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Ocean Development and Management in the Arctic: Issues in American and Canadian Relations[1]

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ABSTRACT. The need for Canadian-American cooperative ocean management in the Arctic stems from four factors. Transboundary ocean currents have the potential to carry marine pollutants from one country to the other. Many living resources, such as bowhead and beluga whales, do not recognize political boundaries. Native communities depend culturally and economically on coastal resources. Technological collaboration in such areas as satellite communications and navigational aids is necessary to avoid costly duplications.

Three documents — the World Conservation Strategy, the Report of the U.N. Conference on the Human Environment, and the Law of the Sea Convention — bid the United States and Canada to join hands in managing resources in a more systematic manner.

At least four jurisdictional issues concerning arctic waters are capable of rocking future U.S.-Canadian relations: the Alaska/Yukon offshore boundary, the legal status of the waters of the Canadian arctic archipelago and the Northwest Passage, the legal principles governing the exclusive economic zones in the Beaufort, Chukchi, and Bering seas, and the legal regime applicable to arctic waters and the seabed beyond 200 nautical miles.

Although cooperative ocean management may be hindered by national complexities, such as lack of clear arctic policies, fragmented decision-making processes, and tensions between government managers and local communities, the two countries should address eight threshold questions concerning future institutional linkages: Are present formal and informal arrangements adequate for arctic ocean management? What type or types of agreement — demonstrative, administrative, distributive, or resolutive — should be used to formalize cooperation? What level of cooperation — bilateral, trilateral, arctic-wide, or global — is required and politically feasible? Should the two countries create new management institutions or should they harmonize existing legislation and administration? Should one "super commission" be created with a say over all arctic marine issues or should a number of commissions be created for coordinating individual ocean uses? Should joint institutions have advisory or actual decision-making powers? What role should native groups play in regionalized arctic marine management? What type of dispute-settlement mechanism(s) should be established?

Key words: Canada-U.S. relations, ocean development and management, international law of the sea

RÉSUMÉ: Le besoin d'administration coopérative océanique canadienne américaine dans l'Arctique provient de quatre éléments: les courants *translimites* de l'océan peuvent transporter les pollutants d'un pays à l'autre; un grand nombre de ressources vivantes comme la baleine 'franche' et le 'dauphin blanc' ne distinguent pas les limites politiques; les communautés indigènes dépendent des ressources littoraux pour leur culture et leur économie; une collaboration technologique, par example dans les domaines de la communication satellite et les aides de navigation, est indispensable pour éviter des reproductions coûteuses.

Trois documents proposent que les Etats-Unis et le Canada s'unissent afin de trouver un moyen plus systématique d'aménager leurs ressources: la Stratégie Mondiale de la Conservation ("World Conservation Strategy"), le Rapport de la Conférence des Nations-Unies sur l'environnement de l'homme ("Report of the U.N. Conference on the Human Environment") et la Convention sur le Droit de la Mer ("Law of the Sea Convention").

Il y a au moins quatre points d'intérêts juridiques concernant les eaux arctiques qui peuvent compromettre les relations futures entre les États-Unis et le Canada: la delimitation de la frontiere maritime entre l'Alaska et le Yukon; la position légale des eaux de l'archipel canadien arctique et du Passage du Nord-Ouest; les principes juridiques qui gouvernent la zone économique exclusive des mers Beaufort, Chukchi et Bering; et le régime juridique qui s'applique aux eaux arctiques et le fond de la mer au-delà de 200 milles marins.

Malgré que l'administration coopérative océanique peut être entravée par des difficultés nationaux comme le manque de politique arctique précise, un processus fragmenté dans la manière de prendre une décision, et les tensions qui existent entre les managers du gouvernement et les communautés locaux, — les deux pays devraient s'addresser aux huit questions de base sur l'avenir des liaisons institutionnels.

Voici les huit questions de base: Les arrangements officiels et non-officiels qui existent à l'heure actuelle pour l'administration coopérative océanique sont-ils adéquates? Quel(s) genre ou genres d'accord(s) doit-on en arriver pour formaliser une collaboration, soit démonstrative, administrative, distributive ou résolutive? Quel niveau de collaboration, qui est en même temps politiquement acceptable, est requis: bilatéral, trilatéral, tout l'Arctique ou mondial? Les deux pays doivent-ils créer de nouveaux institutions administratives ou doivent-ils unir la législation et l'administration qui existent déjà? Doit-on créer une 'super-commission' avec voix dans tous les domaines de l'arctique marine ou créer un certain nombres de commissions pour coordonner l'usage individuel de l'océan? Les institutions liées doivent-ils avoir le pouvoir juridique à titre consultatif ou délibératif? Quel rôle doivent jouer les groupes indigènes dans l'aménagement de l'arctique marine d'une région en particulier? Quel système de réglement des differends doit être établi?

Mots clés: relations Canada-E.U., développement et gestion de l'océan, droit international de la mer

INTRODUCTION

A brooding sea — that describes the present state of American-Canadian relations in the Arctic, for bilateral relations ride an uneasy tension between continental cooperation and national conflict. Continental cooperation has occurred on numerous fronts. In the area of defense, major American-Canadian cooperation, inaugurated during World War II and strengthened with the creation of the North American Air Defense Command (NORAD) in 1957 (Kirton, 1984), has taken new strides in the 1980s. Canada and the United States have approved a comprehensive North American Air Defense Master Plan and have agreed to upgrade the Distant Early Warning (DEW) line — the 5800 km long chain of radar and communication stations extending from Alaska to eastern Greenland (Johnson *et al.*, 1984). Canada has also allowed the American cruise missile to be tested over the Canadian North.

Although Canada's 1980 National Energy Program indicated strong feelings of nationalism, through such measures as the government right to take a 25% back-in interest in any frontier well and the granting of petroleum incentives (paying up to 80% of exploration costs) to operators depending on the level of Canadian ownership, the government of Prime Minister Brian Mulroney, elected September 1984, has reemphasized

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continentalism by dismantling the National Energy Program and supporting greater economic cooperation with the United States. In March 1985 Prime Minister Mulroney and President Ronald Reagan convened a "Shamrock Summit" to discuss bilateral issues and to reaffirm commitments to the principle of "good neighborliness." Both governments began negotiations on a free trade agreement in May 1986.

