use and develop marine resources. We would note in this connection that the IOC has been involved with this task for a long time, and that the General Assembly specifically requested the IOC to intensify its efforts in this field (Resolution 2467 (XXIII December 1968)). We recognize that the transfer of scientific skills and technology is not easy. Although the US and other nations have made significant contributions in the past, we are aware that these efforts have not been uniformly successful. The United States delegation hopes that interested delegations would suggest alternative principles and institutions that might be necessary or desirable to make substantial improvement in the efforts now underway in technical assistance in this field of marine science education and technology transfer. Concrete proposals for making progress in this endeavor are urgently needed. We solicit them and hope that by acting together we can identify steps that could be taken to move ahead in this matter.

In this connection the US wishes to indicate its willingness, in principle, to commit funds to support multilateral efforts in all appropriate international agencies with a view towards creating and enlarging the ability of developing states to interpret and use scientific data for their economic benefit and other purposes; to augment their expertise in the field of marine science research; and to have available scientific research equipment including the capability to maintain and use it. We emphasize that this commitment is in addition to efforts by the International Seabed Resource Authority when it gains the financial capacity to devote funds to the same purpose.

Mr. Chairman, the US believes that it is in the interest of everyone to encourage scientific research in the ocean, recognizing the right of the coastal state within its territorial sea to regulate the conduct of research and to apply reasonable conditions and controls on such research. We have suggested that it would be wise for the Committee to consider broad principles which might act as guidelines under which open research might be carried out within the territorial sea of coastal states.

In addition, in areas of limited coastal state jurisdiction, the US suggests that there be a minimum of interference with open research, but indicated that the Committee could usefully consider what criteria might apply to research carried out in these areas. In areas beyond limited national jurisdiction all scientific research should continue to be conducted without interference.

We believe that the principle of the transfer of skills and technology is an important one which must be emphasized in any convention articles dealing with research. The US is prepared to accept the challenge of transferring technology for ocean research from our country to other countries. We are prepared to commit new resources to this end. In this matter we see nations of the world, developed and developing, rich and poor, acquiring new capability for using the sea and its resources for the benefit of man.

STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, MAIN COMMITTEE, AUGUST 14, 1972

Mr. Chairman, this morning the distinguished representative of Kuwait has introduced a draft resolution similar to one brought before this Committee by his Delegation at its meeting last March (A/AC.138/L.11/Rev. 1). My Delegation regrets the revival of the divisive issues inherent in attempts to establish a Moratorium on deep seabed exploration.

The commitment of my Government at the highest levels to the timely establishment of an equitable internationally agreed regime for the seabeds is a matter of public record. We saw clearly for the first time this summer, in the work of Subcommittee I and its Working Group, a real possibility for achieving this. Now we fear some Delegations are contemplating a step backward.

Mr. Chairman, there is no possibility of agreement on a Moratorium.

Neither resolution 2749, nor any new Moratorium resolution, nor any unilateral claims or interpretations of coastal States, can deprive states of their rights under international law. We are willing to enter into a treaty that ensures that the exploitation of deep seabed resources will be for the benefit of mankind. We are willing to insure that activities in the interim will be subject to the international regime to be established.

The end result of attempts to establish a Moratorium here or in the General Assembly will be to inject a new level of divisiveness into our negotiations. This will not move us closer to achieving the mutual accommodation necessary to establish an agreed regime. It will not enhance the confidence of those whose interests are directly affected. The result in my own country, and perhaps others, could well be the opposite of what is intended by the sponsors. What makes this so tragic is that in fact we still could establish an internationally agreed regime before technology overtakes us, if we do not allow ourselves to become diverted by extraneous issues.

Mr. Chairman, the only way to truly protect the common heritage is to establish a regime in a timely fashion. If we work with all deliberate speed Mr. Chairman, I am certain we can agree on a regime before the actual commercial recovery of seabed minerals commences.

I appeal to all Delegations to spend the time and energy that will be wasted on this new Moratorium resolution by working for the earliest possible beginning of a successful Law of the Sea Conference, including intensive inter-Sessional substantive negotiations.

Thank you, Mr. Chairman.

STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE II, AUGUST 14, 1972

Mr. Chairman, on August 3 in this Subcommittee, the distinguished Representative of Tanzania made a statement reflecting his Government's position on the issue of transit through straits. I stated then that I would want to comment on some of the points which he had raised. In the meantime, this Subcommittee has also heard the views of the distinguished Representative of Spain on this same issue. I would like now, on behalf of my delegation, to respond to certain aspects of both those statements.

I will not repeat in detail the proposals which my delegation made on July 28 in this Subcommittee regarding straits but will only say that these proposals represent a good faith effort by the United States to try to accommodate some of the legitimate concerns of coastal States, and particularly straits States, in navigational safety. My delegation is pleased that a number of delegations have taken our proposals in this spirit and have indicated a willingness to consider them seriously.

Let me explain at the outset, Mr. Chairman, precisely what is and what is not encompassed in the United States draft article for a right of free transit through and over international straits.

The United States claims and recognizes a 3-mile territorial sea. Today, in those straits which are wider than six miles, U.S. flag ships and aircraft exercise high seas freedoms. For us, therefore, an extension of the territorial sea to 12 miles by treaty would change the status of some areas including parts of certain international straits and consequently foreclose our high seas rights in those

areas. The United States is prepared to accept such a result in these negotiations if the law of the sea treaty preserves with respect to international straits free transit for all ships and aircraft.

Mr. Chairman, the United States has previously described the right of free transit we have proposed as a limited right. To my Government, this means only the right for a ship or an aircraft to pass from one end of an international strait to the other. Stated differently, a ship or an aircraft exercising a free transit right could only enter a strait, pass through or over it on the most direct course, using normal navigational channels, established air corridors, or agreed traffic separation schemes, and exit the strait on the opposite side. A ship or aircraft would have no other rights apart from that of transiting the strait in the manner I just described. It could not, for example, exercise any of the other high seas freedoms provided for in Article II of the High Seas Convention. In particular, it could not engage in activities inimical to the security of a coastal State as pointed out by the distinguished Representative of the Soviet Union last week.

As my delegation pointed out on August 3, 1971, "We believe the right to transit straits should be regarded in law for what it is in fact: an inherent and inseparable adjunct of the freedoms of navigation and overflight on the high seas themselves." In addition, the United States believes that the regime of innocent passage provided for in the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone is inadequate when applied to international straits. One reason it is inadequate is because it is a standard which could be abused if a coastal State chose to interpret it subjectively. To illustrate what I mean, Mr. Chairman, I need only refer to certain statements in this Subcommittee suggesting that some delegations have already concluded, that certain types of passage, for example, by nuclear-powered ships and supertankers, should be considered non-innocent per se.

Mr. Chairman, the distinguished Representative of Tanzania stated that a strait is an integral part of the territorial waters of the coastal State and that any special arrangements made should apply to the entire area. This thought was fundamental to many of the specific points which he raised.

I cannot agree that special arrangements made for straits used for international navigation must be made for the entire area of territorial waters. Mr. Chairman, our free transit proposal relates to straits used for international navigation, straits in which many nations in addition to the coastal State have interests. There is, for example, a direct relationship between the degree to which merchant shipping may pass freely over the oceans and through international straits and the prices of goods and materials paid by consumers in every country. The composite of interests is, in fact, that of the international community as a whole.

As I stated in this Subcommittee last summer, neither history nor logic compels any State to concede that an extension of territorial seas must automatically have the same effects upon the rights of the international community in straits as it has in other coastal areas. The balance of international and coastal interests is quite different in the two situations, since the international community has important and valid interests in navigation and overflight of straits. Coastal State regulations, if arbitrary and unreasonable, would be an irritation when applied in territorial waters off an open coast; however, the same regulations could severely hamper sea navigation vital to many nations when applied in straits overlapped by territorial waters.

Mr. Chairman, issue has been taken with the proposals made by my delegation with respect to mandatory application of traffic separation schemes developed by IMCO. It has been asserted that IMCO can only achieve minimum standards, that maximum standards can only be achieved by the coastal State alone. Mr. Chairman, I can see no convincing evidence that IMCO is incapable of developing satisfactory standards or that it has failed to do so in its separation schemes. This is not to say that they cannot be improved as in fact they are, through experience and the recommendations of interested governments. In our opinion, these schemes are in fact sound, reasonable safety measures. If observance of the schemes is made mandatory, as we have proposed, we will have gone a long way toward ensuring navigational safety in areas of congested traffic, including straits. The work of IMCO is technical and is accomplished by representatives of many governments who are experts in matters of navigational safety. Moreover, establishment of navigational standards by an international organization such as IMCO is more likely to balance the interests of the entire international community than would coastal State regulation.

In regard to the proposals made by my Government concerning strict liability in the case of accidents caused by the failure of ships and aircraft to observe

international safety standards, I am in complete agreement with the statement of the distinguished Representative of Tanzania that compensation is a poor substitute for prevention. However, even with the best of intentions and the most carefully thought out measures for preventing accidents, we are not likely to completely eliminate accidents at sea. The best we can hope to accomplish in alleviating the damage accidents cause is to require those at fault to make restitution. The impetus for observing traffic separation schemes, which a strict liability provision would prompt, was also an important reason for my Government's proposal on this point.

We proposed on July 28 that a law of the sea treaty make observance of IMCO traffic separation schemes in straits and other congested areas mandatory on all surface ships. The distinguished Representative of Spain has pointed out the exclusion of submerged submarines from the scope of that proposal. There are a number of reasons, some of them based on the special physical characteristics of submarines, why present traffic separation schemes do not apply to submerged submarines.

In the first place, IMCO has not seen fit to develop such schemes for submarines, for the very good reason that there has been no indication of a need for them since submarine traffic constitutes such a small proportion of overall maritime activity. Secondly, a submarine navigates more safely submerged than on the surface. Because of its low profile, a submarine on the surface is difficult to see even in good visibility. Since a submarine's lights are necessarily close together, other ships in the area can, at night or in time of poor visibility, mistakenly conclude that a smaller ship is involved than is actually the case. When conditions render the use of radar advisable by surface shipping, a submarine mistakenly conclude that a smaller ship is involved than is actually the case. is being encountered. Finally, a submerged transit in congested areas where depth conditions permit is much safer than transit on the surface.

Obviously, should future developments indicate a concern for safety resulting from increased submerged traffic, the United States would want to give consideration to any special safety procedures applicable to submarines transiting through congested areas, such as varying depth criteria for transit.

Mr. Chairman, in view of some remarks made last week, I think it would be appropriate at this time to describe briefly some of the built-in safety characteristics of nuclear-powered ships, including submarines, in operation in the United States Navy, and the safety record of these ships.

The reactors used in our naval nuclear-powered ships are designed to minimize potential hazards to the environment even under the worst conditions, including the actual sinking of the ship. The core of the nuclear reactor in such ships is designed so that it is physically impossible for it to explode. The materials in the reactor fuel elements are extremely resistant to corrosion, even in sea water. If an accident causes a reactor to sink in sea water, the fuel will remain intact for an indefinite period. The reactor's many protective devices and self-regulating fixtures are designed to prevent any melting of the fuel elements and thus protect further against the possible release of radioactive materials.

Mr. Chairman, to illustrate the effectiveness of these safeguards, I would like to point out that the nuclear propulsion program of the United States Navy has since its inception accumulated the equivalent of over 950 years of operational experience with over 20 million miles travelled without ever having had a reactor accident. This includes visits to 85 foreign ports and 42 U.S. ports.

Mr. Chairman, the distinguished Representatives of Tanzania and Spain have spoken at some length on the proposal of my delegation for a free transit right for aircraft over international straits, and in particular, on our proposals of last July 28 regarding this matter. They have correctly observed that existing multilateral aviation agreements do not provide transit rights for state, including military aircraft. In addition, Mr. Chairman, the fact is that unlike ships, aircraft, civil or military, do not even now under international law have a right of innocent passage over the territorial sea, although some writers have persuasively argued that such a right in straits is a logical and necessary concomitant of freedom of overflight on the high seas. I should remind the members of this Subcommittee again, however, that because of the United States position on the breadth of the territorial sea, our aircraft now exercise a high seas freedom of overflight in straits wider than six miles. The purpose of our free transit proposal regarding aircraft is to preserve a right of transit over straits 24 miles wide or less.

Mr. Chairman, the proposal which I described on July 28 regarding free transit by aircraft contemplates that observance of International Civil Aviation Organization (ICAO) procedures during transit of straits would be the usual practice. I can only agree with the distinguished Representatives of Tanzania and Spain that the ICAO Convention is not applicable to military aircraft. However, the United States has always operated its state aircraft in the spirit of the Convention with respect to safety of other aircraft. We anticipate that the overwhelming majority of flights by United States state aircraft will continue to comply fully with ICAO procedures. However, there may be occasional instances when state aircraft would be unable to comply fully with all ICAO procedures.

Mr. Chairman, United States state aircraft and, I am sure, the state aircraft of many other countries, now fly over international straits with high sea areas in them without difficulty. We see no compelling reason to believe that agreement on our free transit proposal will result in an increase in air traffic over international straits and a corresponding increase in the possibility of mishap. In this connection, Mr. Chairman, I should like to emphasize that United States state aircraft have an extremely good safety record. We want to maintain that record and thus the intention of our article is that compliance with ICAO procedures over straits by all aircraft would be the usual practice, with safety always the foremost consideration. I would also like to remind the Subcommittee that included in our statement of July 28 was a proposal that state aircraft exercising the right of free transit be strictly liable for accidents caused by any deviations from International Civil Aviation Organization standards and procedures.

Mr. Chairman, representatives of some governments have noted that my Government is seeking the right of free transit at least partly for reasons of national security. This is a proposition that we are not reluctant to admit or to defend. If we did not take into account our security requirements in these negotiations, we would be acting irresponsibly. As our President has stated, the United States relies upon the seas to meet its global responsibilities. Our security, and that of our allies and friends, depends to a very large extent upon freedom of navigation and overflight of the high seas, and on free transit through and over international straits. More extensive territorial seas than we now recognize, without a correlative right of free transit in straits, would threaten that security.

Mr. Chairman, although my remarks today have been primarily directed at responding to the earlier statements of the Delegations of Tanzania and Spain, I hope that they have clarified for all members of the Subcommittee our proposal for international straits.

STATEMENT BY HON. JOHN R. STEVENSON, U.S. REPRESENTATIVE TO THE COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION, SUBCOMMITTEE II, AUGUST 16, 1972

In accepting the compromise formulation of item 4 of the list my Government has been influenced by the fact that the formulation of the list is a procedural and not a substantive matter, as we have made clear over the last year and a half. We are able to accept the revised formulation of item 4 because we have concluded that it in no way derogates from our position on free transit through and over straits used for international navigation. Also, we are convinced it provides an opportunity for a full, frank presentation of our position and we are willing to accept the language on this basis.

The substantive U.S. position, which is well known to this Sub-Committee and which we continue to support as strongly as ever, is for agreement on a 12-mile territorial sea coupled with free transit of straits used for international navigation. As I have previously indicated, it is our view that to achieve a final law of the sea settlement, the objectives of these proposals must be accommodated. The right of free transit we seek is defined precisely in the draft articles we have tabled. Within this Sub-Committee, my Delegation has explained the nature of this right and made proposals to meet the legitimate concerns of coastal States, particularly straits States, regarding safety of navigation by ships and aircraft through and over straits.

## APPENDIX B

U.N. COMMITTEE ON THE PEACEFUL USES OF THE SEABED AND THE OCEAN FLOOR  
BEYOND THE LIMITS OF NATIONAL JURISDICTION

## LIST OF SUBJECTS AND ISSUES RELATING TO THE LAW OF THE SEA\*

1. International Regime for the Sea-Bed and the Ocean Floor Beyond National Jurisdiction
  - 1.1 Nature and Characteristics
  - 1.2 International Machinery : Structure, Functions, Powers
  - 1.3 Economic Implications
  - 1.4 Equitable Sharing of Benefits Bearing in Mind the Special Interests and Needs of the Developing Countries, whether Coastal or Land-Locked
  - 1.5 Definition and Limits of the Area <sup>1</sup>
  - 1.6 Use Exclusively for Peaceful Purposes
2. Territorial Sea
  - 2.1 Nature and Characteristics, Including the Question of the Unity or Plurality of Regimes in the Territorial Sea
  - 2.2 Historic Waters
  - 2.3 Limits
    - 2.3.1 Question of the Delimitation of the Territorial Sea : Various Aspects Involved
    - 2.3.2 Breadth of the Territorial Sea. Global or Regional Criteria. Open Seas and Oceans, Semi-Enclosed Seas and Enclosed Seas
  - 2.4 Innocent Passage in the Territorial Sea
  - 2.5 Freedom of Navigation and Overflight Resulting From the Question of Regimes in the Territorial Sea
3. Contiguous Zone
  - 3.1 Nature and Characteristics
  - 3.2 Limits
  - 3.3 Rights of Coastal States with Regard to National Security, Customs and Fiscal Control, Sanitation and Immigration Regulations
4. Straits Used for International Navigation
  - 4.1 Innocent Passage
  - 4.2 Other Related Matters Including the Question of the Right to Transit
5. Continental Shelf
  - 5.1 Nature and Scope of the Sovereign Rights of Coastal States Over the Continental Shelf. Duties of States
  - 5.2 Outer Limit of the Continental Shelf : Applicable Criteria
  - 5.3 Question of the Delimitation Between States : Various Aspects Involved
  - 5.4 Natural Resources of the Continental Shelf
  - 5.5 Regime for Waters Superjacent to the Continental Shelf
  - 5.6 Scientific Research
6. Exclusive Economic Zone Beyond the Territorial Sea
  - 6.1 Nature and Characteristics, Including Rights and Jurisdiction of Coastal States in Relation to Resources, Pollution Control and Scientific Research in the Zone. Duties of States
  - 6.2 Resources of the Zone
  - 6.3 Freedom of Navigation and Overflight
  - 6.4 Regional Arrangements
  - 6.5 Limits : Applicable Criteria
  - 6.6 Fisheries
    - 6.6.1 Exclusive Fishery Zone
    - 6.6.2 Preferential Rights of Coastal States
    - 6.6.3 Management and Conservation

\*As finally adopted by Subcommittee II.

<sup>1</sup>To be considered in the light of the procedural agreement as set out in paragraph 22 of the report of the committee (A/8421).

- 6.6.4 Protection of Coastal States' Fisheries in Enclosed and Semi-Enclosed Seas
- 6.6.5 Regime of Islands Under Foreign Domination and Control in Relation to Zones of Exclusive Fishing Jurisdiction
- 6.7 Sea-Bed Within National Jurisdiction
  - 6.7.1 Nature and Characteristics
  - 6.7.2 Delineation Between Adjacent and Opposite States
  - 6.7.3 Sovereign Rights Over Natural Resources
  - 6.7.4 Limits: Applicable Criteria
- 6.8 Prevention and Control of Pollution and Other Hazards to the Marine Environment
  - 6.8.1 Rights and Responsibilities of Coastal States
- 6.9 Scientific Research
- 7. Coastal State Preferential Rights or Other Non-Exclusive Jurisdiction Over Resources Beyond the Territorial Sea
  - 7.1 Nature, Scope and Characteristics
  - 7.2 Sea-Bed Resources
  - 7.3 Fisheries
  - 7.4 Prevention and Control of Pollution and Other Hazards to the Marine Environment
  - 7.5 International Cooperation in the Study and Rational Exploitation of Marine Resources
  - 7.6 Settlement of Disputes
  - 7.7 Other Rights and Obligations
- 8. High Seas
  - 8.1 Nature and Characteristics
  - 8.2 Rights and Duties of States
  - 8.3 Question of the Freedoms of the High Seas and Their Regulation
  - 8.4 Management and Conservation of Living Resources
  - 8.5 Slavery, Piracy, Drugs
  - 8.6 Hot Pursuit
- 9. Land-Locked Countries
  - 9.1 General Principles of the Law of the Sea Concerning the Land-Locked Countries
  - 9.2 Rights and Interests of Land-Locked Countries
    - 9.2.1 Free Access To and From the Sea: Freedom of Transit, Means and Facilities for Transport and Communications
    - 9.2.2 Equality of Treatment in the Ports of Transit States
    - 9.2.3 Free Access to the International Sea-Bed Area Beyond National Jurisdiction
    - 9.2.4 Participation in the International Regime, Including the Machinery and the Equitable Sharing in the Benefits of the Area
  - 9.3 Particular Interests and Needs of Developing Land-Locked Countries in the International Regime
  - 9.4 Rights and Interests of Land-Locked Countries in Regard to Living Resources of the Sea
- 10. Rights and Interests of Shelf-Locked States and States with Narrow Shelves or Short Coastlines
  - 10.1 International Regime
  - 10.2 Fisheries
  - 10.3 Special Interests and Needs of Developing Shelf-Locked States and States with Narrow Shelves or Short Coastlines
  - 10.4 Free Access To and From the High Seas
- 11. Rights and Interests of States with Broad Shelves
- 12. Preservation of the Marine Environment
  - 12.1 Sources of Pollution and Other Hazards and Measures to Combat Them
  - 12.2 Measures to Preserve the Ecological Balance of the Marine Environment
  - 12.3 Responsibility and Liability for Damage to the Marine Environment and to the Coastal State
  - 12.4 Rights and Duties of Coastal States
  - 12.5 International Cooperation
- 13. Scientific Research
  - 13.1 Nature, Characteristics and Objectives of Scientific Research of the Oceans
  - 13.2 Access to Scientific Information
  - 13.3 International Cooperation

14. Development and Transfer of Technology
  - 14.1 Development of Technological Capabilities of Developing Countries
    - 14.1.1 Sharing of Knowledge and Technology Between Developed and Developing Countries
    - 14.1.2 Training of Personnel from Developing Countries
    - 14.1.3 Transfer of Technology to Developing Countries
15. Regional Arrangements
16. Archipelagoes
17. Enclosed and Semi-Enclosed Seas
18. Artificial Islands and Installations
19. Regime of Islands :
  - (A) Islands Under Colonial Dependence of Foreign Domination or Control :
  - (B) Other Related Matters
20. Responsibility and Liability for Damage Resulting From the Use of the Marine Environment
21. Settlement of Disputes
22. Peaceful Uses of the Ocean Space : Zones of Peace and Security
23. Archaeological and Historical Treasures on the Sea-Bed and Ocean Floor  
Beyond the Limits of National Jurisdiction
24. Transmission from the High Seas
25. Enhancing the Universal Participation of States in Multilateral Conventions Relating to the Law of the Sea

U. S. MISSION,  
U. S. INFORMATION SERVICE,  
*Geneva.*

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#### APPENDIX C

##### FOREIGN POLICY ISSUES AND THE LAW OF THE SEA CONFERENCE

ADDRESS BY THE HONORABLE JOHN R. STEVENSON, THE LEGAL ADVISER, DEPARTMENT OF STATE, UNIVERSITY OF WASHINGTON, SEATTLE, OCTOBER 11, 1972

It is a great pleasure to be here today to speak to you about the coming Law of the Sea Conference, and what it may mean to us as Americans.

There has been a growing public awareness of the importance of the oceans to our lives. But I think many here would agree that the general awareness does not yet match the true level of its critical importance to a wide and increasing range of our national interests. There is, however, a special sensitivity to ocean problems here in the Pacific Northwest.

Here we have a major port, and a major segment of our fishing industry. Concern about marine pollution is strong. Both the government and private industry conduct important activities related to our national security. Both Senators from Washington are Chairmen of Committees that are deeply concerned with Federal laws and policies regarding the oceans and their resources. Congressman Pelly has a long record of interest in the oceans, and we were pleased to have him present in Geneva this summer during meetings of the U.N. Seabed Committee. The University of Washington has been a leader on contributing to the study and knowledge of the oceans, and the related scientific, economic, technological, and legal disciplines. Thus, Seattle is an especially appropriate city for a meeting of this sort, and the University of Washington a particularly suitable site.

Before addressing ocean problems specifically, let us stop for a minute and think what life would be like in this country, or this city, or even this room if people did not agree on how they should behave. What if there were no common understanding of one man's rights and another man's duties? Some of us might adhere—perhaps ardently—to one code of behavior, while others would have different inconsistent codes. Sooner or later there would be conflict. The conflict would increasingly involve matters, however important, that really could not justify the cost of the conflict in material or human terms. Whether by agreement—social contract if you will—or by force, common rules of behavior would ultimately have to be imposed on everyone in the common interest.

In this sort of situation we have two fundamental choices—agreement or conflict. This is today the basic foreign policy issue with respect to the oceans. Today more than ever we must bear in mind President Nixon's firm warning of May 1970: If the law of the Sea "is not modernized multilaterally, unilateral action and international conflict are inevitable."

Let us remember in particular that most nations border on and use the oceans, and that all nations have a vital interest in their use and preservation. Neither history, nor logic, nor law permits us to conclude that one country, or one group could itself decide its rights and duties in the sea with respect to the others.

Apologists for unilateralism frequently cite the success of the 1945 Truman Proclamation on the continental shelf to make their case. They omit to say that other States whose interests might have been affected did not object. They also omit to consider the wave of unilateral claims to the seas as well as the seabeds that followed, and the disputes that have resulted. They also forget that in 1945 the world was not as well equipped with institutions that could provide a multilateral alternative as it is today.

On the other hand, the principle that no nation or group can make the decisions itself is not limited to classic forms of unilateral action. We are all aware that representation in the United Nations General Assembly, and at a Law of the Sea Conference, is equal—each State has one vote. Majority or even two-thirds votes do not necessarily reflect any real accommodation of the relevant interests involved. In short, if artificial voting majorities are resorted to, a multilateral conference becomes nothing more than the vehicle chosen by one group of states to impose its will on another. The result will be nothing but a variant of unilateral action, no more legitimate, and no more successful; except, unhappily, that one more blow will have been struck at the idea of seeking international solutions to problems at a time of dangerously waning confidence in international institutions. Those whose national interests are protected by their voting strength in international forums would do well to consider whether the perceived advantages of abusing that strength are worth the price of degrading, if not destroying, the role and influence of all such forums on matters that affect their interests.

I think it is fair to conclude that the large majority of the nations of the world, developed and developing, believe that multilateral agreement on a legal regime for the oceans is desirable. This was manifest in the seriousness of purpose that marked this summer's meeting of the U.N. Seabed Committee, which is charged with preparing for the Conference.

However, this does not mean agreement has already been reached on the outcome. Nor does it mean that all agree the Conference should be held soon. Strong and divergent interests are involved. The real test is not whether a Conference is called: it is whether the Conference will be timely and successful. The relationship between time and success is a critical one: one the one hand, adequate preparation is needed; on the other hand, events and technology will not stand still, and may make agreement far more difficult in the future. It is, for example, much easier to make a unilateral claim than to alter it.

