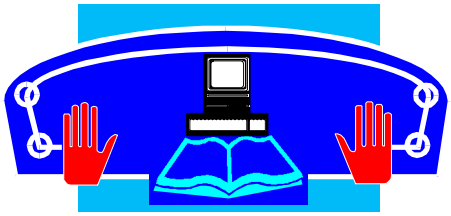

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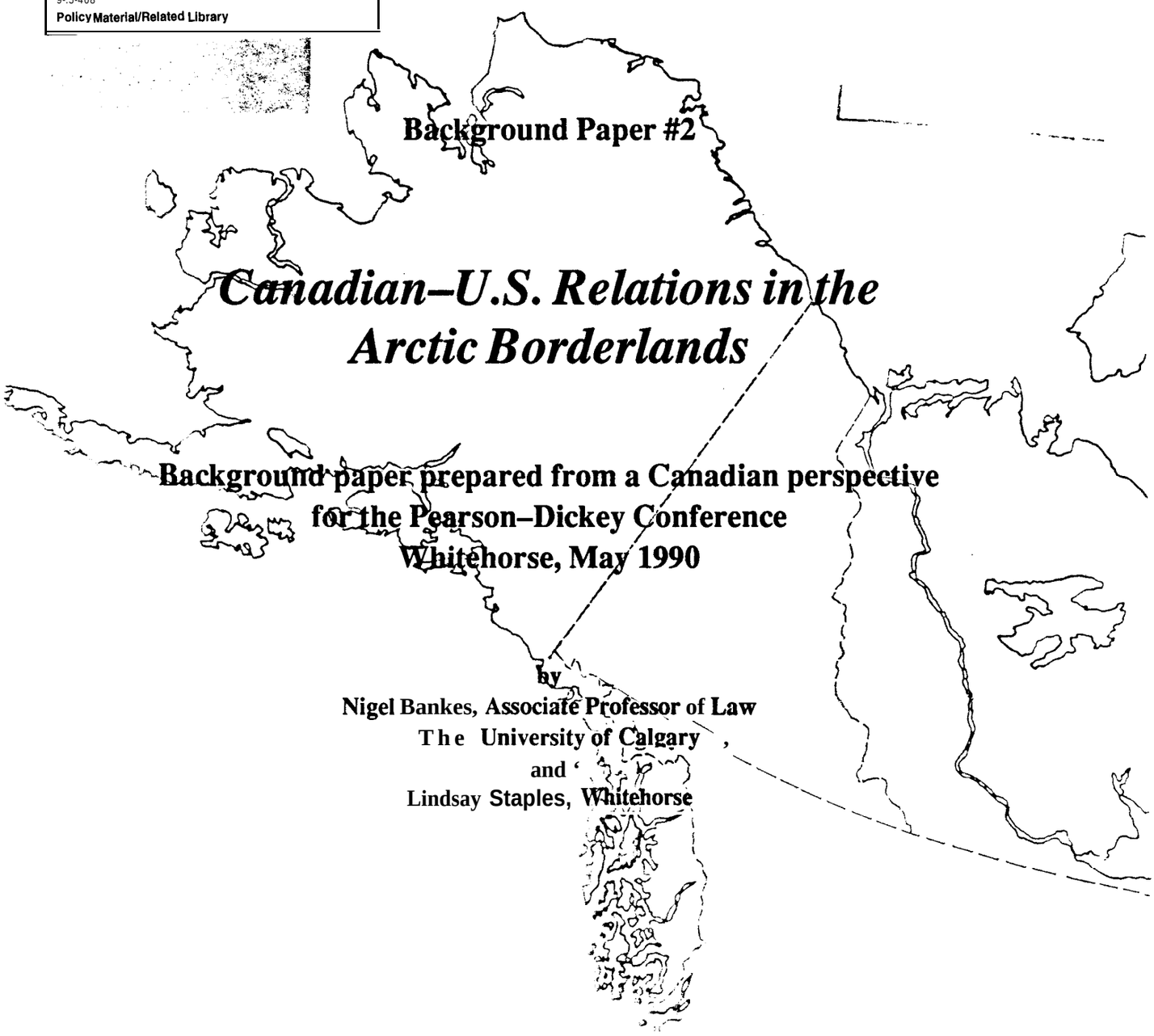

Background Paper #2

Canadian–U.S. Relations in the Arctic Borderlands

Background paper prepared from a Canadian perspective for the Pearson–Dickey Conference Whitehorse, May 1990

by

Nigel Bankes, Associate Professor of Law
The University of Calgary
and
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Canadian Arctic Resources Committee
Canadian Institute of International Affairs

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The Canadian Arctic Resources Committee is a private citizens' group established in 1971. Its objectives are to promote natural resource conservation, environmental protection, and the development of sustainable economies in the Canadian and international North, and to support the development of political, economic, and social institutions in the North that are responsive to the needs and concerns of northerners.

