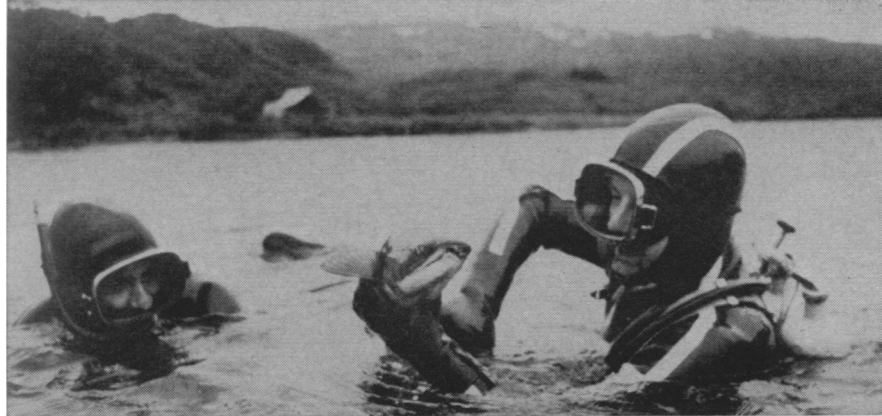


# The politics of marine research

The current structure of international law allows nations to place serious restrictions on scientific research in coastal waters

by Louise Purrett



ABC/Cousteau

*Many types of marine science studies depend on access to coastal waters.*

The world's oceans today are the scene of much scientific activity. The revolution in geological thinking that has seen the vindication of ideas of continental drift stemmed in great part from investigations of the ocean floor. Meteorologists are directing their computers toward the seas' great weather-making activity. Environmentalists are becoming queasy about the assumption that Davy Jones' locker will be forever capacious enough to hold society's garbage. And the economic potential of the medium that covers two-thirds of the earth is on the threshold of realization.

With increased interest—especially commercial interest—in the oceans have come increased difficulties concerning the question of sovereignty over coastal waters.

The authority of a coastal nation does not terminate at its shoreline, but extends a distance into the sea.

**International law** gives a coastal state jurisdiction over adjacent marine areas. Foreign vessels wanting to do scientific research there must obtain permission and comply with conditions imposed by the nation whose waters are invaded.

Until recently, this requirement raised few barriers to scientific research. But in the past seven years the situation has changed drastically.

The situation has become bad enough to prompt the National Academy of Sciences, last June, to issue a statement expressing concern that "restrictions placed by various nations are seriously jeopardizing ocean research" (SN: 6/20, p. 599).

"The limitations that nations have imposed upon free scientific research and exploration of the sea and sea bed have become increasingly severe," emphasized NAS President Philip Handler. "Every indication suggests that this trend is accelerating, much to the detriment of scientific research by all nations."

**These restrictions** have taken various forms. The most noticeable is an increase in the number of refusals of clearance for research.

There is not a complete tally of such refusals, but Dr. William T. Burke, professor of law at the University of Washington and chairman of the NAS panel that researched the subject, says that "during the period January 1967 to November 1968, there were 12

known cases of refusal of clearance of United States public and private vessels." From January 1969 to mid-April 1970, he continues, there were six refusals.

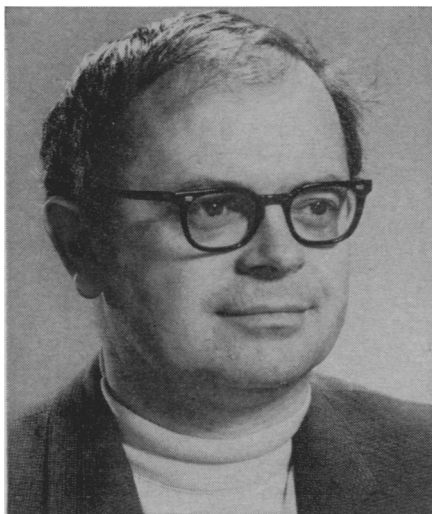
The University of Washington, says Dr. Burke, has three times requested clearance from the Soviet Union—in 1967, 1969 and 1970—and three times been refused. Dr. Kenneth Emery of the Woods Hole Oceanographic Institution says he is "going through long and tricky negotiations" to do research in Indonesian waters. On a recent voyage to the Black Sea, Woods Hole's ship had been refused entry to the territorial seas of Turkey and Rumania.

This situation contrasts with previous years when, according to Dr. Burke, "grant of a clearance was virtually automatic." Before 1966 or 1967, he says, "scientists just went around and did what they wanted to." In fact, he says, he would guess that there were no more than four or five refusals for the entire previous history of mankind.

**Such refusals** of clearance are the most drastic instances of restrictions on research. But the difficult conditions and complex procedure for obtaining clearance, and the likelihood of refusal, affect research in more subtle ways.

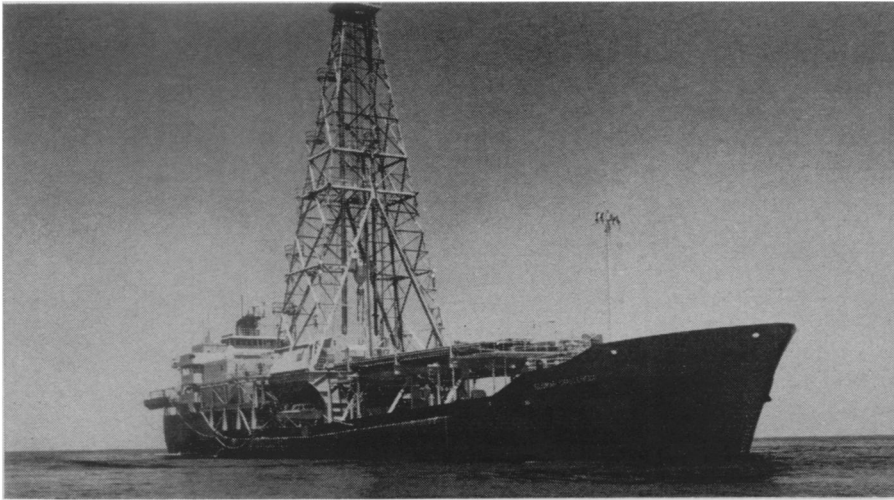
Substantial time, money and effort often have to be diverted from the principal purpose of a project, scientific investigation, to the task of complying with foreign laws governing research.

Applicants for clearance must often supply detailed advance information to the host state. Brazil, for instance, requires details on the institutions and



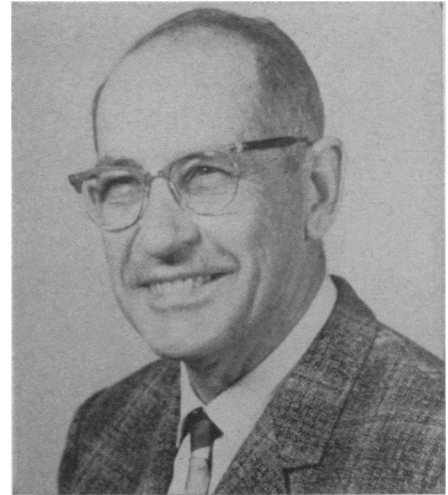
Univ. of Washington

*Burke: Red tape and Mickey Mouse.*



Scripps

*Scientists on the Glomar Challenger had to abandon two drill sites off Brazil.*



Woods Hole

*Emery: The last decade of research?*

persons sponsoring and conducting the research, proposed routes and working sites and duration of activities, plans and objectives of the research, description of all equipment to be used, type of navigation, dates for port calls before, during and after the stay in Brazilian waters, as well as photographs and technical, scientific and structural specifications of ships or aircraft to be used.

Though Brazil has probably the most onerous requirements, Dr. Burke says, "types of information and conditions are increasing in number and complexity and institutions are finding them increasingly difficult to meet." An increasingly common demand, he adds, is that a coastal representative be on board.

Another frequent demand is for duplicates of all data and samples. This can be expensive, especially with computer print-outs, and some samples cannot be shared without giving them up entirely.

There may also be instances in which the difficulty of complying with conditions or the probability of refusal deter an institution from even undertaking a project. "Some people don't plan cruises to areas where they know there is difficulty. . . . The effort for clearance may not be worth it," says William Sullivan, a fisheries and wildlife aide to the Secretary of State.

An additional problem is that methods of investigation and location of research cruises may be wholly determined by legal requirements rather than by scientific criteria. Bottom sampling on the continental shelf almost always requires a clearance. To avoid the difficulties involved, researchers may simply limit themselves to other methods of inquiry.

The issue is further complicated by the lack of agreement on the breadth

of a nation's territorial sea. The 1958 Geneva Conventions on the Law of the Sea, which embody much of the current law, and another convention in 1960 left this issue unresolved.

The United States, Canada, Australia and most European nations claim a three-mile territorial sea. A few nations, such as South Africa, Spain and Turkey, claim six miles. The Soviet Union, China, India and most North African and Middle Eastern nations claim 12 miles, while much of South America claims 200 miles.

Since the United States does not recognize some of these claims, it will not make requests to enter these waters. But research ships found within claimed waters run the risk of legal or even military action by the coastal state.

An example of this kind of barrier was encountered just recently by scientists on Leg 14 of the Deep Sea Drilling Project's Glomar Challenger (SN: 12/19, p. 460). Dr. Dennis E. Hayes of the Lamont-Doherty Geological Observatory says they were forced to abandon two important drill sites 180 miles off the coast of Brazil because of difficulties in obtaining clearance. Since the United States does not recognize Brazil's claim to a 200-mile territorial sea, they couldn't apply through official channels, and unofficial attempts to obtain permission were unsuccessful.

In Dr. Emery's words, "It's easier to do the science than it is the politics."

The major reason for all these difficulties seems to be the opposition of developing nations to freedom of oceanographic research. They fear, explains Dr. Burke, that the developed nations, with their more advanced technologies, would be better able to exploit any resources discovered off the underdeveloped nation's shores, and would reap the benefits.

This opposition manifested itself in action against a proposal in 1969 to revise the statute of the Intergovernmental Oceanographic Commission (IOC) to provide that one of the organization's purposes was to promote freedom of scientific investigation. When the revision was adopted, some of the developing nations announced they would carry their cause to the next session of the UNESCO General Conference, the body that has final authority in such matters.

Whatever the causes of the problem, remedial measures range from a general international convention on all of the legal problems involved in the conduct of marine science to bilateral agreements providing for research in a specific subject area.

Some action has been taken. In 1967, at a meeting of the IOC, the Soviet Union proposed that an agreement on legal principles for scientific research be developed. Ten months later, the IOC created a Working Group on Legal Questions Related to Scientific Investigations of the Oceans. The group immediately tackled the clearance problem and came up with a procedure by which the IOC might supplement individual state efforts to secure clearances for research. The sixth session of the IOC in September 1969 agreed that its Secretariat could be called upon to assist in obtaining clearances.

Another approach might be to bring the matter up in the general conference on the law of the sea that the United Nations has scheduled for 1973 (SN: 12/26, p. 476).

The conference is to establish an international regime for the sea bed and ocean floor beyond the limits of national jurisdiction and to deal with, among other things, the complex question of the breadth of both the terri-

torial sea and contiguous fishing zone.

But such a conference, Dr. Burke cautions, will not necessarily solve the problem of restrictions on ocean research. Because of the attitude of developing nations toward such research, he says, any attempts to include safeguards on scientific research on the agenda of such a general meeting may have the opposite effect.

Even if an agreement on scientific exploration could be concluded in a form acceptable to developed nations, he says, "the likely prospect is that the parties to it will be predominantly those states with a capability for undertaking such research, leaving the waters surrounding entire continents without treaty protection for scientific research."

The prospects for protecting research are better, he believes, in the more limited forum of the IOC.

An alternative with particular promise are bilateral agreements. Such agreements, Dr. Burke points out, could be fashioned to take into account the particular problems and characteristics of each nation. The United States already has made such agreements with Poland, the U.S.S.R., Mexico and Japan, involving cooperation on fisheries research.

In its statement in June, the National Academy of Sciences urged that to encourage other nations to ease their

own restrictions, the United States unilaterally open up waters subject to its jurisdiction to scientific research by other nations.

Such unilateral action, Dr. Burke believes, is about the only thing the United States can do at this point to alleviate the present restrictive situation. It has several advantages, he points out. The action "might provide a dramatic demonstration by the United States of its recognition of the importance of free ocean research." It may also help allay the suspicions of developing nations. Finally, he says, such a move might encourage bilateral agreements or encourage other nations to take similar action.

But though the NAS proposal was sent in June to six Government agencies, no action has as yet been taken on it. State Department spokesmen say only that it is "being studied."

The NAS has recently reorganized its Committee on Oceanography into an Ocean Affairs Board. One of the areas on which the board will focus is international marine-science-affairs policy.

There are many routes toward solving the problem of the new restrictions on ocean research. But most observers agree that some action must be taken, and soon. If the present trend continues, says Dr. Emery, "we may be in the last decade of research on the continental shelves." □

### Claims to the Territorial Seas

(nautical miles)

200 miles	Argentina Peru	Brazil Uruguay	Ecuador
12 miles	Algeria China Ghana Nigeria U.S.S.R.	Bulgaria Colombia India Rumania Venezuela	Canada Egypt Indonesia Saudi Arabia
6 miles	Greece Spain	Italy Turkey	South Africa
3 miles	Australia Japan	France United Kingdom	Germany United States

\* Except for 12 miles in the Black Sea.

Others: 130 miles, Guinea; 50 kilometers, Chile; 18 miles, Cameroon; 10 miles, Yugoslavia and Albania; 4 miles, Norway, Sweden, Finland.

Note: The table lists less than a third of the nations making claims.

Source: Bureau of Intelligence and Research, U.S. Department of State.

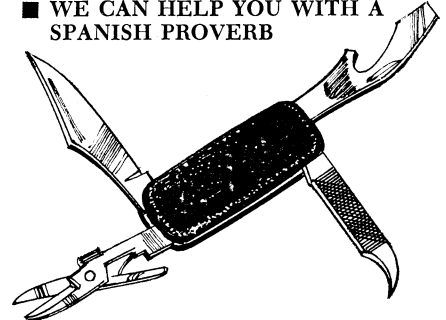
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