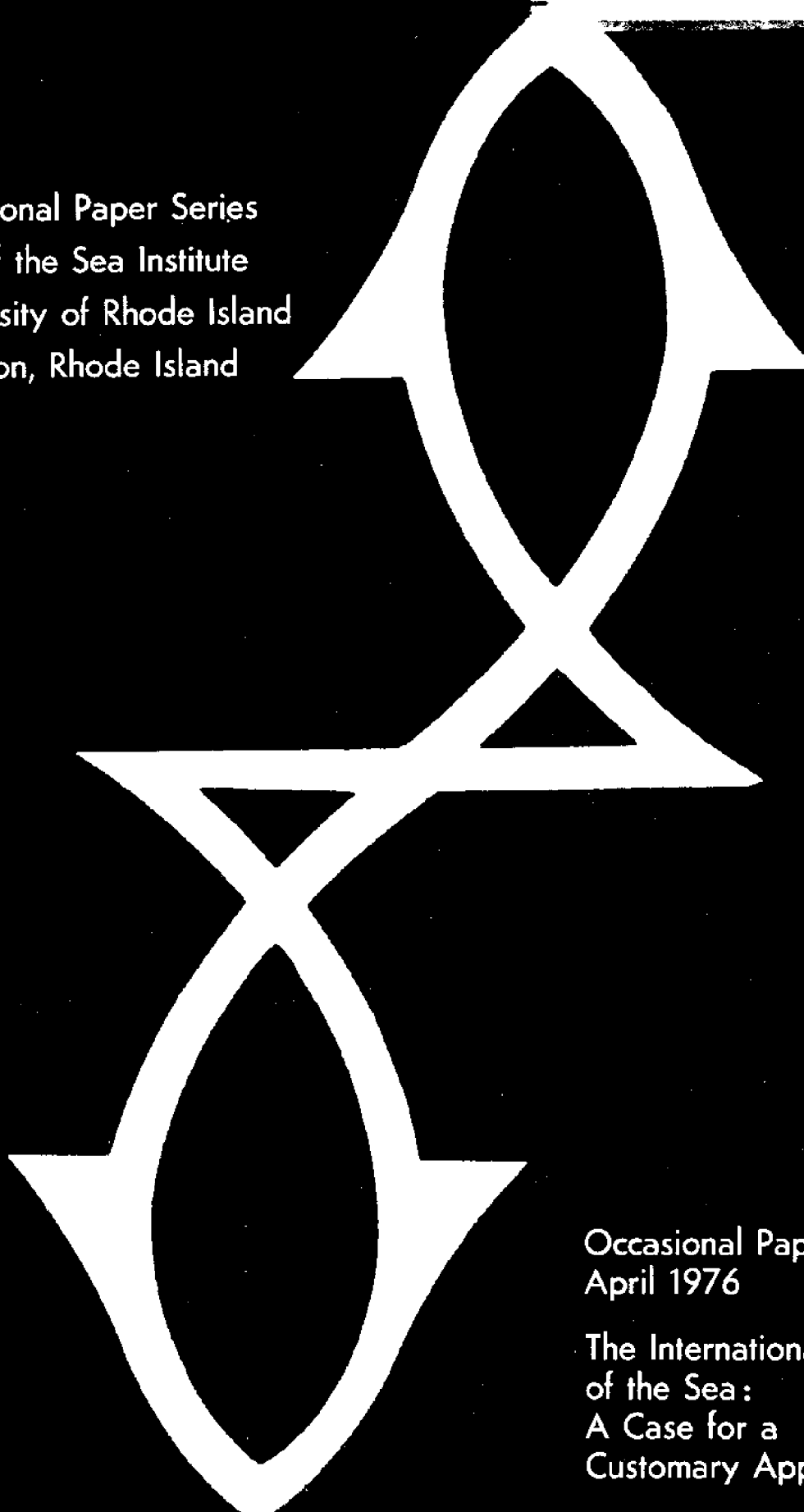


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The International Law
of the Sea:
A Case for a
Customary Approach

E. W. Seabrook Hull

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THE INTERNATIONAL LAW OF THE SEA

A Case for a Customary Approach

by

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THE INTERNATIONAL LAW OF THE SEA

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I. INTRODUCTION

Efforts to design and agree on a new Law of the Sea (LOS) Convention have been underway for nearly a decade-- initially in a somewhat unstructured manner and more recently in the formal processes of the United Nations Law of the Sea Conference, the third session of which has concluded without significant progress. Not only has progress been slow, but it can be argued that what "progress" has been made is negative-- i.e., the more the issues are aired and the more alternative legal regimes are discussed, the more disparate become the views of individual states and blocs of states and the more rigid and unbending become their attitudes.

This persistent lack of progress suggests that perhaps the basic approach is wrong. It is the purpose of this paper to briefly note the diversity of perspectives among the actors, to describe the major issues and to suggest policy changes for the United States, in particular, and a more orderly approach to LOS development for the world, in general.

The issues that the current LOS deliberations seek to resolve can be organized under eight basic area-of-interest headings: (1) geographic considerations and disparities; (2) military security; (3) mineral resources; (4) biological resources; (5) maritime transport; (6) pollution; (7) freedom of scientific research; and (8) international institutional arrangements.

Though the major issues can be so ordered under neat and separate headings, the issues themselves are by no means independent and isolated. Instead, they comprise a network of complex, interrelated interests and perspectives, such that a stance or change of stance in respect of any one area reverberates through the web with multiple-order and diverse impacts and reactions. The challenge can be likened to the task of tuning a carillon bell. Using tuning forks and a trained ear, the musical characteristics of each zone of the rough-cast bell can be calibrated. It can then be determined just how much metal needs to be taken off to bring any one zone of the bell to the desired base note or harmonic. However, the removal of metal from any one part of the bell changes not only local properties but, to varying degrees, those of all other parts of the bell. Thus, in realizing a local objective the bell tuner must take care not to cause irreparable damage in other parts of the bell.

Thus it is in seeking a comprehensive solution to all aspects of the LOS problem: An action or attitude with respect to one issue, then, may change both the nature of the problems and the attitudes in respect of all other issues. For example, a decision on fisheries may well alter the nature of the problem-- or perceptions thereof-- in military security, pollution, geographical limits and disparities, freedom of scientific research, etc.

II. PERSPECTIVES

It is a basic premise of this paper that the current approach to developing new LOS is an exercise in futility for the reason that throughout history the origins of the conventional LOS are found primarily in customary law. The purpose of this section is to examine the conditions that militate against the success of the U.N. Law of the Sea Conference and its efforts to produce wholly new conventional law.

The core problem of LOS negotiations is found in the diversity of attitudes and perspectives of the 140-plus independent national states which have varying degrees of interest in the ocean, its resources and how they are to be allocated and managed. Not even the criteria for developing individual national positions on the issues are consistent. As an example, LOS perspectives by developed and developing states are molded by the following considerations, in the order of importance afforded to each:

Basic Criteria for LOS Positions
By Two Classes of States

<u>Priority</u>	<u>Criteria of Developed States</u>	<u>Criteria for Developing States</u>
First	National Interest	National Interest
Second	Political Bloc Orientation	Correction of Inequities
Third	International Order	Political Bloc Orientation
Fourth	Correction of Inequities	International Order

While the order of the second, third and fourth priority criteria may be debatable, the fact of differences in perspectives, perceptions and priorities is not. Except at the most basic philosophical levels, national interest, for example, does not mean the same thing to Ghana, Dahomey or Sri Lanka that it does to the U.S., Soviet Union or the Federal Republic of Germany. Neither does international order nor the concept of inequities among states. Even political bloc orientation means different things to different national governments.

National Interest

The appearance of uniformity among statements of national goals articulated in support of national interest can be deceptive, for the routes to their realization and the very words used to define them mean different things to different speakers. The factors that dictate both the perspectives and the lexicon include:

- * Social, cultural and religious origins and orientation.
- * Level and nature of economic development.
- * Political history and level of experience in both domestic and international governance.
- * Nature of domestic political and economic systems.
- * Degree of economic diversity.
- * Degree of internal political stability.
- * Extent of autonomy in energy and raw materials resources.
- * Level of knowledge of real significance of oceanic resources.
- * Degree of access to the technology, investment capital and trained personnel necessary to their exploitation.
- * Extent of real or imagined injury from other classes of states (e.g., former colonial powers versus former colonies).
- * Level of marigeographic advantage (e.g., long-coast, broad-shelf states versus short-coast, shelf-locked and/or land-locked states).
- * Extent of current use of oceanic resources (e.g., maritime states versus coastal states).
- * Geopolitical orientation (e.g., pro-western powers, pro-communist powers--P.R.C. versus U.S.S.R.--or anti-superpower of whatever orientation).
- * Traditional local and regional animosities and alliances.
- * And so forth...

International Order

Similarly, what constitutes international order is subject to a broad diversity of interpretations. Developed states, for example, view exploitation of ocean resources by private industry--or, in the case of socialist states, by national entities--as most orderly, while developing states are inclined to favor such development by an international body as being more orderly. Maritime powers favor maximum freedom of the seas and international straits, while coastal and/or developing states tend to associate this stance with colonialism and exhibit nationalistic and possessive attitudes towards "their" straits. Developed states, in general, give "lip service" at least to the importance of effective ocean pollution control, while developing states are inclined to view it as neither of their doing nor of their concern. Developed and maritime powers favor the existing LOS as it has evolved through history as the proper basis from which to develop new laws to govern new situations. Conversely, developing states view the traditional body of international oceanic law as developed without their interests in mind and without

their participation. Accordingly, they are inclined to favor whole new structures for the LOS--structures which, not infrequently, are perceived as means of redressing past grievances and of correcting current inequities. Even the importance of international order--however defined--is questioned by many of the smaller states which are not deeply involved in the international arena and see problems at home as much more relevant to their national well-being.

Correcting Inequities

The matter of inequities and their correction is extremely complex, involves fundamental concepts of international ethics and responsibilities and, again, is viewed differently by different observers. The perceived inequities range from facts and accidents of geology, of politically-determined geographic boundaries and the ocean orientation and access of states under various hypothesized ocean legal regimes, to chronological differences in the opportunity for economic development and a deep-seated feeling among many developing states that they are due compensation not only for earlier, but also for continuing, exploitation by the developed states. In not a few instances this is a major contributing factor to the seemingly irreconcilable adversary confrontations on LOS issues.

The correction of inequities among states that have evolved through the long and intricate processes of human history is not a matter to be discussed at length here, but to the extent that it militates against the orderly development of the LOS it is deserving of some brief comment. The fact is that there is no precedent of international law or practice among states that even suggests an international responsibility for the universal rectification of such inequities. It may be that the time has come in man's moral and ethical evolution for such a responsibility to be assumed. If so, it should be raised in a separate forum of the international community and not injected willy-nilly into the LOS debate where it introduces whole new issues of basic philosophical substance, the portent of which greatly transcends the limits of LOS considerations.

The matter of inequities, however, is not the only ulterior motive encountered in the LOS proceedings. It is long known, for example, that Ambassador Arvid Pardo, one of the prime intellectual movers in the LOS, views the development of new LOS perspectives mainly as stepping stones towards world government. And, many states, especially the superpowers, perceive the LOS as a fulcrum point from which to lever geopolitical, economic and other advantages in the competitive world arena. Whatever the merits or demerits of these motives, they do not bear directly on the immediate problems at hand or contribute to their expeditious solution.

Political Bloc Orientation

Political bloc orientation relates mainly to the geopolitical machinations of the three superpowers, the United States, the Union of Soviet Socialist Republics and the Peoples Republic of China and where the various less powerful states see their national interests as best served. Superficially, the world divides into three political blocs: Pro-west, pro-communist and anti-superpower. Examined more closely, however, it turns out to be much more complex. Within the three blocs there are many shades of gray and some sharp schisms. Among the pro-communist states, for example, some are pro-U.S.S.R. while others are pro-P.R.C., while few, if any, are pro-both. Some states, however, try to play both sides to their own best advantage. In addition, there are regional and economic groupings quite aside from major bloc orientations--the Organization of African States, the European Economic Community, OPEC (Organization of Petroleum Exporting Countries) and the like. All of these factors work against the successful design and construction of, and ultimate majority agreement and adherence to, a new international order of the oceans. They are not the only impediments, however, to the present U.N. effort.

LOS Evolutionary Processes

Sources of International LOS: International LOS has seldom, if ever, originated in formal conventions. Rather, it has evolved through custom, through practice and the general acceptance of such practice by the majority of states--with codification into formal conventions, if ever, following only after the fact. The 1958 Geneva Conventions are good examples of this process. In contrast, the present effort is to develop wholly new law for largely new situations for which customary law has not had time, or even been permitted, to develop. It is a reversal of normal processes and, it may be argued, adds unduly to the difficulty of the task.

Lack of Preparation: Another adverse factor arises from the fact that, unlike the 1958 Conventions which were preceded by several years' work by legal experts of the International Law Commission, with some notable exceptions the current effort is characterized more by politics and horse-trading than by international legal expert effort.

Indeed, with the schismatic disparity of perspectives among the major blocs of states, agreement probably could not even be reached on what constitutes an acceptable "international panel of experts."

Ratification Lag: Even if a draft convention were to emerge from this juridical Tower of Babel, this, of itself, would not make international law. Signatory states would then have to ratify the agreement, and it could be years before the requisite number of instruments of ratification were deposited. Even should that number be realized, unless it included (1) a majority of all states, (2) a majority of the major developed states and (3) the three superpower, the convention still would have little force of law—for, in the final analysis, even conventional international law must become customary law before it is effective. Since there are no direct and reliable means of enforcing international law (only the unilateral threat of force, weight of world public opinion, etc.), it is only through voluntary compliance that such agreements enjoy the force of law.

Body of the Law: Even with a convention, sufficient ratifications and compliance, it would take many additional years for the emergence of a usable body of law—i.e., legal and explicit clarification of what the law means in practice. The evolution of such a body of law comes only through encounters with its use and the resolution of disputes through arbitration, resort to the International Court of Justice at The Hague, negotiation, regional agreements and, in some cases, unilateral action.

The Interim Alternative: Thus, not only are prospects for comprehensive agreement on a new LOS slim indeed, but even should such agreement evolve, it could not alone be relied on as an immediate and sound legal basis for the new levels of the use and taking of oceanic resources now proposed. This suggests that, insofar as the national interests of the United States are concerned, the repetitive resort to the "imminent" prospect of an LOS agreement as an excuse for not taking interim unilateral action is unrealistic in the extreme. Even in the unlikely event of early LOS agreement, interim legislation still would be required. Otherwise, ocean entrepreneurs, be they private corporations, state-owned enterprises or both, would still face a high level of uncertainty as to the legal, financial and political conditions under which they were operating. It would probably not be conducive to attracting the large volumes of investment capital that will be required to exploit some of the ocean's more exciting resources.

Indeed, the enactment and implementation of such interim legislation could provide the responsible unilateral seed from which customary international LOS traditionally emerges. The Truman Proclamations of September 28, 1945, were just such unilateral actions from which a substantial and, to this time workable body of international law of the sea eventually grew. It is the process that has worked best in the past, and there is little new in contemporary world attitudes to suggest that it is not still the best, indeed the most orderly, way to proceed—provided, of course, that such unilateral action is responsible and in consideration of international, as well as national, interests.

This approach would open up another instrument for the development of international law, namely the International Court of Justice which has demonstrated its capacity in this resolution of at least two North Sea oil development questions of boundaries and limits.

III. ISSUES AND PERCEPTIONS

Geographic Limits, Rights and Disparities

Most LOS issues of a geographic nature reduce down to limits in the seas and the nature of national and international rights within those limits. Perceptions on those issues are heavily influenced by each state's geographic relationship to the sea and the extent to which they have the wherewithal to benefit from whatever access they may have. As indicated above, these are by no means the only determinants, but for purposes of this section they are the main ones considered.

Limits in the sea relate to:

* Breadth of the Territorial Sea: Though the U.S. still claims three nautical miles, in customary law it is 12 nautical miles, for more states claim this limit than any other.¹ Fifty-seven states now claim 12 miles—up 32 since 1965 and 43 since 1955, mostly from three miles. Those claiming three nautical miles now total 30, including all but one of the United Arab Emirates (Trucial States), of which five claim three and one claims 12 miles.

¹U.S., National Claims to Maritime Jurisdiction-Limits in the Seas No. 36, Revised 23 December, 1975, (Office of the Geographer, U.S. State Department, Washington, D.C., 1976).

* Legal Continental Shelf for purposes of determining coastal state exclusive mineral rights in light of its increasingly rapid extension under the exploitability rule and the uncertainties of drawing a meaningful limit based on adjacency.

* Preferential Economic Zone which would give the coastal state exclusive right to the resources of the seabed and its superjacent waters to a distance of 200 nautical miles from shore, provided that those living resources not utilized by its own nationals would be made available for the taking by others, within limits dictated by sound conservation practices.

* Various Contiguous Zones concerned with fisheries, pollution control, customs and possibly scientific research--though it seems likely that most of these needs would be accommodated in any economic zone that might be established.

* International Straits, the high seas nature of which might be compromised by extended territorial sea claims.

* The Archipelago Claims of broadly distributed island nations.

* The Residual Non-Sovereign Ocean as that portion of the world ocean beyond the limits of national claims and the resources of which are generally accepted as subject to the principle of res communis or the Common Heritage of Mankind.

National Disparities: The disparities that prevail among the nations of the world with respect to the oceans and its resources include those that are geographic, economic and technological. Alexander² in a discussion of "disadvantaged states" outlines and evaluates marigeographic disparities among states and how these disparities might affect their perceptions of the LOS. Included in this discussion are: Land-locked states with no access to the sea; states with long or short coastlines; states with broad or narrow shelves; states with convex or concave coasts (which, under the equidistance rule for determining seaward rights, determines the extent of their access to offshore resources): states that are shelf-locked or not; and so forth.

Economic and technologic disparities include the "have" or "have-not" status of individual states with respect to investment capital, technology and trained personnel--all of which are necessary to the profitable exploitation of ocean resources. Other economic factors which bear on LOS postures and attitudes include: Level of economic development, degree of economic diversification, extent of offshore and onshore resources, whether they are major producers or consumers of raw materials or both, etc. Other factors of disparity which could be loosely lumped as "political," include: Military and geopolitical posture, specific national objectives, political and economic dependencies, etc.

All of these factors contribute to the development of attitudes and perceptions with respect to specific geographical--e.g., limits--proposals. They also govern attitudes as to what rights should be granted to the affected coastal states, which should be reserved to some as yet unagreed-to international ocean governing body and what are the specific responsibilities of the coastal state to the rest of the world community.

Military Considerations

This is a world of military superpowers, military middle powers and military micropowers. The superpowers include the United States, the Union of Soviet Socialist Republics, the European arm of NATO (North Atlantic Treaty Organization) and the Peoples Republic of China. Only the first three can be considered as major naval powers, though the P.R.C. is beginning to build in that direction³. Military middle powers are those that are not super- or micro- and cover the range from India, Indonesia, Japan, Australia and the larger South American states, to Sweden, Israel, Egypt, Iran, Syria, Republic of South Africa and the like. The military micropowers, if any, are concerned mainly with internal struggles or, at most, with their immediate neighbors, though some of them do have the potential for making trouble on the nearby high seas using high-speed, anti-ship-missile-firing patrol boats provided to them by the Soviet Union.

²Lewis M. Alexander, "Geographical Factors and the Patterns of Alignment," Perspectives on Ocean Policy, (Government Printing Office, Washington, D.C., 1974).

³James R. Schlesinger, Hearings on Military Posture, Part I, (before Committee on Armed Services, House of Representatives, Washington D.C., 1975).

With the exception of local or regional disputes—e.g., the Middle East and Southeast Asia—middle-power forces are mostly defensive and, if balanced, contribute to regional stability by raising the price of military excursions. Neither the middle-powers nor the micro-powers have an overt military stake in maximum freedom of the seas, and, except to the extent that some may be careful to align their views with one or more of the superpowers, this lack of need colors their attitudes more against, than for, maximum freedom of the seas.

The only powers that regularly use extended seapower as a major instrument of national policy are the U.S., the U.S.S.R., and, to a more limited degree, the nations of Western Europe—though future planning must assume that the P.R.C. will join the maritime superpower ranks. Those powers that make use of extended seapower want maximum freedom of the seas for movement of their naval forces--indeed, also of their fishing fleets, merchant shipping and research vessels as well. Generally speaking, with the exception of Japan which seeks to protect its distant-water fishing operations, the majority of other states favor restricting such freedom of movement.

Thus, in the case of issues relating to freedom of movement of the instruments of maritime power, the more powerful minority of states (but including half the world's population) favor maximum freedom of movement of their seaborne units. Conversely, the less powerful majority of states (also comprising roughly half the world's population) at the very least has little sympathy for this argument, while many would severely restrict such movement.

Which view better promotes international order is a subject of endless debate, hinging on the resolution of such questions as: Is the strategic nuclear stand-off in the over-all best interests of peace? Is the ability of the superpowers to intervene in Southeast Asia, the Middle East, etc., in the over-all best interests of peace? Since limited wars provide a use-of-force alternative to all-out nuclear war, and since under urgent conditions the superpowers will move their forces wherever they feel they must, regardless of any alleged international legal restraints, it is probably in the best interests of international order that they have a reasonable opportunity to do so. This is a conclusion in which many of the developing states probably could not be expected to concur, but it is the least bad of two bad options. The dilemma is how to achieve that fine balance between minimum practical permissiveness and maximum constraint and still gain widespread and balanced acceptability.

Specific Military Issues: Basically there are five levels of military interest in the LOS: (1) Strategic, namely ballistic missile firing submarines and long-range bombers (ICBMs, by their nature, don't enter into LOS considerations); (2) support of limited warfare operations; (3) show (but not use) of force to underscore a policy point or to discourage overt action by another; (4) showing the flag in general peaceful support of broad national policy objectives (e.g., international image-building); and (5) intelligence gathering. How these relate to LOS issues is summarized briefly below:

* Strategic Considerations: With the advent of new range capabilities for submarine-fired ballistic missiles, free (submerged) passage through straits is not required. Right of overflight by strategic bombers never has been a critical factor, though the military may consider it a convenience in practice and probing missions. If the button ever is pushed, all such niceties as legalities will immediately become academic, and the vehicles and their weapons will go where they will and can. Strategic needs are met by maintaining the freedom of the non-sovereign ocean and by the conclusion of suitable bi-lateral arrangements with allies. Strategic needs do not constitute a valid argument either for narrow seaward limits or for free transit through straits. The entrance, however, of submarine-launched cruise missiles with a 2,400-mile range into U.S. Naval forces in contrast to the Trident missile's prospective 4,500 mile range--however, would require free transit through straits in order to bring all Soviet targets within their range. Significantly, the Soviet Union does not have to transit straits in order to bring all U.S. targets within range of 2,400-mile missiles. With the possible exception of cruise missiles--in the category both of overkill and SALT bargaining chips--strategic considerations, thus, do not constitute a preemptive argument for free transit through straits.

* Tactical Warfare Operations: Whether for actual use or merely for a show of force, tactical naval units do require free transit through straits. Since limited war operations provide an alternative short of nuclear war, care should be taken not to obviate this option. This may be the strongest argument for free transit through international straits. It does not, however, constitute a valid argument against extended coastal limits (e.g., a 12-mile territorial sea and a 200-mile economic zone), provided that special provision is made for certain major key straits.

* Showing The Flag: This is widely permitted under the rules of innocent passage and almost always involves prior arrangements with the port(s) to be visited. Of itself,

it is not an argument either for free transit or against wider seaward limits.

* Intelligence Gathering: It is covert intelligence gathering which is at issue, and there is no rationale for affording it any more privilege than it now enjoys. A permissive legal regime for illegal activities would be a contradiction in terms.

* Other Military Considerations: The nature of the weapons or the manner of their deployment on, over or under the sea is not at issue before the LOS Conference, though these matters are taken up in the bilateral SALT (Strategic Arms Limitation Talks) negotiations between the United States and the Soviet Union. The emplacement of weapons of mass destruction on the ocean floor, for example, has been banned, and the numbers of submarine-launched ballistic missile tubes that each may deploy have been limited. The emplacement of some types of undersea surveillance gear, the as-yet unrealized full potential of mine warfare, the possible environmental consequences of proposed very high-energy active sonar systems and other potential equipments and applications of undersea warfare may one day interfere with others' peaceful uses of the sea and the taking of its resources. In a sense, then, there are other military considerations which, though now dormant, may one day arise to disturb international order. Provision for their consideration and resolution should be made in any convention that may evolve.

Mineral Resources

For LOS purposes, the mineral resources of the seabed can be divided into two groups: (1) those that fall within the limits of national jurisdiction, and (2) those that lie beyond the limits of national jurisdiction in the non-sovereign ocean. There is general international concurrence that the principle of res communis applies to the latter, that they are the common property of all states--i.e., "The Common Heritage of Mankind". The former are governed by the 1958 Geneva Convention on the Continental Shelf and subject only to the rule of exploitability and the still nonspecific concept of adjacency.

Conceding that specific limits will be assigned to the seaward extent of national jurisdiction by delimiting the maximum extent of the legal shelf, through institution of an economic zone or both, the residual question is what kind of regime will apply to the resources of the non-sovereign sea. Here the main issues relate to the nature of the international governing body that will administer these resources, how that institution will be controlled, who will be permitted to exploit the resources, under what rules, the extent to which production rates might be controlled to protect existing landside producers and the pattern and means of distributing the economic wealth derived from their exploitation. Again, opinion on these issues divides pretty much along the lines of developed and developing states.

In the governance of deep seabed resources the developed states want a non-political institution, after the fashion, for example, of the International Bank for Reconstruction and Development ("The World Bank"). The developing states want such an institution to be controlled on a one-nation, one-vote basis, with the institution's general conference exercising close control over operations. This would, of course, give the developing states an overwhelming majority and would likely subject the organization to almost continual political pressures. The developed states want access to deep seabeds mineral resources to be on a freely competitive basis--after the manner that offshore leases are awarded in the U.S. Developing states' attitudes vary from arrangements that favor directed participation by the developing states in a kind of geopolitical "bussing" arrangement, to the international institution itself doing the mining with little or no participation by industry.

Both the developed and developing states concede that once deep ocean mining proves to be economically feasible and gets into high gear, the sheer volume of production of some minerals (usually production incidental to the recovery of the primary ore--e.g., cobalt as a by-product of copper and nickel recovery from manganese nodules) could be highly disruptive to some world markets and supply patterns for those minerals. And, while both sides agree that the problem should be recognized, the developed states are inclined to wait and see if it does threaten to become a problem, while the developing states want tight controls agreed to in advance. The developed states seek the least restraints on profit-making opportunities. The developing states are not overly impressed with this approach, insisting that most, if not all, of the economic wealth derived from such operations go to the world community, in general, and to themselves, in particular. In the main these disparate views stem from fundamental differences of perception, national value standards, the capability to exploit, the economic need for the resources, fear of economic damage and the hypothesis of compensation for injustices.

The U.S. National Interest: The lack of public comment on specific aspects of this subject raises doubts as to how well the national interest is being served in LOS policy positions of this and previous Administrations. Ocean raw materials resources offer the U.S. hope of (1) new and politically immune sources of essential raw materials, (2) reduction in the adverse balance of payments for raw materials imports, (3) environmentally preferable raw materials sources in comparison with some deposits now contemplated for exploitation on Federal lands (including the national parks) and (4) offsetting or bypassing cartels of raw materials exporting countries (e.g., OPEC, CIPEC, OIEC, ITA, etc.; see Bergsten⁴).

While the primary current interest in deep seabed resources is in the copper and nickel content of manganese nodules, other resources cover vast areas of the ocean floor which, under future market-price-technology conditions, are almost certain to be economic to recover, including many, if not all, of the minerals required by modern technological societies⁵. One kind of deep-ocean sediment alone is estimated to contain 920×10^{12} (million million) metric tons of aluminum with an in-situ metal concentration of 9.2%, 73×10^{12} tons of titanium (@ 0.73%) and 650×10^{12} tons of iron (@ 6.5%). While these concentrations are considerable below those of today's lowest grade economic ores ashore, the time must inevitably come when they are competitive with then-much diminished land resources.

There is further evidence that extensive hard-rock mineralization is occurring along active tectonic plate boundaries (e.g., mid-oceanic rift systems). Since these deposits have been forming on the ocean floor for as long as 150 million years (the age of the oldest known ocean floor yet found) in the Pacific and 90 million years in the Atlantic Ocean, it is most likely that many such deposits exist beneath the sediments in all parts of the world ocean. In addition, there is some evidence of the existence of hot brine deposits in ridge-rift systems in other than the Red Sea. Finally, while most offshore petroleum exploration today is concerned with deposits shelf and upper slope, strong indications of major resources in the deep ocean have been found—(e.g., at Sigsbee Knolls in the Gulf of Mexico found by the deep ocean drilling research ship Glomar Challenger and salt domes found off the southwest coast of Africa by the Woods Hole Oceanographic Institution research vessel Atlantis II). The extent of such deposits is not known, but simple extrapolation of demand-technology-economics curves indicates that these must be considered as potential future sources of supply. All of them are found more than 200 miles from shore and well clear of the continental margin—i.e., within the area of the non-sovereign sea. Policies adopted and agreements concluded now could well affect the nature of national access decades hence.

A basic point of this particular discussion is that when we refer to deep seabed resources, we do not yet really know what we are talking about. By the year 2000 they could be major sources of supply of several important minerals. This possibility should be kept in mind by U.S. policy-makers when considering what to trade away at LOS bargaining tables in return for some temporal military advantage.

On the matter of balance of payments, the choice is quite simple. The U.S. Treasury Department Bureau of Customs has ruled that if deep ocean resources of the non-sovereign sea are mined by American companies operating American-flag vessels manned by American crews, their production will be considered as of domestic origin—which means no import duties (lower prices) and that the money stays within the U.S. (no adverse balance contribution). At present, the adverse balance of payments in raw materials available from deep ocean deposits runs to many hundreds of millions of dollars a year^{6,7}—or, if petroleum is included, many billions of dollars.

The nature of the international institution governing the exploitation of deep seabed resources is important in many ways. The extent to which it would govern business or investment climate is noted above. Another factor of particular importance to the developed, or consuming, states would be its effect on international cartels of raw materials producers, such as OPEC. Under more or less freely competitive conditions recovery and marketing of deep ocean resources could serve as a brake on such activities with price-supply benefits that would be universal. Conversely, if it were controlled on a one-nation, one-vote basis—as demanded by the developing states—and if the present distribution of national attitudes were to prevail, these same deep ocean resources could

⁴Fred C. Bergsten, Commodity Shortages and the Ocean in Perspectives on Ocean Policy, (Government Printing Office, Washington, D.C., 1974).

⁵John L. Mero, The Mineral Resources of the Sea, (Elsevier, New York-London-Amsterdam, 1965).

⁶_____, Minerals Yearbook, Volume 1, Metals, Minerals & Fuels, (U.S. Department of Interior; Government Printing Office, Washington, D.C., 1973).

⁷Various personal communications with various desks of the Department of Commerce Bureau of Economic Analysis, (Washington, D.C.).

be used to reinforce cartellization of international raw materials resources--with consequent devastating effects on the highly industrialized community.

Biological Resources

The biological resources of the sea include: Pelagic finfishes which range widely over the high seas and those that stay close to the coast; anadromous fishes that spend most of their lives in the open ocean but must return to sovereign freshwater streams to spawn; catadromous fishes that live most of their lives in freshwater but must return to the open ocean to spawn; benthic fishes such as flounder, sole, turbot and skate; cephalopods such as octopus and squid; crustaceans such as lobsters, crabs and shrimp; molluscs such as oysters, clams, mussels and scallops; reptiles such as sea turtles; mammals such as whales, porpoises, seals, otters and manatees; and a growing variety of marine plants that are eaten directly or processed to produce important industrial and food processing chemicals.

The world-wide harvest of these resources (excluding marine mammals) in 1973 totalled 65.7 million metric tons⁸ --down from a normal level of close to 70 million metric tons primarily because of the temporary failure of the Peruvian anchovy fishery. Some 5-10 per cent of these totals derive from freshwater commercial fishing and aquaculture (especially significant in P.R.C. totals⁹, leaving a world marine catch of 60-to-65 million metric tons.

Past estimates of the ultimate maximum sustainable yield of the total global fishery resource have ranged widely, if not wildly. Lately, as overfishing has occurred in one fishery after another, there has been a tendency to be conservative. Few will speculate beyond a doubling of the present catch rate, while some question if it could be expanded even that much--unless new and presently unused species were included.

Fishery issues proliferate in multiple combinations and permutations, but basically they can be reduced to the following: (1) conservation, (2) enforcement of, and/or compliance with, management decisions, (3) equitable distribution of economic wealth; (4) rights and responsibilities in distant water fisheries, (5) rights and responsibilities in coastal fisheries, (6) rights and responsibilities in anadromous fisheries and (7) Koers has proposed¹⁰ rights and responsibilities in common fisheries. Marine mammals are not included in this discussion because they are already under regulation by the International Whaling Commission and are not a substantive issue of the LOS negotiations. Underlying the whole fishery problem area is the fact that there are more states which now fish, or potentially want to fish, than there are fish to go around. It is a classic example of the "Tragedy of the Commons"¹¹: If access to a limited common property resource is permitted to increase without restraint--in terms of the numbers of users, the extent and efficiency with which each participant uses the resource or, usually, both--the capacity of that resource will eventually be exceeded, resulting in its destruction. A fundamental concept that must be accounted in any effort to resolve fishery problems is that--though renewable on a regular cyclic basis--the resource is not infinitely renewable and, therefore, for the annual purposes of taking annual production, must be considered as finite. The fact that a resource is available for the taking forever in time does not mean that it is available for taking in unlimited quantities within a given time frame. Indeed, if the maximum sustainable yield of a stock is exceeded and the stock is not then given time to recover, it will be destroyed.

An as-yet unstated fishery problem area, but one which surely must arise in the future, relates to the equitable distribution of the nutritional wealth of the resource.¹² It is self-evident that those states which are most able (capital, technology, manpower, etc.) to catch the most fish do so. These are not always the states whose people most desperately need high-quality animal protein added to their diet; indeed, it is usually quite the opposite. The states most in need of this nutritional input, generally, are

⁸U.S., Fisheries of the United States, (National Marine Fisheries Service; Government Printing Office, Washington, D.C., 1974-1975).

⁹Milan Kravanja, National Marine Fisheries Service - personal communication, (Washington, D.C., 1974).

¹⁰Albert W. Koers, The International Regulation of Marine Fisheries, (Fishing News Books Ltd., London, 1973).

¹¹Garrett Hardin, The Tragedy of the Commons in Science, Vol. 162, (December 13, 1968, Washington, D.C.).

¹²E. W. Seabrook Hull, "The Geography of Starvation", (unpublished) - 1970.

the least able to afford to buy it. Further, there are some disturbing disparities between the geographical location of some of the world's most productive fisheries and the concentrations of large, undernourished populations. Even where rich fisheries may exist close by such population concentrations, what usually happens is that distant water fishing fleets take the bulk of the production and thus export it out of the area. There is an ethical and/or moral question here which one day will have to be addressed.

Conservation: The first problem in fishery conservation planning and management is the lack of an adequate scientific base on which to found decisions. Much of the requisite information simply does not exist. Most analyses, projections and decisions are based more on historical catch records, prospects for new entrants and anticipated increases in harvesting efficiency, than they are on knowledge of standing stocks, recruitment rates and maximum sustainable yield. Globally, the generation of such knowledge is the responsibility of the U.N. Food & Agriculture Organization in Rome, which must rely for its data primarily on its member states. It is in this area that the greatest weakness exists, both in the failure of individual states (including the U.S.) to develop sound scientific bases and, in some cases, simply in a refusal to supply what information has been developed. Further, it is not at all certain that catch statistics are always accurately reported, especially where internationally-set catch quotas may have been exceeded either deliberately or accidentally. This situation is generic to the whole area of fisheries management, and until it is corrected decisions will continue to be based on tenuous assumptions--except when a sharp drop in catch rates signals that a stock has been badly over-stressed. Then it is frequently too late.

Enforcement/Compliance: Voluntary compliance has not worked well and still is not working well. The alternative is some effective means of enforcement. The problem of enforcement of catch quotas, banned species, etc., is that beyond the limits of territorial seas and fishery contiguous zones, no one is clearly responsible. There is no international fishery police force. This leaves it up to the fishing nation--and it is well known how well the fox guards the chickens--or the coastal state. Many coastal states are small, developing and lack the means of enforcement. Others simply lack the incentive to enforce: Others, not they, are catching the fish, and there is doubt over how far they can go in such enforcement procedures without causing a major international confrontation (e.g., the Iceland-United Kingdom "cod war"). This, possibly, is one of the strongest arguments for a 200-mile economic zone. It would clearly vest responsibility for management and enforcement of conservation orders for coastal fisheries in the coastal state. It could then license or not license others to fish in the zone, and it would have the clear authority to inspect and regulate those that do. Included within such a 200-mile zone would be more than three-quarters of the world's fisheries. Only wide-ranging pelagic species, such as tuna, and the oceanic phase of some anadromous species, such as salmon, would be excluded. Their protection will require more rigorous and more effective regulation by international bodies. Because it may be quite costly for the coastal state to maintain their spawning areas, it is widely admitted that anadromous species are mainly, but not exclusively, the property of the coastal state. The problem is to enforce high-seas fishing quotas and fishing methods; at present sole reliance must be placed on voluntary compliance. High seas pelagic species are generally considered as common property (res communis) but in practice are treated more like nobody's property (res nullius). Some international common property species in some parts of the ocean are subject to regulation by international regional bodies (e.g., IATTC-Inter-American Tropical Tuna Commission, ICCAT-International Commission for the Conservation of Atlantic Tunas). Others--billfish, for example, which are fished commercially by the Japanese and others--are not subject to any regulation. More effective means of management and regulation of these fisheries are needed, as well as much sounder scientific bases for decision-making. It would seem to be a problem, the solution to which can come only through more responsible attitudes and actions by the fishery states themselves--the fox in the chickens again...

Distribution of Wealth: Since high-seas fisheries, generally, are considered the common property of all nations, and since the maximum sustainable yield of such fisheries will not support economically-viable fishing units fielded by all the nations that now fish or may wish to fish in the future, protection of the resource requires that there be a system of limited entry. Koers¹³ has proposed that access to common fisheries be licensed both to control access and to provide revenue for distributing economic wealth to those nations which are denied access.

Distant Water & Coastal Fisheries: A major cause of fishery conflicts stems from the nature of the distant water fishing fleets. While some of their effort is restricted to common stocks of the high seas, the bulk of their fishing activities occurs within 200

¹³Koers, loc. cit.

miles (usually much closer) of the shores of other nations. In general, these fleets are either state owned or subsidized. They travel in large numbers. In June, 1973, for example, 927 distant water fishing vessels were counted just beyond the 12-mile contiguous fishing zone of the U.S. 48 coterminous states and Alaska, of which 582 were Japanese and 277 were Russian. These fleets are modern and feature large and efficient vessels--e.g., factory stern trawlers of 3,000 deadweight tons or more and mother factory and supply ships up to 15,000 deadweight tons, as well as numerous smaller catcher vessels and research vessels to scout the catches. The tendency of these fleets is to "pulse fish", that is, to move into an area, fish it until it is no longer profitable to do so and then move on. This not only leaves few fish for the coastal state's fishermen to catch, but frequently the take exceeds the stock's maximum sustainable yield, and it may require several years for the stock to recover, if it is not heavily fished meanwhile. The very presence of these fleets, often numbering scores of vessels at a single locations, makes it physically impossible for small, individual coastal fishermen to operate in the same area. Damage to coastal fishermen's gear is not an infrequent occurrence

As indicated above under "Conservation," the institution of a 200-mile economic zone would bring this problem under effective control. As now perceived, it would not bar distant water fishing fleets from coastal fisheries but would make such access subject to bilateral negotiations with, presumable, resultant reductions in tensions and improved chances for effective conservation.

Anadromous and Common Fisheries: These two categories of fisheries and the main issues involved in their management are covered briefly under "Conservation" above. It should be noted also that both types of fishery are very important economically, with high yields bringing comparatively high prices. In addition, the lack of limited entry in the tuna fishery is leading to perilous overcapitalization. As more and more participants have entered the fishery, the open season in controlled areas has been progressively shortened. As this has happened, the fishing vessels--especially those of the U.S.--have gotten larger and more efficient in order to take as many fish as possible before the season ends. This added efficiency results in the season being shortened even more, and so on and on. As an added consequence of this self-defeating cycle, in order to keep this very expensive capital equipment working, once the season in the controlled zone closes, their captain-owners take their ships to other, open areas. It seems that it must be only a matter of time before the added stress on these uncontrolled stocks requires that they, too, be brought under regulation.

The National Stake in Fisheries: The U.S. national interest in commercial fisheries can be viewed in many different ways. One way is economic. Since 1956 the world catch has increased over 50%. During that period the U.S. catch from all sources--inland, coastal, distant waters--has remained static at slightly over 2 million metric tons. In that same period the U.S. adverse balance of payments in trade in fish and fish products has risen from \$319 million to \$1,431 million in 1974. Distant water fleets currently take almost four million metric tons of fish a year from the 12-to-200 mile zone off the coast of the United States,¹⁴ some 75% more than the total catch of U.S. fishermen from all sources and 13 times the U.S. catch in that zone. Considering that many common high seas fisheries are at or near maximum sustainable catch limits, the greatest opportunity for expanding U.S. domestic fisheries production would appear to be in providing American fishermen greater access to U.S. coastal fisheries resources beyond the 12-mile mark. It would, of course, have the added advantage of providing revenue from licenses awarded to distant water fishing nations and giving the U.S. direct control for conservation management purposes.

Little recognition has been given in this discussion to the numerous regional international fisheries management commissions, conventions, etc., simply because they have not worked well, and, as competition for limited resources rises they work less and less well. There is difficulty in agreeing on quotas; policing of catches and gear in most cases is nearly impossible; and, except where geographic limits (e.g., the 12-mile zone) are violated, enforcement is virtually non-existent. They are better than nothing, however, and they have provided valuable experience in the problems of fishery management. And, even with the advent of a 200-mile economic zone, such institutions might still be required to manage both common highseas and anadromous fisheries. Christy

¹⁴Kravanja, Ibid.

and Scott,¹⁵ Johnston,¹⁶ and Koers¹⁷ have examined these institutions of international fisheries management in considerable detail and generally concur in this appraisal of the effectiveness of these organizations.

Maritime Transport

The issues related to maritime transport are reasonably easy to enumerate; they are rather more difficult to treat with in the international arena. How they should be ordered depends on perspective. The ship owner-operator will have quite a different view from members of a non-maritime coastal state whose shores and coastal waters have been inundated by oil from a casualty to a VLCC (Very Large Crude Carrier).

With the rising traffic in petroleum products and the remarkable increase in the size of the carriers--from the 16,000 dwt (deadweight ton) T-2 of the mid-1940's to the latest VLCC of half a million tons)-- pollution is probably the major concern today. Freedom from political or other interference with ocean trade routes is another worry, as is traffic control in congested areas [e.g., areas of dense shipping traffic as in the English Channel, areas of heavy offshore petroleum development, traditional fishing areas, etc.]. Another concern related to the first is the inadequacy of depth charts in many parts of the world. Most of these charts were originally made with a controlling depth of no more than 30-to-35 feet in mind. Today's VLCC's may draw as much as 90 feet when fully loaded; many draw 40-to-50 feet, and the danger of grounding is ever present.

Freedom from political or other interference with ocean trade routes is mainly a matter, simply, of international peace and stability and is generally beyond the scope of the LOS concerns, with one exception. That has to do with geographic limits in the seas and how they are applied. If a coastal state (or states) exerts claims that make an otherwise-international strait territorial sea, and if the controlling state(s) should decide that the danger posed by passage of VLCC's violated the right of innocent passage and closed the strait to such traffic, this would present a problem to operators of such vessels. Similar action could be taken in extended territorial-sea; pollution-control or archipelago zones. This is a problem area with which LOS negotiators are trying to deal in the broader matters of limits and rights generally.

Ship traffic control is a matter that presently is dealt with on a regional or local basis--as with traffic control in the English Channel and, even, lane separation in transoceanic trade. The problem is in getting merchant captains to pay any attention to these rules or (more often) recommendations. The matter of the inadequacy of charts is a universal problem with which the International Hydrographic Office at Monaco tries to deal. However, charting depends on the efforts of each local coastal state. Costs are high, incentives are often low, and progress is dismally slow. It is a problem with which shippers, in particular, and the world, in general, are going to have to live until such time as sheer urgency forces action at the international, if not at the national, level.

The matter of pollution is extremely difficult to handle. While IMCO (International Maritime Consultative Organization), the various national certification bureaus (e.g., American Bureau of Shipping in the U.S., Lloyds in the United Kingdom, etc.), national agencies (e.g., U.S. Maritime Administration), etc., are supposed to control such things as ship-design and operation, manning, loading, etc., they are virtually helpless in the face of the world pattern of ship registration and ownership. Mostert¹⁸ has expertly and dramatically reported on this problem in the case of the VLCC's. He notes that whereas ten years earlier there were none, by year-end 1973 there were 388 ships of 200,000 dwt or over in service with another 493 under construction or on order. While these ships are not the whole problem, they dramatize the general problem and are themselves a major portion of it.

The majority of these ships are registered under "flags of opportunity," usually small states that have turned the registration of ships into a big and profitable business. They care little, if at all, how they are built, manned or operated. Or, if they do,

¹⁵Francis T. Christy, Jr., & Anthony Scott, The Common Wealth in Ocean Fisheries, (Baltimore: The Johns Hopkins Press, 1965).

¹⁶Douglas M. Johnston, The International Law of Fisheries, (New Haven: Yale University Press, 1965).

¹⁷Koers, loc. cit.

¹⁸Noel Mostert, Supership, (New York: Alfred A. Knopf, 1974).

they are forced to rely on ship operators for guidance for determination of which criteria should apply. Indeed, most of the ships that carry their flags never have and never will call at their home ports. In turn, these ships are owned by corporations that are subsidiaries of other corporations which are subsidiaries...and so on through multiple corporate layers and usually through a number of different countries in which the various subsidiary firms are licensed to do business. The flag-of-opportunity state that licenses the ships isn't going to bite the hand that feeds it by trying to enforce rigid regulations, assign blames and hold violators of either national or international law liable for damages; if it did the operator would simply move to another flag-of-opportunity state, which would be happy for the business. Probing through the corporate maze to find the owner-corporation of a particular ship can be difficult-to-impossible and very costly. And, if one is successful, it is not unusual to find that the only asset the firm has is that one ship; if the ship has been lost in the casualty that produced the pollution, there is nothing left to assess for damages.

The magnitude of the problem has probably not really begun to dawn, for most of these ships are still new and still in the hands of their original owners and, therefore, reasonably well maintained. Many of the vessels, however, were built quickly with every effort to cut costs. Again, Moster reports on the hazards of single-screw, single-rudder, single boiler vessels without double hulls, the frequency with which non-polluting casualties occur and the rising chances of their increasing in the future. With age and/or under conditions of surplus capacity, as now, many of these ships will be sold to other, more marginal operators; what now is largely a potential hazard could well become an ecological disaster of considerable consequence.

In addition to the dangers of pollution from accidents, there is also the problem of intentional pollution, from cleaning tanks, pumping bilges, etc. These actions are supposed to be regulated, but as so often occurs in the international arena, the means of enforcement is virtually non-existent. Reliance has to be placed mainly on the operating companies, and this is a mixed bag at best—with some issuing and enforcing rigid regulations and others not bothering on either count.

IMCO was organized to play the major role in regulating just such activities, but not only does it suffer from the usual weaknesses of international organizations--functioning by the compromise of majority rule and lacking effective means of enforcement--but to a large extent it is run by the world shipping industry (those pesky foxes and the chickens again).

Some of the more responsible states have imposed and enforce effective regulations on ships that fly their flag. This, however, is an effort of diminishing returns insofar as the world picture is concerned. Between 1968 and 1972 the world merchant fleet of vessels of 1,000 gross tons or over increased 40% from 261 million dwt to 380 million dwt.¹⁹ At the same time ships registered under flags of opportunity (mainly Liberia and Panama) increased over 90% from 49 million dwt to over 88 million dwt—to a point where they account for over 23% of the world's registered tonnage.

It is difficult to see how the problem can be solved by anything the LOS Conference might decide. The lack of effective enforcement in international regulations in today's situation would seem to be an insurmountable obstacle. Unilateral action by major individual states or multilateral action by groups of major states which would have effective economic impact on the operation of such vessels—e.g., barring unsafe or "not-responsible" vessels from the state's ports or from carrying their trade--might serve to force more responsible design and operating practices.

Pollution

The problem of pollution by ships at sea is largely covered in the section on maritime transport above. It is a problem of developing and enforcing minimum standards, of assigning blame for violations and of assessing and collecting penalties and damages. The intentional dumping of wastes from shore sources with the sanction of the dumping state in some cases is a matter of regional control (e.g., the North Sea, Baltic, etc.). Dumping of particularly hazardous materials in the high seas, however, should be brought under specific international control, including the development of a prohibited list and of specific standards and procedures for ocean disposal of those materials which are also hazardous but not prohibited.

¹⁹U.S., Maritime Administration, personal communication (Washington, D.C.).

The more subtle and more pervasive form of ocean pollution, however, is that which originates within national boundaries and is transported incidental to the natural circulation of air and water beyond such boundaries and into the non-sovereign sea. Hull and Koers²⁰ have shown that by far the greatest variety and largest volume of damaging pollution found in the ocean originates and is transported in this way. As examples are the persistent polychlorinated hydrocarbons (DDT, PCB, e.g.), petroleum products, other hydrocarbons and nearly every other material that is released to national rivers or to the atmosphere over national territory. Of the transport vectors, by far the greatest volume of pollutants is carried by the atmosphere, which is the most difficult to control.

This means that the most severe threat of ocean pollution can only be controlled from within the national boundaries of sovereign states. This presents difficult but not unprecedented problems of international law, as experience with some of the world's international river basins has shown²¹. The problem is complex and the solution proposed by Hull and Koers presupposes a level of responsibility by individual states to the welfare of the world community which does not appear to exist. In essence, however, it would assign economic penalties against such pollution commensurate with the economic benefit realized from the act of polluting. Human nature being what it is, this could be the only principle of pollution control that can be expected to be effective. This is true of any pollution from whatever source that damages or threatens to damage the world community. Any liability for damages from such pollution, of course, should be considered separately and be assessed in addition to any penalties that might be involved.

Freedom of Scientific Research

Simplistically viewed, attitudes on freedom of scientific research divide along the same lines of most other issues--the developed states versus the developing states. However, it is not a simplistic situation. Nobody has much opinion one way or another on scientific research conducted on or under the high seas, no matter who is conducting the research. The problem comes when the research vessels of one, often distant and much larger, state seeks to conduct research on the continental slope or shelf of another, perhaps smaller, state. Immediately there is suspicion by the coastal state that the motive may not be entirely scientific--with scientific, in this case, implying full, free and prompt publication of results. The fear is that the "research vessel" may be looking for exploitable resources or that it may have military business. And, simply, there is a sense of possessiveness about one's offshore, which may not be alleviated by a recognized lack of knowledge of what really does lie there.

States with trained ocean scientists and well-equipped oceanographic research vessels want to use them, and they want to use them in all parts of the world--close to other states' shores as well as in the deep and distant ocean. The majority of these scientists have no motive in this work other than the quest for knowledge, which they are prepared to share fully. The oil companies, however, also operate research vessels which specifically seek evidence of deep sea oil deposits. And, not only does the U.S. Navy fund much of the research of the private oceanographic research institutions, but it operates its own research vessels and funds major portions of its oceanographic budget under "Intelligence" and ASW (Anti-Submarine Warfare) Research & Development. Both are legitimate naval activities. It is not difficult to understand the confusion and suspicion that is found in many of the developing states in regard to the big powers' desire for complete freedom to conduct research in their offshore waters. Knauss²² and others have articulated the marine scientists' case for freedom for research, finely drawing the line between it and petroleum exploration or military snooping. But lucidity and logic are not known for winning battles with emotion.

The best that can probably be expected in any LOS agreement is a statement of principles in support of freedom of research, but only with the permission and participation of the contiguous state--a codification, in effect, of what is already becoming customary practice.

International Institutional Arrangements

²⁰E.W. Seabrook Hull & Albert W. Koers, Introduction to a Convention on the International Environmental Protection Agency, Law of the Sea Institute Occasional Paper No. 12, (Kingston, RI, 1971).

²¹A.H. Garretson, R.D. Hayton and C.J. Olmstead, The Law of International River Basins, (Oceana, 1967).

²²John Knauss, comments on science and international organizations (no title) Law of the Sea Recommendations, Proceedings, 4th Annual Law of the Sea Institute, Kingston, RI, 1969), pp. 404-408.

The fundamental issue in respect of the institutional arrangements offered before the LOS Conference has been alluded to above—namely the unwillingness of the developed states to subject themselves or their interests in ocean resources to the vagaries of management subject to a one-nation, one-vote general conference of 140+ states. The developed states want a non-political structure on which they could rely for stability of policy and action and which would be conducive to attracting the extensive investments that will be required to initiate and bring to profitable status such activities, for example, as deep ocean mining. This is an issue on which there must be intelligent compromise if there is to be a satisfactory conclusion to the matter. The prospects are not encouraging.

IV. RECOMMENDATIONS

It has been the purpose of this paper to make a case for a reexamination of the wisdom of a purely conventional approach to the development of new international LOS—especially in light of the continuing diminution of the usefulness of the U.N. forums subject to the rule of one-state, one-vote. This paper has not been written, however, to demonstrate what is wrong without also proffering some kind of alternative. The recommendations that follow are not proposed so much as specific, detailed actions as they are proposed to demonstrate a totally different kind of approach. They are phrased to show, in general, how it might go, rather than to insist that this is precisely how it should go. They are intended to demonstrate a new policy approach, not to elaborate the implementation of that policy—though some of the specifics may well have merit. What is needed is a totally different approach, one that is pragmatic and recognizes things as they are, rather than as one would wish they were. There are probably many alternative approaches to initiation of customary LOS evolutionary processes. These are but some of them.

In General:

a. Conduct a balanced review of where the national interest lies, giving more weight than appears to have been given in the past to economic, as well as military, factors and to the long-term, as well as the short-term, implications of policies adopted to treat with the contemporary time frame.

b. In statements and in actions give more pragmatic recognition to conditions, attitudes and perspectives as they actually exist in the world today—e.g., make recognition by the developing states of the needs of the developed states a condition of recognition by the developed states of the needs of the developing states.

c. Recognize and admit of the difficulty, if not impossibility, of developing complex new law of the sea through the conventional process alone, and both permit and encourage the processes of customary law evolution to commence.

d. Initiate preparations to take responsible unilateral action, with or without the cooperation and participation of other states, in respect of some of the more critical law of the sea decisions, giving due consideration to the national interest, the national responsibility to the international community and the difference between sovereign, shared and international common property resources.

In Particular:

A. Limits and Disparities.

1. Proclaim a 12-mile territorial sea for the United States, to bring uniformity to the North American continent and in recognition of developing customary international law.

2. Proclaim, or support Congressional action establishing a 200-mile economic zone providing for:

- a. exclusive control over the natural resources thereof;
- b. extension of pollution and customs control over the full extent of that zone;
- c. modified free passage through that zone, conditioned on adherence to certain traffic control regulations designed to reduce the chances of collision, minimize interference with resource recovery operations, etc.
- d. negotiation of bilateral licenses with other states to take that portion of the living resources production between the catch by U.S. fishermen and the safe maximum sustainable yield—giving favorable consideration to states with historical fishing interests in the waters of the zone;
- e. reservation of a portion of the revenues from licensing fishing rights in the economic zone for the international community.

3. Continue work in the U.N. LOS Conference and other international forums for free transit through straits, but be prepared to make a unilateral declaration and to back it up, if necessary, with force—taking care to specify only those straits which have a clear history of, and need by, international commerce.

4. Proclaim sovereignty over the resources of the seabed to the limits of the continental margin as defined by Hedberg,²³ or to a distance of 200 nautical miles from shore, whichever is the greater; and reserve to the international community a portion of the revenues derived from the exploitation of mineral resources beyond the 200-meter isobath.

5. Recognize the archipelago principle provided that a regime of territorial sea, rather than internal waters, applies within the archipelago baselines and that special provision be made to assure a clear passage for vessels wishing to cross the archipelago perpendicular to and approximately midway along its longest dimension.

6. Examine the archipelago principle as it may apply to the Hawaiian archipelago and make appropriate claims.

7. Seek to develop a rational economic zone regime in respect of islands having less than a certain minimum diameter.

8. Declare it to be national policy to favor convening a special U.N. conference to consider the problem of geographic and other disparities among nations and to oppose efforts to inject this issue into the LOS deliberations.

B. Military Considerations

1. Declare it to be national policy that free transit for other than strategic weapons of mass destruction be allowed through, over and under straits used currently and historically for international commerce.

2. Declare it to be national policy not to move strategic weapons of mass destruction—including strategically-armed submarines—through, over or under such straits and to oppose such movements by other states.

C. Mineral Resource

1. Declare it to be national policy that the non-sovereign sea is an international community and, with such other states as may wish to participate, establish a "World Ocean Resources Agency" which shall license and regulate the use and taking of these resources, providing that revenues from such licensing which is surplus to the costs of administration, scientific research and enforcement shall be reserved to the international community.

2. Enact and implement enabling legislation to permit the prompt commencement of mining operations by nationals of the United States under the rules of the proposed World Ocean Resources Agency.

3. Implement an orderly and long-term program of scientific research into the resources of the non-sovereign sea, including their location, extent, rates and processes of regeneration and of pollution and other constraints on their use and taking.

D. Biological Resources

1. Declare it to be national policy that the living resources of the territorial sea (to 12 n. mi.) are the exclusive property of the United States, while those of the economic zone (12-to-200 n. mi.) are property under the control and management of the United States but belonging jointly to the U.S. and the international community, with the wealth derived from its taking to be shared accordingly, and while those resources of the non-sovereign sea are the common property of the international community with the wealth derived from the licensing thereof, after expenses, to be reserved to the international community.

2. Declare it to be national policy that anadromous species which spawn in the U.S. streams are the shared resource of the U.S. and the international community, and that administration thereof will be conducted jointly by the U.S. and the World Ocean Resources Agency, with

²³Hollis D. Hedberg, Ocean Boundaries and Petroleum Resources, (March, 1976), Sci., 191, pp. 1009-1018.

a portion of the revenues derived from licensing the non-sovereign fisheries for these stocks to go to the international community.

E. Maritime Transport

1. Declare it to be national policy that ships designed below minimum safe standards, operated in an unsafe manner and whose flag and/or ownership leave no clear line of accessibility and responsibility are inimical to national safety and well being.

2. Establish such safe standards and seek their adoption through existing international institutions—i.e., IMCO—but, failing prompt action, seek the cooperation of other major trading states in establishing a supplementary "International Maritime Standards Organization" and in taking unilateral action by initially requiring the posting of pollution security bonds before passing through economic (or pollution control) zones, and, after passage of a reasonable period of time, prohibiting the presence of non-conforming vessels in U.S. controlled waters.

F. Pollution

1. With respect to shipping, pollution is covered above under "IX-Maritime Transport"

2. Declare it to be national policy to oppose the dumping of hazardous materials in the ocean, to seek effective action through the LOS Conference and through existing institutions, and, barring effective action within a reasonable period of time, to seek recourse through the establishment of multi-national regional organizations outside the U.N. structure.

3. Initiate through the UNEP, or unilaterally through U.S. federal agencies, a thorough study of the danger posed by the escape of pollutants beyond national boundaries in the atmosphere, rivers and run-off waters and which find their way into the waters of the world ocean, this study to be preparatory to initiating remedial action on an international scale to reduce such releases to safe levels.

G. Freedom of Scientific Research

1. Declare it to be national policy that peaceful and non-commercial scientific investigation of the ocean is necessary to understanding the ocean and its resources and is in support of the best interests of mankind.

2. Work through existing international institutions (e.g. the IOC) and the LOS Conference to obtain maximum freedom for scientific research of the ocean, while continuing to perfect and simplify procedures for making bilateral arrangements for conducting such research offshore of individual states on a participating basis.

H. International Institutions

1. Continue to work through the LOS Conference and other forums for the development of responsible and politically stable management of international institutions—meanwhile establishing whatever institutions outside of the U.N. structure as may be necessary to assure and expedite the wise management, use and taking of ocean resources to the benefit both of individual states and of the international community as a whole.

I. Postscript

If this means the end of the United Nations as an effective instrument of international order, it can be argued that the developing states have already brought it to that unfortunate state. Rather than destroying the U.N., however, it is quite possible, if not likely, that, at the prospect of alternative institutions evolving without their participation, the developing states would exhibit more mature and more responsible attitudes, and the new institutions could then be brought into the U.N. structure—but only with assurances that their effectiveness would not be destroyed thereby. This last might require some restructuring of the U.N. itself, perhaps through revisions in its charter.