The mission of the Canadian Institute of International Affairs is to promote an understanding of international affairs by providing interested Canadians with anon-partisan, nation-wide forum for informed discussion, analysis, and debate. The Institute as such is precluded by its constitution from expressing an official opinion on any aspect of world affairs. The views expressed in this volume are those of the authors.

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Foreword

The third Pearson-Dickey Conference, *Arctic Borderlands: Environment and Development Issues in Canadian–American Relations,* was held in Whitehorse, Yukon on 10–12 May 1990. It focused on the shared responsibilities of Canada and the United States to plan and manage human activities so as to protect the natural environment and sustain the region's human communities. The conference was co-sponsored by the Canadian Institute of International Affairs and the Institute on Canada and the United States, Dartmouth College, New Hampshire.

Scope of Paper and Summary

This paper was prepared as a background paper for the Pearson-Dickey Conference, held in Whitehorse, Yukon in May 1990. It attempts to canvass abroad range of issues which currently are of concern to Canada and the United States in the Beaufort Sea region. The paper focuses on bilateral issues, and its coverage of multilateral issues is brief.

As the title indicates, the geographical area with which we are concerned is the arctic borderlands area. We use this term to embrace the Beaufort region and the North Slope of Alaska and Yukon. Hence, the paper covers only a small segment of the borderlands region between Alaska and the Yukon and omits much of the rich history surrounding relations between the two states in the Panhandle and Gold Rush areas. The arctic focus has also led us to exclude coverage of the very real differences which continue to separate the two states on questions related to the Pacific salmon stock of the Porcupine, Yukon, and Panhandle rivers.

The paperis divided into four parts. The first contains a statement of the bilateral environmental and developmental problems which face the two countries in the borderlands area. These are identified as being: (1) the Arctic National Wildlife Refuge (ANWR) proposals, (2) potential pipelines, (3) potential port sites, (4) proposed offshore petroleum developments on either side of the border, and (5) possible military developments. Currently, the latter seem to be the least significant. It is noted that several issues cut across these problems-especially the treatment of shared living resources and habitat protection. These issues are important for environmental reasons but are also important for socio-economic and cultural reasons because of the continuing dependence of aboriginal subsistence harvesters on many of these shared fish and wildlife populations. The aboriginal harvest of these resources also poses critical questions for project assessment, and liability and compensation in the event of project approval. Questions of liability and compensation have not been dealt with adequately at a domestic level in Canada and certainly not at an international level. There is no bilateral agreement between the two states on these questions, and current arrangements in Canada are discriminatory *vis-a-vis* Alaskan residents.

The second part of the paper surveys some of the applicable legal principles and international instruments, and attempts to provide some evaluation of the extent to which these instruments adequately address the problems and issues identified in the first part. The measures canvassed include the Migratory Birds Convention, the Polar Bear Convention, the Agreement on the Porcupine Caribou Herd, and the Marine Contingency Plan. This part of the paper concludes with an evaluation of the extent to which domestic assessment procedures have been able to provide an assessment of the international and cumulative impact of proposed developments.

In our view, the existing arrangements fall short in a number of particulars. First, existing instruments do not make adequate provision for habitat protection. Second, some of the instruments do not make provision for distribution of the allowable harvest. Third, in some cases, international instruments have been negotiated without paying any regard, or sufficient regard, to the interests of aboriginal users. Fourth, there are significant gaps in the coverage of existing instruments in relation to, for example, marine mammals. Fifth, domestic assessment procedures do not take sufficient account of transboundary impacts. They are discriminatory and do not provide for equal access.

The third part of the paper briefly reviews some of the broader regional and global concerns which affect or may affect the arctic borderlands. We point out that there are very few arctic-specific multilateral initiatives at the governmental level, and we place emphasis on the leadership role played by the Inuit Circumpolar Conference (ICC).