National differences, however, continue to abound. Transboundary resource conflicts span the breadth of the 49th parallel and include such issues as fisheries management in the Gulf of Maine/Georges Bank region, water quality of the Great Lakes, the Garrison Dam proposal near the Manitoba/North Dakota border, and salmon management on the West Coast (Carroll, 1983). In August 1985, a U.S. Coast Guard icebreaker, *Polar Sea*, re-aroused Canadian nationalism by not requesting Canadian permission to transit the Northwest Passage. On 10 September 1985 External Affairs Minister Joe Clark reacted by declaring Canadian sovereignty over arctic waters through the establishment of straight baselines (effective 1 January 1986) around the Canadian arctic archipelago (Clark, 1985).

A developmental "high pressure" system looms on the arctic horizon, which may soon force greater bilateral cooperation. In the U.S. Beaufort Sea, three federal-related offshore lease sales for oil and natural gas tracts have occurred — on 11 December 1979, 13 October 1982, and 22 August 1984. Federal lease sales are also proposed for July 1987 and May 1990. A 300-million-barrel oil find by Shell at Seal Island about 19 km northwest of Prudhoe Bay has heightened industry's interest. Canadian oil companies — Dome, Esso, and Gulf — have submitted proposals to produce and transport Beaufort Sea hydrocarbons by utilizing an overland pipeline or giant Class 10 tankers. Panarctic Oils Ltd. shipped the first tanker load of oil produced from the Bent Horn field on Cameron Island in the High Arctic in September 1985, and it is conceivable that small-scale seasonal shipments of oil through the Passage could open the way for year-round vessel traffic.

This paper provides a legal perspective on bilateral ocean development and management issues through a four-part discussion: the need for international cooperation, international legal issues in the Arctic, national complications in ocean management, and basic policy questions for an arctic management regime.

THE NEED FOR INTERNATIONAL COOPERATION

The need for binational ocean management derives from a combination of physical, biological, human, and technological factors. The Beaufort Sea Gyre, a circular rotation of offshore waters, and a transboundary drift of nearshore currents have the potential to carry marine pollutants such as spilled hydrocarbons from the waters of one country to the other (Giovando and Herlinveaux, 1981). Many arctic mammals, fish, and birds do not "belong" to any given nation state and do not recognize political boundaries. Bowhead and beluga (white) whales, for example, migrate from wintering areas in the Bering Sea eastward around the northwestern Alaska coast and into the Canadian Beaufort and Amundsen Gulf regions (Fraker, 1979). The Inuit Circumpolar Conference has emphasized the common cultural heritage of northern native peoples and has highlighted the need for regional cooperation in scientific research and marine wildlife management (Inuit Circumpolar Conference, 1983). Technological collaboration is necessary to avoid costly duplications in such areas as satellite communication and navigational technologies and to facilitate standardization of icebreaking vessel designs (Amaria *et al.*, 1977).

Three international documents, in particular, have erected legal or ethical guideposts bidding the United States and Canada to join hands, on occasion with other nations, in order to manage marine resources in a more systematic manner.

The World Conservation Strategy

The World Conservation Strategy, a major report prepared by the International Union for the Conservation of Nature (IUCN) and commissioned by the United Nations Environment Programme (UNEP), names the Arctic Ocean a priority sea and intimates arctic nations should develop binational or regional arrangements to facilitate environmental conservation on three fronts (International Union for the Conservation of Nature, 1980). Measures, including joint research, should be undertaken to improve protection of migratory species breeding within the Arctic and wintering inside or outside the region. Studies should be carried out on the impact of fisheries and other economic activities on northern ecosystems and non-target species. The arctic nations should consider developing agreements for the conservation of vital biological resources, based on the model of the regional Agreement on the Conservation of Polar Bears.

The ethical mandate implicit in the language may take a step forward toward greater fruition through the holding of a World Conservation Strategy conference in Canada in June 1986.

Report of the UN Conference on the Human Environment

The 1972 Stockholm Conference on the Human Environment, a great oracle of recommendations urging governments to initiate programs to protect the environment on numerous fronts from pesticide regulation to waste recycling, issued a number of broad recommendations holding potential applicability to international relations in the Arctic on at least five fronts. Recommendations 37 and 38 of the Action Plan for the Human Environment urge governments, through international agreements, to protect internationally significant ecosystems and to cooperate in managing contiguous protected zones. Recommendations 32 and 50 urge governments to cooperate in protecting living resources — species migrating from one country to another and transboundary fish stocks. Governments are bid to establish joint fishery councils or commissions in regions where none exist. Recommendation 48 urges international cooperation in studying and regulating industrial activities in one country affecting aquatic resources in another country — for example, transboundary effects on estuaries and tidal marshes, important habitats for marine fish stocks, and transboundary effects of toxic chemical discharges. Recommendation 51 urges states to create commissions to coordinate shared water resources through such means as cooperative environmental assessments and water quality control programs. Principle 22 of the Declaration on the Human Environment bids states to develop compensation schemes for victims of transboundary pollution (United Nations, 1972).

The Law of the Sea Convention

Even though the legal status of the Law of the Sea Convention may remain uncertain in international law, since the U.S. is not a signatory and the required 60 ratifications for a binding treaty

have not yet been attained, the convention contains a number of provisions calling for a new vision of Arctic Ocean management.

First, states are urged to cooperate in managing transboundary living resources. Article 63 requires states to coordinate management of overlapping fish stocks within the exclusive economic zones (EEZs) or of fish stocks straddling the EEZ and high seas. Article 66 requires states to cooperate in conserving and managing transboundary anadromous stocks (those fish that spawn in rivers and spend much of adult life at sea, such as Arctic char). Article 65 requires states to cooperate in conserving marine mammals and in the case of cetaceans (whales, porpoises, dolphins) requires states to work for conservation through appropriate international organizations.

Second, states are mandated to cooperate in protecting the marine environment. Articles 207 and 208 reiterate the need to harmonize marine pollution policies for land-based sources and seabed activities respectively, not only at the global level but also at a regional level. Article 210 requests states to establish global and regional rules to control ocean dumping. Article 211 requires states to establish international rules to control vessel-source pollution and to promote routing systems to minimize the threat of accidents. Article 212 asks states, through global and regional rules, to endeavor to control atmospheric pollution of the marine environment. Article 200 requires states to cooperate in scientific research of marine pollution, while Article 201 requires states to cooperate in establishing scientific criteria for the formulation of rules and recommended practices to control marine environmental pollution.

Third, states are commanded by Article 243 to cooperate, through bilateral or multilateral agreements, to create favorable conditions for marine scientific research and to integrate the work of scientists studying ocean phenomena.

If the Arctic Ocean is considered to be a semi-enclosed sea — as suggested by at least one writer (Alexander, 1974), but debated by others (Harders, 1986) — then Article 123 urges all littoral states to cooperate in coordinating conservation and exploitation of living resources, protection of the marine environment, and scientific research policies and programs.