There seems to be a good chance that the United Nations General Assembly this fall will establish a precise schedule for further preparatory work and for the Law of the Sea Conference. The question therefore is: what are the elements of success?

It is common to answer this question with exhortations for a spirit of good will and mutual accommodation. Indeed, I suspect that the Law of the Sea Conference will need more than an ample measure of such a spirit. But, if it is to write rules that provide the answers to real problems, the Conference must be prepared to deal with those problems honestly. It is not at all reprehensible for nations to identify their interests clearly and seek solutions that accommodate them. My own view, after three years of negotiation on this subject, is that the national interests involved are not as difficult to reconcile as formal juridical positions might indicate.

Because of the divergence of view regarding what is permitted under current international law, I think there is too great a tendency to overlook the gradual convergence of ideas on what the effect of the Law of the Sea Conference should be. In this connection, it must be emphasized that State can take a far more flexible approach to changes in the Law of the Sea affected by a widely agreed treaty than they could to unilateral changes; the danger of setting adverse precedents is minimized by the fact that the treaty itself specifies what can and cannot be done.

In some cases, there is wide agreement on a specific result. This, for example, is the case with respect to the breadth of the territorial sea. The overwhelming majority of States from all regions are supporting agreement on a 12-mile territorial sea. Of course, this support is frequently contingent on reaching agree-

ment on an overall Law of the Sea settlement that satisfactorily resolves other issues. For example, we have made clear that, because extension of the territorial sea from three to twelve miles would affect many vital international straits that are narrower than 24 miles, there must also be agreement on free transit of straits used for international navigation.

In other cases, there is widespread support for more generalized objectives.

Let us take the case of resources beyond the territorial sea. Whatever the divergences in various specific proposals made, it is clear that all of them contemplate increased coastal State regulatory authority and preferential rights over fisheries beyond the territorial sea. No such common element existed at the 1958 and 1960 Law of the Sea Conferences. Similarly, broad coastal State management jurisdiction over seabed resources is widely contemplated. In both cases, of course, there are critical questions regarding the extent of international limitations on coastal State rights. These questions are of course the key to a successful resolution of the problem of coastal State economics jurisdiction. However, the very broad support for a 12-mile territorial sea itself indicates that at least one of these limitations is also widely supported, namely the protection of freedom of navigation and overflight in areas beyond twelve miles where the coastal State exercises resource rights.

It is also clear that there is very widespread support for the establishment of an international regime for the seabeds in the area beyond coastal State economic jurisdiction. Once again, however, there are critical subsidiary questions: what should be the nature of the regime and the structure and functions of the international seabed authority to be established.

There is also a widespread belief that the Law of the Sea Conference should make an important contribution to international efforts to protect the marine environment. The Declaration of Principles regarding the seabeds beyond national jurisdiction makes clear that the international regime for this area should include such provision. The United States has proposed international standards to ensure such protection in coastal seabed areas as well. Where ships are concerned, the problem is one of reconciling the interest in free navigation on the high seas and free transit of international straits with that of assuring adequate protection of the marine environment. This can in the United States view best be done by seeking adequate measures of an international character, such as making IMCO traffic separation schemes mandatory, strengthening IMCO itself, and establishing certain general legal principles.

What then are the major problems to be resolved?

First, the problem of free transit of straits used for international navigation. In the broadest sense, the United States as well as many other nations simply cannot agree that the extension of the territorial sea can subject the transit of straits used for international navigation to the discretion of the states bordering those straits. Since for geographic reasons the use of such straits is necessary for access to and from high seas areas, the right to transit straits must be regarded as an inseparable adjunct of the right to use the high seas. In more refined legal terms, this means that while we are not insisting on complete freedom of navigation and overflight in straits used for international navigation, we oppose the substitution of innocent passage for three reasons:

(1) While we are not of this view, it is apparent that certain important coastal States believe they can unilaterally determine the innocence of passage subjectively, and unilaterally determine limitations on such passage, whether for safety or pollution reasons, or for other reasons.

(2) Under the Convention on the Territorial Sea and the Contiguous Zone, to be in innocent passage, submarines must navigate on the surface.

(3) The Convention on the Territorial Sea and the Contiguous Zone does not apply the right of innocent passage to aircraft.

There are obvious reasons of national security for this position, for maritime powers and their allies, and for countries that rely on a stable balance of power to ensure their own security. However, these are not the only reasons. The movement of merchant shipping, including tankers, will be critical to international trade for the foreseeable future. For many nations, exporters as well as importers; the importance of such movement is so vital as to reach the level of a primary security as well as economic concern. Those who would leave interests of such magnitude to the vicissitudes of international and domestic politics around the world are inevitably inviting very serious problems.

This is not to say that the only interests involved are international. States bordering straits obviously have legitimate interests in being assured that vessels and aircraft do no more than transit their territorial sea in straits, and that their concerns with safety of navigation and pollution are met. The proposals we have made regarding international regulation of these problems, coupled with coastal State enforcement rights and strict liability, indicate that we are prepared to deal with these legitimate problems of straits States. The Soviet Union has made other proposals that I think indicate that it is prepared to do so as well.

A second set of problems concerns the nature of coastal State rights over resources beyond the territorial sea.

Under traditional approaches to the Law of the Sea, this was basically regarded as a question of limits. On one side of a line the coastal State had unlimited exclusive rights over resources; on the other side its high seas rights were essentially no different from those of all other States. The major flaw in this approach is that the coastal State is not the only state with interests on the landward side, and that the coastal state has special problems regarding resources beyond the line that may not be shared by other States.

The fundamental innovation in President Nixon's Oceans Policy Statement of May 23, 1970 is that it proposes a pragmatic balancing of coastal and international interests in the same area, as opposed to the older "all or nothing" approach. While the Continental Shelf Convention was a first step in this direction, separating resource rights from the territorial sea, it still represented an "all or nothing" approach regarding the resources. What we now propose is a harmonization of coastal and international interests in the context of coastal State resource management authority. If these interests can be harmonized, the limits question becomes far less contentious.

The interests of our Pacific Coast fishing industry provide a good example of the advantages of this approach.

The development of large, mobile and highly sophisticated foreign fishing fleets has significantly altered the practical effects of freedom of fishing on the high seas. Serious depletion of stocks can occur rapidly. Local coastal fishermen economically dependent on coastal or resident stocks are not in an equal competitive position: they can be pre-empted by the distant water fleets rapidly without enjoying the same ability to move on to other areas. Understandably, these fishermen would like the United States to regulate these fisheries. For this regulation to be fully effective, it should apply to the coastal stocks wherever they may be off the coast.

The United States has important commercial and sports fisheries for Pacific salmon. The viability of these fisheries depends upon significant positive measures and restraints in the rivers and streams where they spawn. However, the salmon migrate far out to sea. If regulation is to be effective, the coastal State of origin should regulate them throughout their migratory range on the high seas.

We also have an important tuna fishing industry based on the West Coast. Tuna are highly migratory species that must be regulated throughout their migratory range. Unlike salmon, spawning is not localized. Thus, adequate conservation of tuna requires international action; no coastal state could assure this on its own. Moreover, fishing boats obviously must follow the fish. In the case of tuna, this means operations over a wide area of the sea off the coasts of many countries. Thus, by and large an economically adequate tuna fishery of substantial size requires access to the fish off several coasts; virtually no coastal State could develop such a fishery off its own coast alone.

Finally, although important interests in this fishery are located in other parts of the country, we should bear in mind that our shrimp industry engages in significant fishing not only off our own coast but off foreign coasts. Its problems are analogous to those of foreign fishermen who have an interest in fishing for coastal species off our coast. Moreover, we should consider the conservation and economic effects on our local shrimp fisheries if all these boats were forced to return.

What all this means is that a simplistic solution cannot resolve all the relevant problems, for us or for others. In important measure, the diversity of our own interests is a fairly accurate reflection of the diversity of interests that exists in the international community in general.

How then can international limitations be coupled with coastal State authority to provide an adequate accommodation? We believe a two step analysis is needed.

First, what fisheries should be subject to coastal State authority beyond the territorial sea? For reasons I have outlined, we believe the coastal State can regulate all coastal stocks wherever they may be located off the coast, and all anadromous stocks throughout their migratory range on the high seas. This covers over three quarters of all the world's fisheries. Because of their biological characteristics, we believe highly migratory oceanic species like tuna should be subject to international regulation.

Second, with respect to coastal and anadromous species, what should be the rights of the coastal State and what should be the obligations of the coastal State to protect the interests of other States and the international community in general? Obviously, the coastal State should be responsible for assuring conservation. Beyond this, the coastal State should have an economic preference based on its capacity to harvest these stocks. However, since fish are a renewable resource, the coastal State has no need to prevent fishing consistent with sound conservation measures for stocks it cannot itself fully utilize for the time being, and should be required to provide access to others on reasonable terms for what it cannot itself fully utilize. Some accommodation through an agreed international formula with states that have traditionally fished in an area and with other states in a region is also desirable. Finally, if States are to have the necessary confidence in the viability of such an approach, a procedure for compulsory settlement of disputes is required. This goes to the heart of the matter, because the essential ingredient is a balancing of interests, and States must be assured that the agreed balance will be subject to disinterested review.

We envisage a similar process of analysis with respect to seabed resources in coastal areas. However, the problems are different, and therefore the solutions would be different. Nevertheless, the basic premise of coastal State resource management jurisdiction subject to international treaty standards and compulsory dispute settlement remains the same.

For reasons of time, I will not develop the analysis here at great length; I have done so in other places and I am sure that many of you are aware of the considerations involved. The petroleum and gas potential of the continental margins around the world is enormous, and the world's energy needs are growing rapidly. For important environmental, economic, and other reasons, we and other coastal nations must examine this problem from a global, as well as coastal, point of view.

The international standards we contemplate with respect to seabed resources in coastal areas are indicated in the President's Oceans Policy Statement of May 23, 1970. In general, they would provide for:

- prevention of unreasonable interference with other uses of the oceans;
- protection of the ocean from pollution;
- protection of the integrity of investment;
- sharing of revenues with the international community; and
- peaceful and compulsory settlement of disputes.

While the reasons for most of these standards can be readily understood, I would like to dwell for a moment on one that can give rise to misunderstanding. It is obvious that anyone making an investment is interested in protecting its integrity. However, as energy becomes more important and increasingly scarce the question takes on much broader international significance. Moreover, we are witnessing a situation in which stability of investment conditions is increasing as a factor influencing not only the assessment of the risk and rate of return, but the very decision to invest in the first place. At a time when most of the world is interested in stimulating the flow of investment capital to developing countries, at the very least we should try to minimize the effect of political factors that are encouraging precisely the opposite. The investments required for offshore oil exploitation can be very substantial. Treaty standards protecting the integrity of investment would be of great benefit to developing coastal countries that desire to attract offshore investment and maximize the potential benefit from such arrangements. It would strengthen their ability to exercise their right (which should also be guaranteed by treaty) to decide whether, by whom, and under what conditions such investment can be made. The entire international community would benefit from the elimination of a serious potential source of conflict, and indeed would hopefully share in some of the revenues generated.

Another problem area concerns the international regime for the seabeds beyond the limits of coastal State economic jurisdiction. The basic problem here is that

of reconciling the interests of States with the indigenous technical, managerial and financial capacity to exploit the deep seabeds with the interests of other States in participation in the regulation and benefits of such exploitation. These are not inconsistent objectives. But they can be made to appear so if too much emphasis is placed on theoretical or ideological considerations.

There is no dispute, at least in principle, about such matters regarding the regime for the deep seabeds as the need to assure protection of the marine environment or to provide for equitable sharing of benefits. The heart of the problem revolves around three inter-related questions: What will be the system for exploring and exploiting the resources? What will be the functions and powers of the international authority? How will the interests of different States be reflected in the decisionmaking process of the international authority?

The desire of our citizens and others for reasonable and secure investment conditions is involved in all these questions. In the first place, the opportunity for such investment must exist. An international exploitation monopoly clearly would be inconsistent with this. Second, the international organization must have regulatory authority to protect the interests of the international community and to assure that conditions remain reasonable in the light of changing conditions. At the same time there must be a definite element of predictability for large investments to be made. Arbitrary action by the international organization clearly would be inconsistent with necessary predictability; in this connection, compulsory dispute settlement, including judicial review of administrative action, is an integral element of a solution. Finally, to the extent that the international authority has discretionary regulatory authority, the States with interests most likely to be affected must be assured of reasonable protection in the decision-making process.

A subsidiary problem relates to the concerns of those few States, including some developed States, that produce metals on land that are likely to be found on the deep seabeds. While our own and other economic studies indicate that deep seabed production is unlikely to lead to a reduction of world prices or have other serious adverse effects, some land producers remain concerned and have urged that the seabed authority control production and prices. This has served to sharpen significantly the concern, particularly on the part of potential investors and consumers, over the functions and powers of the international organization. Moreover, the fact that some developing countries that are consumers, and not producers, of these metals and that would share in the benefits of deep seabed exploitation, have made few attempts to assure a more balanced approach to this question has intensified the inherent difficulties in urging confidence in an organization whose powers have not yet been defined and that is not yet in operation.

Scientific research, particularly in areas of coastal State resource jurisdiction, presents still another problem. The United States and others have stated their strong belief that there should be maximum freedom of scientific research in the oceans because such research is, and should be, open and of benefit to all. On the other hand, certain coastal countries have questioned this conclusion, on the grounds of their ability to participate meaningfully in such research and in its benefits, to protect their interests in resources in the area, and to prevent environmental damage. A new and more vigorous approach to the problems of training, participation, and technology sharing may provide the basis for an accommodation that protects freedom of scientific research and assures that it is of maximum benefit to all, including developing countries. The draft seabed treaty we presented, and various statements we made, elaborate in detail on some of these ideas.

There are of course other problems as well. Some of them will not be easy to overcome. But I also do not think that success is impossible or even improbable. What is required is a translation of the general foreign policy considerations favoring agreement, that most countries share, into specific harmonization of interests with respect to each problem. I think the recent session of the U.N. Seabed Committee this summer gives us increased hope to believe this can be done: not only—or even primarily—because of its concrete accomplishments, but because of the seriousness of purpose and business-like approach that characterized the meeting.

Some of you doubtlessly have questions about that meeting and about other aspects of the Law of the Sea Conference. Accordingly, I will end my formal remarks here, and thank you once again for your kind invitation.

## APPENDIX D

## BREADTH OF TERRITORIAL SEAS AND FISHING JURISDICTIONS CLAIMED BY SELECTED COUNTRIES

Country	Territorial sea (nautical miles)	Fishing limit nautical miles)	Other
Albania.....	12	12	
Algeria.....	12	12	
Argentina.....	200	200	Permits overflight and navigation. Licensing of foreign fishing vessels from 12 to 200 nautical miles.
Australia.....	3	12	
Belgium.....	3	13	
Brazil.....	200	200	
Bulgaria.....	12	12	
Burma.....	12	12	
Cambodia.....	12	12	
Cameroon.....	18	(?)	
Canada.....	12	12	
Ceylon.....	12	12	
Chile.....	3	200	
China, People's Republic of.....	12	12	
China, Republic of.....	3	3	
Colombia.....	12	12	
Costa Rica.....	12	200	"Specialized competence" over living resources to 200 nautical miles.
Cuba.....	3	3	
Cyprus.....	12	12	
Dahomey.....	12	12	Subsoil of area stretching 100 miles from the low-tide level or first obstacle of navigation.
Denmark.....	3	1 12	
Dominican Republic.....	6	12	
Ecuador.....	200	200	
Egypt.....	12	12	
El Salvador.....	200	200	
Ethiopia.....	12	12	
Federal Republic of Germany.....	3	1 3	
Finland.....	4	4	
France.....	12	1 12	
Gabon.....	30	30	
Gambia.....	50	50	
Ghana.....	12	12	
Greece.....	6	6	
Guatemala.....	12	12	
Guinea.....	130	130	
Guyana.....	3	3	
Haiti.....	6	6	
Honduras.....	12	12	
Iceland.....	4	12	
India.....	12	12	Plus right to establish 100-mile conservation zone. Archipelago concept baselines.
Indonesia.....	12	12	
Iran.....	12	12	
Iraq.....	12	12	
Ireland.....	3	1 12	
Israel.....	6	6	
Italy.....	6	1 12	
Ivory Coast.....	6	12	
Jamaica.....	12	12	
Japan.....	3	3	
Jordan.....	3	3	
Kenya.....	12	12	
Korea, Republic of.....	3	20-200	
Kuwait.....	12	12	
Lebanon.....	6	6	
Liberia.....	12	12	
Libya.....	12	12	
Malaysia.....	12	12	
Maldives.....	* 3-55	* 100	Rectangular block defined by latitude and longitude.
Malta.....	6	12	
Mauritania.....	12	12	
Mauritius.....	12	12	
Mexico.....	12	12	
Morocco.....	12	12	Exception—6-mile zones for Strait of Gibraltar.
Netherlands.....	3	1 12	
New Zealand.....	3	12	
Nicaragua.....	3	200	Continental Shelf, including sovereignty over superjacent waters.
Nigeria.....	30	30	
Norway.....	4	12	
Pakistan.....	12	12	Plus right to establish 100-mile conservation zones.

Country	Territorial sea (nautical miles)	Fishing limit (nautical miles)	Other
Panama.....	200	200	Continental Shelf, including sovereignty over superjacent waters.
Peru.....	200	200	Sole jurisdiction over the area of the sea, the subsoil, and seabed adjacent to coastlines, including superjacent waters.
Philippines.....			Archipelago concept baselines. Waters between these baselines and the limits described in the Treaty of Paris, Dec. 10, 1898, the United States-Spain Treaty of Nov. 7, 1900, and United States-United Kingdom Treaty of Jan. 2, 1930, are claimed as territorial sea.
Poland.....	3	12	
Portugal.....		12	
Romania.....	12	12	
Saudi Arabia.....	12	12	
Senegal.....	12	18	Proposed to extend fishing jurisdiction 110 nautical miles beyond territorial sea.
Sierra Leone.....	200	200	
Singapore.....	3	3	
Somali Republic.....	12	12	
South Africa.....	6	12	
Spain.....	6	12	
Sudan.....	12	12	
Sweden.....	4	12	
Syria.....	12	12	
Tanzania.....	12	12	
Thailand.....	12	12	
Togo.....	12	12	
Trinidad and Tobago.....	12	12	
Tunisia.....	6	12	
Turkey.....	6	12	12 nautical miles in Black Sea as a matter of reciprocity.
Ukrainian Soviet Socialist Republic.....	12	12	
U.S.S.R.....	12	12	
United Kingdom.....	3	12	
United States of America.....	3	12	
Uruguay.....	200	200	Licensing required between 12 and 200 nautical miles. Presidential decree of Aug. 26, 1971, establishing detailed regulations for foreign fishermen in the 12- to 200-nautical mile zone.
Venezuela.....	12	12	
Vietnam, Republic of.....	3	( <sup>4</sup> )	Extension to 12 and 30 nautical miles, respectively, under consideration.
Yemen (Aden).....	12	12	
Yugoslavia.....	10	12	

<sup>1</sup> Parties to the European Fisheries Convention which provides for the right to establish 3-mile exclusive fishing zone seaward of 3-mile territorial sea, plus additional 6-mile fishing zone restricted to the Convention Nations.

<sup>2</sup> To be fixed by decree.

<sup>3</sup> Approximate.

<sup>4</sup> 20 kilometers (10.8 nautical miles).

Source: "International Boundary Study," series A, "Limits in the Seas, National Claims to Maritime Jurisdictions," Publication No. 36, Jan. 3, 1972 (with corrections to March 1972), issued by the Geographer, Department of State.

## APPENDIX E

### A REPORT TO THE PRESIDENT AND THE CONGRESS

(First Annual Report by the National Advisory Committee on Oceans and Atmosphere, Washington, D.C., June 30, 1972)

#### NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE

William A. Nierenberg, Chairman, Director, Scripps Institution of Oceanography.

William J. Hargis, Jr., Vice-Chairman, Director, Virginia Institute of Marine Sciences.

Charles F. Baird, Vice-President—Finance, International Nickel Company of Canada, Ltd.

Werner A. Baum, President, University of Rhode Island.

Wayne V. Burt, Associate Dean of Research (Oceanography), Oregon State University.

John C. Calhoun, Jr., Vice President for Academic Affairs, Texas A&M University.

William D. Carey, Vice-President, Arthur D. Little, Inc.

Dayton H. Clewell, Senior Vice-President, Mobil Oil Corporation.

John P. Craven, Dean of Marine Programs, University of Hawaii.

Charles L. Drake, Professor, Dept. of Earth Sciences, Dartmouth College.

Thomas A. Fulham, President, Suffolk University.

Joseph J. George, Director of Meteorology, Eastern Airlines.

Gilbert M. Grosvenor, Editor and Vice-President, National Geographic Society.

Francis S. Johnson, Director, Center for Advanced Studies, University of Texas at Dallas.

Ralph A. MacMullan, Director, Dept. of Natural Resources, State of Michigan.

Thomas F. Malone, Dean, Graduate School, The University of Connecticut.

O. William Moody, Jr., Administrator, Maritime Trades Department, AFL-CIO.

Mark Morton, Vice-President and Group Executive, Aerospace Group, General Electric Company.

John J. Royal, Secretary-Treasurer, Fishermen and Allied Workers' Union.

Julius A. Stratton, President-Emeritus, Massachusetts Institute of Technology.

Verner E. Suomi, Director, Space, Science, and Engineering Center, University of Wisconsin.

Clement Tillion, Alaska House of Representatives.

Myron Tribus, Senior Vice-President, Information Technology Group, Xerox Corporation.

Odale D. Waters, Jr., Head, Oceanography Department, Florida Institute of Technology.

Edward Wenk, Jr., Professor of Engineering and Public Affairs, University of Washington.

Executive Director, Douglas L. Brooks.

Staff Assistant, David A. Katcher.

Staff: John W. Connolly, Carl W. Fisher, William H. Kumm, Stewart B. Nelson, Steven E. Schanes, Eleanor tum Suden.

Supporting Staff: Elizabeth S. Tune (Admin. Aide), Beverly B. Douglas, Elaine E. Johnson.

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NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE,  
*Washington, D.C., June 30, 1972.*

TO THE PRESIDENT AND THE CONGRESS :

SIRS : I have the honor to submit to you the first Annual Report of the National Advisory Committee on Oceans and Atmosphere.

The Committee was established by P.L. 92-125, approved on August 16, 1971, and was directed to submit a comprehensive annual report to the President and to the Congress setting forth an overall assessment of the status of the Nation's marine and atmospheric activities.

This report is submitted to the Secretary of Commerce for transmittal as provided by the statute.

Respectfully,

WILLIAM A. NIERNBERG,  
*Chairman.*

SOME INTERNATIONAL ISSUES RELATED TO LAW OF THE SEA

The rules governing the use of the seas by the nations of the world are today in a transition comparable to that which took place in our own country when the frontier and the open range disappeared. While NACOA finds the emerging U.S. positions at the level of the Working Group on Law of the Sea soundly in the national interest and consistent with international needs, it also finds that the actual situation, and the U.S. current tactics in negotiation, give less cause for optimism. These matters are discussed with respect to freedom of passage, fisheries, and freedom of research, NACOA then suggests the kind of effort and program adjustment which should result in a more positive approach and improved prospects for international agreement.

It will be impossible to come anywhere near the oceanic goals set by the Congress or proposed by earlier commissions and councils until an updated and

accepted set of international rules is developed for international oceanic operations. The international negotiations on the Law of the Sea have a status comparable to those on disarmament, and may very well take longer to resolve. We should take care not to view this matter with undue optimism in view of the complexity and wide range of issues to be resolved.

The basic issues before us are in several broad categories which have to do with: The extent of territorial waters and the resultant effect on freedom of navigation and overflight and freedom for research; fisheries; and the appropriate regime for the management of the ocean basins.

The complexity of the issues derives from the many different interests, national and international, and has diplomatic aspects that are normally not discussed in official reports. NACOA nevertheless feels that the importance of a full and frank discussion of this multifaceted problem is essential if procedures and programs are to be adopted that can move matters forward. We conclude that the present situation is unsatisfactory internationally and that the current U.S. procedures will not suffice to achieve the U.S. policy goals. This is a pessimistic statement more with respect to the direction matters have taken internationally than to specific criticism of past approaches. Nevertheless, NACOA feels that these difficulties could have been sooner anticipated and a more imaginative and coordinated program could have been developed.

NACOA has been critical of the activities of the Working Group on the Law of the Sea because of an apparent diffusion of objectives and a lack of sharply developed policies or positions. The situation has recently improved considerably, undoubtedly through the effect of increasing the delegation by five nongovernmental experts, and the formation of a broadly based advisory committee. One of the results of this interaction is, as is noted later, an agreed industrywide position for the fisheries industries. There is, however, the ever-present danger of weakening of objectives under the grind and tedium of a one-hundred nation debate.

The entire position of the United States in international oceanic affairs should be thoroughly reviewed and clarified without neglecting the possible contribution of any department or agency. The position must include a strong policy for keeping the oceans and the classical straits open for free navigation and the oceans free for commerce and for responsible scientific research. The oceans are a common heritage. This heritage carries with it the necessity for freedom to explore, freedom for navigation, and freedom for simple human enjoyment.

#### ACHIEVEMENT AT GENEVA (1958)

With these goals in mind, and before setting down specific programmatic recommendations, we present our analysis of the current situation and the history of how we arrived at what appears to NACOA to be a difficult impasse. Perhaps the most useful and illuminating starting point is the Geneva Conventions of 1958. These Conventions were the result of intensive and arduous preparatory conferences. They were momentous achievements, made possible largely by intensive and lengthy preparations involving considerable technical consultation. The signatories assigned the bottom resources out to the 200-meter depth to the adjacent state and made easy allowance for general research outside of territorial waters in this zone by agreeing that permission to carry on research in this region would "not normally be withheld." Freedom for research in the ocean basins outside these limits was unrestricted. Considerable detail went along with these conventions—specifying, for example, that lobster and shrimp were not to be classified as belonging to the bottom but rather to the water mass, and so on.