We also note the recent initiative of the Finnish government in convening the Rovaniemi conference on the arctic environment in 1989 and the follow-up meetings which have been scheduled.

The conclusion of the paper is divided into three parts. First, some general themes are emphasized: shared resources, habitat protection, inclusive assessment procedures, gaps in international instruments, role of indigenous peoples, etc. Second, the suggestions of other commentators are given, and third, we conclude with some of our own observations.

Finally, it should be noted that although the paper was prepared as a background paper, we have added material at several places to reflect the views of participants.

PART I: A Statement of the Bilateral Issues and Problems

Introduction

The bilateral international management of resources is becoming more, rather than less, complex in the Arctic. Any analysis must keep in mind the interests of resource users, the demands that industrial interests make on the land and resource base, the uncompromising stances of animal welfare groups and the deep ecologists,[1] as well as the cultural and "rights-based" concerns of aboriginal users and the interests of a plethora of environmental and wilderness organizations.

Renewable Resource Issues

The renewable resources which have given rise to international dispute or concern in the arctic borderlands include migratory birds (notably, lesser snow geese), the Porcupine caribou herd, polar bears, fish and marine mammals, and the associated non-renewable wilderness values.[2]

There are two types of renewable resource management problems which, for political rather than management reasons, are best kept distinct. The first type relates to the establishment of harvest levels and distribution among different user groups. The second type relates to protection of habitat. There is an obvious connection between the two in many cases, but it has always proven difficult to obtain international protection of habitat on a Systematic bask. This is particularly true where the resources in question are highly migratory. The reasons for this are not difficult to discern: habitat protection requirements have a widespread and diverse impact through abroad area and across a wide range of interests; the protection of habitat may make it impossible to accommodate the interests of other users; resource distribution and harvest decisions are more likely to be confined to specific user groups; and all interests may be more readily accommodated at some level of demand. As well, we should not lose sight of the extent to which the interests of the anti-fur lobby, composed of deep ecologists and animal welfare societies, have also complicated this latter group of decisions and made them, from this perspective at least, less tractable. The resource distribution problems in the region do not seem to be serious at this time, with the exception of the potential distribution of a bowhead harvest between the Inuvialuit and the Inupiat. The distribution problem in relation to the Yukon and Porcupine salmon fishery is a serious one but is not dealt with here.[3]

Non-Renewable Resource, and Military and Defence Issues

Issues relating to non-renewable resources arise in relation to the distribution of the resource and the actual and potential impacts of resource development, including transportation questions and the decision of whether or not to allow development. Distribution questions at an international level are confined to the problem of where to draw the line between the U.S. and Canadian sectors of the Beaufort Sea. Additional problems may also conceivably arise in the future if straddling petroleum deposits are discovered.

Many of the resource development issues are of bilateral concern because of impacts on the renewable resources just referred to. The development issues in question include: oil and gas exploration either occurring or being considered for the Beaufort Sea, Canadian and U.S. sections; the North Slope lands in Alaska; and the Alaska Outer Continental Shelf (OCS). Associated with these development issues are various pipeline and port proposals, and marine traffic considerations, whether in the form of supply ships or tanker traffic, to take the oil or gas to market. In the non-oil and gas sector, placer mining in the Yukon is of concern to Alaskan interests primarily because of potential conflicts with fisheries, although there is a more general concern with water quality in specific instances.

Currently, military and defence issues are not of great concern in the borderlands region.

The Oil-and-Gas-Related Developments

Since the main bilateral issues appear to be raised by the conflicts created by the development of oil and gas

resources, in the following section we will identify and discuss some of the particular proposals or projects. We shall begin by considering the land-based projects: (1) the North Slope proposals including ANWR, (2) bilateral pipeline proposals, and (3) port proposals for the Yukon North Slope associated with offshore developments.

The North Slope Proposals

Given federal protection in 1960, the 19-million-acre ANWR has been the subject of debate by competing resource interests ever since. Conservationists have sought to preserve the integrity of the refuge and its habitat in the face of increasing pressure to open the refuge to oil and gas exploration. Both conservationists and development interests have known some measure of success for their efforts.

Under the 1980 *Alaska National Interest Lands Conservation Act*[4] (ANILCA), the range was doubled in size, classified as a refuge, and almost half of it was designated wilderness. The same act also opened the 1.5-million-acre coastal plain to oil and gas exploration, and in the winters of 1984 and 1985 some exploration occurred in this area. Now the status of these federal public lands are once again the subject of review as required by ANILCA, with the prospects of continued or expanded oil and gas exploration or strict preservation of habitat at the heart of the conflict.

The lands of the Alaskan coastal plain in question are known as the "1002 lands" after the section number in ANILCA which refers to them. Section 1002 was formulated to ensure that hydrocarbon exploration would be undertaken, if at all, with minimal harm to the wildlife and habitat of the coastal plain. The review of the status of these lands has attracted international attention. Not since the proposal in the early 1970s by the Arctic Gas consortium to transport gas by pipeline from Prudhoe Bay across the North Slope of the Yukon to the Mackenzie Valley has there been such a contentious bilateral issue in the Beaufort region.

The petroleum lobby, anxious to see the 1002 constraints relaxed to further increased exploration in the area, finds support among those concerned about the energy security needs of the United States. It has also been supported by some native organizations, especially North Slope village corporations in Alaska which would like to derive some of the economic benefits which could flow from hydrocarbon development in the area. The North Slope Borough, for example, perceives that its interests would be far better served by encouraging petroleum exploration in the ANWR than by development of the OCS. The North Slope Borough considers that offshore developments pose a far more serious threat to traditional lifestyles and resource-use patterns than does onshore exploration. Ranged in opposition to these proposals are user groups of the Porcupine caribou herd on both sides of the international boundary, especially the Gwitch'in people; conservation and environmental organizations; and the governments of Canada, the Yukon, the Northwest Territories, and Alaska.

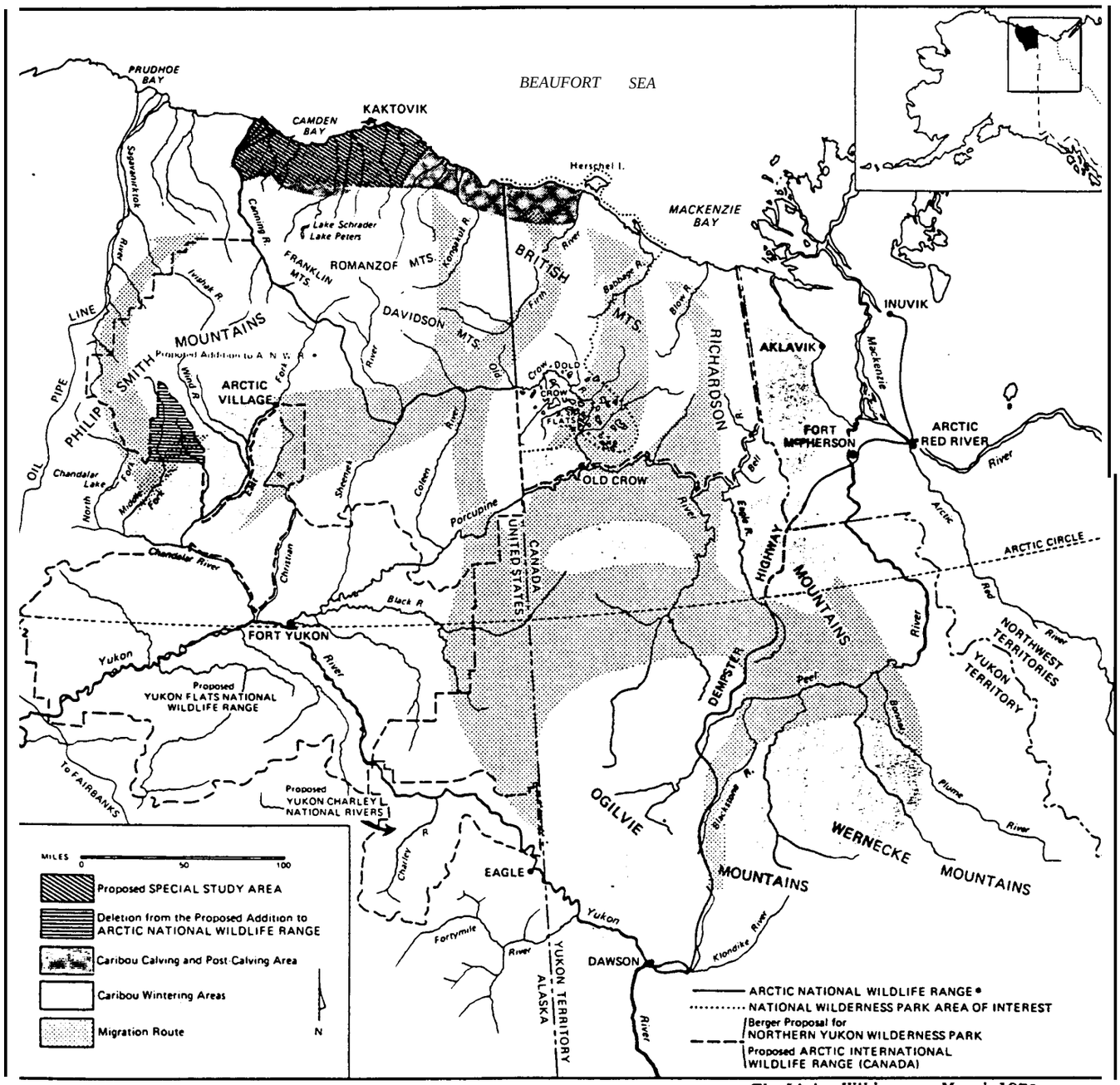
The U.S. Secretary of the Interior and the Fish and Wildlife Service have recommended that the coastal plain be opened for drilling, but an act of Congress is required before leasing is permitted. Canada's opposition to leasing has been criticized by some U.S. politicians on the grounds that Canada is merely endeavoring to boost the attractiveness of its own resources. Most objections have focused on the threat to the Porcupine caribou herd and the threat to the subsistence users dependent upon it. (See map 1 of caribou migration and calving grounds.) The 1002 area contains almost 80 per cent of the core calving grounds of the herd. No alternative calving areas of this magnitude have been identified. The governments of Canada, the Yukon, and the Northwest Territories have also addressed the other "shared wildlife migratory resources", such as lesser snow geese, polar bears, fish, and marine mammals.