INTERNATIONAL LEGAL ISSUES

At least four jurisdictional questions concerning arctic waters are capable of rocking or capsizing future U.S.-Canadian relations: the Alaska/Yukon offshore boundary, the legal status of the waters of the Canadian arctic archipelago and the Northwest Passage, the legal principles governing the exclusive economic zones (EEZs) in the Beaufort, Chukchi, and Bering seas, and the legal regime governing arctic waters and the seabed beyond 200 nautical miles.

The Alaska/Yukon Offshore Boundary

Canada wishes to extend the land boundary between Alaska and Yukon into the Arctic Ocean as the appropriate maritime boundary. A Canadian claim to the 141st meridian W longitude as an offshore boundary, although hinted at in various official statements and early government maps, became crystal clear in 1965 and onward (Pharand, 1984, 1986). In January 1965, the Department of Northern Affairs and Natural Resources began to issue oil and gas exploration permits in the Beaufort Sea up to and along the 141st meridian. The Arctic Waters Pollution Prevention Act, passed by Parliament in 1970, declared the 141st meridian as the western boundary of a 100 nautical mile pollution prevention zone in Canadian arctic waters. In 1977, Canada used the 141st meridian as the westerly limit to a 200 nautical mile fishing zone in arctic waters. In a 1984 land claims agreement with the Inuvialuit of the Western Arctic, Canada used the 141st meridian as the westerly limit of aboriginal claims to offshore areas of the Beaufort Sea (Canada, Department of Indian Affairs and Northern Development, 1984).

On 1 November 1976, the United States, in preparation for expanding fisheries jurisdiction out to 200 nautical miles, formally published the coordinates to an alternative Beaufort Sea boundary (United States Department of State, 1976). Based on the principle of equidistance, the line was drawn to the east of the Canadian line (Lawson, 1981).

Since 1975 the Beaufort boundary waters have been rather tranquil. Both governments have imposed an informal moratorium on offshore exploration in the disputed area covering approximately 6180 square nautical miles of seabed. In 1977, special negotiators, Marcel Cadieux of Canada and Lloyd Cutler of the United States, tried to reach a package agreement on all four disputed U.S.-Canadian marine boundaries, but when negotiations became too complex, the Yukon/Alaska offshore boundary and the two western boundaries of Dixon Entrance and Juan de Fuca Strait were jettisoned until resolution of the Gulf of Maine line was achieved (Wang, 1981).

A solution to the boundary conflict has been complicated by the lack of a ready-made set of international legal rules for maritime boundary delimitation (Legault and McRae, 1984). Article 6 of the 1958 Continental Shelf Convention appeared to establish a firm rule of equidistance (unless there were special circumstances), but the Gulf of Maine decision, rendered by a Chamber of the International Court of Justice in October 1984, indicated that equidistance may only be a practical method (Legault and McRae, 1984). The 1982 Convention on the Law of the Sea, when referring to boundary delimitation of the exclusive economic zone (Article 74) or continental shelf (Article 83), only sets forth the general principle that states must seek to reach an agreement on the basis of international law to achieve an equitable solution. A further complication is that separate boundaries could be drawn for the seabed and water column, although a single line is generally preferable to avoid administrative chaos (Legault and Hankey, 1985).

The Waters of the Canadian Arctic Archipelago and Northwest Passage

The legal status of the waters within the Canadian arctic archipelago including the five basic routes of the Northwest Passage is perhaps the greatest potential irritant in U.S.-Canadian arctic relations, for the waters have symbolized divergent interests for Canada and the United States. Canadians tend to view the waters with a coastal state perspective. The waters are part of the "Canadian North," a land of adventure and early explorers, a land of individualistic spirit, an historic homeland of native people, and a unique environment requiring special stewardship. Many Americans, meanwhile, tend to view the archipelagic waters with a maritime perspective. The waters not only represent a marine highway capable of reducing ocean transport from U.S. ports to European or east coast markets by thousands of kilometres, but also represent a dangerous domino. The Canadian move to increase jurisdictional control over the Passage might encourage other states to expand claims over archipelagic waters and international straits.

Such divergent perspectives may continue to foster disparate national viewpoints as to the legal status of the waters. Canada, by enclosing the waters of the Passage and archipelago with straight baselines, has formalized a claim to internal waters status and complete sovereignty that would include the right to prohibit foreign vessel transits. However, the United States may pose at least two major arguments in favor of increased transit rights for its vessels. First, to assert complete sovereignty including the right to prohibit foreign vessel transits Canada would have to prove an historic title to the water areas. Since one of Canada's leading authorities on arctic waters' status has indicated Canada may not be able to prove an historic title (Pharand 1984, 1986), Canada must rely on the doctrine of straight baselines to establish internal waters status. Even assuming Canada could establish the three major requirements for drawing straight baselines — a coastal fringe of islands, lines enclosing water with a close land-sea link, and lines not departing from the general direction of the coast (VanderZwaag and Pharand, 1983) — both the 1958 Convention on the Territorial Sea and the 1982 Law of the Sea Convention provide that waters formerly considered as part of the territorial sea or high seas would still be subject to the right of innocent passage. The 1958 Territorial Sea Convention defines innocent passage as not being prejudicial to the "peace, good order or security of the coastal state." The 1982 convention, in article 19, spells out what is not innocent passage, such as a willful act of pollution or weapon exercises.

The United States might even go further and argue that the baselines were not justified and that the Northwest Passage, in particular, is an international strait subject to almost complete freedom of air and marine transit by user states. The Law of the Sea Convention allows a coastal state only minimal regulatory reins over international straits — the power to prescribe sea lanes and traffic separation schemes, the power to prohibit foreign fishing, and the power to control the discharge of oil and other noxious substances (in conformity with international standards). Submarines would be allowed to pass through the strait in the submerged mode (Moore, 1980; Pharand, 1984).

Canada might counter with at least two major arguments. First, even if Canada were not justified in claiming internal waters status based on historic title or straight baselines, complete sovereignty should arise over much of the water area because landfast ice is analogous to land territory (Boyd, 1984). Second, no matter what the legal status of the waters, Article 234 of the Law of the Sea Convention grants a coastal state like Canada broad regulatory powers over commercial shipping in ice-covered waters, and the power may include the right to require special vessel design standards (for example, hull construction and strength specifications) and special crewing qualifications (for example, tankers are required to carry an ice navigator aboard if operating in any arctic zone) (Pharand, 1979).

The Beaufort, Chukchi, and Bering Seas

At least two major international legal issues loom over the northern waters within national jurisdiction to the west of the Northwest Passage. First, the future applicability of Article 234, the Law of the Sea Convention's provision that grants coastal states broad regulatory powers over ice-covered waters, remains uncertain.

Will Canada eventually apply the article beyond the present 100 nautical mile pollution prevention zone — that is, all the way out to 200 nautical miles? Will the U.S. eventually wish to invoke special Article 234 shipping controls if other nations such as Japan or Canada initiate major marine transport along the western Alaska seaboard? What is the southern extent of ice-covered waters, assuming the U.S. did wish to impose stringent shipping controls? How is "ice-covered for most of the year" to be defined? Does ice-covered mean 100 percent coverage, 90 percent coverage, or perhaps any amount over 50 percent? Is most of the year to be defined by a single heavy-ice year or by an average of ice years?

Second, what marine scientific research regime will be applied to the waters? The United States, although following a consent regime for marine research in the territorial sea and on the continental shelf, has refrained from claiming jurisdiction over scientific research in the EEZ. Canada has established a consent regime for marine scientific research in the economic zone, but, as yet, has not formalized the process through exclusive economic zone legislation (Underwood, 1984). The question should be raised whether Canada and the United States wish to follow a standard consent regime for arctic research. On the positive side, such a regime ensures coastal state interests and assures maximum consultation and input for coastal state agencies. On the negative side, a consent regime may engender bureaucratic delays and increase administrative costs. Possible alternatives to a full-blown consent regime include establishment of a simplified notification scheme or a binational commission to give streamlined review to research projects (Mangone, 1981).

Legal Regime beyond 200 Nautical Miles

The Seaward Delimitation of the Continental Shelf: The delimitation of the outer limit of the continental shelf will likely not raise a major political tempest in U.S.-Canadian relations for one basic reason. Most of the continental shelf in the Arctic is located within the internationally accepted 200 nautical mile exclusive economic zones (Pharand, 1981).

The legal status of two Arctic Ocean ridges — the Lomonosov Ridge, running from offshore North Greenland and across the North Pole, and the Alpha Ridge, located off Northern Ellesmere Island — could also raise international murmurings. Article 76(6) of the Law of the Sea Convention may allow coastal states to claim seabed jurisdiction beyond 350 nautical miles on submarine ridges that are continental and not oceanic in origin. Although still uncertain, the Lomonosov Ridge appears to be continental in origin and, thus, the Soviet Union, Canada, and possibly Greenland (Denmark) could seek to extend jurisdiction on the ridge beyond the 200 nautical mile limit (Pharand, 1984). Preliminary reports from the Canadian Expedition to Study the Alpha Ridge (CESAR), which gathered scientific information over the ridge in spring 1983, indicate an oceanic origin (Halifax Chronicle-Herald, 1984).

Seabed Jurisdiction beyond National Zones: Assuming the deep arctic seabed eventually becomes economically attractive as an exploration area for marine resources — an unlikely possibility according to some analysts (Pharand, 1984), what is to be the applicable legal regime? At least three possibilities exist. First, the arctic seabed could be considered the common heritage of mankind and thus subject to the deep seabed provisions of the Law of the Sea Convention. Pursuant to the convention, the International Seabed Authority would regulate environmental consequences of seabed activities, limit the level of

mineral production, and carry out equitable sharing of financial benefits. Marine scientific research would remain open to all states.

Second, the deep seabed could be considered a part of the high seas and thus open to exploitation by any state having appropriate technological capabilities. The U.S., of course, has supported such an approach in other ocean areas through three major steps — by refusing to sign the Law of the Sea Convention, by passing the Deep Seabed Hard Minerals Resources Act, which legislatively recognizes the high seas status of deep seabed mineral resources, and by signing a "Provisional Understanding Regarding Deep Seabed Matters" with several other states, including the U.K. and West Germany, for resolution of seabed mining conflicts.

Third, the five littoral arctic states, based on the principles of proximity and special arctic circumstances, could establish a separate regional exploration and exploitation regime.

Vessel Management for Arctic Waters beyond 200 Nautical Miles: It is tempting for arctic researchers to become fixated on transit management questions in the Northwest Passage for two reasons. The Passage has been a critical issue in U.S.-Canadian relations, and the Passage represents a rather romantic subject. Explorers since John Cabot in 1497 have been fascinated with the tremendous possibilities of opening up a shortened sea route to the Orient.

However, vessel transit over the North Pole also holds potential. On 16 August 1977, the Soviet icebreaker *Arktika*, travelling at an average speed of 11.5 knots, became the first surface vessel to reach the North Pole and proved the feasibility of transpolar surface transit. In early 1986, the Soviets announced plans to begin using the transpolar route for shipping for as much as five months of every year (Halifax Chronicle-Herald, 1986). A North Pole Passage offers tremendous reductions in shipping distances between major world ports. For example, the approximate distances between Vancouver and Rotterdam could be reduced from 19 310 to 14 000 km, Vancouver to Murmansk from 22 530 to 12 060 km, and Yokohama to Rotterdam from 28 970 to 12 550 km. Transit via the North Pole route could reduce voyage duration by a half to a quarter of present open-sea routes (Harrison, 1981).

Given the oceanographic current patterns in the Arctic Ocean, an oilspill or other hazardous cargo accident along a High Arctic transportation route could impact the waters of the U.S., Canada, or other arctic nations. Therefore, the polar nations might eventually wish to address the question of an appropriate legal regime.

Two major possibilities exist for jurisdictional status. First, the area could be considered part of the high seas and thus each nation-state would impose, according to international standards, shipping restrictions on its own flag vessels. Second, the area could be considered *sui generis*, that is, a unique area bidding the five arctic littoral states — the U.S., Canada, Denmark/Greenland, Norway, and the Soviet Union — to reach agreement as to the appropriate vessel design, cargo limits, and crewing requirements to assure coastal states are not adversely impacted by transpolar commercial shipments.

NATIONAL COMPLICATIONS

Lack of Clear Arctic Ocean Policies

Neither the U.S. nor Canada has yet formulated clear, comprehensive visions of how, when, and where arctic offshore resources should be developed and transported. The United States' lack of a clear policy vision might be explained by at least two major factors. First, the U.S. has traditionally devoted minimal attention to arctic policy formulation (Pollack and Anderson, 1973; Smith, 1978). Not until December 1971 did the United States actually attain a statement of national arctic policy. Through National Security Decision Memorandum 144 President Richard Nixon established four broad principles: rational development of arctic resources, minimal adverse environmental effects, international cooperation in the Arctic, and protection of security interests including the principle of freedom of the seas and superadjacent airspace (Kildow, 1985). He also established the Interagency Arctic Policy Group (IAPG), chaired by the Department of State and including the Departments of Defense, Interior, Commerce and Transportation, the National Science Foundation, and the Council on Environmental Quality, to coordinate U.S. arctic programs. In a report of 22 October 1982, the group noted that numerous arctic policy questions still face the U.S., including the level of federal effort required, such as search and rescue support and weather and ice forecasting, in relation to domestic and foreign offshore development. After reviewing the report, President Reagan affirmed the broad principles established in the 1971 National Security Memorandum and authorized the Interagency Arctic Policy Group to undertake two priority reviews — of how the United States should coordinate arctic activities with other countries and of the proper level of federal services for resource development (U.S. Department of State, 1983). The latter review is to recognize that resource development is primarily a private sector activity. Not until 1968 did the U.S. establish a formal mechanism, the Interagency Arctic Research Coordinating Committee (IARCC), to coordinate scientific research in the Arctic. However, in the absence of a guiding research policy, the IARCC foundered and was formally disbanded in June 1978, leaving coordination for polar research largely at the agency level. Not until late July 1984 did Congress finally pass the Arctic Research and Policy Act, establishing an Arctic Research Commission and an Interagency Arctic Research Policy Committee, which could be catalysts for developing an integrated arctic science policy.

A second reason for the lack of a clear policy vision by the United States is likely the "knowledge gap" as to arctic offshore resources and preferable transportation mode. Until firm answers are gained on the commercial viability of offshore hydrocarbons and until industry decides on the preferred type of transportation, such as pipelines, tankers, or a combination of the two, government has little incentive to engage in massive program and policy development. Although the federal government has supported a number of arctic science programs such as the Outer Continental Shelf Environmental Assessment Program (OCSEAP) in the Beaufort Sea, a joint program by the Bureau of Land Management (now Minerals Management Service) and the National Oceanic and Atmospheric Administration to provide the necessary baseline data for environmental impact statements, the overall level of funding for arctic research has been relatively low (U.S. Senate Hearings, 1982) and arctic research has taken somewhat of a back seat to Antarctic research (Kildow, 1985).

Canada, while certainly paying greater attention to arctic policy formation than the United States, has developed such a fragmented array of sectoral policies as to leave substantial uncertainty to the schedule and scale of arctic offshore resource

development (VanderZwaag and Lamson, 1986). Perhaps the only firm verbal statement of the policy confusion is to describe government's overall policy as "the creative search for balanced development." Indeed, former Prime Minister Pierre Trudeau clearly stated the lack of a comprehensive development plan in favor of creative evolution:

> You have overall plans in totalitarian societies. They don't work well and when they don't it's because they bend the people into the will of the plan. . . . We feel that the creative evolution of thinking and acting is the best approach to developing the North. [Munro, 1983.]

The Beaufort Sea Environmental Assessment Panel in its policy recommendations to the federal government in early 1984 cast uncertainty over marine transportation of arctic hydrocarbons, in particular, by stating a preference for a small-diameter buried pipeline and by recommending the government of Canada withhold approval of the tanker option until after two evaluation stages. A research and preparation stage would focus on such questions as the effect of tanker traffic on marine mammals and the need for increased government support systems such as hydrographic charts and ice detection systems. A two tanker stage would involve actual field trials and performance studies of two Arctic Class 10 oil-carrying tankers (Canada, Federal Environmental Assessment and Review Office, 1984).

Fragmented National Decision-Making Processes

Binational cooperation in northern ocean development and management may also be complicated by political or legal tensions in national decision-making processes on at least three levels — federal jurisdictional overlaps, federal-state/territorial tensions, and governmental-community relations.

Federal Jurisdictional Overlaps: Both the U.S. and Canada face fragmented decision-making processes for dealing with marine-related issues at the federal level. In the United States some 21 organizations in 6 departments and 5 agencies are responsible for aspects of marine science and oceanic regulation. Besides the Department of Interior and NOAA, the Department of State, the Environmental Protection Agency, the Department of Defense, the Army Corps of Engineers, the Department of Energy, and the Coast Guard all play key roles in ocean affairs. Such bureaucratic fragmentation is complemented by Congressional fragmentation. Over 30 subcommittees in both branches of Congress have jurisdiction over some aspect of ocean affairs (King, 1978). A U.S. Interagency Group on the Law of the Sea does exist, however, for dealing with law of the sea issues and lends some structure to law of the sea deliberations by the Executive Branch (J.L. Malone, pers. comm. 1984).

In Canada, control over offshore resource development is fragmented primarily over 7 federal entities, the Department of Indian Affairs and Northern Development, Transport Canada (and the Coast Guard), External Affairs, the Department of Fisheries and Oceans, Environment Canada, the Canada Oil and Gas Lands Administration (COGLA), and the National Energy Board. At least 13 major pieces of federal legislation apply directly to aspects of northern marine management: the Arctic Waters Pollution Prevention Act, the Canada Shipping Act, the Migratory Birds Convention Act, the Canada Wildlife Act, the Ocean Dumping Control Act, the Fisheries Act, the Navigable Waters Protection Act, the Canada Oil and Gas Act, the Oil and Gas Production and Conservation Act, the Territorial Lands Act, the Public Lands Grant Act, the National Parks Act, and the National Energy Board Act (VanderZwaag and Lamson, 1986).

Such fragmented and often uni-sectoral decision-making processes raise at least two questions for U.S.-Canadian cooperative ocean development and management. First, is it possible to achieve rational management at the binational level when rational ocean management at the national level has been more a dream than a reality? Second, the complexity of national ocean management regimes raises the difficult two-part question of which federal agencies should be represented on binational decision-making or advisory committees and what proportion of membership should each agency enjoy?

Federal-State/Territorial Tensions: Legal and political tensions over northern offshore issues exist for the United States and Canada at the state and territorial levels respectively. Tensions between Alaska and the federal government have existed on at least two fronts. First, what is the geographical extent of Alaskan offshore jurisdiction? While the Submerged Lands Act gave most states jurisdiction over waters and submerged lands out to 3 nautical miles off their coastlines, the question remains of from where the coastline should be measured. Alaska and the U.S. are presently litigating the question of territorial sea delimitation off the mainland shore in the Arctic Ocean before the U.S. Supreme Court. Alaska wishes to draw straight baselines around the outer perimeter of a number of islands lying more than 6 nautical miles from shore, while the U.S. claims delimitation should follow the coastline and thus high seas enclaves exist between the islands (Charney, 1983). If the U.S. in the future extends its territorial sea from 3 to 12 nautical miles, coastal states, such as Alaska, could argue for a seaward extension of state control over offshore resources as well (Seymour, 1977). A second level of state/federal tension exists over state rights to manage activities beyond the territorial sea. Federal statutes, such as the Coastal Zone Management Act, the Outer Continental Shelf Lands Act, the Deepwater Ports Act, and the Magnuson Fishery Conservation and Management Act, provide varying degrees of state influence over federal actions in the EEZ ranging from consultation to direct review and approval (Center for Ocean Management Studies, 1983). However, state and local governments have desired a greater role in decision-making, particularly concerning the pace of offshore oil and gas exploration and development (Jones, 1984).

In Canada, federal-territorial tensions are more political than legal. On the legal side, Yukon's offshore jurisdiction stands rather certain. Yukon's territory includes all islands within 20 statute miles from the shores of the Beaufort Sea (Nicholson, 1979). This area includes Herschel Island, an important early whaling center and an area still rich with abundant marine mammal resources, and the Territorial government has indicated an intent to establish a Territorial Historic Park, which might eventually incorporate a marine component (Government of Yukon, 1980). The Northwest Territories, meanwhile, holds at least a slight legal lever for claiming offshore jurisdiction since the Northwest Territories Act, the federal statute establishing territorial powers, provides an ambiguous definition of Territories that could be interpreted to include all ice, water, and land north of the 60th parallel. Section 2 of the act states: " 'Territories' means the Northwest Territories which comprise . . . all that part of Canada north of the Sixtieth Parallel of North

Latitude, except the portions . . . within the Yukon Territory, the Province of Quebec or the Province of Newfoundland. . . .'' At least two cases have upheld Territorial jurisdiction over the offshore. In *R.* v. *Tootalik E4-321*, the Territorial court upheld the prosecution of a Spence Bay resident for unlawfully hunting, while on the sea ice, a female polar bear with young. In *BP Exploration Co. (Libya) Ltd.* v. *Hunt*, the Northwest Territories Supreme Court allowed an injunction preventing the defendant from disposing of exploration permits for land under the Beaufort Sea. The Northwest Territories, using the powers granted by the Northwest Territories Act over such facets as direct taxation and matters of a local or private nature, could argue (and has argued) for a share of revenues from offshore activities. However, such a legal lever could be snapped at any moment, for Parliament retains the latent power to clarify the statutory language.

On the political side, both the Northwest Territories and Yukon continue to push for full provincehood. Political evolution in the N.W.T. has taken important strides since 1979 when C.M. Drury, the Prime Minister's special representative on constitutional development on the Northwest Territories, urged a greater role for northern residents in determining the political future (Drury, 1980). On 14 April 1981 a majority of N.W.T. residents (56%) voted to divide the Territories into two — a western territory and an eastern territory (called Nunavut). Following the plebiscite, the N.W.T. Legislative Assembly unanimously endorsed division, and in November 1982 the Minister of Indian Affairs and Northern Development announced support in principle for division, subject to four conditions, including the settlement of native land claims and agreement among northern residents on political boundaries (Sherwood, 1986). On 28 March 1984 Cabinet approved a final land claims agreement with Inuvialuit in the Western Arctic. Negotiations are continuing between the federal government and the Tungavik Federation of Nunavut (TFN) over areas of the Central and Eastern Arctic. In Yukon, self-government has been a paramount objective of every government since the establishment of Yukon in 1898. Perhaps the overall political mood in Yukon was captured in the words of government leader Chris Pearson in a statement setting forth a new government Land Use Policy:

> The rallying cry of each Yukon Government has been that Yukoners, not people living in Ottawa, should be making decisions that affect us at the territorial level. The feeling of Yukoners was most aptly described by Commissioner Gordon when he said, 'You can't drive a team of horses with reins 3,000 miles long'. . . . My Government will not be satisfied until our land is owned and managed by Yukoners. . . . [Government of Yukon, 1982.]

Such federal-state/territorial tensions, touched on above, raise an important twofold question for cooperative ocean management between the U.S. and Canada. What role should state and territorial representatives play in any decision-making and advisory bodies created to facilitate cooperation, and assuming there is representation, which state or territorial agencies should be represented on such bodies?

Governmental-Community Relations: Both the U.S. and Canada also face political and legal tensions between government managers and local communities in the North. Judicial pronouncements and federal legislation in both countries have generally crowned federal administrators ''rulers'' of the sea. Inuit communities, on the other hand, reliant on arctic seal, fox, polar bear, and whale populations, have lived in concert with the natural rhythms of sea ice regimes for centuries. A dynamic tension has thus been established between federal managers, who often view the ''national interest'' as maximizing oil and gas development or maximizing multiple ocean uses, and Inuit communities, which, while not necessarily opposing offshore development, wish to maximize opportunities to sustain their cultural heritage, represented in part by renewable resource harvesting activities.

In the United States, the political tension has been played out on at least four fronts. First, the Inupiat of Alaska's North Slope litigated unsuccessfully at the District Court and Court of Appeal levels the question of rights over sea ice, water, and submerged lands in the Beaufort and Chukchi seas beyond the three-mile limit. Second, the North Slope Borough has formulated a Coastal Zone Management Plan, which if approved at the federal level will become a district component of the Alaska Coastal Management Program. The plan could provide some leverage over federal offshore developments, for Section 307 of the Federal Coastal Zone Management Act requires all federal activities ''directly affecting'' the coastal zone to be consistent to the maximum extent practicable with an approved state coastal management plan. Third, the Alaska Eskimo Whaling Commission (AEWC) has been granted joint management responsibilities with the National Oceanic and Atmospheric Administration over bowhead whaling. Fourth, the Native Claims Review Commission has recently released a report criticizing the 1971 Alaska Native Claims Settlement Act (Berger, 1985).

In Canada, the major mechanisms for securing a community hand over offshore development have been participation in government environmental assessment reviews and the negotiation of land claims settlements. The Beaufort Sea Environmental Assessment Panel, having listened to the social and cultural concerns of native northerners, has recently recommended that ''governments give to the communities and local hunters and trappers a stronger role in harvesting studies and in fish and wildlife resource planning and decision-making'' (Canada, Federal Environmental Assessment and Review Office, 1984). The recent land claims agreement signed by the government of Canada and the Inuvialuit of the Western Arctic promises to establish several new resource management mechanisms granting native northerners new participation rights but not exclusive authority. Wildlife Management Advisory Councils, one for the Yukon North Slope and one for the Northwest Territories with equal native and governmental representation, will provide advice on management of wildlife and wildlife habitat. An Inuvialuit Game Council, besides assigning community hunting and trapping areas and providing additional advice on wildlife management, is to advise the government on any proposed Canadian international position affecting wildlife in the settlement region and to provide membership for any Canadian delegation dealing with international matters affecting Inuvialuit wildlife harvests. A Fisheries Joint Management Committee will advise the Minister of Fisheries and Oceans on such matters as harvestable quotas for marine mammals, regulations regarding sport and commercial fishing, and international agreements being developed that might apply to Inuvialuit fisheries. Community Hunters and Trappers Committees will sub-allocate subsistence quotas. A Research Advisory Council will seek to coordinate research activities in the settlement region.

One clause of the settlement agreement, in particular,

acknowledges the importance of facilitating transboundary management regimes:

> Canada undertakes to ensure that wildlife management and habitat management produce an integrated result with respect to migratory species within the Yukon Territory, the Northwest Territories and the adjacent offshore. In respect of migratory species which cross international boundaries (e.g. Porcupine Caribou herd), Canada shall endeavour to include the countries concerned in cooperative management agreements and arrangements designed to maintain acceptable populations in all jurisdictions affected, including safe harvesting levels within each jurisdiction. Canada shall endeavour to have within such agreements provisions respecting joint research objectives and related matters respecting the control of access to populations. [Canada, Department of Indian Affairs and Northern Development, 1984.]

The evolving political status of native northerners raises a number of questions for cooperative ocean management between the U.S. and Canada. What role should native northerners play in decision-making or advisory institutions created to facilitate binational (or multilateral) cooperation? What role should an umbrella organization, such as the Inuit Circumpolar Conference, play in binational (or multilateral) ocean management?

POLICY QUESTIONS FOR AN INTERNATIONAL ARCTIC MARINE MANAGEMENT REGIME

Without clear national pictures of offshore development pace, transportation modes, endpoints of territorial and native political institutions, and priorities for renewable resource development (such as marine mammal harvesting and tourism) and non-renewable resource uses, it is extremely difficult to predict future international regulatory needs and management possibilities in the North. Nevertheless, this section provides an overview of key policy questions involved in creating an arctic marine management regime. Before saying "I do" to increasing bilateral or multilateral marine cooperation in the Arctic, Canada and the United States should address at least eight threshold issues to assure future institutional linkages do not end up in separation or divorce.

1. Are present formal arrangements and informal *ad hoc* linkages adequate for arctic ocean management? The tendency for many academics and perhaps many diplomats is to look for a "quick fix" to binational and multinational relations through the negotiation of a series of formal "wedding vows" — formal treaties and executive agreements. In fact, many countries are content to live in a "common law" relationship, where most contacts tend to be rather *ad hoc* and informal. Present Canadian and American relations in the Arctic are governed mainly by informal mechanisms with a slight sprinkling of formal agreements.

On the relatively informal level, since 1976 U.S. and Canadian government officials have met in yearly Beaufort Sea information exchange sessions. In a 1970 memorandum of understanding (MOU), the U.S. Department of Transportation and the Canadian Ministry of Transportation pledged to cooperate in pursuing scientific and technological research in the field of transportation so as to avoid duplication of parallel national efforts. On 25 April 1985 Transport Canada and the U.S. Department of Transportation signed a further agreement to cooperate in research projects relating to arctic shipping. In a March 1982 memorandum of understanding, the U.S. Coast Guard and the Canadian Department of the Environment agreed to cooperate in pollution control research including behavior of oil spilled in the Arctic and development of pollution response equipment. U.S. and Canadian scientists have cooperated with scientists from other nations in large-scale research programs such as AIDJEX (Arctic Ice Dynamics Joint Experiment) and MIZEX (Marginal Ice Zone Experiment). At the industry level, the Canadian Arctic Petroleum Operators Association (APOA) and its research affiliate, the Canadian Offshore Oil Spill Research Association (COOSRA), have held yearly meetings with the U.S. Arctic Beaufort Sea Oilspill Research Body (ABSORB) to discuss oil pollution research (Johnston, 1982). Numerous other binational contacts no doubt occur, particularly at the scientist-to-scientist or official-to-official level.

National legislation, on occasion, mandates binational consultation. For example, the Alaska National Interest Lands Conservation Act requires the Secretary of Interior to consult with appropriate Canadian agencies in evaluating impacts of oil and gas development and transportation activities on North Slope wildlife resources, including polar bear, seabirds, and caribou.

At a more formal level, a Canada-United States Joint Marine Pollution Contingency Plan for the Beaufort Sea establishes procedures for the U.S. Coast Guard and the Canadian Coast Guard to jointly respond to any oil or noxious substance pollution incident threatening the waters or coastal areas of both parties. In 1972, the U.S. and U.S.S.R. signed an Agreement on Cooperation in the Field of Environmental Protection, which pledged the two countries to cooperate, among other things, in studying arctic ecological systems and to exchange information on marine pollution prevention facets such as vessel design, traffic control, shore facilities, and offshore oil drilling safeguards. Canada has recently signed a scientific research cooperation agreement with the U.S.S.R., and on 26 August 1983 Canada and Denmark signed a Marine Environment Cooperation Agreement covering the Nares Strait, Baffin Bay, Davis Strait region. The Canada-Denmark agreement establishes joint contingency plans for shipping or seabed pollution incidents, sets forth the duty to consult on activities creating a significant risk of transboundary pollution, pledges cooperation in marine scientific research, and mandates cooperation in vessel traffic management and in identifying appropriate vessel routing areas.

Much can be said in favor of the present *ad hoc* mix of informal and formal cooperation in the Arctic. Government administrators enjoy the ultimate in flexibility. Unbound by numerous treaty requirements, they may simply establish cooperative bridges as needed. Until resource development scenarios become clarified, arctic states may not be able to justify financial and manpower commitments beyond *ad hoc*, incremental cooperation. On the negative side, lack of an integrated ocean management system for the Arctic could result in little long-range planning, fragmented research and development programs, and, thus, greater financial, social, and environmental costs in the long run.

2. Assuming the U.S. and Canada do wish to establish more formal cooperative mechanisms, should they make only minimal commitments to cooperate through a *demonstrative* agreement (an agreement demonstrating good intentions to consult and cooperate), or should they make more substantial commitments through a combination of more elaborate agreements? An *administrative* agreement might establish specific administrative arrangements, for example a joint Beaufort Sea Advisory Commission, for managing ocean uses. A *distributive* agree-

ment might formalize the exchange (or distribution) of scientific information and technological expertise. A *resolutive* agreement might resolve outstanding issues such as the Beaufort marine boundary (Johnston, 1981).

A demonstrative treaty offers to bestow two advantages. It would likely be politically attractive since no great national commitments would be required by either country. It would also give differing management regimes time to adjust to one another. On the negative side, an agreement limited to expressing good intentions could encourage abundant international talk but little concrete action.

3. Assuming the U.S. and Canada wish to establish more formal mechanisms for arctic marine management, what level of cooperation — binational, trinational, arctic-wide, or global — is required and politically feasible? Arctic marine issues are often susceptible to management on varying levels. For example, arctic shipping might require management at the arctic-wide (or arctic-wide plus major shipping state) level to assure a uniform system of vessel specifications, such as design and equipment, for the day could come when a single ice-strengthened vessel would ply the Northwest Passage, the North Pole route, and the Northeast Passage on a multipurpose shipping assignment. If a vessel's route were limited to the Northwest Passage region, including Canadian waters to the east and U.S. waters to the west, a bilateral agreement between the U.S. and Canada might be sufficient to protect vessel owners from conflicting regulations. However, if a ship were to transit the West Greenland waters as a Northwest Passage entry way or exit, a trinational agreement might be necessary among the U.S., Canada, and Denmark/Greenland. Given the stiff opposition of Greenlanders to the Arctic Pilot Project, a proposal by Petro-Canada to ship liquefied natural gas by Class 7 icebreakers through the Northwest Passage to Eastern Canada or Europe, a trilateral agreement might be an extremely difficult and sensitive issue. The question must also be addressed whether the shipping mode for hydrocarbon transport is an appropriate choice for the Arctic, given strong native opposition and the pipeline alternatives.

Since the Beaufort Sea is a closely shared body of water between the U.S. and Canada, a bilateral management regime seems logical. However, the bowhead whale migrates to Soviet waters, so a trilateral arrangement for managing marine mammals might be called for.

4. Should the two countries create new binational management institutions and approaches, or should they emphasize harmonization of existing legislation and administration? As an example of this type of policy question, the U.S. and Canada might seek to create a new institution for assessing the environmental consequences of major offshore and onshore developments, or the countries could simply harmonize their own domestic processes to assure domestic environmental reviews fully consider the transboundary implications of project proposals. Harmonization of domestic legislation might require domestic environmental review entities, such as the National Energy Board, environmental assessment panels, and U.S. counterparts, to give notice of proceedings to interested foreign residents and relevant foreign governmental departments and allow intervention by such parties. Environmental review entities might also be authorized to fund foreign interventions and perhaps to hold public hearings in another country, if agreeable to both governments.

5. Assuming the U.S. and Canada agree to create new arctic marine management institution(s), how should they design their joint institution(s)? At the one extreme, the U.S. and Canada could create a multifunctional management commission, that is, a "super-commission" with some say over all arctic marine uses, including marine mammal harvesting, fisheries development, navigation, oil and gas activities, and habitat protection. At the other extreme, they could establish one or more unifunctional commissions for coordinating single ocean uses. Thus, there might be one commission for managing shared fish stocks, one for managing vessel traffic, and another for overseeing offshore oil and gas development.

Each extreme bears positive attributes. A multifunctional approach promises to maximize comprehensive integrated planning and to streamline decision making, since all functions would be handled under a single institutional umbrella. A unifunctional approach, meanwhile, might be more politically attractive, since both countries would only have to incrementally commit themselves to the most demanding ocean problems rather than having to take a total plunge into untested, comprehensive ocean management.

6. Assuming new arctic marine management institution(s) are created, what kind of powers should be given to the joint institution(s)? Advisory only? Or actual decision making? The greater the decision-making power, the greater the political paranoia is likely to be, for the national executives and bureaucracies are bound to be wary of losing powers to an international body. Political opposition might be curbed, however, by leaving decision making as far as possible with the responsible government agencies in each country. Such might be accomplished by matching international institutional membership with responsible agency memberships.

7. What role should native groups play in regionalized arctic marine management? Given the cultural importance of sea ice and marine mammal harvesting to Inuit communities, the U.S. and Canada might consider at least partially following the example of Australia and Papua New Guinea, which in settling maritime jurisdiction over the Torres Strait region agreed to establish a special protection zone for preserving traditional lifestyles of local inhabitants.

If actual decision-making powers were to be granted to arctic marine management institutions, then native northerners, based on arguments for human rights and cultural continuity, might claim a right to participate in actual decision making as well.

8. What type of dispute settlement mechanism(s) should the U.S. and Canada establish for resolving arctic marine issues? At least three sub-questions arise as to binational settlement of arctic marine issues:

a. Is any dispute settlement mechanism required at all? While lack of outside binding settlement procedures would arguably induce both countries to avoid tough management decisions, the opposite could also be true. Forcing officials to resolve basic differences by internal negotiations could facilitate management decisions, for officials would face a "do or die" situation: either resolve basic differences or reach no joint management.

b. What level of dispute settlement is preferable for arctic marine issues: a chamber of the International Court of Justice? submission for arbitration or recommendation by the International Joint Commission, the joint six-member body created by the 1909 Boundary Waters Treaty? submission to general settlement mechanisms still to be created by the U.S. and Canada (for example, an overall Canadian-American Environ-

mental Dispute Tribunal)? creation of a settlement mechanism specific to arctic marine issues (for example, an Arctic Marine Ad Hoc Tribunal)? or adoption of the dispute settlement procedures of the Law of the Sea Convention, including reference to the International Tribunal for the Law of the Sea?

c. Should dispute settlement references occur only by mutual consent, or should either party be allowed to unilaterally request a reference?

CONCLUSION

The need for Canadian-American cooperation in the Arctic is essential to prevent transboundary pollution incidents in the Beaufort, to manage overlapping living resources, including marine mammals and fish stocks, to protect the culture of native northerners, and to increase technological understanding and capabilities. Legal and ethical mandates to cooperate are emphasized in such documents as the World Conservation Strategy and the Law of the Sea Convention. However, the legal status of arctic waters remains clouded in uncertainty and the national capabilities to manage ocean development remain cloaked in fragmentation and political tension.

Whether Canadian-American relations in the Arctic have been riding in the eye of a storm or at the edge of a tranquil sea will likely depend on renewed national commitments to cooperate in ocean development and management.

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