One provision was accepted that may soon be a thorny issue; it provided that the bottom resources of the region beyond the 200-meter depth be assigned to the adjacent state to the extent that they are economically exploitable. Until recently it was expected that this controversial clause would be a dominant issue in the current discussions. Then a host of other difficulties arose which seemed for a while to overshadow it: concern about the depletion and management of the living resources of the world ocean, proposals for ultimate arrangements for the exploitation of the ocean basins, a number of unilateral extensions of territorial limits, a deepening universal concern about the environmental degradation of the oceans, and concerns dealing with the destruction of species, such as the

whale. However, growing oil consumption may again force to the fore problems having to do with resources beneath the ocean floor.<sup>1</sup>

#### APPROACH TO GENEVA (1973)

Against this background we wish to make four observations. The first is that treaties in matters of this kind where a common heritage is involved must allow for change. In the course of increasing knowledge of the oceans and their resources, and increasing threats to the oceans, it is clearly necessary to review the arrangements periodically and adjust them equitably to new needs based on new knowledge. This applies principally to our present emergent fisheries position.

The second observation is that these conventions have the force of international law and should be observed as such. Unfortunately U.S. experience with the 1958 Geneva Conventions has been largely the opposite. This experience raises grave questions as to the usefulness of attempts to improve the situation by treaty revision alone, unless a better basis is laid. For example, in waters off Chile, Peru, Ecuador, and Brazil, the United States or its fishermen have had to pay fines or seek permits in areas in which there should be unrestricted fishing access under generally accepted provisions and conditions at the time of the 1958 Conventions. Another example is in the area of scientific research. Various countries have affected the freedom to conduct scientific research in that they have not routinely granted permission to perform research in waters over their shelves, or they have instituted permission-granting procedures sufficiently cumbersome in many instances as to effectively exclude certain areas from planning for scientific research cruises. Their reason often seem obscure, but it appears that they may be interpreted as possible efforts to force the reopening of previously settled matters for the impending Law of the Sea negotiations. It is all the more discouraging to observe that, for other reasons, several of the developed nations have also denied permission for research on their shelves. The reasons may well have involved serious national questions, but they have also had chauvinistic overtones.

This leads to a third observation, our pessimism as to the chaotic state and the ultimate benefit of the preparatory sessions leading to the 1973 Law of the Sea Conference. The difference between the 1958 Conference, with its mark of success, and the current negotiations is that the former was preceded by quiet and hard work on the part of technical experts. The 1958 results were based on the best oceanic expertise available at the time and were limited to a small number of priority issues. Despite the best efforts of the United States and other major powers to limit the forthcoming Conference to a few issues—particularly the question of territorial limits—the member nations, led by the lesser developed countries, overwhelmingly voted to include all issues on the agenda. Most of the countries will not have the time to become adequately informed technically on a broad array of complex issues. Thus the Conference may degenerate into a series of position-taking statements on very narrow local issues rather than a striving for an optimum regime for the benefit of all and for a situation that could enhance conflict-free prospects around the world.

Our fourth observation is that a legalistic approach will not serve and an alternative must be sought. A legalistic approach will only work to maintain the present fractionated situation. A strongly pragmatic approach based on the realities of what the oceans can offer mankind and what is needed to deliver on this offer allows more hope for success. It appears that the true requirement is a framework which permits all nations to jointly participate in a mutual educational effort centered on the world's oceans, the current and future resources, and the factors to be balanced if mankind's long-term needs are to be most appropriately met by oceanic means.

Today's strong movement in the direction of further nationalism carries with it serious threats to classical free movement on the oceans. This is contradictory

<sup>1</sup> It is possible that there will be a considerable lapse of time before international agreement on Law of the Sea is attained. NACOA recognizes that economic and other pressures may develop to such an extent that individual nations including the United States will take unilateral actions, especially with respect to resource exploitation. NACOA therefore urges consideration by the U.S. Government of suitable interim arrangements that will allow development of these resources to proceed, but at the same time will offer reasonable probability of meshing with eventual international agreements.

to the lofty phrase, the "common heritage of mankind," which opened the present debates on the uses of the resources of the midocean.

The current position of the United States with respect to three important issues treated in this chapter (freedom of passage, fisheries, and freedom of research) as it has slowly evolved in the ferment of the last years, seems to us now eminently sound. It satisfies U.S. national interests, it is based on good conservation principles, and it seems the best arrangement leading to an amicable international situation and the common good.

#### THE ISSUE OF FREE PASSAGE

*The U.S. policy for free passage in waters outside the 12-mile territorial limit and in classical straits must remain unmodified.* It is required in the interests of world trade and communication, and is necessary to prevent cumbersome restrictions or procedures being placed in the way of open research. It is also necessary with respect to national defense. In this regard, the Committee has in mind not only the classical requirement for defense systems but also the historical fact that restrictions imposed on classical straits passage have almost always converted them to foci of military confrontation and sources of conflict.

#### THE ISSUE OF FISHERIES

The U.S. position with respect to the fisheries question has been slow in formulation because of the lack of an agreed industrywide position. Now, however, the industry as a whole has agreed to support the position prepared by the U.S. Working Group. The coalition of interest has been largely induced by the realization that the current worldwide fishing capability can grossly reduce the catch of currently marketable fish and alter the relative species balance in a major way if uncontrolled and unregulated. The position proposed is to assign each coastal fishery to the adjacent state for management and licensing; to assign responsibility for anadromous fish to the country in whose waters the fish spawn; and to rely on multilateral arrangements for the pelagic fisheries. *The basic approach is to place priority on conservation of the resource.* This approach, in the case of the coastal fishery, has the important corollary that the fixed territorial concept is removed from the important fisheries domain, and should help relieve the pressures which appear to be driving territorial limits outward.

#### THE ISSUE OF OPEN RESEARCH

Our position with regard to the use of the ocean basins is largely in agreement with the positions of most other states. The principle of community ownership and international management has been accepted, but the question of the relation between a producing corporation and the international management is yet to be settled—and there is great resistance to such management conducting its own research while restricting research of member nations.

Except possibly for manganese nodule and phosphate mining, the deep-sea resources will remain inaccessible for many years. Therefore these questions are less immediate than the fishing and territorial waters questions, and even in the case of the nodules and phosphate beds the pressure for development may be resolved by the hidden question of the effect on individual states' economies by the introduction of new sources of specific minerals. Nevertheless, discussions relating to the use of the seabed have raised the specter of restrictions on freedom of research on the open sea. *It is and should remain firm U.S. policy that this freedom of research on the open sea continue.*

In a purely practical way, we as a world can never hope to realize any of the postulated benefits from the oceans if research is hampered. Even now it is proceeding at altogether too slow a pace to match the oft-stated expectations. International interference with research is far more serious than that on the national level. It has happened that scientific inquiry has been blocked in various disciplines in one nation or another at one time or another usually for ideological reasons. Fortunately for mankind, if not for that nation in particular, scientific inquiry advanced elsewhere. At a later date, the laggard nation was able to catch up, if not to repair the damage completely. This corrective is not available if the inhibition to science is on a global scale. More fundamentally, any further limitations on freedom of inquiry that are not for basic safety or the general welfare (such as those to control pollution) are a dangerous addition to a list of limitations that is already too large.

It is possible to understand and sympathize with the position taken by the developing nations. Mostly former colonies, they are sensitive to any possibility, however remote, that their share of the oceanic resources may be usurped by the more advanced nations who have the technology to exploit these resources. They transfer this concern to research as well, believing that their poor or nonexistent research capabilities put them at a gross disadvantage in obtaining their share of the resources. This could bring major oceanic development to a halt if such fears are translated into conventions restricting research on the open seas, because research and education do go together, and are not developed serially. Thus, halting exploration or research until the developing nations reduce the research gap would lead to a total slowdown, further frustrating hopes for fulfillment of the postulated benefits available to mankind from development of oceanic resources. It would also greatly impede applied research in nonextractive uses of the oceans such as meteorological research, which, for the immediate future, may be the most beneficial of all efforts.

#### RECOMMENDED COURSES OF ACTION

NACOA recommends means by which the United States may exert leadership based on its acknowledged advanced capabilities in oceanic technology. The 1958 Conference was successful largely because of the United States and the technical support that could be brought to bear on the deliberations. The generally formal, legalistic approach that has been followed in the last several years seems to be moving too slowly. If progress is to be made, we must change our approach by recognizing the obstacles to progress in negotiations and by altering our procedures accordingly. *Our principal recommendation is to engage other countries, particularly the developing nations, in as many joint projects with the United States as possible and in as great a variety as reasonable.* This engagement should be primarily at the technical level with the full cooperation of the involved government. Some of the harsher realities of oceanic research and development will be more widely understood and there will be improved ability to interpret the findings of others. This should go far toward allaying suspicions of unilateral exploitation. Or, from a different point of view, this should give the developing nations a better technical base to protect themselves in economic negotiations.

It happens that numerous U.S. programs exist at various levels of activity which could be employed toward this end. Aside from the necessary strengthening of the individual programs, the programs should operate in a coordinated way with the ultimate purpose of developing a better worldwide understanding of ocean technology and the value of a management approach to oceanic resources.

1. A first and important step would be greatly strengthening the office, in the Department of State, of the Coordinator of Ocean Affairs and Special Assistant for Fisheries and Wildlife. This Office has been very effective with its limited means in handling many fisheries problems, and has been supportive of U.S. research programs around the world and in species protection, particularly mammals. The success of this Office is based on its expertise and the relationships it has established with its constituent community in the United States. The problems, however, are too varied and too numerous for the Office to handle within its present means. It is this Office that has demonstrated the usefulness of joint research in the international realm by arranging for cooperative fisheries research.

2. Other governmental agencies have not been as effectively or imaginatively used. For example, the Agency for International Development has almost entirely dropped its programs in the oceans due to budget pressures. This lack of coordination seems difficult to understand at a time when Law of the Sea problems involve so much intradepartmental effort up to the Under Secretary's level at the Department of State. We recommend a vigorous AID program in ocean science and technology. There are a number of such efforts by the Department of Agriculture, with one example being the USDA's Economic Research Service, set up to work with AID for the purpose of enhancing international development in areas related to agricultural matters. By analogy, a similar decision could be reached to focus certain developmental activities in areas related to marine matters by a cooperative Department of Commerce/AID program. NACOA suggests this might be most logically assigned to the Sea Grant Program within Commerce's NOAA.

Thus, a new candidate for international programs is the United States Sea Grant Program. By analogy with our Land Grant Program it offers great

promise. One of the great contributions of the Land Grant Program to the common welfare has been that of American agricultural technology, and the key element has been the educational contribution of our great agricultural colleges and universities. Their dedicated students are to be found in the most remote corners of the world. They have been instrumental in helping feed the world's billions by introducing new agricultural and land management practices. We cannot properly compare the fledgling Sea Grant Program of the Department of Commerce with the Land Grant Program activity developed over the past century, but the potential is there. One possibility has already been noted. The Sea Grant Program could be made even more valuable than at present by introducing an exchange program for foreign students, particularly from the developing countries.

3. It was hoped that the International Oceanographic Commission (IOC) could serve as an important exchange mechanism between governments and during the period between important diplomatic conferences. It has been a major disappointment. For many nations it has become rather a political forum. A re-examination of the role of the IOC would be very much in order, looking to the possibility of having experts named as representatives rather than political delegates. If a major reconstruction takes place as a result of this review, it would be desirable to consider consolidating the oceanic and atmospheric interests.

4. Among the various U.S. programs the most useful could be the International Decade for Ocean Exploration (IDOE) of the National Science Foundation. It was originally intended to be a major international effort but has fallen far short of the intent. Its various current activities, such as GEOSECS (Geochemical Ocean Sections), the ocean buoy efforts, the midocean ridge studies, and the upwelling studies are very suitable candidates for massive international cooperation. Greater international participation at a higher level in these programs should be developed by more vigorous diplomatic activity, accelerated support to allow for more and a greater variety of projects, with funds specifically allocated for the support of cooperating developing countries. We note the important contributions of the IDOE to the oceanic pollution problem.

5. The National Marine Fisheries Service (NMFS) can play a vital role in exchanges with foreign governments—indeed they already do to a considerable degree—but this activity could be greatly enhanced, again with the motive of a mutual learning effort among nations. The NMFS is the basic support instrument for all of our activities related to biological resources. The NMFS should be strengthened to enable it to meet the increased demand for its services to related Law of the Sea activities, sea mammal protection, and additional fisheries conservation activities. The best support for a rational international program is a well-promulgated and sound scientific position—which is not presently available for many important issues.

6. There are military-related aspects apart from those of straight national defense requirements, and those warrant the most careful consideration. Within the United States, in addition to various academic institutions and civilian branches of the Federal Government, the military branches—most notably the U.S. Navy—conduct considerable amounts of scientific research. Such research is intended to contribute to better understanding of natural phenomena. This is largely open research, it is not classified in nature. Outside the United States, particularly in a number of Latin American nations, much if not all of the oceanographic research is conducted by the navies, even research that would in the United States be conducted by civilian organizations. This suggests an important role for the U.S. Navy in extending its current relationships with these navies to include the exchange of research programs and techniques.

7. The National Oceanic and Atmospheric Administration's National Data Buoy Program and all the programs in general involving air-sea interaction, such as NORPAX and GATE, are extremely appropriate for intense international cooperation. There are immediate possible benefits for the participating countries regardless of a country's current level of research effort or sophistication, since many measurements of widely varying complexity are required. There are also appreciable cost savings for the individual countries. These programs can all use more support, particularly for those aspects which are directly related to international cooperation. Particular support is required to enable close contact between technical people at the working level.

8. Beyond these there are individual programs of sufficient magnitude and worldwide scope that they could carry important international involvements. The Deep Sea Drilling Project is a good example. It is also the unique tool now

available for divining the potential resources beneath the deep ocean floor. The results of the research are now widely and voluminously disseminated. Greater international participation would help dispel the sense of inadequate knowledge that motivates the developing countries and builds pressures for increasing restrictions or widened territorial waters.

In summation, we do not underestimate the difficulties facing the negotiators who have to operate in a forum of representatives with widely varying backgrounds in technical development and varying nationalistic attitudes. It is as a result of our experience with these difficulties that we make our recommendations to engage other countries in suitable mutual efforts in the hope that a different and more positive approach may result which is aimed specifically at the sources of the difficulties.

## APPENDIX F

### COMMENTS ON U.S. OCEAN POLICY AND THE INTERNATIONAL LAW OF THE SEA NEGOTIATIONS

(By H. Gary Knight \*, Campanile Charities Professor of Marine Resources Law  
Louisiana State University Law Center, October 16, 1972)

#### I. INTRODUCTION

In these comments I would like to (1) define what I feel to be the most important long range objectives of United States oceans policy, (2) comment specifically upon some aspects of the United States proposals of August, 1970, and August, 1971, and subsequent comments thereon relating to military, petroleum, hard minerals, and fisheries interests, which I believe weaken the chances for achieving this objective, and (3) to recommend some courses of action which I believe would assist in securing this objective.

Before turning to criticism, however, I would like to observe that in general the policies embodied in the proposals submitted to date by the United States delegation to the United Nations Seabed Committee are good and desirable, particularly the "Draft United Nations Convention on the International Seabed Area" ("Draft Convention"). The members of the Inter-Agency Law of the Sea Task Force, and especially its chairman, Hon. John R. Stevenson, are highly knowledgeable individuals who are deeply concerned with both the National interest in the oceans and the broader international community perspective. If I were to be forced into a "go" or "no-go" decision on United States oceans policy as it is presently being developed by the Executive branch, I would have to say "go." Fortunately, no such decision is required, and both Congress and the private sector can in good faith suggest modifications in or additions to our oceans policy without suggesting that what has already been done is without merit. It is in this spirit that I address what I believe to be some defects in current proposals and attitudes of special interest groups.

#### II. LONG RANGE OBJECTIVES OF UNITED STATES OCEANS POLICY

There are a number of explicit objectives in our National oceans policy as it is presently being developed. Among the more important are: (1) the preservation of national security, (2) the development of food and energy resources from the ocean, (3) the granting of assistance to developing nations, (4) the protection of the marine environment, and (5) the establishment of an international regime and machinery to govern activities undertaken in the ocean beyond the limits of national jurisdiction. The necessity for the first four can hardly be argued—ocean resource development systems must not be permitted to unreasonably

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These comments are made in the author's individual capacity only, based on independent research and analysis, and do not include anything learned exclusively in connection with service on the Advisory Committee on the Law of the Sea, nor do they necessarily represent the views of the Administration on any of the matters discussed.

imperil national security; there exists an urgent need for additional food and energy resources; economic aid to less developed countries is a long standing National policy; and avoiding irreparable damage to the environment has strong National support. Less agreement can be reached on the fifth objective.

It is my personal view that one of the most beneficial long term goals of current ocean policy initiatives might well be the establishment of a workable system of international cooperation in the use of the oceans which besides its inherent value, might ultimately be the basis for a new world political organization or for reorganization of the political agencies of the United Nations.

As the most realize, the task of developing a system of international political cooperation or a system of resource/revenue sharing is made extremely difficult by the existence of vested interests in the existing political or economic order. Nations in the main are reluctant to relinquish aspects of their political or economic sovereignty which would be necessary for effective international government or resource management. Nations are equally reluctant to part with resources or revenues in which they have a present vested interest—fear of the “great give-away” dictates that meaningful international political and economic cooperation is problematical.

The beauty of the ocean environment in this respect is that there are few if any vested interests in the area or its resources at present. Absolute territorial sovereignty can probably be limited to twelve miles from the coast; vested interests in non-living resources of the seabed and subsoil do not extend beyond the 200 meter isobath at present; and beyond relatively narrow exclusive fishing zones, the living resources of the sea are the property of no one until reduced to possession. Thus, rather than giving up anything they already possess, nations would be able to develop cooperatively a new regime to govern activities taking place in the ocean without running the risk of domestic repercussions from dealing away vested economic or political rights.

Unfortunately, in my view, there are forces at work—from the private sector and from within government—to lessen the possibility of reaching agreement on a meaningful international regime for the oceans. It is to these forces that I shall address the bulk of my comments.

### III. ASPECTS OF CURRENT U. S. OCEANS POLICY WHICH MAY BE DETRIMENTAL TO THE ACHIEVEMENT OF INTERNATIONAL OCEANS ORGANIZATION

The United States oceans proposals of August, 1970, and August, 1971, are essentially compromises among the several users of the marine environment—military, petroleum, hard minerals, fisheries, scientific research, transportation, and environmental protection, among others. Accommodation of the desires of some of these interests has, in my opinion, restricted the possibility of achieving a meaningful international organization to govern the use of the ocean. Additionally, many less developed countries are also contributing to this end by supporting the concept of an “economic resource zone” extending 200 miles from the coast in which the coastal state would have exclusive or preferential rights to exploit living and non-living resources. Unfortunately the United States, at the July–August, 1972, meeting of the Seabed Committee, indicated its willingness to go along with the economic resource zone concept, provided that several “international” elements would be incorporated in the concept.

If the United States and other technologically advanced nations were to take bold steps in the direction of support for an international regime and machinery having jurisdiction over resource rich areas of the continental margins, this adverse trend might be attenuated.

I shall limit my criticisms to four interest groups: military, petroleum, hard minerals, and fisheries.

#### A. Military

The interests of the Department of Defense (“DOD”) in the law of the sea lie in two main areas: (1) naval mobility, which can be subdivided between the needs of the *Polaris/Poseidon* submarine fleet and more traditional naval operations, and (2) the right to implant anti-submarine warfare (“ASW”) tracking and detection devices on the seabed. These interests can be briefly summarized as follows:

1. *The Polaris Nuclear Strike Force.*—The *Polaris/Poseidon* system is the linchpin of our second strike nuclear capability which is in turn the key element in our current nuclear deterrent philosophy. The objective is to render undetectable, and therefore undestroyable, the submerged *Polaris/Poseidon* fleet. In order

to maximize undetectability this fleet requires maximum possible mobility. This in turn dictates the narrowest possible belt of maritime territorial sovereignty. It is clear, however, that the worldwide trend is away from the traditional three mile breadth for the territorial sea and toward a 12 mile breadth, or more. As an inhibiting factor on general mobility, the expansion from three to twelve miles is relatively insignificant. The importance of the expansion is that a substantial number of straits which now contain areas of high seas by virtue of a three mile limit would become entirely territorial waters. Under the provisions of the Convention on the Territorial Sea and the Contiguous Zone, submarines are required to navigate on the surface and show their flag when navigating within territorial waters. This means that although Polaris submarines may now legally pass through straits such as Gibraltar in a submerged state, expansion of the territorial sea to twelve miles would, without other change in the existing law of passage, require them to surface and show their flag when making the same passage. Accordingly, DOD sees as necessary the implementation of a system of "free transit" through international straits, including the right of overflight and submerged passage (for purposes of transit only), and without control or conditions imposed by the coastal state.

2. *Intelligence Operations and Traditional Naval Maneuvers.*—Obviously, intelligence gathering vessels would prefer the narrowest possible territorial sea, for there is a marked increase in the resolution of electronically and visually gathered data as one moves closer to the source being investigated (of course, a narrow territorial sea also makes more vulnerable to "enemy" surveillance one's own shore based security installations). Further, traditional uses of naval power, including "gunboat diplomacy" maneuvers, also dictate the narrowest possible territorial sea. Finally, any restrictions which might be placed on surface warships under a subjective interpretation by the coastal state of the standard of "innocent" passage under present law (which would be applicable to an increased number of straits if the territorial sea were expanded from three to twelve miles) might hamper traditional naval mobility. Thus, on the basis of these interests as well as the Polaris situation, the military establishment is interested in a relatively narrow territorial sea and a system of "free transit" through international straits.

3. *ASW Tracking and Detection Devices.*—A concomitant of the Polaris/Poseidon Fleet's operations is the necessity for tracking and detecting their counterparts from the Soviet Union or other potentially hostile nations. The desired objective here, of course, is that the seabed and subsoil beyond a reasonably narrow zone be open for the implantation of ASW tracking and detection devices. Although recognizing the obvious need for coastal state or international community jurisdiction over the exploitation of the resources of the seabed and the subsoil, the regime desired by DOD would leave open to use by all states "other" seabed activities, presumably including the right to deploy such ASW devices.

Examining the 1970-71 United States law of the sea proposals, it is not surprising to find that *all* of the needs of the military establishment have been met to the fullest possible degree. The requirements of a relatively narrow territorial sea and free transit through straits are met through the proposed Articles I and II submitted to the United Nations Seabed Committee at its August, 1971 meeting. Articles I and II provide in essence for a twelve mile territorial sea and a system of free transit through straits constituting "the same freedom of navigation and overflight, for the purpose of transit through and over [international] straits, as [is permitted] on the high seas."

With respect to the military interests in maintaining freedom to implant ASW tracking and detection devices on the seabed, one finds satisfaction of this need in the Draft Convention. That proposal would limit the exercise of *exclusive* coastal state jurisdiction for other than mineral exploitation purposes to the 12 mile limit, since under both the Convention on the Continental Shelf (which presumably would remain applicable to the 200 meter isobath) and the Draft Convention (including the International Trusteeship Area), exclusivity is permitted *only* with respect to the exploitation of seabed resources and would not, therefore, act as a bar to "inclusive" other uses. The basis for this interpretation is Article 3 of the Draft Convention which provides that "[t]he International Seabed Area shall be open to use by all States, without discrimination, except as otherwise provided in this Convention." The Draft Convention provides "otherwise" only with respect to exploration and exploitation of certain natural resources, presumably leaving all other uses to be covered by the "open to use by all States" proviso of Article 3.

4. *Analysis.*—With respect to the desire for an “international” regime in order to avoid extensions of national jurisdiction which might (a) prejudice the ASW tracking and detection system, or (b) limit freedom of navigation beyond 12 miles, I have no essential quarrel, except to note that (a) it consists in doing the right thing for the wrong reason, and (b) it is based on the validity of the concept of “creeping jurisdiction” for which I find little evidentiary support. I do dispute, however, the necessity for the substance and strategy involved in the straits transit proposal (Article II).

In his August 3, 1971, speech before the Seabed Committee Mr. Stevenson stated that the United States Government “would be unable to conceive of a successful Law of the Sea Conference that did not accommodate the objectives of these Articles [I and II].” Such a statement indicates a present intention on the part of the United States to treat the Article II objectives as non-negotiable. This position was reasserted at both 1972 meetings of the Seabed Committee. Non-negotiable status ought to be reserved for National needs of the highest priority, and it seems to be the proposal for free submerged passage which is regarded as so critically important by this Nation’s negotiating team. A brief analysis of the necessity for submerged passage through international straits is therefore in order.<sup>1</sup>

If the Soviet Union has a sophisticated ASW tracking and detection system operative in key straits, then the object of non-detection will not be secured by free submerged passage through such straits. It follows that there is no necessity for free submerged passage unless there are reasons other than non-detection to justify it.

If the Soviet Union does not have such a detection system already, the probability of their developing one in the near future seems relatively high. Even assuming that the law of the sea conference is held in 1973 (and it seems much more likely that the conference actually will begin in 1974) the dates of 1978 to 1980 would seem to be the earliest possible time before which any treaty providing for free transit through straits could enter into force. With regard to states which do not become parties to such a convention, substantial additional time will be necessary for the principle to ripen into one of customary international law and, indeed, it might never come about at all because of the possibility of competing practice being maintained by a significant number of states continuing to recognize the concept of innocent passage. Given these time lags, it seems likely that the Soviet Union would possess a sophisticated detection system by the time such an agreement could be effective. If this assumption is correct then the same conclusion reached above follows.

Another argument against the utility of free submerged passage through straits is the probability that the first stage of an Undersea Long-Range Missile System (“ULMS”) soon will be operational for the United States. ULMS greatly reduces reliance on mobility since the launch position does not need to be as near to the shore as required by the present Polaris class submarines. The ULMS system also probably will be operative prior to the time that any such treaty provision could come into force, and, if this is true, insistence upon submerged passage through straits would seem to be of little value. Furthermore, given a 2,500 mile range for Poseidon C-3 missiles, straits passage could be avoided entirely, and only Gibraltar, Bab el Mandeb, and Hormuz would be required for access to the *entire* area around the Soviet Union circumscribed by the 2,500 mile range radius.

Even if these arguments were not compelling there is the further consideration that detection of passage through straits will not destroy the effectiveness of the Polaris/Poseidon second strike capability; to do so would require the capacity to destroy the submarines before they could launch a second strike. Accordingly, only knowledge of the location of the submarine at a time of initial attack is critical, and not merely its general location (which is all that could be determined by observing its passage through a strait). In any event, if our Polaris/Poseidon submarines are equipped with inertial guidance systems such that the launch of a second strike can be effected at any instant, location for purposes of destruction is virtually impossible. However, even if such systems are not in operation or are ineffective, the preordained launch positions are a matter of national secu-

<sup>1</sup>I am assuming in this analysis both non-detection and non-destruction of nuclear armed Polaris/Poseidon class submarines are key elements in the preservation of our second strike nuclear capability which is, in turn, the linchpin of the current deterrent to nuclear conflict. I am further assuming that detection is a *sine qua non* to destruction. Finally, I assume that our strategy is based essentially on confrontation with the Soviet Union.

riety and the mere detection of a submarine passing through a strait would not release such information.

Finally, and perhaps conclusively, the Soviet Union apparently is as much in favor of the Article II concept as is the United States. Because military planners in the Soviet Union surely would not support a proposal which, if adopted, would place their nation at a marked disadvantage, it is doubtful that any significant military advantage is being secured by the United States through Article II.

Based on these arguments I have difficulty concluding that there is a necessity to have the right of free submerged transit through straits. I therefore fail to see the justification for making the matter a non-negotiable issue.

The potential damage is twofold. First, if the community of nations rejects this non-negotiable demand, then theoretically the law of the sea conference cannot succeed, and all chances for international cooperation in the oceans will be lost. Second, by assigning non-negotiable status to the straits position, great concessions are probably going to have to be made in other areas—perhaps with respect to fisheries, scientific research, or even petroleum and hard minerals—which could impair the effectiveness of those operations. Neither result is desirable.

### B. Petroleum

The domestic petroleum industry desires extension of national jurisdiction to the edge of the continental margin for purposes of exploiting the non-living resources of the seabed and subsoil. The industry asserts that to renounce national jurisdiction beyond the 200 meter isobath is to "give away" national resources, and it argues further that it could not operate successfully under the regime proposed in the Draft Convention for the International Trusteeship Area because the international authority would have unspecified residual powers. I disagree with these assertions.

1. *The "Draft Convention" Poses No "Give-Away" Threat.*—I contend that there are no present vested rights in non-living resources of the seabed and subsoil beyond the 200 meter isobath which would subject to "renunciation" by the Draft Convention. The Convention on the Continental Shelf, to which the United States is a party, defines the portion of seabed and subsoil in which contracting states have exclusive natural resource exploitation rights as extending to the 200 meter isobath "or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of said areas." Since no commercial production of non-living resources exists at present beyond the 200 meter isobath, and since the mere granting of exploration permits alone could not conceivably meet the "exploitability" criterion of the Convention, no interest in seabed resources beyond the 200 meter isobath has as yet vested in any state party to the Convention, including the United States. At best such interest is an inchoate right, in the nature of an inheritance, to vest on occurrence of a condition. Thus the United States, in agreeing to the regime proposed in the Draft Convention, would simply be exchanging an inchoate right for a definite, present interest and could in no sense be said to be "giving away" a *vested* National resource.

The decision of the International Court of Justice in the North Sea Continental Shelf Cases is often cited as authority for the proposition that a coastal state's interest in seabed resources extends *at present* to the edge of the continental margin. The court there stated:

[T]he most fundamental of all the rules of law relating to the continental shelf . . . [is] that the rights of the coastal State in respect to the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exists ipso facto and ab initio by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources.

The argument based on that decision is untenable for two reasons: (1) the cited statement is *dicta* since the issue before the Court was not the seaward extent of the continental shelf but rather the determination of principles applicable to the delimitation of *lateral* shelf boundaries between adjacent states; and (2) the proposition is stated to be a rule of customary international law which may be modified by international agreement, an event which has in fact happened in the form of the Convention on the Continental Shelf.

The I.C.J. decision being therefore inapplicable to the United States in this situation, one must conclude that this Nation, as a party to the Convention on the

Continental Shelf has no present vested national interest in the natural resources of the seabed and subsoil beyond the 200 meter isobath. Further, the inchoate rights which the United States now possesses beyond the 200 meter isobath would be exchanged, under the Draft Convention provisions, for exclusive administrative rights over exploitation of seabed resources out to the edge of the continental margin, a *net gain* in jurisdictional terms.

2. *The Regime of the "International Trusteeship Area" is Not Incompatible with Petroleum Industry Operations.*—Although the Draft Convention calls for a renunciation of national jurisdiction beyond the 200 meter isobath, the document gives back to the coastal state special jurisdictional rights with respect to the exploration for and exploration of nonliving resources of the seabed and subsoil in the area between 200 meters and the edge of the continental margin. The rights thus obtained by the coastal state permit it to determine if, where, when, how, what, and by whom the resources shall be developed. This wide discretionary power is spelled out in detail in Appendix C to the Draft Convention. Residual rights would, however, be retained by the international authority. These residual powers would include the power to establish rules to avoid conflicts of use, to protect the ocean from pollution, to assure the integrity of the investment necessary for exploitation, and to provide for peaceful and compulsory settlement of disputes, as well as other powers not exclusively delegated to the coastal state in its trusteeship capacity.

Clearly, the petroleum industry has sufficient guaranty under this system of administration by the coastal state to ensure security of investment for its operations. The fear of abuse of residual powers by the international agency is unwarranted in my view. The industry now operates on the United States continental shelf under regulations concerning erection of offshore structures and protection of the marine environment which are equally subject to uncertainty and abuse, yet this has not affected the willingness of petroleum companies to continue offshore exploration and development. To give but one example, operators under the Outer Continental Shelf Lands Act now erect structures on the continental shelf off the coast of the United States under permits which *revocable at the will of the Secretary of the Army*. It is difficult to think of a more uncertain and unknown residual power than that condition in all permits for structures in navigable waters of the United States issued by the U.S. Army Corps of Engineers.

Accordingly, it seems to me that the fear evidenced is not of the uncertainty attending reservation of residual powers, but the fact that they would be internationally administered. This, however, is part of the price we must be prepared to pay if we are to secure the objective described earlier.

The damage to the potential for international control of ocean uses from adoption of the petroleum industry viewpoint hardly needs articulation—if national jurisdiction were extended to the edge of the continental margin, there would be no resources of any near term economic significance under international jurisdiction. Without a meaningful economic constituency, such an international regime and machinery would have little impact on international relations.

### *C. Hard Minerals*

The only point of disagreement which I have with the hard mineral industry position on current law of the sea negotiations is one of timing. There has been introduced in both houses of Congress the "Deep Seabed Hard Mineral Resources Act" (S. 2801; H.R. 13904) which would establish a system of "flag nation" jurisdiction over hard mineral mining activities on the seabed beyond the limits of national jurisdiction. The Act envisions parallel legislation in other technologically advanced states.

This Nation is currently involved in complex negotiations on the law of the sea leading to the Third United Nations Conference on the Law of the Sea to be held in 1973 or 1974. It is from this Conference that an international regime for the ocean, if one is to exist, will evolve. If, however, the "Deep Seabed Hard Mineral Resources Act" becomes the law of this Nation, then an international regime for the area beyond the limits of national jurisdiction will be precluded, for the "flag nation" approach will have been imposed on the area by those with the technology to mine deep seabed minerals.

It seems to me that we ought to give the current international negotiations a chance to fail before we opt for alternative systems. If, indeed, the negotiations do fail to establish an international regime and machinery, then S. 2801 might well be the most appropriate vehicle for development of deep seabed

hard minerals. But pending such a failure, enactment of S. 2801 can only precipitate expansion of claims to national jurisdiction in the ocean, for the developing nations are likely to view this (in spite of the revenue sharing provision in the Act) as a "grab" by technologically advanced nations and respond in kind with 200 mile resource zone claims, thus sealing off once and for all the possibility of international control over ocean uses.

#### D. Fisheries

The fourth factor tending toward nationalistic solutions to ocean resource development problems is the domestic fisheries industry and its associated government agencies (principally the National Marine Fisheries Service, with the Department of Commerce and the Office of the Special Assistant to the Secretary for Fisheries and Wildlife, within the Department of State). In Article III, submitted by the United States Government to the United Nations Seabed Committee in August, 1971, a fisheries regime was proposed which, although allowing for some regional and international cooperative efforts, nonetheless gives the coastal state a "preferential" right to all the fish it can catch in the ocean adjacent to its coast. Stocks are to be managed on a species basis, however, rather than on the basis of a zone of some fixed distance from the coast.

Except for the tuna industry (and, to a lesser extent, a portion of the shrimp industry), domestic fishermen are vociferous in their demand for a 200 mile exclusive fishing zone for this and other nations. Their objective is to protect themselves from the competition of foreign fishing fleets. The United States Government is moving steadily toward accommodation of this demand. At the March, 1972, meeting of the United Nations Seabed Committee, Ambassador Donald L. McKernan indicated a willingness on the part of the United States to move toward an even more nationalistic solution to the fisheries problem than posed in Article III. On March 29, he said, among other things:

Within the framework of the species approach, and in respect to two types of fish stocks, coastal and anadromous, *we are prepared to consider a greater role for coastal States. . . .*

[W]e are ready to consider whether responsibility for conservation and management of coastal and anadromous species could rest *primarily with the coastal State*, subject to agreed international standards and reviews. . . .

Specifically, we are prepared to consider *whether clear regulatory authority could be vested in the coastal State* with respect to coastal species adjacent to the state's coast and anadromous species throughout their migratory range on the high seas. . . .

Effective management and conservation . . . may be provided *by granting coastal States clear and effective control over all such species*, in the context of protecting other uses of the high seas. (Emphasis added.)

At the July-August, 1972, Seabed Committee Meeting, Mr. Stevenson went even further in stating that:

We can accept virtually complete coastal State resource management jurisdiction over resources in adjacent seabed areas if this jurisdiction is subject to international treaty limitations in five respects [conflict of uses; pollution prevention; integrity of investment; revenue sharing; and compulsory dispute settlement].

Clearly, these statements propose a highly nationalistic solution to fisheries problems.

The damage for international cooperation through such an approach is obvious—if there are no fishery resources left for management by an international authority (except perhaps for whales and tuna), then such an authority is going to be a mere "token" just as it would be for non-living resources if national jurisdiction over the latter were extended to the edge of the continental margin.

#### IV. RECOMMENDATIONS

Based on the above comments, I recommend the following courses of action, all designed to achieve the objective of meaningful international cooperation in the oceans:

1. The Department of Defense should be called upon, in executive session if necessary, to explain to Congress the basis for Article II in terms of national security and to explain the basis for making Article II a non-negotiable element of United States oceans policy. If in fact either the objectives of Article II are deemed unnecessary, or, if necessary, not so vital as to deserve non-negotiable status, our oceans policy should be appropriately amended.

2. The United States should reassess its seabed and fisheries proposals and should begin to support the narrowest possible limit of exclusive national jurisdiction with respect to both living and non-living resources of the marine environment. It should strive to strengthen, not weaken, the role of the international regime and machinery in the area beyond a narrow band of national jurisdiction.

3. Congress should not *at this time* pass the "Deep Seabed Hard Mineral Resources Act," but should defer action thereon until after the conclusion of the Third United Nations Conference on the Law of the Sea.

THE LAW OF THE SEA INSTITUTE,  
UNIVERSITY OF RHODE ISLAND,  
*Kingston, R.I., November 3, 1972.*

HON. ERNEST F. HOLLINGS,

*Chairman of the Subcommittee on Oceans and Atmosphere, U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: Thank you for your letter of October 9, 1972 inviting me to submit material for inclusion in the record of your Subcommittee hearings on the law of the sea. The following comments, of course, represent only my own personal views.

In recent years three general myths have, I believe, developed with respect to the law of the sea. A first is that the world ocean is a relatively homogeneous physical body for which simple rules and regulations can be developed. Second there is the myth of conformity of interests among the world's developing states. Third is the mythical supremacy of the United States with respect to ocean affairs. I should like to comment briefly on each of these three topics.

The world ocean is a highly variegated geographic phenomenon, covering over 70 per cent of the earth's surface. Within the deep ocean basins there is great variation both in the potential productivity of the waters, and in the nature of the ocean floor and its mineral resources. The international law of the sea has made no provisions for control and use of the shallow areas of the oceans, including the multitude of seamounts, some of which come close to the water surface and are reportedly now being utilized, at least for certain military purposes. The presence of isolated mid-ocean rocks and islands raises the issue of how these anomalies should be treated when it comes to allocating areas of the seabed to national governments or to an international agency. The more we learn of the deep ocean the more the physical variations existing there become apparent.

In the marginal sectors of the world ocean geographic differences are even more complex. Here are found the continental margins; the offshore islands, island groups, and archipelagos; the bays, gulfs, and semi-enclosed seas, for which simple provisions for jurisdiction are generally inadequate. Although the 1958 Geneva Conventions contain a number of articles relating to these marginal areas, they failed to address such problems as the delimitation of baselines in the case of archipelagos, the nature of historic waters, and provisions for the special interests of countries uniquely dependent on the sea. A prevailing rationale here was that the complexities of these issues were too great for the delegates to handle adequately at that time, and that more study by experts was needed before the rules relating to these variations could be drawn up; unfortunately, little has been done since 1958 in terms of further study. And now we have new demands—for pollution abatement and control measures in offshore areas, for jurisdictional arrangements in the outer continental margin, and for accommodation of national and international interests with regard to fisheries exploitation beyond the limits of the territorial sea. Here again, physical variations in the nature of the areas and resources involved tend to make universal rules and regulations difficult to formulate. Yet little attention seems to have been paid in recent UN debates to the need to account for the details of physical and regional differences in the marine environment within the overall law of the sea context.

I should like next to address the question of the needs and interests of the developing states. Although definitions of the term "developing" may vary widely, there are in the world today about 120 countries whose per capita GNP is less than \$1,500. Here at least is one criterion (although perhaps not the best one) for differentiating between developed and developing. Each of these countries has its own particular national interests with regard to the law of the sea. Each of them is in a sense unique in terms of (1) access to the sea and its resources; (2) investment in marine-related activities; (3) dependence on the sea; and (4) perception of its needs and opportunities which may be met through the exploitation of the marine environment.

Twenty of the developing countries in the UN, for example, are land-locked; nine others are shelf-locked, meaning that their continental platform abuts directly on that of their neighbor's so that they have no continental slope or rise where future seabed minerals might be found. Some developing countries, such as the Republic of China (Taiwan), South Korea, and Cuba have invested heavily in fishing activities; many other coastal states have not. Iceland and the Faeroes are uniquely dependent on the sea for their economic existence; Peru is becoming progressively more dependent on fisheries. For at least half of the countries of the world (most of them developing) a 200-mile exclusive fisheries zone would have little effect, since the extent of ocean areas off their own coasts is either small or non-existent; for an almost equal number the extension of national limits to the outer edge of the continental margin would also be of little consequence. While Indonesia or Brazil might find extensive quantities of oil and gas on their continental margins—with resultant enrichment of the countries themselves—for many other states the only hope of realizing a portion of the sea's potential wealth is through some international arrangement. Under an international arrangement the revenues derived from resource exploitation beyond rather narrow national limits could be turned over to an international fund to be distributed, particularly among developing states. But for a developing country off whose coast there is at least some area of outer continental margin, the choice may be a difficult one—whether to opt for extending the limits of national jurisdiction seaward to include the continental slope and rise, and thus retain all future revenues derived from mineral exploitation there, or support international control of the outer margin, thereby sharing the revenues from minerals produced in this zone off other countries' coasts.

In addition to such geographic facts and possibilities is the question of perception by developing countries of their needs and interests. The unfortunate "politicizing" of much of the law of the sea debates has meant that some countries think more in terms of regional solidarity, of the widening gap between rich and poor countries, of their own non-ocean problems and conflicts, than they do of the real-world conditions in the marine environment. The question then presents itself, to what extent does this "politicizing" represent relatively fixed positions on the part of UN members, and to what extent is it for publicity only? When the time comes for voting at a Law of the Sea Conference will countries then make decisions on the basis of the geographic realities of their particular situation with respect to the sea?

The position of strength of the United States with respect to international law of the sea negotiations is challenged from two sources—our own oceanographic efforts relative to those of other countries; and the lack of support we receive for our positions in Seabed Committee meetings. With respect to the national ocean effort it is well known, for example, that our total commercial fisheries catch has remained relatively constant over the past few decades with the result that we have dropped from second to sixth place among the world's fishing countries. We are in fifth or sixth place in terms of our merchant marine tonnage, and according to many estimates our navy may soon drop to second place in the world. The national ocean budget, as defined by the Marine Science Council, increased by only \$234 million between 1967 and 1973, despite the Stratton Commission's recommendation that the annual incremental increase in the ocean budget between 1970 and 1975 be set at \$652 million. Clearly in terms of any efforts toward "supremacy" in ocean affairs, our national ocean effort is still considerably underfunded—a condition which seems destined to continue for some time.

Acquiring support for our positions at the UN is a difficult diplomatic task for which I, as a layman, would have little to offer in the way of advice. We should, I think, take a firm position on such matters as freedom of scientific research, pollution abatement and control in the oceans, and stronger international regulations with respect to shipping. But more important, perhaps, may be the need for our government to consider trade-offs, particularly those which may involve the oceans only peripherally, if at all. We tend to treat marine matters as isolated political and diplomatic issues; yet, if the United States really feels the law of the sea negotiations to be of national importance, and thus deserving of priority action, it is my belief that considerably more could be done to reinforce our representatives' position by suggesting other concessions the United States might be willing to make in such areas as large-scale technology transfer, or technical assistance. Too often, it seems to me, we are trying to maintain a dominant position in law of the sea matters without the necessary investment of resources and particularly priorities on the part of the U.S. Government which could make this position possible.

In summary I would suggest the following. We need to press for flexibility of international rules and regulations which take into account the physical differences existing in the world ocean. Where claims to special circumstances are made by foreign governments with reference to such situations as extremely irregular coastlines or continental margins, or the presence of offshore rocks, islands, and island groups, the U.S. Government should develop some criteria for deciding which claims are acceptable to it, and which are not. We must be prepared to respond effectively to unilateral actions by other governments concerning jurisdiction over these physical anomalies; a corollary to this is that our response need not always be negative.

Perhaps one thing we need is an advisory panel or commission of experts on these questions of accommodating physical differences in the world ocean, since reliance on conditions of "special circumstance" for offshore claims may become increasingly prevalent in the years ahead.

So far as the "developing countries" syndrome is concerned, probably the most effective direction in which the United States might move is in education. Some well-documented studies might be prepared which emphasize both the nature and importance to individual countries of their peculiar physical and economic relationships with the sea, as well as the impacts on their own situations which would result from the adoption of certain proposals, such as the 200-mile limit, or the extension of national control over resources to the outer edge of the continental margin. Such studies should be widely distributed among delegations, particularly those of the developing countries. At the same time U.S. diplomatic efforts should continue to focus on emphasizing the differences as well as similarities among national interests in the ocean, and in playing down the illusory commonality of developing states' positions.

Finally, improvement in the U.S. position with regard to law of the sea matters might come about (1) by a considerable increase in the level of funding and of development of certain elements of the national ocean program; (2) through emphasizing those aspects of ocean activities in which the United States is, or could be, particularly strong, such as pollution control and abatement, oceanographic research or global monitoring and prediction; and (3) by devising a strategy of trade-offs in law of the sea matters, whereby concessions can be made by our Government in order to win and maintain support from other countries for U.S. positions on such vital matters as scientific research or passage through straits, without necessarily weakening our stance on such other issues as fisheries, territorial breadth, or seabed minerals.

Sincerely yours,

LEWIS M. ALEXANDER,  
Director.

UNIVERSITY OF WASHINGTON,  
Seattle, Wash., October 25, 1972.

HON. ERNEST F. HOLLINGS,  
U.S. Senate,  
Washington, D.C.

DEAR SENATOR HOLLINGS: I have your letter of October 9 inviting me to submit timely and appropriate material for the Committee's record on the subject of the law of the sea. The following comments are submitted as my personal views and do not pertain to or derive from any position or affiliation I have now or in the past.

One of the concerns most often expressed by developing states in the discussions of the Seabed Committee over the past few years is over the prospect that the benefits of ocean resource development will flow more to the rich states than to the poor states. They identify part of the reason for this as the general lack of scientific and technical training and equipment in the vast majority of the developing states. Although this lack may not be wholly or even mainly responsible for the dilemma the developing states confront in improving their lot, it undoubtedly is a contributing factor and over time will become an increasingly significant factor. Certainly it is an important U.S. policy to provide assistance to developing states to meet this problem wherever it is important. President Nixon noted only two years ago in his foreign policy statement to the Congress:

"In an era when man possesses the power both to explore the heavens and desolate the earth, science and technology must be marshalled and shared in the cause of peaceful progress, whatever the political differences among nations. In numerous and varied fields—the peaceful use of atomic energy, the exploration and use of outer space, the development of the resources of the ocean and the

*seabeds*, the protection of our environment, the uses of satellites, the development of revolutionary transportation systems—we are working with others to channel the benefits of technological progress to the benefit of mankind.” (Emphasis added.)

This high-level expression of U.S. intentions has recently been supplemented by a statement specifically concerning our intentions to provide assistance to states interested in ocean resource development. At the July–August, 1972, meeting of the Seabed Committee in Geneva Ambassador McKernan stated as follows before Subcommittee III:

“ \* \* \* There have been numerous statements before this Committee that indicate the need and the desire of many developing states to build or to strengthen capabilities in marine science and technology. The United States shares this concern and believes that effective action should be taken on an urgent basis to cooperate with those states who are developing their expertise in marine science and their capability to use and develop marine resources. We would note in this connection that the IOC has been involved with this task for a long time, and that the General Assembly specifically requested the IOC to intensify its efforts in this field (Resolution 2467 (XXIII December 1968)). We recognize that the transfer of scientific skills and technology is not easy. Although the US and other nations have made significant contributions in the past, we are aware that these efforts have not been uniformly successful. The United States delegation hopes that interested delegations would suggest alternative principles and institutions that might be necessary or desirable to make substantial improvement in the efforts now underway in technical assistance in this field of marine science education and technology transfer. Concrete proposals for making progress in this endeavor are urgently needed. We solicit them and hope that by acting together we can identify steps that could be taken to move ahead in this matter.

“In this connection the U.S. wishes to indicate its willingness, in principle, to commit funds to support multilateral efforts in all appropriate international agencies with a view towards creating and enlarging the ability of developing states to interpret and use scientific data for their economic benefit and other purposes; to augment their expertise in the field of marine science research; and to have available scientific research equipment including the capability to maintain and to use it. We emphasize that this commitment is in addition to efforts by the International Seabed Resource Authority when it gains the financial capacity to devote funds to the same purpose.”

This statement by Ambassador McKernan expressing a U.S. “willingness, in principle, to commit funds . . .” is important for a number of reasons. First, this particular form of international cooperation, the consequential support of multilateral assistance efforts, is basic to the desire of the U.S. and many other states to create sound and equitable laws for activities on the oceans of the world. Second, it appears to signal a new emphasis on U.S. support for marine-related assistance efforts, at least in multilateral agencies. Third, it hopefully will trigger concrete and specifically focussed multilateral efforts to devise new or improved programs and institutions to carry out this important work.

It appears to me that the Congress has an important role to play in formulating and implementing U.S. policies in this area. For one thing the scope of the statutory authority of various agencies to engage in technical assistance work may need supplementing in some instances and, in others, more concrete specification. Inquiry into this potential problem may be useful. A second point is reasonably obvious: there may well be a need for increased funding for imaginative new programs in technical assistance oriented to the scientific investigation and ultimate development of the ocean. Third, there is a need for some creative law-making aimed at encouraging a broader international perspective or outlook among U.S. institutions, public and private. One possibility in this connection that has sometimes been mentioned is amendment of the Sea Grant Act (accompanied certainly by augmentation of the useful, but still meager, funds now devoted to Sea Grant activities) to put this program explicitly into activities on the international level.

I hope the above comments are pertinent to the Committee's concerns about law of the sea matters. It is worth emphasis that improved U.S. assistance programs in the marine area are worthwhile irrespective of any relevance they may have for the law of the sea.

Sincerely,

WILLIAM T. BURKE,  
*Professor of Law.*

**BRIDGING THE GAP TO INTERNATIONAL  
FISHERIES AGREEMENT: A GUIDE  
FOR UNILATERAL ACTION**

**JON. L. JACOBSON**

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# Bridging the Gap to International Fisheries Agreement: A Guide for Unilateral Action

JON. L. JACOBSON\*

## I. INTRODUCTION

This article begins with a basic assumption: That between now and the time of workable international fisheries agreement, at least a few coastal nations<sup>1</sup> will take unilateral action in the seas beyond their presently claimed areas of fishery jurisdiction, ostensibly for the sake of conserving valuable food resources endangered by overfishing (or perhaps in some cases, pollution). Indeed, unilateral fisheries-protective action has of course already been taken by several countries (including the United States),<sup>2</sup>

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1. The word "nation" will be used throughout this article in place of the more traditional word "state."

2. Exclusive Fisheries Zone Act (1966), 16 U.S.C. §§ 1091-94 (1970). For claims of other nations, see generally Bureau of Intelligence and Research, U.S. Dep't of State, National Claims to Maritime Jurisdictions (International Boundary Study, Series A, Limits in the Seas No. 36, 1972) [hereinafter cited as National Claims to Maritime Jurisdictions].

and further extensions are presently being contemplated by several nations (including the United States).<sup>3</sup>

If this initial assumption is correct—and I believe it is—it might further be assumed that the predicted extensions of fisheries jurisdiction will have to be counted as additional steps toward a division of the world ocean into “national lakes.” Certainly there are many recent extensions of national ocean jurisdictions, unilaterally proclaimed and otherwise, that must be so characterized: the Truman Proclamation (the Great Precedent for the following),<sup>4</sup> the Latin American 200-mile claims,<sup>5</sup> the Convention on the Continental Shelf,<sup>6</sup> extra-territorial exclusive fishing zones,<sup>7</sup>

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3. While this article was being written, Iceland announced that it plans to enforce a 50-mile exclusive fishing zone and a 100-mile pollution zone beginning in the fall of 1972. *Seattle Times*, Dec. 16, 1971, § G, at 8. Many developing nations are making similar proposals. NATIONAL FISHERMAN, Feb. 1972, § A, at 3, 27. Proposals are continually being made in the United States Congress for extension of the United States exclusive fishing zone. For example, in the 92nd Cong., 1st Sess., H.R. 627 was introduced to extend United States fishing jurisdiction to at least 50 miles and H.R. 628 and H.R. 1675 were introduced to extend the fishing zone to 200 miles offshore.

4. Presidential Proclamation No. 2667, Policy of the United States With Respect to the Natural Resources of the Subsoil and Seabed of the Continental Shelf (1945); 3 C.F.R. § 67 (1943-48 comp.) [hereinafter cited as Truman Proclamation on the Continental Shelf].

5. Argentina claims a 200-mile territorial sea, Decree Law 17,094 (Jan. 4, 1967); Brazil claims a 200-mile territorial sea, Decree 1098 (Mar. 25, 1970); Chile claims a 200 mile territorial sea, Supreme Resolution No. 179 (Apr. 11, 1953); Costa Rica claims a 200-mile fisheries conservation zone, Decree Law No. 739 (Oct. 4, 1949), Decree Law No. 74 (Oct. 4, 1949); Ecuador claims a 200-mile territorial sea, Executive Accord (Nov. 10, 1966), Decree Law 1542 (Nov. 11, 1966); El Salvador claims a 200-mile territorial sea, Constitution Art. 7 (Sept. 14, 1950); Guinea claims a 130-mile territorial sea, Decree No. 224 (June 3, 1964); Nicaragua claims a 200-mile exclusive fishing zone, Executive Decree 1-L (Apr. 5, 1965); Panama claims a territorial sea of 200 miles, Law No. 31 (Feb. 2, 1967); Peru claims exclusive fishing jurisdiction to 200 miles, Executive Decree (Aug. 1, 1947); Uruguay claims a 200-mile territorial sea, Decree (May 12, 1969), Decree (Dec. 13, 1969). National Claims to Maritime Jurisdictions, *supra* note 2; See generally Lecuona, *The Ecuador Fisheries Dispute*, 2 J. MARITIME L. & COMM. 91 (1970); Loring, *The United States—Peruvian Fisheries Dispute*, 23 STAN. L. REV. 391 (1971).

6. United Nations Conference on the Law of the Sea; Convention on the Continental Shelf, Apr. 29, 1958, [1964] 15 U.S.T. 471, T.I.A.S. No. 5578, 499 U.N.T.S. 311 (*in force* June 10, 1964) [hereinafter cited as Convention on the Continental Shelf].

7. See, for example, the extra-territorial fishing zones claimed by the United States: Exclusive Fishing Zone Act (1966), 16 U.S.C. §§ 1091-94

the Canadian anti-pollution legislation,<sup>8</sup> etc. All purport to be permanent extensions of exclusive national authority, delimited by geographical boundaries, and thus contribute to the creeping disintegration of an important area of the earth's surface that might otherwise, if given time, be set aside as the "common heritage of mankind."<sup>9</sup>

It is therefore unfortunate that the almost inevitable delay in reaching international agreement on matters of substance, coupled with the technology-threat of overfishing, will probably soon compel some nations to extend themselves further into the sea. However, as the following discussion is supposed to demonstrate, unilateral fishery-protection action beyond present limits of jurisdiction need not be characterized as a step toward national lakes or as a precedent for jurisdictional extensions which can be characterized as such.

The proposition advanced in this article is undoubtedly an oversimplification. It could even be unworkable. Yet it is, I think, something that needs to be considered as we approach the scheduled time for the 1973 Conference on the Law of the Sea.<sup>10</sup> The proposition is this:

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(1970); the United Kingdom: Fishery Limits Act of 1964, 12 & 13 Eliz. 2, c. 72, at 1181; Australia: Fisheries Act 1967, Commonwealth Acts, No. 116, at 853 (1967). See generally National Claims to Maritime Jurisdictions, *supra* note 2.

8. Arctic Waters Pollution Prevention Act, 18-19 Eliz. 2, c. 47 (Can. (1970) [hereinafter cited as Canadian Pollution Prevention Act]. For a good discussion of the Act, see Bilder, *The Canadian Arctic Waters Pollution Prevention Act: New Stresses on the Law of the Sea*, 69 MICH. L. REV. 1 (1970). See also Green, *International Law and Canada's Anti-Pollution Legislation*, 50 ORE. L. REV. 462 (1971).

9. See E. Borgese, *The Ocean Regime—A Suggested Statute for the Peaceful Uses of the High Seas and the Sea Bed Beyond the Limits of National Jurisdiction* (Center for the Study of Democratic Institutions Occasional Paper No. 5, 1968); Nixon, *U.S. Policy for the Seabed*, 62 DEP'T STATE BULL. 737 (1970).

10. G.A. Res. 2750C (XXV) (1970), 10 INT'L LEGAL MATERIALS 226 (1971). This is a resolution in which the United Nations General Assembly

*Decides to convene in 1973, in accordance with the provisions of paragraph 3 below, a conference on the law of the sea which would deal with the establishment of an equitable international regime—including an international machinery—for the area and the resources of the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, a precise definition of the area, and a broad range of related issues including those concerning the regimes of the high seas, the continental shelf, the territorial sea (including the question of its breadth and the question of international straits) and contiguous zone, fishing and conservation of the living resources of the high seas (including the question of the preferential rights of coastal states), the preservation of the marine environment (including inter alia, the prevention of pollution) and scientific research.*

See Dole & Stang, *Ocean Politics at the United Nations*, 50 ORE. L. REV. 378

In view of the apparent trend toward overexploitation of certain stocks of the world's commercial fishes, and in light of the proven incapacity of the international community to come to effective agreement on any important topic in anything like a timely fashion, coastal nations ought to be allowed—even, perhaps, encouraged in some instances—to take emergency resource-protective action in the high seas within the following guidelines: (1) The protective action must be a response to a demonstrable conservation crisis. (2) The protective action must be concerned solely with protection of the endangered resource. (3) The protective action must not unreasonably discriminate on the high seas against nationals of other nations. (4) The protective action must carry an automatic termination time. (5) The protective action must be accompanied by a clear call for international agreement.

Readers familiar with international fisheries law will recognize that this proposition borrows from the concepts underlying the second Truman Proclamation<sup>11</sup> and the Convention on Fishing and Conservation of the Living Resources of the High Seas.<sup>12</sup> In fact, the non-success (it cannot quite be called failure) of that convention<sup>13</sup> represents one of the obstacles to the proposal advanced

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(1971); Pollack, *Fisheries Considerations of Ocean Space*, 4 NAT. RES. L. 676 (1971).

11. Presidential Proclamation No. 2668, Policy of the United States with Respect to Coastal Fisheries in Certain Areas of the High Seas (1945); 3 C.F.R. § 68 (1943-48 comp.) [hereinafter cited as Truman Proclamation on Fisheries]. A companion executive order contemplated the establishment of fishery conservation zones. Executive Order No. 9634 (1945); 3 C.F.R. § 437 (1943-48 comp.)

12. United Nations Conference on the Law of the Sea Convention on Fishing and Conservation of the Living Resources of the High Seas, April 29, 1958, [1966] 17 U.S.T. 138, T.I.A.S. No. 5969; 559 U.N.T.S. 285 (*in force* March 29, 1966) [hereinafter cited as Convention on Fishing and High Seas Conservation].

13. As of January 1, 1971, only 30 nations had ratified the Convention on Fishing. U.S. DEP'T OF STATE, TREATIES IN FORCE 299 (1971). In 1969 the combined catch of these 30 nations made up only 17 percent of the total world catch. And of this 17 percent the five nations which could be considered fishing powers (Denmark, South Africa, Thailand, United Kingdom, and the United States) caught 75 percent. 28 FAO, YEARBOOK OF FISHERY STATISTICS 1969 § A at 4-11 (1970). See generally Herrington, *The Future of the Geneva Convention on Fishing and the Conservation of the Living Resources of the Sea*, Proceedings of the Conference of the Second Annual Law of the Sea Institute 62 (1968).

here. But more on that subject will be presented later.<sup>14</sup>

In the meantime, I will try to demonstrate why unilateral fisheries action might soon be deemed a necessity and how a nation taking such action might avoid being characterized as a "national laker."

## II. THE CRISIS-CREATOR: OVEREXPLOITATION

It is common opinion among observers of the international fishing scene that "freedom of fishing," as one of the traditional freedoms of the high seas,<sup>15</sup> is no longer a viable principle of sound fisheries management.<sup>16</sup> In terms of the fishing effort and techniques which could have been fielded in Grotius' day, when the principle was supposedly established,<sup>17</sup> it was perhaps reasonably accurate to say that the living resources of the sea were inexhaustible and therefore represented "free goods."<sup>18</sup> In fact, such a rationale was apparently found not too difficult to support as late as 1958, when the principle was re-asserted in an attempted codification.<sup>19</sup>

We know better today. Grotius and the Geneva Convention

14. See text accompanying notes 69-72, *infra*.

15. The traditional doctrine is supposedly "codified" in United Nations Conference on the Law of the Sea; Convention on the High Seas, Art. 2 § 2, April 29, 1958, [1962] 13 U.S.T. 2312, T.I.A.S. No. 5200, 450 U.N.T.S. 82, (*in force* Sept. 30, 1962) [hereinafter cited as Convention on the High Seas].

16. See F. CHRISTY & A. SCOTT, *THE COMMONWEALTH IN OCEAN FISHERIES* 6-7 (1965); FAO, *The State of the World's Fisheries* 1-5 (World Food Problems No. 7, 1968); J. CRUTCHFIELD & A. ZELLNER, *ECONOMIC ASPECTS OF THE PACIFIC HALIBUT FISHERY*; Goldie, *The Oceans' Resources and International Law—Possible Developments in Regional Fisheries Management*, COLUM. J. TRANSNAT'L L. 1, 3-4 (1969). See also 1 L. OPPENHEIM, *INTERNATIONAL LAW* 593-94 (8th ed., H. Lauterpacht, 1955).

17. H. GROTIUS, *THE FREEDOM OF THE SEAS* 22-44 (1916) (translated with a Revision of the Latin text of 1633, by Ralph Van Deman Jagoffin). See generally H. KNIGHT, *THE LAW OF THE SEA* 37-61 (1969); Reppy, *The Grotian Doctrine of the Freedom of the Seas Reappraised*, 19 *FORDHAM L. REV.* 243 (1950).

18. The inexhaustibility premise was disputed even in initial responses to Grotius. See T. FULTON, *THE SOVEREIGNTY OF THE SEA* 548 (1911):

Welwood, Selden, and many others, held, in opposition to Grotius and his school, that the fisheries along a coast might be exhausted or injured by promiscuous fishing, and that the inhabitants of the coast had a primary right to the fractus of the adjacent sea, as against the intrusion of foreigners—a principle which lay at the root of the Scottish claims to the reserved waters.

19. Convention on the High Seas, *supra* note 15, Art. 2 § 2. But, in the exercise of freedom of fishing, the nation must take into account the interests of other nations and the interests of conservation of the living resources. II INT'L L. COMM'N, Commentaries on the Draft Articles on the Law of the Sea, U.N. Doc. A/3159, Art. 27 (1956).

framers were wrong not so much in their respective assessments of then-existing fishing capabilities and fish supplies as in their inability to predict the tremendous impact of technology on these matters. Grotius, at least, can be excused.<sup>20</sup>

Today we are confronted with many technology crises which challenge the existing order of our society. The society represented by the community of nations is not immune. New and growing technology in the field of ocean mining accounts for much of the current rethinking about international institutions;<sup>21</sup> ocean weapons technology, known and suspected, adds its share of concern;<sup>22</sup> ocean transportation is being technologically revamped on a large scale and thus presents potential threats to freedom of navigation;<sup>23</sup> technology has opened up the sea to uses unsuspected a short time ago.

New and coming fishing technology now threatens the ancient practice of free ocean fishing. Larger and faster boats, improved fishing gear and fishing techniques, high seas processing, and more fishing nations have made fishing a major international activity.<sup>24</sup> This tremendous increase in fishing effort<sup>25</sup> and fishing ability has made it possible to exploit stocks which a few dec-

20. Excused not only because of his failure to foresee the much later impact of technology, but also because he was probably not really concerned with fishing rights when he drafted *Mare Liberum* (i.e., *THE FREEDOM OF THE SEAS*, *supra* note 17). See Reppy, *supra* note 17, at 263. And not everyone agreed, even in Grotius' time, that the seas were inexhaustible. See Knight, *supra* note 17, at 55-73.

21. See COMMISSION ON MARINE SCIENCE, ENGINEERING, AND RESOURCES, PANEL REPORT, INDUSTRY AND TECHNOLOGY, H.R. Doc. No. 91-42, Part 2, 91st Cong., 1st Sess. at VI, 161-221 (1969) [hereinafter cited as STRATTON PANEL REPORT 2].

22. See E. Brown, *Arms Control in Hydrospace: Legal Aspects* 1-36 (Woodrow Wilson International Center for Scholars—Ocean Series 301, 1971); Breckner, *Some Dimensions of Defense Interest in the Legal Delimitations of the Continental Shelf*, Proceedings of the Fourth Annual Conference of the Law of the Sea Institute 188 (1970).

23. STRATTON PANEL REPORT 2, *supra* note 21, at VI, 115-21.

24. See FAO, *FISHERIES IN THE FOOD ECONOMY* 41-45 (Freedom from hunger Campaign—Basic Study No. 19, 1968).

25. In 1850, the total world catch of fish and shellfish products was (excluding whales) between 1.5 and 2.0 million metric tons; in 1900, about 4.0 million tons; in 1930, about 10.0 million tons; in 1950, about 20.0 million tons; in 1960, 38.0 million tons; in 1965, 52.4 million tons; and in 1968, 64 million metric tons.

Chapman, *The Theory and Practice of International Fishery Development-Management*, 7 SAN DIEGO L. REV. 408, 414 (1970).

ades ago were not feasible and has resulted in an increasing number of overfished stocks.<sup>26</sup> In the face of rapidly increasing demand for food fish,<sup>27</sup> the classical response to overfishing moving to another stock is no longer as viable as it used to be.<sup>28</sup> The need for sound management has become critical.<sup>29</sup>

New fisheries technology and the prediction of overfishing crises have caused concern on at least two levels: (a) the "objective" level—represented by fisheries scientists, academicians, policy makers, and the like—who are worried about the preservation of important food resources for the hungry of today's and tomorrow's world populations;<sup>30</sup> and (b) the "subjective" level—

26. In 1949 a group of fishery experts believed the only fish stocks in need of serious management to be a few high-priced species like plaice in the North Sea and salmon and halibut in the northeast Pacific. However, in 1968, about half of some 30 stocks believed underfished in 1949 were in need of protection. FAO, *THE STATE OF THE WORLD FISHERIES I* (World Food Problems No. 7, 1968).

27. It is estimated that by 1985 the world demand for food fish will be 65 to 100 per cent greater than the 1965 catch. This growth will result from a 33 to 50 per cent increase in demand from the developed nations, a 90 to 150 per cent increase from the centrally planned countries (includes mainland China), and a 100 to 160 per cent increase from the developing nations. FAO, *FISHERIES IN THE FOOD ECONOMY*, *supra* note 24, at 60. See generally Holt, *The Food Resources of the Ocean*, 221 *SCIENTIFIC AMERICAN*, Sept. 1969, at 178.

28. The FAO predicts that by 1990 few substantial stocks capable of being harvested with modern fishing gear will remain unexploited. FAO, *FISHERIES IN THE FOOD ECONOMY*, *supra* note 24, at 38-39.

29. Further potential danger to the living resources of the sea comes from the threat of pollution. Most pollutants reach the oceans from land-based sources, over which the coastal nation can exercise little control (except, of course, for those sources within its own land boundaries). See NATIONAL ACADEMY OF SCIENCES, *MARINE ENVIRONMENTAL QUALITY: SUGGESTED RESEARCH PROGRAMS FOR UNDERSTANDING MAN'S EFFECT ON THE OCEANS* (1971), where it is suggested that most pollutants (including 95 per cent of the petroleum) reach the oceans through the atmosphere. Coastal nations are now beginning to take unilateral action in the high seas to protect themselves and fisheries from the dangers of oil pollution resulting from accidental spills and intentional discharges. Canada and Norway have taken such action. Canadian Pollution Prevention Act, *supra* note 8; Law No. 6 of Mar. 6, 1970, [1970] *Lovtid* 335. See Swan, *International and National Approaches to Oil Pollution Responsibility: An Emerging Regime for a Global Problem*, 50 *ORE. L. REV.* 506, 570-72 (1971). Iceland plans to enforce a 100-mile pollution zone beginning in late 1972. NATIONAL FISHERMAN, Feb., 1972, § A at 27.

30. See generally F. CHRISTY & A. SCOTT, *supra* note 16; J. CRUTCHFIELD & G. PONTECORVO, *THE PACIFIC SALMON FISHERIES—A STUDY IN IRRATIONAL CONSERVATION* (1969); COMMISSION ON MARINE SCIENCE, ENGINEERING, AND RESOURCES, REPORT, OUR NATION AND THE SEA, H.R. Doc. No. 91-42, 91st Cong., 1st Sess., 88-94 (1969) [hereinafter cited as STRATTON COMMISSION REPORT]. For a discussion on the STRATTON COMMISSION REPORT's recommendations regarding fishing, see Proceedings of the Fourth Annual Conference of the Law of the Sea Institute 286-359 (1970).

represented mainly by fishermen and their representatives—who foresee real threats to their livelihoods in the depletion of fish stocks upon which they depend.<sup>31</sup> The basic assumption at the start of this article—that unilateral fisheries-protective action on the high seas will be taken soon by some nations—is in turn founded on the assumption that pressures emanating from one or both of these two levels will in fact cause the unilateral fisheries jurisdictional extensions to be undertaken.

Certainly, in view of the seemingly inevitable overfishing crises, it would be a good idea for *somebody* to act for the purpose of conserving important fish resources. But does that somebody have to be single nations acting on their own?

### III. THE ULTIMATE SOLUTION: THE DESIRABILITY OF INTERNATIONAL AGREEMENT

The 70 percent of our planet's surface covered by ocean is the vast stage now set for the drama in which man will perform acts determinative of his essential character as an organized species of intelligent life for generations to come. Perhaps it would be even more appropriate to view this immense area as the field fate has selected for an impending battle whose significance may well eclipse that of the skirmishes fought at Salamis and Waterloo. Whatever the metaphor, important things are about to happen in the ocean. In this decade and much of the next, we of the present generation will be forced to decide whether it is really possible for man in his present condition to administer an incredibly valuable world resource for the shared benefit of all men everywhere. No matter what our decision ultimately will be, men living hundreds of years in the future will be affected by it. It is an awesome responsibility, and there is no way we can avoid it.

Two scenarios represent the opposite ends of a spectrum of scenarios covering the possible results of our decades of decision in the ocean:

- (1) In the 1970's and 80's, the nations of the earth continue to

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31. See Wakefield, *Fishing Interests on the Shelf*, Proceeding of the Third Annual Conference of the Law of the Sea Institute 230 (1969); Wedin, *Impact of Distant Water on Coastal Fisheries*, Proceedings of the Second Annual Conference of the Law of the Sea Institute 14 (1968).

debate and disagree on the structure of a regime for management of the ocean's resources. In the meantime, the coastal nations continue to expand their self-proclaimed authorities farther out to sea, until it finally becomes apparent to the debaters that there is really very little left to argue about. By that time, most of the ocean has been sliced up into segments claimed by the coastal nations. Conflicts between coastal nations over particularly rich areas of ocean develop, harsh words are exchanged, fleets are mobilized, shots are fired, missiles are launched, and the world goes up in flame, proving what many have long suspected: that man is really an unsuccessful species of life.

(2) On the other extreme, a much more pleasant prospect invites consideration. Suppose that the upcoming Law of the Sea Conference meets with great success—success in the sense that out of it comes the seed from which grows a new world organization devoted to the principle that the ocean's wealth is the common heritage of all mankind. Eventually, under the guiding hand of the new organization, the sea's resources, mineral and living, are developed and harvested and distributed in such a way as to eliminate poverty and hunger from all corners of the earth. The nations, occupying the land, are thus shown the hitherto suspected but undemonstrated advantages of world-wide cooperative effort, old barriers to international cooperation fall, a new world order is established, and wars are forgotten, thus proving what a few have suspected: once shown the way, all men can be brothers.

Obviously, neither of these extremes is likely to happen. What is likely to happen will probably look more like the first scenario than the second. But I think most of us would prefer to leave something like the second scenario for future generations to inherit.<sup>32</sup> So what we must do is keep the second goal in mind while rejecting those avenues which might lead toward the first.

This all means, of course, that in dealing with any matter affecting that largely unregulated area of the earth's surface that man now calls "high seas"—certainly in the case of international fisheries—the international community should, as a general rule, reject any further attempt of nations unilaterally to extend their seaward jurisdictions. International agreement of some form (including regional agreement between nations) is the desirable end solution to the problems which engender such moves.

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32. Again, a gross assumption. *Contra*, Eisenbud, *Understanding the International Fisheries Debate*, 4 NAT. RES. L. 19, 38-39 (1971).

International management also has some more immediate, practical advantages. As to most swimming resources of the high seas, lines drawn seaward as extensions of national land boundaries, no matter how far these lines go, tend to result in arbitrary divisions of the geographical area occupied by the resource. Truly effective management will, logically, require unitary control of the whole area of the resource—and, perhaps, the entire area of the ecological unit of which the resource is a part. Furthermore, the great expense of administering, enforcing and scientifically monitoring the progress of a management scheme should be reduced and more easily borne by a single international manager. In sum, fractionalized management would not only be inefficient but would, in the long run, undoubtedly fail.<sup>33</sup> International agreement on management plans is the only real long-term answer.

But we cannot forget two important realities taught to us by recent history: (1) Technology tumbles forward at an incredible pace, feeding on itself and accelerating as it goes. (2) Despite the aids of technology (such as jet planes and communication satellites), workable international agreement on any important topic still takes a long, long time to accomplish. It is doubtful that technology will await the pleasure of the diplomats.

The nations are therefore presently faced with a slightly different fisheries problem: Not what to do *eventually* about management of the sea's living resources, but what to do *now* to bridge the gap between the present and that desirable eventuality, to forestall the effects of overfishing which we are about to inherit from advancing technology.

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33. A similar statement has been made about existing international agreements:

The coverage of the fishery conventions is inadequate in another crucial way. Taken together, they apply to only a small part of the actual and even smaller part of the potential catch from the world's fisheries. At present, too, no international organization has been explicitly entrusted with the task of taking a world-wide view and making recommendations that will result in the creation of a world-wide system of regional fishery conventions able to anticipate difficulties and to assure the conserving and economically efficient utilization of the living resources of the high seas.

COMMISSION ON MARINE SCIENCE, ENGINEERING, AND RESOURCES, PANEL REPORT, MARINE RESOURCES AND LEGAL-POLITICAL ARRANGEMENTS FOR THEIR DEVELOPMENTS, H.R. Doc. No. 91-42, Part 3, 91st Cong., 1st Sess. at VIII-55 (1969) [hereinafter cited as STRATTON PANEL REPORT 3].

#### IV. THE IMMEDIATE SOLUTION: CAREFUL UNILATERAL ACTION

The present system for "management" of high seas resources illustrates perfectly the horrible mis-meshing of the two rates of movement represented by technology's rapid pace and the international community's turtle-like response to regulatory needs. It has been known for some years now that the ocean's food resources are not, as originally thought, limitless.<sup>34</sup> It has therefore been quite obvious for some time that these important resources need to be carefully managed.<sup>35</sup> Yet despite this knowledge on the part of individuals and nations, the international community (the present instrument of high seas "management") continues officially to view the sea's resources as "free goods"—free for the taking by anyone who has the desire and the ability to take.<sup>36</sup> The desire continues and the ability increases, the danger of overfishing threatens the food resources, and the international organism remains helplessly stuck in first gear, ponderously trying to move to cut off the threat.

Perhaps it will move in time to save the bulk of the endangered resources. Some will undoubtedly be saved by bilateral and regionally multilateral action, by both existing mechanisms and those to be created.<sup>37</sup> But some will, tragically, not be saved by international action or, perhaps, at all.<sup>38</sup> The creation and operation of the necessary saving mechanisms comes about too slowly.<sup>39</sup>

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34. See text accompanying notes 24-28 *supra*.

35. See authorities cited in notes 16 & 30 *supra*.

36. See Hardin, *The Tragedy of the Commons*, THE ENVIRONMENTAL HANDBOOK 31 (ed. G. de Bell, 1970), where the writer demonstrates the dangers in a common-property approach to a limited resource.

37. See LEGISLATIVE REFERENCE SERVICE, TREATIES AND OTHER INTERNATIONAL AGREEMENTS ON OCEANOGRAPHIC RESOURCES, FISHERIES, AND WILDLIFE TO WHICH THE UNITED STATES IS A PARTY, 91st Cong., 2nd Sess. (1970). See also Lucas, *International Fishery Bodies of the North Atlantic* (Law of the Sea Institute, Occasional Paper No. 5, 1970); Chapman, *supra* note 25, at 417-52.

38. The greatest failure of all the international fishery bodies has been the International Commission on Whaling. Its basic purpose was not the protection of whale stocks, but rather the protection of the investment nations had in whaling. Quotas, established on almost no scientific information, were much too large and nearly caused the extinction of several species of whale. The Commission has yet to adopt a sensible system for establishing quotas, although they are now low enough that, for the time being, the whale is perhaps out of danger. Chapman, *supra* note 25, at 427-30.

39. Indeed, a few of the organizations have fair successes to their credit. The fact is, however, that the fisheries have been changing faster than the international machinery to deal with them. . . . Nations have given, and continue to give, ludicrously low-level support to the bodies of which they are members, and the bodies themselves do not have the powers they need properly to manage

Unlike the international regulatory mechanisms, the mechanisms of most national governments are of course capable of responding more quickly to crises. And where international mechanisms fail to respond to developments considered by certain nations to be of crisis proportions, is it not likely that at least some of these nations will take what they deem to be appropriate responses unilaterally? Indeed, the unilateral extensions of seaward sovereignty by the Latin American countries can certainly be classified in large degree as reactions to what these nations felt to be a failure of international mechanisms to respond to fisheries crises.<sup>40</sup> Or, to take a more recent analagous example, the Canadian arctic legislation asserting exclusive pollution-control jurisdiction into the high seas must be viewed as a unilateral response to the slow-motion nature of international mechanisms.<sup>41</sup>

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the fisheries and conserve the resources. Add to this the trend to high mobility and range of today's fishing fleets, the problems of species interaction and the growing number of nations at various stages of economic development participating in international fisheries, and the regional bodies are indeed in trouble!

Holt, *supra* note 27, at 191.

This impotence of international fishery bodies has forced many coastal states to take a hard look at unilateral protective action. For example, the Ivory Coast delegation to a preliminary meeting for the Law of the Sea Conference in 1973 remarked that "subjecting fisheries to international organization is the way of ultimate solution, but coastal states cannot wait." NATIONAL FISHERMAN, Feb., 1972, § A, at 3. Hans G. Andersen (Iceland's ambassador to Norway), in announcing his country's proposed extension of its exclusive fishing zone, said, "We cannot wait—we will not wait." Seattle Times, Dec. 16, 1971, § G, at 8.

40. "[I]f regional precedents are any indications, it is perhaps not too surprising that Chile, Peru and Ecuador feel wary about entering into agreements with maritime powers larger than themselves." Lecuona, *supra* note 5, at 104. Also, "Chile's 200 mile territorial sea claim was supported in great part by its desire to avoid the regulations established by the International Commission on Whaling." Chapman, *supra* note 25, at 429.

41. A Canadian defender of his country's anti-pollution legislation recently stated:

[B]y and large all we have done is to carry out exactly what the world community told us to do, and what the international agreements haven't done. The world community has consistently said, "Governments, get on with it." The international convention hasn't got on with it effectively. We might have loaded the charge of dynamite that makes others begin to get on with the realization, "By god, somebody really means it!"

Green, *Canada's Anti-Pollution Legislation: Oral Proceedings*, 50 ORE. L. REV. 491, 492-93 (1971). See also Bilder, *supra* note 8, at 2-3.

The Law of the Sea Conference scheduled for 1973 should probably not be looked to as the place where international solution to the high seas fisheries problem will be finally assembled. The Conference will have a vast array of ocean issues to deal with,<sup>42</sup> and even if it is successful beyond the most optimistic of present expectations in its handling of the fisheries issue, there is not likely to be any effective, working management program for many years to come.<sup>43</sup>

The tragedy of delay in international agreement on high seas fisheries is found in the apparent dilemma it presents to some fishing nations: on the one hand, such a nation can await the ultimate agreement of the international community and thereby possibly watch the substantial deterioration or destruction of important food resources upon which its economy has come to depend and which should be preserved for future generations; or, on the other hand, the nation can attempt a unilateral extension of fisheries jurisdiction (or sovereignty) for the purpose of maintaining the endangered resource and thereby add to the division of the world ocean into national seas (and perhaps breach a treaty obligation as well).<sup>44</sup> In a real crisis a nation that feels the crunch will probably choose the short-term but clearly definable benefits of immediate resource-protective action to the long-term and nebulous benefits of awaiting international agreement. And perhaps such a nation will be right.

Again, my assumption is that unilateral fisheries-protective action *will* be taken before international agreement gets around to meeting the coming fisheries crises. But my main purpose is to suggest that a nation which ultimately feels constrained to act unilaterally need not face the dilemma as presented above. There is, I think, a middle ground which will allow a nation to act to preserve important fisheries, which will not necessarily contribute to a national division of the high seas, and which will encourage international action on fisheries conservation.

The suggested solution is temporary, resource-related, non-discriminatory unilateral action in response to a real conservation crisis.

#### V. THE FORM OF UNILATERAL ACTION

If one accepts the premise that there are greater values to be served by eventual international or supranational management

42. See note 10, *supra*, for discussion.

43. See NATIONAL FISHERMAN, Feb., 1972, § A, 3, 27.

44. See text accompanying notes 73-89, *infra*.

of ocean resources than by continued non-management ("freedom of the seas") or fractionalized national management, then there have been several things wrong with the recent national resource-protective moves into the open seas. At least the following objections appear:

(1) The claimed extensions are often delimited by geographic lines not reasonably related to the area occupied by the resource to be protected. This is especially true in the case of fisheries-protective action. The extensions therefore appear to be boundary-related rather than resource-related.

(2) The claims are often capable of being characterized as "over-kill" measures—that is, extensions of sovereignty or national jurisdiction encompassing more claimed authority than required for protection of the resource.

(3) The claims have often been accompanied by stated—and, sometimes, enforced—management policies that grossly discriminate in favor of the claimant nations.

(4) The claimed extensions have *all* been presented as permanent.

The sum total of these factors, if the claims are given credence, means that *nations*—and not just soon-to-be-discarded bits of national authority—are expanding and the high seas are shrinking. This is, as already suggested, a trend toward potentially monumental dangers.

The problem resolves itself, then, to one which can be stated simply: Can a nation unilaterally act in the high seas to protect fisheries resources which it "subjectively" would like to preserve for its own benefit, or which it "objectively" would like to see preserved for future generations, without contributing to the trend toward a division of the world ocean into national territories? I think the answer is "maybe." Such unilateral action, must, however, convincingly appear to be a voluntary undertaking of the task of managing a high seas resource substantially for the benefit of the world community (though it might have as a partial purpose the safeguarding of the actor's own share of that resource) pending permanent international agreement.

Unilateral fisheries-protective action might have a chance if it is carefully planned and executed according to the following guidelines.

A. *The protective action must be a response to a demonstrable conservation crisis.*

This, like the following factors, is essentially a requirement of a showing of "good faith." To have a chance of indicating to the world community its ultimate desire for international management, a nation claiming unilateral fisheries authority in the high seas must be convincing in its posture as a protector or custodian of an international resource. Any claim clearly based on a selfish grab for an added portion of ocean space is bound to be viewed as a bad faith, uncooperative move prompted solely by the "subjective" appetite for a greater share of fish resources; more importantly, it is likely to be met with opposition from some rather strong sources.<sup>45</sup> Even a claim patently based upon a demonstrated conservation crisis will probably find some opposition, but the demonstrable-crisis requirement would seem to be a crucial premise for any unilateral fisheries-protective extension if such an extension is to have any possibility of success in terms of the final goal of international management.

The problem lies of course in demonstrating to the international community that a conservation crisis does in fact exist. Much depends on the definition to be given to the word "crisis." Is its meaning restricted to its "objective" sense, so that the only relevant inquiry is whether there is an imminent threat to the world-community interest in conserving the fishery? This is probably too much to expect; in view of the recent tendency of many fishing nations to recognize the principle of coastal-nation preference in respect to adjacent fisheries,<sup>46</sup> a nation claiming management jurisdiction over nearby high seas fisheries ought to be able to concede that a special "subjective" interest in the immediate

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45. It has become increasingly difficult for one nation to move unilaterally effectively in excluding, or hampering, the operations of fishermen of other nations in the high seas simply to gain preferential advantage in that fishery for its own nationals. Such actions tend to provide the offending nation with a bad international public image, which is not beneficial diplomatically in these times.

Chapman, *supra* note 25, at 408. See also S. ODA, *INTERNATIONAL CONTROL OF SEA RESOURCES* 21-35 (1962).

46. See Convention on Fishing and High Seas Conservation, *supra* note 12, at Art. 6; STRATTON COMMISSION REPORT, *supra* note 30, at 110; Draft Articles on the Breadth of the Territorial Sea, Straits, and Fisheries Submitted by the United States, U.N. Doc. A/AC. 138/SC. II/L. 4 (1971) (submitted to the U.N. Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond the Limits of National Jurisdiction, July 30, 1971) [hereinafter cited as U.S. Draft Articles on the Territorial Sea and Fishing]. See also Schaefer, *Some Recent Developments Concerning Fishing and the Conservation of the Living Resources of the High Seas*, 7 *SAN DIEGO L. REV.* 371, 398-405 (1970).

regulation of the endangered resource colors its determination of a "crisis" without destroying the credibility of its "international protector" claim or risking fatal opposition to its unilateral extension—so long as it is also convincing in its showing that there is at least some not-too-long-term threat to the international interest. That is, a coastal nation which can demonstrate that its economy is in serious trouble because of overfishing of an adjacent fishery upon which it has come to depend might get away with a claim of "crisis" even though there is no immediate threat of extinction of the particular species or any other imminent danger to the international community's short-term interest in conserving the fishery. However, there should also be a showing that the continuance of the present regulation (or non-regulation, as the case may be) will, in the near future, lead at least to a very serious reduction of the fishery's physical yield.<sup>47</sup>

A similar crisis determination is a prerequisite for the more limited allowance of unilateral conservation management found in the Convention on Fishing and Conservation of the Living Resources of the High Seas:

2. The measures which the coastal state adopts under the previous paragraph [authorizing "unilateral measures of conservation" after six months of unsuccessful attempts at international agreement] shall be valid as to other states only if the following requirements are fulfilled:

- (a) That there is a need for urgent application of conservation measures in the light of existing knowledge of the fishery;
- (b) That the measures adopted are based on appropriate scientific findings. . . .<sup>48</sup>

The requirement that the showing of a conservation crisis be based on scientific findings is one not often easy to meet.<sup>49</sup> But it would seem necessary that the claimant nation base its claim

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47. Since it is highly unlikely that a stock of fish could be exploited to extinction (except for slowly reproducing stocks of mammals like whales—see note 38 *supra*), it is important that criteria for defining depletion be established. For the difficulties in defining depletion, see F. CHRISTY & A. SCOTT, *supra* note 16, at 80-86.

48. Convention on Fishing and High Seas Conservation, *supra* note 12, Art. 7, § 2 (a & b).

49. See M. McDUGAL & W. BURKE, PUBLIC ORDER OF THE OCEANS 994-95 (1962); see also Jackson, *Some Observations on the Future Growth of World Fisheries and the Nature of the Conservation Problems*, Proceedings of the Second Annual Conference on the Law of the Sea Institute 2 (1969).

that the fishery's yield is rapidly dwindling on *some* kind of reliable evidence. It might be questioned whether evidence that the coastal nation's total landings have decreased is either "appropriate" or "scientific." Yet this is likely to be the sort of evidence that is most available to many nations and provides a primary reason for contemplating unilateral action. Evidence of a decline in the coastal nation's yield should not, however, standing alone, be sufficient for showing of a "crisis."

*B. The protective action must be concerned solely with protection of the endangered resource.*

As noted already, some recent unilateral extensions of national jurisdiction tend to be more territory or sovereignty oriented than resource oriented. Either the extension is delineated by strict geographic boundaries or the proclaimed authority embraces more than is required to meet the coastal nation's immediate concern, or both. The claimant nation thus gives the impression (sometimes accurate) that it is primarily concerned with expanding its own existence. A nation concerned with the conservation of a high seas resource would probably increase the acceptability of a unilateral extension of authority to meet that concern if it limits the extended jurisdictional control specifically to the resource to be protected. Geographically, the new jurisdiction should cover the area or areas inhabited by the fish resource, wherever that may be, and no others;<sup>50</sup> similarly, the claimed authority should not be substantively broader than required for the protection of the resource.

For example, if the fish resource to be protected is an anadromous species spawned in the coastal nation and the threat is overfishing, the unilaterally extended authority can and should geographically follow (but be limited to) the entire migratory pattern of the fish; and it should not attempt to affect any high seas activities unrelated to fishing the species. If the threat is high seas pollution, then the asserted control should be directed only to pollution prevention.

Again, the purpose of these resource-relationship limitations on unilateral action is to enhance the credibility of the claimant's position.<sup>51</sup>

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50. But where the resource is part of a highly integrated ecological unit, effective regulation of the endangered resource requires regulation of the whole unit. See F. CHRISTY & A. SCOTT, *supra* note 30, at 78-80.

51. Several resource-oriented multilateral agreements are currently in effect. International Convention for the Conservation of Atlantic Tunas,

C. *The protective action must not unreasonably discriminate on the high seas against nationals of other nations.*

Like a unilateral claim not demonstrably in response to a conservation crisis, a claim that appears to be a grab for *exclusive* access to a high seas fishery will probably not be acceptable to, or acquiesced in by a substantial number of the rest of the nations. The management policy and procedures of the new "resource custodian" should not be designed to assign a substantially greater share of the resource to the custodian.

On the other hand, a unilateral claim to some sort of preference for the claimant nation may not be viewed unfavorably. Coastal-nation preference is, as already noted, apparently becoming more widely accepted as a general principle of high-seas fisheries management.<sup>52</sup> Therefore, to an extent, the coastal-nation claimant just might receive an understanding response even if its unilateral management regulations tend to favor its own coastal fishermen—but only to an extent. The line between a possibly acceptable claim to a moderate preference and an unacceptable selfish grab is still indistinct; a claimant nation would be well advised to err on the side of the smaller preference.

The essential difficulty here is, of course, allocation of the unilaterally managed fishery's benefits between the custodian and the various other nations having some sort of fishing experience in the fishery. This allocation-of-benefits problem has been at the heart of the international fisheries hassle and has been responsible in large part for the failure of the world's nations to agree successfully on management schemes for many high seas fisheries.<sup>53</sup> At least the difficulty of obtaining agreement on a

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(opened for signature May 14, 1966), [1968] 20 U.S.T. 2887, T.I.A.S. No. 6767 (in force March 21, 1966); Convention for the Establishment of an Inter-American Tropical Tuna Commission, (opened for signature May 31, 1949), [1950] 1 U.S.T. 230, T.I.A.S. No. 2044, 80 U.N.T.S. 3 (in force March 3, 1950). For a proposed world tuna Convention, see Kask, *Tuna—A World Resource* App. I (Law of the Sea Institute, Occasional Paper No. 2, 1969). See also Convention for the Regulation of Whaling, (opened for signature Sept. 24, 1931), [1935] 49 Stat. 3079, T.S. 880, 3 Bevans 26, 155 L.N.T.S. 349 (in force Jan. 16, 1935); Interim Convention on Conservation of North Pacific Fur Seals, (opened for signature Feb. 9, 1957), [1957] 8 U.S.T. 2283, T.I.A.S. No. 3948, 314 U.N.T.S. 105 (in force Oct. 14, 1957).

52. See text accompanying note 46 *supra*.

53. "The roadblock to conservation normally is reduced to a question of

particular system of apportionment could be solved—or, rather, obviated—by unilateral management. However, the custodian-nation would, it seems, have to be careful not to grossly discriminate against foreign fishermen in order to maintain a convincing “protective” posture.

D. *The protective action must carry an automatic termination time.*

Of the five proposed guidelines for unilateral action, the proposals that the action be self-terminating and be accompanied by a call for international agreements are the guidelines especially tailored to unilateral action and therefore have not been discussed in the literature devoted to general questions of fishery management. The termination provision might work something like this: the legislation or proclamation (or whatever means the nation uses to assert its management responsibility) should include an express clause stating that the newly claimed authority will terminate on a certain date in the future or on the effective date of any acceptable international management agreement, whichever date is earlier. The termination date might be many years in the future; the important thing is that there be a termination clause so that the unilateral action can be classifiable as a stop-gap measure pending international agreement.

Of course, it is possible that the termination date will arrive without the conclusion of acceptable international agreement, and there would be nothing to prevent the custodian-nation from further extending the time of its unilateral management. But such a prolongation (if it, too, carries a new termination date) would not destroy the proclaimed temporary nature of the unilateral action: it would still be self-terminating by design and thus incapable of being categorized as a permanent national boundary extension.

E. *The protective action must be accompanied by a clear call for international agreement.*

That the unilateral extension of management authority be accompanied by a call for international management is an obvious credibility requirement. If the claimant nation is truly interested in an eventual international solution it should say so and, beyond

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*division of the wealth created by . . . conservation efforts.” Chapman, supra note 25, at 444. For a proposed allocation system, see U.S. Draft Articles on the Territorial Sea and Fishing, supra note 46, at Art. III, § 2.*

the mere statement, might take some steps to get the international machinery rolling in higher gear. For example, a draft treaty or convention might be submitted to an appropriate international body or gathering.<sup>54</sup> At a minimum the claimant nation should, in an appropriate forum, call upon the world community to start or hasten its deliberations on fisheries conservation and regulation.

And, of course, subsequent cooperation by the custodian nation in the international deliberation process would be essential to the maintenance of credibility.

## VI. MAJOR OBSTACLES AND DIFFICULTIES

There are, of course, many obstacles to and difficulties with implementing unilateral fisheries-protective action, even assuming that following the suggested guidelines gives credence to the claimant nation's asserted "custodian" status. At a minimum, there are the following major problems: (1) "legal" obstacles under international law; (2) formulation of management methods; (3) enforcement problems; and (4) risk of over-response by other nations.

### A. "Legal" obstacles under international law.

Unilateral fishery-protective action is bound to run up against fairly formidable legal obstacles; or, more accurately perhaps, the claimant nation will have to be prepared to meet some opposition arguments having sound bases in the set of norms we have come to call international law. Certainly freedom of fishing, as one of the fundamental, customarily recognized freedoms of the high seas, will have to be reckoned with. In addition, the claimant nation may be a party to one or more treaties that expressly or implicitly prohibit unilateral management of the high seas fishery.

Although freedom of fishing has long guaranteed community-resource status to fish located on the high seas—thus prohibiting any single nation from restricting the fishing activities of any

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54. *E.g.*, the 1973 Law of the Sea Conference, see note 10, *supra*; subsequent international conferences; or presently constituted world organizations like FAO.

other nation beyond the territorial sea<sup>55</sup>—the principle has recently come under attack, both by the actions of individual nations and in the writings of some international-law commentators.<sup>56</sup>

As already noted in another context,<sup>57</sup> several nations have in recent years asserted unilateral jurisdiction over fishing grounds which had prior to the unilateral assertions been universally recognized as part of the high seas and thus subject to the freedom-of-fishing principle. There is more than a suggestion that this spate of unilateral expansion found its initial impetus in the 1945 Truman Proclamations.<sup>58</sup> In the first proclamation, the United States President asserted his country's exclusive right to control the exploitation of all resources, living and mineral, of the U.S. Continental shelf beyond the three-mile territorial sea. The second proclamation claimed the right of the United States to establish and regulate high seas conservation zones for fisheries. The response to these two proclamations by other nations was somewhat surprising: instead of rejection—imitation. In machine-gun succession, compared to the usual pace of international-law developments, individuals in the world community extended their jurisdictional boundaries farther out to sea. In what still seems to some a grotesque exaggeration of the Truman precedent, several Latin American countries claimed various sorts of sovereignty over huge areas of high seas.<sup>59</sup> Other nations followed suit. The 1958 Geneva Conventions on the Law of the Sea, while reasserting freedom of fishing, excepted "sedentary species" on the continental shelf from the doctrine's application.<sup>60</sup> The even more recent practice by narrow-territorial sea nations of claiming exclusive fishing zones out to 12 miles from shore (exemplified by

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55. See text accompanying notes 15-19, *supra*.

56. [T]here is much more doubt that the oceans or their fisheries are inexhaustible. While it may be impossible to destroy some species of fish by today's fishing methods, it is possible to deplete a species; and it is certainly possible to raise the productivity of the seas by means analogous to those which have justified private property in land. Consequently, it is not surprising that to many people the freedom of the seas, no longer based on unassailable assumptions, is something less than an article of faith.

F. CHRISTY & A. SCOTT, *supra* note 16, at 179. See also Christy, *Marine Resources and the Freedom of the Seas*, 8 NAT. RES. J. 424, 425-428 (1968).

57. See text accompanying notes 4-9, *supra*.

58. See notes 4 and 11, *supra*.

59. See note 5, *supra*.

60. Convention on the High Seas, *supra* note 15; Convention on the Continental Shelf, *supra* note 6. See S. ODA, *supra* note 45, at 181-95; Goldie, *Sedentary Fisheries and Article 2 (4) of the Convention on the Continental Shelf—A Plan for a Separate Regime*, 63 AM. J. INT'L L. 86 (1969).

the U.S. zone<sup>61</sup>) has been followed by many nations.<sup>62</sup> The expansionist trend continues to the present, with Canada and Iceland being the most prominent current examples.<sup>63</sup>

This pattern of erosion of the freedom-to-fish concept is of course extremely significant in the international society, where norms of acceptable conduct are not legislated but are established by the practice of nations.<sup>64</sup> The only safe conclusion that can be drawn from the continuing practice of nations with respect to high seas fisheries is that freedom of fishing is not what it used to be. Whether it will disappear entirely or only become a limited concept is not clear at this point; but it is trending away from the almost universally accepted doctrine of the past.

This means, of course, that a nation asserting unilateral fisheries jurisdiction can respond with some force to the argument that it is "breaking" the "law" prohibiting restrictions on freedom of fishing: it can answer that it is only a part of the trend away from strict application of the freedom-to-fish principle and that in the international community this is the traditionally accepted way of establishing new norms of conduct.<sup>65</sup> This is of course a

61. Exclusive Fishing Zone Act (1966), 16 U.S.C. §§ 1091-94 (1970).

62. See note 7 *supra*.

63. Canadian Pollution Prevention Act; Seattle Times, Dec. 16, 1971, § G, at 8.

64. See J. BRIERLY, *THE LAW OF NATIONS* 59-62 (6th ed., 1963); Kunz, *Nature of Customary International Law*, 47 AM. J. INT'L L. 662 (1953); Wright, *Custom as a Basis for International Law in the Post-War World*, 2 TEXAS INT'L L. FORUM 147 (1966).

65. From the perspective of realistic description, the international law of the sea is not a mere static body of rules but is rather a whole decision making process, a public order which includes a structure of authorized decision-makers as well as a body of highly flexible, inherited prescriptions. It is, in other words, a process of continuous interaction, of continuous demand and response, in which the decision-makers of particular nation states unilaterally put forward claims of the most diverse and conflicting character to the use of the world's seas, and in which other decision-makers, external to the demanding state and including both national and international officials, weigh and appraise these competing claims in terms of the interests of the world community and of the rival claimants, and ultimately accept or reject them. As such a process, it is a living, growing law, grounded in the practices and sanctioning expectations of nationstate officials, and changing as their demands and expectations are changed by the exigencies of new interests and technology and by other continually evolving conditions in the world arena.

McDougal, *The Hydrogen Bomb Tests and the International Law of the Sea*, 49 AM. J. INT'L L. 356, 356-57 (1955).

technical response that unfortunately relies upon questionably appropriate past acts as precedents. But it is, nevertheless, a fairly strong response to the argument based on the freedom-of-fishing doctrine.

A more comfortable response to that argument lies in documenting the *reasons* why freedom of fishing is no longer considered by many to be a valid principle of fisheries management. Essentially those reasons can of course be attributed to the increased demand (due to population growth) and vastly increased ability to harvest (due to technological development) in the face of relatively constant supply of food fishes.<sup>66</sup> In fact, because we are dealing with "living goods" in a wild (unregulated) state, the greatly expanded fishing capability and effort has adversely affected the supply of several important species.<sup>67</sup> Therefore, a fundamental premise upon which freedom to fish was originally constructed—that the supply is inexhaustible<sup>68</sup>—has, in recent times, collapsed. And—to put it metaphorically and rhetorically—if the cornerstone crumbles, should not the house soon follow?

So while a self-proclaimed custodian might be accused of breaking new legal ground in assuming temporary custodian status, it would arguably not be guilty of breaking the old freedom-to-fish "law."

Nevertheless, the failure of the Convention on Fishing and High Seas Conservation<sup>69</sup> to become widely adopted provides some basis for the assertion that freedom of fishing is still immune to unilateral conservation management. From the fact that only five major fishing nations have so far become parties to the convention,<sup>70</sup> it can be reasoned that those who are most concerned about conservation of high seas fishes are not prepared to endorse unilateral conservation regulation as a solution to the problem; and therefore that the community of nations, however it defines the trend away from tradition freedom of fishing, does not yet include unilateral conservation management within the new exceptions to the doctrine.

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66. See notes 24-28, *supra*, and accompanying text.

67. See Holt, *supra* note 27, at 190, 192; F. CHRISTY & A. SCOTT, *supra* note 16, at 102-03.

68. See Eisenbud, *supra* note 32, at 37-38. See also discussion *supra* note 27.

69. See Bishop, *The 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas*, 62 COLUM. L. REV. 1206, 1220-21 (1962).

70. See note 13, *supra*.

This reasoning is probably not sound. First of all, there is every indication that the relative unpopularity of the Convention is due not so much (if at all) to its allowance of unilateral conservation management as it is to such other provisions as compulsory arbitration.<sup>71</sup> Moreover, the force of the reasoning is substantially mitigated by the fact that the Convention even exists: it was approved in a very political international conference by a vote of 45 in favor, only one against, and with eighteen abstentions.<sup>72</sup> Finally, if the world community is not too bothered by the recent inclination of some coastal nations to carve permanent *exclusive* fishing zones out of the high seas, it cannot really be believed that a temporary custodianship zone will be intolerable.

Therefore, freedom of fishing as a "legal" obstacle is, because of its currently uncertain status, not overly difficult to answer. A somewhat more troublesome argument is found in the charge—capable of being levied against at least some of the nations expected to take unilateral action—that single-nation control of high seas fisheries is a breach of the actor nation's treaty obligations. Treaty obligations, unlike customary norms of conduct, are after all written down in black and white and solemnly entered into by the parties. They would seem less easy to discard or ignore than an obligation founded on the shifting tides of customary practice.<sup>73</sup>

The treaty most widely applicable to unilateral extensions of fishery jurisdiction is of course the 1958 Convention on the High Seas. In what has been termed a "codification" of the customary doctrine,<sup>74</sup> the High Seas Convention specifically provides that

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71. Jessup, *The United Nations Conference on the Law of the Sea*, 59 COLUM. L. REV. 234, 263 (1959); Sørensen, *Law of the Sea* 224-25 (International Conciliation Pamphlet No. 520, 1958); 5 U.N. Conference on the Law of the Sea, Official Records 74-78 (A/Conf. 13/38) (1958).

72. See Bishop, *supra* note 69, at 1220.

73. See L. OPPENHEIM, *INTERNATIONAL LAW* (7th ed., H. Lauterpacht ed. 1948); J. BRIERLY, *supra* note 64, at 317-345. But, "treaties are legally binding because there exists a customary rule of International Law that treaties are binding." L. OPPENHEIM, *supra* at 794.

74. Article 13 of the Charter of the United Nations places on the General Assembly the obligation to "initiate studies and make recommendations for the purpose of . . . encouraging the progressive development of international law and its codification." The General Assembly set up the International Law Commission (ILC) to carry out these tasks. Despite the recent lack of United States Government interest and leadership in the ILC, the Commission, with Professor Francois of the Netherlands as Rapporteur,

freedom of the high seas (that is, all waters beyond the outer limits of territorial seas<sup>75</sup>) includes freedom to fish.<sup>76</sup> Forty-six nations have signed and ratified this convention,<sup>77</sup> thereby binding themselves by contract to recognize the right of all nations to unrestricted fishing of the high seas. Can a nation that has so bound itself restrict fishing on the high seas, even as a temporary custodian, without breaching this "contract"?

Individual nations have also entered into bilateral or multi-lateral treaties with other countries which define the parties' high seas fishing rights with respect to one another.<sup>78</sup> Presumably such a nation would, by declaring the exclusive right to regulate fishing in the areas covered by these treaties, breach its treaty-recognitions of these rights. It is highly possible that it is these same treaty parties—that is, those fishing in the area to be managed—which the claimant nation wants to restrict or regulate.

A general response by the claimant nation might be to assert the application of the doctrine of *rebus sic stantibus*. This doctrine arguably states that a treaty terminates with the appearance of new and unforeseen circumstances attacking its very foundation.<sup>79</sup> (It is thus very much like the Anglo-American contracts doctrine of frustration of purpose.<sup>80</sup>) This is, however, apparently a controversial principle, not well defined in international law.<sup>81</sup> Fur-

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did an admirable piece of work on the law of the sea. See Jessup, *supra* note 71, at 235-36.

75. See United Nations Conference on the Law of the Sea; Convention on the Territorial Sea and Contiguous Zone (*opened for signature* Apr. 29, 1958). [1964] 15 U.S.T. 1606, T.I.A.S. No. 5639, 516 U.N.T.S. 205 (*in force* Sept. 10, 1964) (hereinafter cited as Convention on the Territorial Sea).

76. Convention on the High Seas, *supra* note 15, at art. 2 (2).

77. U.S. Dep't of State, TREATIES IN FORCE 324 (1971).

78. See, e.g., Interim Convention on Conservation of North Pacific Fur Seals (*opened for signature* Feb. 9, 1957), 1957 8 U.S.T. 2283, T.I.A.S. No. 3948, 314 U.N.T.S. 105 (*in force* Oct. 14, 1957) [hereinafter cited as Fur Seal Convention]; International Convention for the Northwest Atlantic Fisheries Feb. 8, 1949, [1950] 1 U.S.T., T.I.A.S. No. 2089, 157 U.N.T.S., 157 (*in force* July 3, 1950) [hereinafter cited as ICNAF Convention]; International Convention for the High Seas Fisheries of the North Pacific Ocean May 9, 1952, [1953] 4 U.S.T. 380, T.I.A.S. No. 2044, 80 U.N.T.S. 3 (*in force* June 12, 1953) [hereinafter cited as North Pacific Fishing Convention].

79. See J. BRIERLY, *supra* note 64, at 335-39; L. OPPENHEIM, *supra* note 73, at 843-50.

80. See generally A. CORBIN, CONTRACTS 1128-41 (one volume edition, 1952).

81. We may well hold that the obligation of a treaty comes to an end if an event happens which the parties intended, or which we are justified in presuming they have intended, should put an end to it; the more difficult problem concerns an obligation which the parties did not intend to be ended, but which it would be oppressive to enforce, and which will probably in fact be violated, in the events which have happened. It is because so many writers have

thermore, it is doubtful that it is applicable so as to excise a *part* of a treaty that has allegedly become obsolete; and it therefore might not be usable by a claimant nation that wants simply to avoid certain provisions of a treaty.<sup>82</sup> For example, the claimant nation may want to continue to adhere generally to freedom of the high seas, as expressed in the High Seas Convention, and redefine only freedom of fishing. It may want to take a similar attitude toward its bilateral and multilateral fishing treaties. On the other hand, *rebus sic stantibus* comes close to expressing doctrinally the rationale of the claimant nation: a crisis exists because of new circumstances, and a reasonable departure from the obligations assumed under previous circumstances ought to be allowed.

Unfortunately for potential claimant nations that are parties to bilateral or multilateral fishing treaties, the recent so-called Treaty on Treaties<sup>83</sup> takes a rather narrow view of the *rebus sic stantibus* principle. The pertinent part of Article 62 ("fundamental change of circumstances") states that:

A fundamental change of circumstances which has occurred with regard to those existing at the time of the conclusion of a treaty, and which was not foreseen by the parties, may not be invoked as a ground for terminating or withdrawing from the treaty unless:

- (a) The existence of those circumstances constituted an essential basis of the consent of the parties to be bound by the treaty; and
- (b) the effect of the change is radically to transform the extent of obligations still to be performed under the treaty.<sup>84</sup>

Is an overfishing-caused conservation crisis a "fundamental change of circumstances"? Perhaps not; indeed, the fishing treaty may have been motivated by a conservation crisis.<sup>85</sup> Was such a crisis, even if a "fundamental change," "not foreseen by the parties"? Unless the treaty is very old, it is unlikely that a crisis, even if recent, was entirely unforeseen. Was "essential basis of the con-

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sought to find in *rebus sic stantibus* a solution for this latter problem that the doctrine has become one of the most controversial in international law.

J. BRIERLY, *supra* note 64, at 338-39.

82. *Id.* at 339.

83. Vienna Convention on the Law of Treaties, May 23, 1969, U.N. Doc. A/Conf. 39/27 [hereinafter cited as Treaty on Treaties]. Note that on Nov. 22, 1971, President Nixon sought advice and consent of the Senate to ratify the Treaty on Treaties. 11 INT'L LEGAL MAT. 234 (1972).

84. Treaty on Treaties, *supra* note 83 at art. 62 § 1.

85. See treaties listed in note 78 *supra*.

sent of the parties" the existence of the same level of fishery yield as existed at the time the treaty was concluded? In some cases, it might be justifiably so argued. Is the effect of the conservation crisis "radically to transform the extent of obligations still to be performed under the treaty"? This would probably be difficult to argue in most cases.

Therefore, if the potential claimant nation is a party to the Treaty on Treaties, or if the Treaty on Treaties is acceptable as a "codification" (or at least good evidence) of international law,<sup>86</sup> the claimant nation will have trouble arguing *rebus sic stantibus* in support of modifying or withdrawing from its fishing treaties. It had better be prepared to look for help in its treaty's provisions on termination and withdrawal and also to open negotiations for treaty modification.<sup>87</sup>

The High Seas Convention, which purports to express the customary understanding on freedom to fish,<sup>88</sup> can be handled slightly more easily. A convention designed to "codify" existing but fluctuating principles should not be so interpreted as to freeze those principles at any particular point in time unless this is the clear intent of the parties. In general, and over the relatively long run, the norm-system we call the international law of the sea is a responsive, dynamic system well attuned to the desires of those it regulates. In some respects it is more responsive to change than the agreement process (though this probably says more in criticism of the agreement machinery than in praise of the customary-change mechanism). Certainly the practice of nations indicates that the freedom-to-fish principle is changing in its customary form, and the High Seas Convention is arguably being interpreted by this practice.<sup>89</sup>

Despite these foreseeable difficulties with the "legal" obstacles to unilateral fishery-protective action, the claimant nation is not likely to be too worried about them—*unless* it agrees to take the legality issue to the International Court or to arbitration. There is probably enough in the arguments suggested above (and perhaps other arguments) to lend a color of legality to the action as

86. See Report of the Commission to the General Assembly, 61 AM. J. INT'L L. 253, 262 (1967), U.N. Doc. A/6309/Rev. I; Rosenne, *The Temporal Application of the Vienna Convention on the Law of Treaties*, 4 CORNELL INT'L L.J. 1 (1970).

87. See, e.g., Fur Seal Convention, art. 12; ICNAF Convention, Art. 16; North Pacific Fishing Convention, Art. II § 2.

88. The Preamble to the High Seas Convention, *supra* note 15, states the parties' desire to "codify" customary high seas law.

89. See McDougal, *supra* note 65.

it is discussed and debated in diplomatic correspondence, enough to avoid the label of "wanton lawbreaker" or other similar labels. It is unlikely that the claimant nation will choose to go to the Court or to arbitration, since the odds, I would guess, would not favor a determination of legality. So far, at least, nations making extravagant or different types of unilateral claims of high seas authority have apparently been advised to refuse to submit to a formal test of legality.<sup>90</sup> It is one of the many anomalies of the international law system (though it is not unique in this respect) that a series of seemingly "illegal" actions can eventually add up to a general legality. Perhaps fortunately, coastal-nation control of adjacent high seas fisheries is not yet a general legality.

#### B. *Formulation of management methods.*

Management problems, discussed briefly in this section and the next one, are the practical difficulties that should cause a nation with any real sense to forget entirely about taking unilateral fishery-protective action in the high seas. Under even a large and rich nation's custodianship, an extensive high seas fishery is likely to be managed poorly at best; and, when poor management is added to the multi-layered objections to unilateral action in general, it should be recognized that very few fishery "crises" deserve that kind of trouble. Nevertheless, according to my initial prediction, unilateral action will be taken soon, and the management problems might as well be faced.

The basic problem is, of course, how to cut down the fishing "take" and so to allow the fishery's physical yield to build back up.<sup>91</sup> (Economic yield might be a better focus, but a practically impossible one for a unilaterally managed international fishery.<sup>92</sup>) There are several methods for regulating the yield of a fishery, once the authority to regulate exists or is recognized. Some are unsuited to unilateral management, and others just might have a chance. First, the unsuitable ones:

- (1) *Quotas.* Perhaps the best potential device for regulating

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90. See, e.g., Bilder, *supra* note 8, at 12; Wolff, *Peruvian-United States Relations over Fishing: 1945-1969*, 14 (Law of the Sea Institute Occasional Paper No. 4, 1970).

91. See discussion note 16 *supra*.

92. See Chapman, *supra* note 25, at 454; note 16 *supra*.

international fisheries is a system of national quotas.<sup>93</sup> While a self-proclaimed custodian might set and publicize national quotas for the nations active in the fishery, it will not be able to enforce the quotas without constant boarding and inspecting of foreign vessels, or very unlikely cooperation from all the nations where landings are made. There are indications that quotas might work under a scheme set up by agreement between the fishing nations<sup>94</sup>—landings could then be monitored at home ports—but *unilateral* quota management is bound to fail.

(2) *Gear restriction.* A method of fishery conservation now widely employed is gear restriction.<sup>95</sup> Essentially the purpose of restricting the types and amount of fishing equipment and gear is to make the fisherman inefficient: make him fish with hooks instead of nets; where he is allowed to fish with nets, regulate the size of the mesh so a lot of fish will escape, and so on.<sup>96</sup> With such obstacles, the fisherman simply does not have enough time to overfish. Aside from the rather obvious economic objections to gear restriction (as well as its general silliness),<sup>97</sup> as an international management method it must be classified with the quota system: unless there is a great deal of cooperation among the fishing nations, the surveillance required by the custodian nation will be too expensive and risky.<sup>98</sup> Regular vessel-boarding and inspection of gear would probably be a necessity.

(3) *Limiting entry.* The problem with limiting the number of vessels in the fishery, and thereby reducing the catch, is perhaps more political than practical.<sup>99</sup> It might be barely feasible, for

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93. STRATTON COMMISSION REPORT 105-09; Crutchfield, *National Quotas for the North Atlantic Fisheries: An Exercise in Second Best*, Proceedings of the Third Annual Conference of the Law of the Sea Institute 263 (1969).

94. See, e.g., Convention for the Protection, Preservation, and Extension of the Sockeye Salmon Fishery of the Fraser River System May 26, 1930, 50 Stat. 1355, T.S. 918; 184 L.N.T.S. 305 [1937]; Convention for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea Mar. 2, 1953, 5 U.S.T. 5, T.I.A.S. No. 2900, 22 U.N.T.S. 77 (in force July 13, 1950).

95. See, e.g., 4 ORE. REV. STAT. §§ 509.360-509.385 (1971); 75 REV. CODE WASH. 12.040-12.080 (1968); ICNAF Convention Art. VIII(1)(d).

96. Bevan, *Methods of Fishery Regulation*, THE FISHERIES: PROBLEMS IN RESOURCE MANAGEMENT 37-39 (J. Crutchfield ed., 1965); J. CRUTCHFIELD & G. PONTECORVO, *supra* note 30, at 40-47; J. CRUTCHFIELD & A. ZELLNER, *supra* note 15, at 29-37; STRATTON PANEL REPORT 3, *supra* note 33, at VIII 48-50.

97. Bevan, *supra* note 96, at 38-39; F. CHRISTY & A. SCOTT, *supra* note 16, at 6-16; J. Crutchfield & G. Pontecorvo, *supra* note 30, at 40-47.

98. Arglen, *Problems of Enforcement of Fisheries Regulations*, Proceedings of the Second Annual Conference of the Law of the Sea Institute 19, 22 (1968); Carroz & Roche, *The International Policing of High Seas Fisheries*, 6 CAN. Y.B. INT'L 61, 86-87 (1968).

99. There is no question but what there is validity to the conten-

a powerful custodian nation anyway, to license only a certain number of well-marked vessels of the various fishing nations and then patrol the fishery to exclude unlicensed boats. Limiting entry, however, means telling people (and, assuming an extreme overfishing crisis, a *lot* of people) to do something else for a living—or at least to fish someplace else. A custodian nation might be able to set up some sort of program to induce or require its own fishermen to accept limited entry, but foreign fishing nations—who will not readily accept *any* kind of restriction—will probably rebel, to the extent that enforcement will again be impossible. And the mechanics of *fairly* limiting entry (a slow phase-out, vessel and gear-reimbursement program, for example)<sup>100</sup> are undoubtedly too complex and expensive for a temporary unilateral management.

There are, on the other hand, some methods of fish conservation that would be less difficult for a single-nation custodian to operate:

(4) *Season restrictions.* Along with gear restriction, season restrictions, (prohibiting fishing during certain times of the year) are currently in wide use as a conservation mechanism.<sup>101</sup> And, like gear restrictions, season restrictions (where their purpose is simply cutting down the harvest of a fishery) supposedly work because they promote inefficiency: if the fishermen are catching too many fish, let them fish less often. It is probably the easiest of the traditional conservation methods to enforce in that it is relatively simple to determine whether a violation is occurring. No

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tion that the wastage of fishing effort used beyond the point of maximum net economic yield should be avoided. It appears to me, however, that this is a second order problem that is so difficult to solve from the political and diplomatic standpoint that it should not be tackled seriously until the conservation, that is maximizing the physical yield, problem is a little better in hand.

Chapman, *supra* note 25, at 451.

100. See, e.g., Christy, *The Distribution of the Sea's Wealth in Fisheries*, THE LAW OF THE SEA: OFFSHORE BOUNDARIES AND ZONES 106, 116-120 (L. Alexander ed., 1967); J. CRUTCHFIELD & G. PONTECORVO, *supra* note 30, at 177-79; Mead, *Discussion—Symposium on the Appropriate Role of Limitation of Entry as a Method of Managing Marine Fisheries*, Proceedings of the Fifth Meeting of the Governor's Advisory Commission on Ocean Resources (California) 114 (1966).

101. See Bevan, *supra* note 96, at 34-35; J. CRUTCHFIELD & G. PONTECORVO, *supra* note 30, at 42-44; J. CRUTCHFIELD & A. ZELLNER, *supra* note 15, at 35-37, 118-121 (STRATTON PANEL REPORT 3, *supra* note 33, at VIII-49).

boarding of vessels is generally required. The custodian nation's patrol officers need to know, of course, how to determine whether a fishing vessel is fishing for the controlled species (not always easy), but this determination should not usually require boarding.<sup>102</sup> Otherwise, the patrol officers only have to know what time of year it is.

(5) *Area restrictions.* The device of closing off areas, rather than seasons, from fishing is something within the experience of most fishing nations.<sup>103</sup> After all, an exclusive fishing zone or territorial sea is nothing more or less than an area closure. The method is slightly more difficult to enforce—again in the violation-determination sense—than season restrictions because of the problem of drawing geographical lines at sea.<sup>104</sup> On the other hand, it has the advantage of limiting the total surveillance area.

Two more attributes of both season and area restrictions can be noted: (a) the two methods can be combined, and (b) either or both can be readily manipulated to allow a measure of coastal-nation preference; the custodian can allow its own vessels longer seasons, or wider areas, or both.

A major problem with any conservation method is the requirement that the manager know a great deal about the regulated fish before it can intelligently set restrictions. This means knowledge on size, yield, migration patterns, feeding habits, growth rates, ecological interdependencies, etc.<sup>105</sup> Without such scientific knowledge, regulation tends to be haphazard at best. And, because the knowledge is scarce and expensive to obtain by investigation and monitoring, even current management policies, both domestic and international, are seldom based on adequate scientific knowledge.<sup>106</sup> It is probably too much to expect more from a single-nation custodian. It is no doubt unrealistic to expect even as much, since accurate control of harvesting requires monitoring of catches and landings, impossible to carry out without active cooperation of the fishery participants.

102. See Aglen, *supra* note 98, at 21.

103. For a description of area closures and how they operate, see Bevan, *supra* note 96, at 34; STRATTON PANEL REPORT 3, *supra* note 33, at VIII-49.

104. Aglen, *supra* note 98, at 21; Carroz & Roche, *supra* note 98, at 85-87. See Orlin, *Positioning on the Continental Shelf*, Proceedings of the Third Annual Conference of the Law of the Sea Institute 156 (1969).

105. See COMMISSION ON MARINE SCIENCE, ENGINEERING, AND RESOURCES, PANEL REPORT, SCIENCE AND ENVIRONMENT, H.R. Doc. No. 91-42, Part I, 91st Cong., 1st Sess. at I-30 (1969).

106. See generally STRATTON PANEL REPORT 3, *supra* note 33, at VIII 51-54; Chapman, *supra* note 25, at 442-44.

Obtaining knowledge is not the only expensive component of a management program. Administration and enforcement are expensive activities.<sup>107</sup> License fees and fines for violations are likely to be major sources of income for the program's expenses, and it is probably safe to say that, for most countries, the success of the conservation management will turn upon the ability of the custodian to collect its fees and fines.

### C. *Enforcement problems.*

The difficulties of policing a unilaterally proclaimed high seas fishery zone are immense. The problems are essentially related to the necessity to patrol a potentially vast area of open, hostile sea. Hostile is the word for the physical environment as well as the attitudes of the distant-water foreign fishermen likely to be encountered. It will of course be impossible to employ a saturation method of enforcement—one that will discover and punish every violation. The United States says it now has trouble finding the resources to effectively police its twelve-mile fisheries zone.<sup>108</sup> It is not likely that a nation with fewer resources will be able to do a better job in a more extensive management area. Even if saturation or near-saturation policing were possible, the cost would almost certainly outweigh the conservation benefits.

Still, some kind of enforcement will be necessary if a management program is to have a chance of success. Although the extent of enforcement required might be mitigated by the custodian nation's demonstration of good faith and the "good sense" of its management program for the benefit of all, voluntary cooperation in *any* unilateral program—no matter how much sense it makes—should not be anticipated.

So considering that really effective enforcement is probably impossible, what are the options open to the custodian-manager? Enforcement problems can be divided into two kinds: (1) violation determination, and (2) sanctions. The custodian's enforcement options must deal with each.

As indicated in the preceding section, discovery or determination of violations can be aided considerably by the choice of conserva-

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107. See note 106 *supra*.

108. STRATTON PANEL REPORT 3, *supra* note 33, at VIII 55.

tion methods. Season and area restrictions are probably the most feasible methods for unilateral management (other than outright exclusion of foreign fishermen, a method obviously not recommended here). But even the relatively simple discovery of fishing at the wrong place or the wrong time requires surveillance effort. The offender must be spotted and, moreover, must be seen to be fishing for the controlled fish. Few countries have a fleet of surface vessels sufficient for surveillance of an extensive area of high seas.<sup>109</sup> Where the area to be policed is broad, aircraft can be of great value, although surface craft will still be necessary for apprehension.<sup>110</sup> It is, as noted, not realistic to expect to discover and apprehend every violation. But it would seem that the risk of apprehension would have to be relatively great if violators are to be deterred. Perhaps an occasional "surprise" saturation effort would be sufficient. Alternatively, continuous patrolling with a limited fleet in a haphazard area-pattern is a possibility. Application of the area-restriction conservation method would of course assist the surveillance fleet by cutting down the total area to be patrolled.<sup>111</sup> Nevertheless, violation-determination is, for nearly all (if not all) countries, a very substantial stumbling block in the way of effective conservation management.

But assume a sufficient percentage of violators can be discovered. What are the realistic options for sanctions to be imposed on foreign fishermen or nations? The following alternatives, alone or in conjunction with each other, might be considered:

(1) *License revocation or suspension.* If the offense is committed by a vessel licensed by the custodian, its license might be revoked or suspended. There are at least a couple of things wrong with this sanction: (a) it does not help meet the primary enforcement problem of fishing by unlicensed boats; and (b) the revocation or suspension itself must be enforced.

(2) *Fines.* Imposition of fines, supported by vessel seizures and cargo confiscation, is of course a method now employed by unilateral managers, with uncertain measures of success.<sup>112</sup> Much would seem to depend on the ability of the custodian's policing force to spot, apprehend and force the offender to port where the penalty can be assessed.<sup>113</sup>

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109. See NATIONAL FISHERMEN, Feb., 1972, § A, at 3, 27.

110. Aglen, *supra* note 98, at 22.

111. *Id.*, Carroz & Roche, *supra* note 96, at 85.

112. Lecouna, *supra* note 5, at 110.

113. Carroz & Roche, *supra* note 98, at 79-80.

(3) *Imprisonment.* Vessel captains and crews could be imprisoned for violating the custodian's regulations, but this would be risky in that it would be likely to lead to reprisals or at least to heightened resistance by the world community as a whole to the custodian's proclaimed authority.

(4) *Economic sanctions.* Depending upon its economic and trade relationships with the nation of the offending fisherman and on the extent to which his violation reflects an attitude or policy of his country, the custodian might impose economic sanctions against the fishermen's nation. These might range from minor trade reductions and increased tariffs, through boycotts and embargoes.<sup>114</sup> Economic sanctions cannot be undertaken lightly, however, since they tend to affect adversely the economic position of the sanction-imposer also.<sup>115</sup>

(5) *Diplomatic sanctions.* Again depending upon the circumstances surrounding the relationships of the two nations, diplomatic sanctions could, in a serious case, be imposed against the offending nation. Such sanctions might include a spectrum of restrictions on the openness of relations between the two countries—travel restrictions, cultural-exchange restrictions, and so on—and range up to withdrawal of diplomatic recognition.<sup>116</sup> But matters would have to be pretty grim to warrant the last.

(6) *Occupation of territory and war.* Fortunately, disputes over the right to fishery resources are not yet likely to lead to

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114. See Loring, *supra* note 5, at 440-41, 448-49; Note, 6 SAN DIEGO L. REV. 443 (1969). The United States has taken recent action toward protecting its conservation programs for Atlantic salmon of North American origin by imposing economic sanctions on any country whose nationals endanger those programs. Act of Dec. 23, 1971, PUB. L. No. 92-219.

115. This would certainly be true for the United States. For example: New retaliation against Peru, particularly if the United States should close its markets to Peruvian fish and fish products, will almost certainly bring Peruvian retaliation against United States fishing investment's in Peru . . . . United States-controlled companies produce roughly one-fourth of Peru's fishmeal; the annual value of their product on is about \$70 million—nearly the total value of all United States tuna landings. These companies . . . have no interest in tuna, but would like to keep foreigners away from the anchovy fishery, which extends beyond 12 miles, and would like to maintain good relations with the Peruvian government.

Loring, *supra* note 5, at 427-28.

116. See VON GLAHN, LAW AMONG NATIONS, Chapter 24 (2d ed. 1970).

the use of force to occupy land territory or go to war.<sup>117</sup> We should hope they never will be.

All in all, enforcement problems probably stand as the largest of the large obstacles in the way of successful unilateral fisheries management on the high seas. The fishery crisis should be quite severe to warrant the expenditure of effort and risk necessary for adequate policing.

#### D. *Risk of over-response by other nations.*

It has already been pointed out above<sup>118</sup> that the 1945 Truman Proclamation undoubtedly formed the initial precedent (or "excuse") for the subsequent unilateral jurisdictional extensions into the high seas. As a precedent, the Proclamations were not carefully followed. The Proclamation on the Continental Shelf was specifically limited to jurisdiction over the resources of the seabed and did not purport to alter the status of the water above the shelf.<sup>119</sup> The Second Proclamation provided only for future fishery conservation zones and anticipated international agreement.<sup>120</sup> The claims that have supposedly followed the lead of the Truman Proclamations have often gone far beyond these limitations.<sup>121</sup> The Latin American 200-mile claims to some sort of sovereignty are the grossest examples.

The point is this: although the custodian's purpose in following the guidelines set out above would be to preserve a resource for ultimate international management, its unilateral declaration might well undermine the chances for international agreement by triggering other unilateral claims not limited by the suggested guidelines. Permanent extensions of varying aspects of jurisdictional authority or sovereignty might occur, and thus the unfortunate effect of the custodian's action would be to accelerate the national-lake trend rather than to forestall it.

#### E. *Other problems.*

The list of obstacles and difficulties just summarized is obviously not exhaustive; it is thought to represent the major problems to be faced by any nation that attempts to declare a temporary custodianship of a high seas fishery. Particular nations will have

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117. Chapman, *supra* note 25, at 454.

118. See text accompanying note 4, *supra*.

119. Truman Proclamation on the Continental Shelf, *supra* note 4.

120. Truman Proclamation on Fisheries, *supra* note 11.

121. See Wolff, *supra* note 90, at 7. See also note 5, *supra*.

special problems or especially severe versions of the problems already suggested. For example, a nation with a relatively narrow coastline can expect to have greater difficulty establishing authority over a fishery stock whose "adjacency" is shared by neighboring nations. Or, an economically developing nation will undoubtedly experience more trouble than a richer nation in effectively policing a broad-ranging species and in scientifically monitoring the physical yield for conservation purposes. Much will also depend on the nature of the regulated species: a relatively localized fishery, for instance, should be easier to manage than a highly migratory oceanic species.

And the administrative problems—the heavy burden of the everyday management responsibility for an internationally shared resource—should, even if international cooperation were assumed, be enough to give the strongest-willed nation great pause before undertaking the task.

#### VII. CONCLUSION

It is time for me to admit recognition of the possibility that few (maybe none) of the nations now contemplating extensions of unilateral fisheries jurisdiction really care to become custodians for the international community. It is more likely, despite some assertions to the contrary, that each of these nations simply wants to preserve for itself a greater share of a dwindling resource. The simplest, most direct method for doing this is to join the legitimizing trend of carving out a greater portion of adjacent ocean space for an *exclusive* fishing zone.

Still, it must at some point be seen that a march of individual permanent jurisdictions toward a common center can only postpone the time when the real problems, then to be confronted in full-blown maturity, must be faced. And by then it may be too late for truly effective solutions.

International agreement on detailed management schemes that fairly apportion the benefits and provide for adequate enforcement and scientific monitoring is the only true solution for endangered high seas fisheries. Given time, the world fishing community will certainly have to acknowledge this. It is not impossible that some of the nations now and to be engaged in the march of unilateral claims already recognized the superior virtue

in international management, but that they feel compelled to act now. Who can really blame them? The immediately foreseeable future, despite the promise of the 1973 Law of the Sea Conference, does not seem to hold an effective response to the felt threat of overfishing.

For those nations that feel an irresistible urge to meet the frustration by grabbing while the grabbing's good, I have suggested an alternative to the annexation of new wet territory. It is not an earth-shaking proposition. It simply asks that nations unilaterally act only in response to true over-fishing crises, and only to becoming temporary, relatively non-discriminating custodians of the endangered resources, while we all await the coming of the International Solution.

It might not work. But it should be better than participating in the carving up of an old friend.

## APPENDIX G

### INTERGOVERNMENTAL CONFERENCE ON THE CONVENTION ON THE DUMPING OF WASTES AT SEA

(London, 30 October to 10 November 1972)

Representatives of the Governments of Afghanistan, Argentina, Australia, Austria, Bahrain, Bangladesh, Barbados, Belgium, Bolivia, Brazil, Byelorussian SSR, Cameroon, Canada, Chile, Denmark, Dominican Republic, Egypt, El Salvador, Ethiopia, Fiji, Finland, France, The Gambia, Federal Republic of Germany, Ghana, Greece, Guatemala, Haiti, Honduras, Iceland, India, Indonesia, Iran, Ireland, Italy, The Ivory Coast, Jamaica, Japan, Jordan, Kenya, Korea, Kuwait, Liberia, Malaysia, Mexico, Monaco, Morocco, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Pakistan, Panama, Paraguay, Philippines, Portugal, San Marino, Saudi Arabia, Senegal, Somali Democratic Republic, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tonga, Trinidad and Tobago, Tunisia, Uganda, Ukrainian SSR, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Union of Soviet Socialist Republics, Venezuela, People's Democratic Republic of Yemen, and Zambia; Observers from the Governments of Burma, Colombia, Czechoslovakia, Khmer Republic, Malta, Tanzania, Turkey, Viet-Nam, Guyana, Yugoslavia, Zaïre and Sierra Leone; and Observers of the Commission of the European Economic Communities, the International Atomic Energy Authority, the International Bank for Reconstruction and Development, the International Labour Organization, the International Maritime Consultative Organisation, the United Nations Educational Scientific and Cultural Organisation and the International Oceanographic Commission and the World Meteorological Organisation accepted the invitation extended to them by the Government of the United Kingdom of Great Britain and Northern Ireland to participate in an Intergovernmental Conference. The Secretary-General of the United Nations was also represented at the Conference.

The Conference was called for the purpose of giving consideration to draft articles and annexes of a Convention on the Prevention of Marine Pollution by Dumping prepared at earlier intergovernmental meetings of limited membership, with a view to completing the text of a Convention which might be opened for signature before the end of 1972.

The Conference met at Lancaster House, London, from the 30th of October to the 13th of November 1972. Dr. M. W. Holdgate, leader of the delegation of the United Kingdom of Great Britain and Northern Ireland, was elected Chairman. His Excellency Señor Don Vicente Sanchez Gavito, the leader of the delegation of Mexico and Mr. N. N. Jha, the leader of the delegation of India, were elected Vice-Chairman. Dr. D. L. Simms served as Secretary-General.

As a result of its deliberations the Conference adopted, subject to linguistic verification of the English, French, Spanish and Russian texts, the text of a Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, which is annexed to this Final Act as is a separate technical memorandum and a resolution on support for parties requesting assistance in order to fulfil their obligations under the Convention.

The Conference entrusted the Government of the United Kingdom of Great Britain and Northern Ireland with the task of collating any comments of a purely linguistic character submitted before 10 December 1972, by Governments participating in the Conference and thereafter ensuring, in collaboration with the Governments of France, Spain and the Union of Soviet Socialist Republics, the linguistic consistency of the text in the English, French, Spanish and Russian languages, which would then become the authoritative text of the Convention in these four languages.

*The Intergovernmental Conference on the Convention on the Dumping of Wastes at Sea*

#### RESOLVES:

To open the Convention for signature from the 29th of December 1972 until the 31st of December 1973.

To express its gratitude to the Government of the United Kingdom of Great Britain and Northern Ireland for their initiative in convening the present Conference and for its preparation; and to the Chairman of the Conference, Dr. M. W. Holdgate, for his efforts in bringing about a successful conclusion to its work;

To authorize the Government of the United Kingdom of Great Britain and Northern Ireland to publish the Final Act of this Conference and the text of the Convention annexed hereto in the four working languages of the Conference together with the other documents of the Conference.

IN WITNESS WHEREOF the following Representatives have signed this Final Act.

DONE at London, this 13th day of November 1972 in a single original copy in each of the four working languages to be deposited in the archives of the Government of the United Kingdom of Great Britain and Northern Ireland which shall transmit a certified copy thereof to all the other Governments participating in the Conference.

CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTER \*

PREAMBLE

*The Contracting Parties to this Convention*

*Recognizing* that the marine environment and the living organisms which it supports are of vital importance to humanity, and all people have an interest in assuring that it is so managed that its quality and resources are not impaired;

*Recognizing* that the capacity of the sea to assimilate wastes and render them harmless, and its ability to regenerate natural resources, is not unlimited;

*Recognizing* that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction;

*Recalling* Resolution 2749 (XXV) of the General Assembly of the United Nations on the principles governing the sea bed and the ocean floor and the subsoil thereof, beyond the limits of national jurisdiction;

*Noting* that marine pollution originates in many sources, such as dumping and discharges through the atmosphere, rivers, estuaries, outfalls and pipelines, and that it is important that States use the best practicable means to prevent such pollution and develop products and processes which will reduce the amount of harmful wastes to be disposed of;

*Being convinced* that international action to control the pollution of the sea by dumping can and must be taken without delay but that this action should not preclude discussion of measures to control other sources of marine pollution as soon as possible and;

*Wishing* to improve protection of the marine environment by encouraging States with a common interest in particular geographical areas to enter into appropriate agreements supplementary to this Convention:

*Have agreed* as follows:

ARTICLE I

Contracting Parties shall individually and collectively promote the effective control of all sources of pollution of the marine environment, and pledge themselves especially to take all practicable steps to prevent the pollution of the sea by the dumping of waste and other matter that is 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.

ARTICLE II

Contracting Parties shall, as provided for in the following Articles, take effective measures individually, according to their scientific, technical and economic capabilities, and collectively, to prevent marine pollution caused by dumping and shall harmonize their policies in this regard.

\*Text as finally adopted by the Conference.

*Note:* This text is the product of an Intergovernmental Conference held at London October 30-November 13, 1972. It is subject only to linguistic verification for the English, French, Spanish and Russian languages.

## ARTICLE III

For the purposes of this Convention :

1. (a) "Dumping" means :

(i) any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea ;

(ii) any deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures at sea ;

(b) "Dumping" does not include :

(i) the disposal at sea of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea, operating for the purpose of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft platforms or structures ;

(ii) placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this convention ;

(c) The disposal of wastes or other matter directly arising from, or related to the exploration, exploitation and associated off-shore processing of seabed mineral resources will not be covered by the provisions of this Convention.

2. "Vessels and aircraft" means waterborne or airborne craft of any type whatsoever. This expression includes air cushioned craft and floating craft, whether self-propelled or not.

3. "Sea" means all marine waters other than the internal waters of States.

4. "Wastes or other matter" means material and substance of any kind, form or description.

5. "Special permit" means permission granted specifically on application in advance and in accordance with Annex II and Annex III.

6. "General permit" means permission granted in advance and in accordance with Annex III.

7. "The Organisation" means the organisation designated by the Contracting Parties in accordance with Article XIV.2.

## ARTICLE IV

1. In accordance with the provisions of this Convention Contracting Parties shall prohibit the dumping of any wastes or other matter in whatever form or condition except as otherwise specified below :

(a) The dumping of wastes or other matter listed in Annex I is prohibited ;

(b) The dumping of wastes or other matter listed in Annex II requires a prior special permit ;

(c) The dumping of all other wastes or matter requires a prior general permit.

2. Any permit shall be issued only after careful consideration of all the factors set forth in Annex III, including prior studies of the characteristics of the dumping site, as set forth in Sections B and C of that Annex.

3. No provision of this Convention is to be interpreted as preventing a Contracting Party from prohibiting, insofar as that Party is concerned, the dumping of wastes or other matter not mentioned in Annex I. That Party shall notify such measures to the Organisation.

## ARTICLE V

1. The provisions of Article IV shall not apply when it is necessary to secure the safety of human life or of vessels, aircraft, platforms or other man-made structures at sea in cases of force majeure caused by stress of weather, or in any case which constitutes a danger to human life or a real threat to vessels, aircraft, platforms or other man-made structures at sea, if dumping appears to be the only way of averting the threat and if there is every probability that the damage consequent upon such dumping will be less than would otherwise occur. Such dumping shall be so conducted as to minimize the likelihood of damage to human or marine life and shall be reported forthwith to the Organisation.

2. A Contracting Party may issue a special permit as an exception to Article IV1a, in emergencies,<sup>1</sup> posing unacceptable risk relating to human health and admitting no other feasible solution. Before doing so the Party shall consult any other country or countries that are likely to be affected and the Organisation which, after consulting other Parties, and international organisations as appropriate, shall, in accordance with Article XIV4e promptly recommend to the Party the most appropriate procedures to adopt. The Party shall follow these recommendations to the maximum extent feasible consistent with the time within which action must be taken and with the general obligation to avoid damage to the marine environment and shall inform the Organisation of the action it takes. The Parties pledge themselves to assist one another in such situations.

3. Any Contracting Party may waive its rights under Paragraph 2 at the time of, or subsequent to ratification of, or accession to this Convention.

#### ARTICLE VI

1. Each Contracting Party shall designate an appropriate authority or authorities to:

- a. issue special permits which shall be required prior to, and for, the dumping of matter listed in Annex II and in the circumstances provided for in Article V2;
- b. issue general permits which shall be required prior to and for the dumping of all other matter;
- c. keep records of the nature and quantities of all matter permitted to be dumped and the location, time and method of dumping;
- d. monitor individually, or in collaboration with other Parties and competent international organisations, the condition of the seas for the purposes of this Convention.

2. The appropriate authority or authorities of a Contracting Party shall issue prior special permits in accordance with paragraph 1 in respect of matter intended for dumping:

- a. loaded in its territory;
- b. loaded by a vessel or aircraft registered in its territory or flying its flag, when the loading occurs in the territory of a State not party to this Convention.

3. In issuing permits under sub-paragraphs 1a and b above, the appropriate authority or authorities shall comply with Annex III, together with such additional criteria, measures and requirements as they may consider relevant.

4. Each Contracting Party, directly or through a Secretariat established under a regional agreement, shall report to the Organisation, and where appropriate to other Parties, the information specified in sub-paragraphs c and d of paragraph 1 above, and the criteria, measures and requirements it adopts in accordance with paragraph 3 above. The procedure to be followed and the nature of such reports shall be agreed by the Parties in consultation.

#### ARTICLE VII

1. Each Contracting Party shall apply the measures required to implement the present Convention to all:

- a. vessels and aircraft registered in its territory or flying its flag;
- b. vessels and aircraft loading in its territory or territorial seas matter which is to be dumped;

<sup>1</sup> The United States understands that the word "emergency" as used in Article V(b) to refer to situations requiring action with a marked degree of urgency, but is not limited in its application to circumstances requiring limited action.

c. vessels and aircraft and fixed or floating platforms under its jurisdiction believed to be engaged in dumping.

2. Each Party shall take in its territory appropriate measures to prevent and punish conduct in contravention of the provisions of this Convention.

3. The Parties agree to cooperate in the development of procedures for the effective application of this Convention particularly on the high seas, including procedures for the reporting of vessels and aircraft observed dumping in contravention of the Convention.

4. This Convention shall not apply to those vessels and aircraft entitled to sovereign immunity under international law. However each party shall ensure by the adoption of appropriate measures that such vessels and aircraft owned or operated by it act in a manner consistent with the object and purpose of this Convention, and shall inform the Organisation accordingly.

5. Nothing in this Convention shall affect the right of each Party to adopt other measures, in accordance with the principles of international law, to prevent dumping at sea.

#### ARTICLE VIII

In order to further the objectives of this Convention, the Contracting Parties with common interests to protect the marine environment in a given geographical area shall endeavour, taking into account characteristic regional features, to enter into regional agreements consistent with this Convention for the prevention of pollution, especially by dumping. The Contracting Parties to the present Convention shall endeavour to act consistently with the objectives and provisions of such regional agreements, which shall be notified to them by the Organisation. Contracting Parties shall seek to cooperate with the Parties to regional agreements in order to develop harmonized procedures to be followed by Contracting Parties to the different conventions concerned. Special attention shall be given to cooperation in the field of monitoring and scientific research.

#### ARTICLE IX

The Contracting Parties shall promote, through collaboration within the Organization and other international bodies, support for those Parties which request it for:

- a. the training of scientific and technical personnel;
  - b. the supply of necessary equipment and facilities for research and monitoring;
  - c. the disposal and treatment of waste and other measures to prevent or mitigate pollution caused by dumping;
- preferably within the countries concerned, so furthering the aims and purposes of this Convention.

#### ARTICLE X

In accordance with the principles of international law regarding State responsibility for damage to the environment of other States or to any other area of the environment, caused by dumping of wastes and other matter of all kinds, the Contracting Parties undertake to develop procedures for the assessment of liability and the settlement of disputes regarding dumping.

#### ARTICLE XI

The Contracting Parties shall at their first consultative meeting consider procedures for the settlement of disputes concerning the interpretation and application of this Convention.

#### ARTICLE XII

The Contracting Parties pledge themselves to promote, within the competent specialised agencies and other international bodies, measures to protect the marine environment against pollution caused by:

- a. hydrocarbons, including oil, and their wastes;
- b. other noxious or hazardous matter transported by vessels for purposes other than dumping;
- c. wastes generated in the course of operation of vessels, aircraft, platforms and other man-made structures at sea;
- d. radioactive pollutants from all sources, including vessels;
- e. agents of chemical and biological warfare;

f. wastes or other matter directly arising from, or related to the exploration, exploitation and associated off-shore processing of seabed mineral resources.

The Parties will also promote, within the appropriate international organization, the codification of signals to be used by vessels engaged in dumping.

#### ARTICLE XIII

Nothing in this Convention shall prejudice the codification and development of the law of the sea by the United Nations Conference on the Law of the Sea convened pursuant to Resolution 2750C (XXV) of the General Assembly of the United Nations nor the present or future claims and legal views of any State concerning the law of the sea and the nature and extent of coastal and flag state jurisdiction. The Contracting Parties agree to consult at a meeting to be convened by the Organisation after the Law of the Sea Conference, and in any case not later than 1976, with a view of defining the nature and extent of the right and the responsibility of a coastal state to apply the Convention in a zone adjacent to its coast.

#### ARTICLE XIV

1. The Government of the United Kingdom of Great Britain and Northern Ireland as a depositary shall call a meeting of the Contracting Parties not later than three months after the entry into force of this Convention to decide on organizational matters.

2. The Contracting Parties shall designate a competent organization existing at the time of that meeting to be responsible for secretariat duties in relation to this Convention. Any Party to this Convention not being a member of this Organisation shall make an appropriate contribution to the expenses incurred by the organisation in performing these duties.

3. The Secretariat duties of the Organisation shall include:

a. the convening of consultative meetings of the Contracting Parties not less frequently than once every two years and of special meetings of the Parties at any time on the request of two-thirds of the Parties;

b. preparing and assisting, in consultation with the Contracting Parties and appropriate International Organisations, in the development and implementation of procedures referred to in sub-paragraph 4e of this Article;

c. considering enquiries by, and information from the Contracting Parties, consulting with them and with the appropriate International Organisations, and providing recommendations to the Parties on questions related to, but not specifically covered by the Convention;

d. conveying to the Parties concerned all notifications received by the Organisation in accordance with Articles IV 3, V 1 and 2, VI 4, XIII, XV, XX and XXI.

Prior to the designation of the Organisation these functions shall, as necessary, be performed by the depositary, who for this purpose shall be the Government of the United Kingdom of Great Britain and Northern Ireland.

4. Consultative or special meetings of the Contracting Parties shall keep under continuing review the implementation of this Convention and may, inter alia:

a. review and adopt amendments to the Convention and its Annexes in accordance with Article XV;

b. invite the appropriate scientific body or bodies to collaborate with and to advise the Parties or the Organisation on any scientific or technical aspect relevant to this Convention, including particularly the content of the Annexes;

c. receive and consider reports made pursuant to Article VI 4;

d. promote cooperation with and between regional organisations concerned with the prevention of marine pollution;

e. develop or adopt, in consultation with appropriate International Organisations, procedures referred to in Article V 2, including basic criteria for determining exceptional and emergency situations, and procedures for consultative advice and the safe disposal of matter in such circumstances, including the designation of appropriate dumping areas, and recommend accordingly;

f. consider any additional action that may be required.

5. The Contracting Parties at their first consultative meeting shall establish rules of procedure as necessary.

## ARTICLE XV

1. a. At meetings of the Contracting Parties called in accordance with Article XIV amendments to this Convention may be adopted by a two-thirds majority of those present. An amendment shall enter into force for the Parties which have accepted it on the sixtieth day after two-thirds of the Parties shall have deposited an instrument of acceptance of the amendment with the Organisation. Thereafter the amendment shall enter into force for any other Party 30 days after that Party deposits its instrument of acceptance of the amendment.

1. b. The Organisation shall inform all Contracting Parties of any requests made for a special meeting under Article XIV and of any amendments adopted at meetings of the Parties and of the date on which each such amendment enters into force for each Party.

2. Amendments to the Annexes will be based on scientific or technical considerations. Amendments to the Annexes approved by a two-thirds majority of those present at a meeting called in accordance with Article XIV shall enter into force for each Contracting Party immediately on notification of its acceptance to the Organisation and 100 days after approval by the meeting for all other Parties except for those which before the end of the 100 days make a declaration that they are not able to accept the amendment at that time. Parties should endeavour to signify their acceptance of an amendment to the Organisation as soon as possible after approval at a meeting. A Party may at any time substitute an acceptance for a previous declaration of objection and the amendment previously objected to shall thereupon enter into force for that Party.

3. An acceptance or declaration of objection under this Article shall be made by the deposit of an instrument with the Organisation. The Organisation shall notify all Contracting Parties of the receipt of such instruments.

4. Prior to the designation of the Organisation, the Secretarial functions herein attributed to it, shall be performed temporarily by the Government of the United Kingdom of Great Britain and Northern Ireland, as one of the depositaries of this Convention.

## ARTICLE XVI

This Convention shall be open for signature by any State at London, Mexico City, Moscow and Washington from 29 December 1972 until 31 December 1973.

## ARTICLE XVII

This Convention shall be subject to ratification. The instruments of ratification shall be deposited with the Governments of Mexico, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, and the United States of America.

## ARTICLE XVIII

After 31 December 1973, this Convention shall be open for accession by any State. The instruments of accession shall be deposited with the Governments of Mexico, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, and the United States of America.

## ARTICLE XIX

1. This Convention shall enter into force on the thirtieth day following the date of deposit of the fifteenth instrument of ratification or accession.

2. For each Contracting Party ratifying or acceding to the Convention after the deposit of the fifteenth instrument of ratification or accession, the Convention shall enter into force on the thirtieth day after deposit by such Party of its instrument of ratification or accession.

## ARTICLE XX

The depositaries shall inform Contracting Parties:

a. of signatures to this Convention and of the deposit of instruments of ratification, accession or withdrawal, in accordance with Articles XVI, XVII, XVIII and XXI and

b. of the date on which this Convention will enter into force, in accordance with Article XIX.

## ARTICLE XXI

Any Contracting Party may withdraw from this Convention by giving six months' notice in writing to a depositary, which shall promptly inform all Parties of such notice.

## ARTICLE XXII

The original of this Convention of which the English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Governments of Mexico, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America who shall send certified copies thereof to all States.

IN WITNESS WHEREOF the undersigned Plenipotentiaries, being duly authorized thereto by their respective Governments have signed the present Convention.

DONE at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 1972.

## ANNEX I

1. Organohalogen compounds.
2. Mercury and mercury compounds.
3. Cadmium and cadmium compounds.
4. Persistent plastics and other persistent synthetic materials, for example, netting and ropes, which may float or may remain in suspension in the sea in such a manner as to interfere materially with fishing, navigation or other legitimate uses of the sea.
5. Crude oil, fuel oil, heavy diesel oil, and lubricating oils, hydraulic fluids, and any mixtures containing any of these, taken on board for the purpose of dumping.
6. High-level radiocative wastes or other high-level radioactive matter, defined on public health, biological or other grounds, by the competent international body in this field, at present the International Atomic Energy Agency, as unsuitable for dumping at sea.<sup>2</sup>
7. Materials in whatever form (e.g. solids, liquids, semi-liquids, gases or in a living state) produced for biological and chemical warfare.
8. The preceding paragraphs of this Annex do not apply to substances which are rapidly rendered harmless by physical, chemical or biological processes in the sea provided they do not:

- (i) make edible marine organisms unpalatable, or
- (ii) endanger human health or that of domestic animals.

The consultative procedure provided for under Article XIV should be followed by a Party if there is doubt about the harmlessness of the substance.

9. This Annex does not apply to wastes or other materials (e.g. sewage sludges and dredged spoils) containing the matters referred to in paragraphs 1-5 above as trace contaminants. Such wastes shall be subject to the provisions of Annexes II and III as appropriate.<sup>3</sup>

## ANNEX II

The following substances and materials requiring special care are listed for the purposes of Article VI 1a

A. Wastes containing significant amounts of the matters listed below: arsenic, lead, copper, zinc (and their compounds); organosilicon compounds; cyanides; fluorides; pesticides and their by-products not covered in Annex I.

B. In the issue of permits for the dumping of large quantities of acids and

<sup>2</sup> With reference to Item 6 on Annex I, the United States has noted that there is no internationally accepted definition of "high level radioactive wastes." The United States defines high level radioactive wastes as aqueous wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuels. Until an internationally acceptable definition is negotiated under the auspices of the international Atomic Energy Agency, the United States plans to govern its activities on the basis of the definition stated herein.

<sup>3</sup> The Conference agreed, on the advice of the Technical Working Party, that for a period of five years from the date when the present Convention comes into effect, wastes containing small quantities of inorganic compounds of mercury and cadmium, solidified by integration into concrete, may be approximately classified as wastes containing these substances as tract contaminants as mentioned in paragraph 9 of Annex I to the Convention but in these circumstances such wastes may be dumped only in depths of not less than 3500 metres in conditions which would cause no harm to the marine environment. When the Convention comes into effect, this method of disposal, which will be used for not longer than five years, will be subject to the relevant provisions of Article XIV 4.

alkalis, consideration shall be given to the possible presence in such wastes of the substances listed in paragraph A and to the following additional substances: beryllium, chromium, nickel, vanadium (and their compounds).

C. Containers, scrap metal and other bulky wastes liable to sink to the sea bottom which may present a serious obstacle to fishing or navigation.

D. Radioactive wastes or other radioactive matter not included in Annex I. In the issue of permits for the dumping of this matter, the Contracting Parties should take full account of the recommendations of the competent international body in this field, at present the International Atomic Energy Agency.

#### ANNEX III<sup>4</sup>

Provisions to be considered in establishing criteria governing the issue of permits for the dumping of matter at sea, taking into account Article IV 2 include:

##### A. Characteristics and Composition of the Matter:

1. Total amount and average composition of matter dumped (e.g., per year).
2. Form, e.g., solid, sludge, liquid, or gaseous.
3. Properties: physical (e.g., solubility and density), chemical and biochemical (e.g., oxygen demand, nutrients) and biological (e.g., presence of viruses, bacteria, yeasts, parasites).
4. Toxicity.
5. Persistence: physical, chemical and biological.
6. Accumulation and biotransformation in biological materials or sediments.
7. Susceptibility to physical, chemical and biochemical changes and interaction in the aquatic environment with other dissolved organic and inorganic materials.
8. Probability of production of taints or other changes reducing marketability of resources (fish, shellfish, etc.).

##### B. Characteristics of Dumping Site and Method of Deposit:

1. Location (e.g., co-ordinates of the dumping area, depth and distance from the coast), location in relation to other areas (e.g., amenity areas, spawning, nursery and fishing areas and exploitable resources).
2. Rate of disposal per specific period (e.g., quantity per day, per week, per month).
3. Methods of packaging and containment, if any.
4. Initial dilution achieved by proposed method of release.
5. Dispersal characteristics (e.g., effects of currents, tides and wind on horizontal transport and vertical mixing).
6. Water characteristics (e.g., temperature, pH, salinity, stratification, oxygen indices of pollution—dissolved oxygen (DO), chemical oxygen demand (COD), biochemical oxygen demand (BOD)—nitrogen present in organic and mineral form including ammonia, suspended matter, other nutrients and productivity).
7. Bottom characteristics (e.g., topography, geochemical and geological characteristics and biological productivity).
8. Existence and effects of other dumpings which have been made in the dumping area (e.g., heavy metal background reading and organic carbon content).
9. In issuing a permit for dumping, Contracting Parties should consider whether an adequate scientific basis exists for assessing the consequences of such dumping, as outlined in this Annex, taking into account seasonal variations.

##### C. General Considerations and Conditions:

1. Possible effects on amenities (e.g., presence of floating or stranded material, turbidity, objectionable odour, discolouration and foaming).
2. Possible effects on marine life, fish and shellfish culture, fish stocks and fisheries, seaweed harvesting and culture.

<sup>4</sup> Resolution of the Intergovernmental Conference on the Convention on the Dumping of Wastes at Sea on Assistance in Accordance With Article IX:

<sup>5</sup> The participants at this Conference *having agreed* to promote support for scientific and technical co-operation in the prevention and control of marine pollution caused by dumping and having *noted* the need to assist Contracting Parties who may request support for this purpose *in accordance with Article IX of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, requests* the Secretary-General of the United Nations to report this resolution to the appropriate bodies for early consideration.<sup>7</sup>

3. Possible effects on other uses of the sea (e.g., impairment of water quality for industrial use, underwater corrosion of structures, interference with ship operations from floating materials, interference with fishing or navigation through deposit of waste or solid objects on the sea floor and protection of areas of special importance for scientific or conservation purposes).

4. Practical availability of alternative land-based methods of treatment, disposal or elimination, or of treatment to render the matter less harmful for dumping at sea.

#### UNITED STATES DELEGATION

The Honorable Russell E. Train, Chairman, Council on Environmental Quality—  
Leader of Delegation.

Mr. Christian A. Herter, Jr., Special Assistant to the Secretary of State for  
Environmental Affairs—Representative.

Mr. William C. Salmon, Office of Environmental Affairs, Bureau of International  
Scientific and Technological Affairs, Department of State—Alternate Representative.

Mr. A. Lowell Doud, Assistant Legal Adviser for Environmental Affairs, Department  
of State—Adviser.

Mr. Otho Eskin, Office of United Nations Political Affairs, Bureau of International  
Organizational Affairs, Department of State—Adviser.

Colonel Frank Fedele, USAF, Office of Ocean Affairs, Department of Defense—  
Adviser.

Mr. William J. Ford, American Embassy, London—Adviser.