The lesser snow goose population is effectively shared by Canada and the United States because the population nests on Banks Island and in the Mackenzie Delta, and spends time on the 1002 lands in late summer before wintering in central California and New Mexico. The 1002 lands are important staging areas. The polar bear population of the Beaufort region is not highly migratory, but there is evidence of westerly migration from the Mackenzie Delta and Herschel Island. Development of the coastal plain has the potential to interfere with denning sites especially if a port were constructed in the area. The potential problems in relation to fishery resources and marine mammals are not as well documented. White fish such as the arctic cisco, an important subsistence food source, are known to migrate along the coast as are valued marine mammals such as ringed seal, bearded seal, beluga whale, and bowhead whale.

Canada's official position, and that of the territorial governments, is that the 1002 lands should be designated

Map 1

Porcupine Caribou Herd: Caribou Migration and Calving Grounds



The Living Wilderness, March 1978

as wilderness and twinned with the Northern Yukon National Park in Canada.[5] However, Canada has also indicated that, "the 1002 lands east of the Hulahula River are particularly important. These are the 1002 areas most frequently used by Porcupine caribou, by snow geese, and by polar bears."[6] The state of Alaska has proposed a moratorium on exploration and development in the core calving area.

The Yukon Territorial Government is opposed to the development of ANWR lands on environmental grounds, but it also has an economic interest at stake. The Yukon government believes that opening up the ANWR lands will increase the likelihood of a North Slope gas pipeline, and that the territory's interests would be better served by continuing to insist on the construction of the Alaska Highway Natural Gas Pipeline? which has been approved by Canadian legislating and by international agreement between the United States and Canada.[9]

At the time of this conference, the various interests were awaiting the introduction of bills. It was felt that, but for the *Exxon Valdez* incident discussed below, legislation would already have been introduced in the U.S. House of Representatives or Senate, or both. A threat to energy security, such as that posed by the Iraqi invasion of Kuwait, will lead to significant pressure to open the ANWR lands, and Alaskan senators have indicated that Alaska is open for business.

Bilateral Pipeline Issues

There are still potentially serious bilateral concerns in relation to the means of getting Prudhoe Bay gas (or other supplies yet to be discovered) to market. