

MARINE MINERAL RESOURCES: NATIONAL SECURITY AND NATIONAL JURISDICTION

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Introduction The various leaflets and letters announcing this Symposium have listed "Matters of Military Concern" as the topic of my address. Considering the far-reaching complexities involved with the oceans' resources today and at the same time, the vastness of the military's oceanic interests, and responsibilities, I think it is important that we word the topic with greater precision to read "Matters of Military Concern Connected with Marine Mineral Resources."

The scope and nature of civil activities in the oceans and on the seabeds is increasing rapidly, and current technological developments indicate that exploitative activities on and beyond the continental shelves will continue to grow in both magnitude and variety. Such growth will logically result in various types of physical plants for extractive or processing purposes, transportation and life support systems, power generation plants and other appurtenances of marine mineral industrial activity.

At the same time, international political interest in the oceans and seabeds has been aroused in recent years by the 1958 and 1960 United Nations Conferences on the Law of the Sea, by the growing international exploitation of fisheries, by the seaward steps of the petroleum industry, and by growing

interest in the exploitation of marine mineral resources. This is also demonstrated in part by the current activities of the United Nations' *Ad Hoc* Committee on the Seabeds, and by suggestions from various quarters, both at home and abroad, to the effect that man is churning the oceans into legal chaos, and consequently sweeping new international legal action is required to define a law of the seabed. We can expect this interest to increase rather than diminish in the future.

Both the technological and the political developments relating to marine mineral resources are of professional concern to the military: the first, because they will give rise to a new order of military requirements along with new problems of accommodation between military and other uses; the second, because they have the potential for changing the traditional nature of the freedom of the seas, and, in so doing, would have major implications for military aspects of the Nation's security.

Accordingly, I would like to address three topics: (1) requirements for military capability arising in connection with the exploitation of the mineral resources of the world ocean; (2) problems of accommodation between military and nonmilitary uses arising from the exploitation; and (3) problems in

legal regimes (including arms control regimes) triggered (at least in part) by the problems and prospects of exploitation. In discussing these subjects I will consider them from the point of view of one responsible for military uses of the oceans and of military security, giving at best only passing notice to other aspects of overall national security, of which military security is only one ingredient. Many other aspects of these problems are being covered elsewhere in this Symposium.

This is an exceedingly complex subject, and many diverse views are being considered. The statements made in this paper should be considered as my thoughts on the subject and should not necessarily be interpreted as representing official governmental positions.

Military Uses and Responsibilities in the Oceans. As a foundation for my discussion, I will describe some of the principal aspects of the involvement of the military with the sea.

Many military uses of the ocean stem from general uses of the ocean: Where man goes his problems go, where man's problems go his conflicts go, and where man's conflicts go his military forces follow. I note parenthetically that it sometimes seems to be implicitly assumed that removal of the military forces somehow removes the conflicts and the problems, but I see no reason to believe this, except in the occasional case where the presence of the military force makes the problem or the conflict. In any case we may call this the first class of military uses of the oceans; "General use of the oceans."

A second class of military uses of the ocean stem from special properties of the ocean, including the fact that there is no sovereignty there, the fact that the sea provides special kinds of concealment, and the fact that it is an arena generally empty of human population concentrations.

A third class of military uses stems from uses generated in response to the military uses called out by the first two classes, and by those in the third class. (I fold the third class into itself to avoid a useless sequence.)

Within these categories lies a wide range of present and possible future military activities, most of which can be influenced by changes in national or international views of jurisdiction, or by access to and use of the ocean floors and seabeds; changes that could result from international political action related primarily to the world's marine mineral resources.

Included in the phrase "general use of the oceans" are the traditional, time-honored uses of the world's oceans to move military forces to or against foreign shores and to prevent such movements against our own shores. General use includes the protection of U.S. shipping, fishing, and other property at sea; it includes the entire spectrum of naval activity--surface, sub-surface and in the air above the seas. Such use is the essence of naval power; if we are not careful in how we tamper with the factors that permit it we may harm our national interest.

In the second category,--"military uses generated by special properties of the oceans,"--we include those uses which take advantage of the mobility and concealment made possible by the marine environment. The flexible and highly invulnerable POLARIS deterrence system is a prime example of such use, as the follow-on POSEIDON system will be.

The third category,--"military uses generated by other military and by civil uses,"--includes such activities as anti-submarine warfare; air defense of fleets, forces, and merchant shipping; submarine warfare, mine warfare; search, rescue, and salvage missions; and oceanographic forecasting. Within this category, there are several possible mili-

tary uses of the continental shelves and seabeds. Saturation diving techniques, for example, together with future submersibles, sensors and tools may permit greater military use of the ocean floor. Such use could well be threatened or limited by changes in the legal regime for the deep oceans.

Requirements Arising from Exploitation. As the Nations's civil activities in the oceans and on the seabeds increase, the Navy can expect a considerable increase in tasks and requirements. At present, for example, a worldwide civil and military salvage network is in operation under Navy management and control.

By law (PL-513 of the 80th Congress and 10 U.S. Code 7361, et. seq.) and policy (OPNAVINST 4740.2B), while the Navy does not commit itself to maintain salvage facilities in excess of Navy requirements, the Secretary of the Navy can and does provide necessary salvage facilities for public and private vessels upon suitable terms. In effect, the Navy is the principal salvage agency of the federal government, working with Navy vessels and contract services to fill gaps in normal commercial salvage capabilities where necessary. This work is carried out, worldwide, by the Supervisor of Salvage working under the Naval Ship Systems Command. In addition, the Navy assists the Coast Guard in carrying out its statutory responsibility for the safety of life and property at sea by providing additional men and ships when required. In fact, the Navy participates in the traditional law of the sea: give help where help is needed.

The growing numbers of research ships, submersibles, and divers; and recreational craft, submersibles, and divers; operating from the nearshore to the deep ocean environment will inevitably require more rescue and salvage operations. For example, as more and more divers experiment in the months and years to come with saturated diving,

there may be an increased need for man-rated hyperbaric facilities just to handle emergencies resulting from such diving. Also, we can expect that increasing requirements for rescue of personnel and salvage of material will be the inevitable results of growth in the fishing and maritime industries. The possible necessity and possibility of expanding the Navy's salvage network and increasing its capabilities to deal with such growing requirements is certainly worthy of the most serious consideration.

In this connection, there is a growing requirement for safety certification of commercial and recreational submersibles. The Coast Guard has the responsibility for general certification and for the definition of standards of safety, etc., but because the Navy has the greatest capability in the federal government in the technology of submersibles, we are working with the Coast Guard both in the initial stages of standards preparation, and to assist them in acquiring the necessary skills and capabilities to carry on the work themselves in the long term. I think it worth mentioning at this point that there is a long tradition of cooperation between Navy and Coast Guard in carrying out our respective peacetime missions, in addition, of course, to our close association in wartime.

Navy certification of commercial or private submersibles is only in connection with their use by the Navy or its personnel.

As mineral exploration and exploitation activities (be they for sulphur, petroleum products, or heavy metals) increase and extend seaward, associated problems will increase, not only for rescue and salvage work, but also for protection and policing of U.S. nationals carrying out commercial activities on the surface, in the water column, and on the seabed.

While the United States, of course, looks first to diplomatic or peaceful

legal resolution of any problem of the protection of its citizens, when engaged in lawful activity on the high seas against arbitrary interference by other powers, or by piracy, this has to be backed up by a military potential. This requirement may be expected to extend to similar lawful activity in the water column or on the seabed. Such protection would, again, presumably be a responsibility shared between Navy and Coast Guard, depending somewhat on the nature and location of the problem. Clearly we will need the military capability to operate everywhere technology permits exploitation, if we are to fulfill this requirement.

These new and increasing challenges relating to marine mineral resources activities are functions for which the Navy and Coast Guard will accept responsibility as part of their overall missions. We should remember, however, that they are requirements that may demand an expanded effort on the part of the Navy and Coast Guard in terms of manpower, operating forces, shore facilities, and funding.

Problems of Accommodation. Another factor of interest to the military, stemming from marine technological development, will be the effect, in terms of interference or hazards, that the growing number of offshore and deep ocean platforms, structures, ships and related activities have on military operations in the marine environment. The Navy, for example, will have to be more and more on guard against physical interference from moving objects; in turn, it will have to be continuously aware of locations at which there are on-going marine resource exploitation activities. A partial list of expanding activities posing interference problems would include fishing, petroleum exploration, drilling, petroleum production operations, salvage work, recreational boating, merchant traffic, and oceanographic surveys being conducted

by means of ships, buoys, free submersibles, towed submersibles, tethered submersibles, seabed vehicles, and seabed installations.

A recent review of the situation indicates that naval operations involving individual ship exercises have been most affected by (and presumably have most affected) nonmilitary oceanic activities which have included fishing, merchant traffic, recreational boating, and ocean survey operations. To a lesser degree, amphibious, gunnery, and replenishment operations, antisubmarine warfare exercises, and air-sea rescue operations have been affected by the same kinds of interference. Minesweeping and mine hunting experimental work and exercises have experienced interference from recreational boating, fishing activities, oil drilling operations, and the establishment of artificial reefs.

While nonmilitary interferences have increased in recent years, they have not, by-and-large, created serious problems for the Navy, and we hope that naval operations have not created serious problems for others. In the great majority of reported interference incidents, the Navy ships involved have either accommodated or adjusted to the nonmilitary activity. The Navy has, for example, modified operations sufficiently to permit their completion with minimum interruption; in many cases it has solved the interference problem by giving more sea room to the nonmilitary activity. It has largely accommodated the oil industry in this fashion by moving seaward and away from interaction with drilling and production operations.

The Navy is a firm believer in the concept of accommodation of many different users, a concept which is, of course, fundamental to the present law of the sea. For example, the Convention on the Continental Shelf authorizes coastal nations to erect installations on their shelves to explore and exploit

seabed and subsoil resources, but at the same time, stipulates that this exercise of authority must not result in any unjustifiable interference with navigation, fishing, or conservation of living resources. The Gulf of Mexico offers an excellent example of the successful application of this concept in an area of high-intensity marine activity.

In sum, while this "crowding" of the oceans is of concern to the military, it does not pose an insurmountable problem. As we have for many decades, suitable arrangements will be made for multiple users using the historic principle of the international law of the sea as codified in Article 2 of the 1958 Geneva Convention on Law of the Sea.

One further point to keep in mind, however, is that it is not necessarily easy to move a military use of an area. The costs may be high, perhaps so high as to be prohibitive, particularly when extensive on and offshore facilities such as ranges are involved. This suggests the need for careful long-range planning by all potential users of an ocean area so that future conflict may be minimized.

Problems Arising from Possible Legal Regimes. Present-day naval operations are conducted in an international legal regime in which the principle of freedom of the high seas prevails: All nations have an equal right to use the high seas, one nation may not unreasonably interfere with the lawful use of the high seas by another, and each nation has jurisdiction over activities conducted on the high seas under its flag or nationality.

Under the present regime, national jurisdiction over exploration and exploitation of the seabed is limited to a relatively narrow offshore area adjacent to the coastal nation and short of the deep ocean seabed. In general terms, the law of capture applies to marine mineral resources, with title to the resources vesting only once they have been dredged, mined, or otherwise removed.

The explorer and exploiter are both protected and limited by the requirement that each user have reasonable regard for the activities of other users. The user's nation can control his marine operations.

Changes to the international law of the sea will undoubtedly be required, as changes have been required and made in the past. In all likelihood, it will be essential, for example, for nations to agree on a precise outer limit for the extension of national jurisdiction under the regime of the continental shelf. Nations may also ultimately need to resolve conflict-of-use problems on the seabed and subsoil of the deep oceans. As indicated by my earlier comments, the problem of such conflicting use on the high seas is not a new problem. In the past, as specific problems have arisen, specific solutions under international law have been devised to provide for an accommodation of interests. Lying behind these specific rules is the general rule of international law that one use of the high seas may not unreasonably interfere with other lawful uses.

Any number of suggested new regimes for the world's seabeds, their exploitation, and their ownership are being advanced, most involving either greater restrictions or greater international involvement than does the present regime.

Under the terms of a Flag State Regime, for example, a nation would have exclusive jurisdiction over a vessel flying its flag, and it would have responsibility with regard to what those individuals operating under its flag could lawfully do in light of the rights of other nations. The nation of the marine minerals explorer or exploiter would have a protective interest in the resources to be exploited within a reasonable area, although national sovereignty over areas of the deep ocean seabed would be prohibited.

The Median Line Regime would have

the coastal nations divide the entire oceans, seabeds and subsoil among them on the basis of median lines equidistant from the nearest land. In its ocean area, the shore state would control right of access, prescription, and appropriation.

Alternatively, the International Registry proposal would have the establishment of an International Registry Agency which would, for a fee, register flag state claims. The agency would presumably exercise some authority regarding competing claims, thus validating certain flag state claims.

Going one step further, the proposed regime of a Limited International Authority would establish an international agency with limited rights to lease the seabed and prescribe regulations, but no general ownership rights.

Finally, a regime of Complete Internationalization would include the establishment of an international agency which would own the seabed, the subsoil, and their resources with authority analogous to sovereignty over marine mineral resources.

I would like now to point out another interim approach toward clarification of principles related to different seabed users. I refer to the Seabed Principles introduced by the United States at last month's meeting of the U.N. *Ad Hoc* Committee. From the military viewpoint, these principles, intended to guide nations and their nationals in the exploration and use of the deep ocean floor and its subsoil, offer a most useful approach to seabed problems. They do not imply a "freeze" on marine mineral resources exploration and exploitation activities while specific seabed rules evolve from the practice of seabed users or are negotiated in the abstract.

Another aspect of the interaction of resource exploitation and military uses involves the problem of arms control. Mineral resources and arms control do not necessarily travel hand-in-hand; the two are often linked, however, in pro-

posed new regimes for the marine environment. As any arms control agreements relating to the continental shelves and deep ocean floors are a matter of critical concern to those responsible for the Nation's security, a brief comment on seabed arms control proposals being advanced, either as part of the proposed seabed regimes or otherwise, is in order.

At present, subject to the provisions of the United Nations Charter, there are few restrictions on defensive military deployment and activities in the oceans. Coastal state consent is required for territorial sea, and to some extent continental shelf operations. Additionally, there are the normal constraints of the rules of war, including the Geneva Convention's, the restraint against unreasonable interference with other users, and the limited test ban treaty which prohibits underwater, atmospheric, and space nuclear tests. The various arms control proposals which have been discussed, might, among other things, prohibit the stationing or affixing of nuclear weapons on the seabed, restrict the seabeds of the world for peaceful uses only or demilitarize them completely.

With regard to these proposals, the point I wish to make today is that several nations already have a capability to use the oceans and seabeds for military purposes. This situation dictates that any international effort to limit military uses of the continental shelves and deep ocean floors must be subject to truly effective controls and measures for verification: the ascertainment of treaty violations on the part of other nations.

General Concluding Remarks. In all of the marine mineral activity, both political and technological, underway today considerable attention is being focused on the need to be able to distinguish more clearly between the continental shelf and the deep ocean bed. It is significant to note that this

distinction is not of great importance to the military as it views the proposed regimes for seabed mineral exploitation and arms control. The military seldom has need to make such a distinction in its oceanic operations, being concerned, instead, with the extent of national jurisdiction that is the breadth of the territorial sea. The Navy is concerned, however, that proposed seabed regimes might eventually result in claims and restrictions on the use of the superjacent waters and secondly might lead to information and reporting requirements that would pose unnecessary problems for military operations. While the Navy is free to operate on the high seas, and while it generally has the right of innocent passage through foreign territorial waters, it must gain the consent of the coastal state if it wishes to *operate* in foreign territorial waters.

The military view has been, and continues to be, that any extension of territorial seas should be kept to a minimum, sovereignty over the continental shelves (whatever their seaward boundary) should be closely limited, and the air space above the high seas should remain free.

The security of the United States rests in part on the Navy's use of the high seas, and we would like to see the use and legal coverage of the high seas develop in such a way as not to impede this portion of our security unnecessarily. The military has neither the

desire nor the intention to impede the full development of marine mineral resources. Rather we see fuller exploitation as a natural and positive development, but one which will require new capabilities for policing and protection and thus poses new military problems. We hope that the development of the requisite law will proceed together with the development of exploitation and its technology so that the law will not impede the development nor channel it in directions that later turn out to be unwise or difficult to protect or police.

I reemphasize the view that with the gradual evolution of specific rules based on practice it should be possible successfully to accommodate traditional uses (including military uses) of the sea with future exploitation of the seabed.

I might add that the Navy has another interest regarding marine mineral exploration and exploitation activities: that is, within the limits of national security, to make available from its ocean engineering program all the technological and scientific information possible for use by marine mineral explorers and exploiters, information ranging from bathymetric data to the technical information required for submarines and submersibles. The Navy is most anxious to cooperate with the whole public and private community in developing a national program for the oceans with the objective of enhancing national security in its largest sense.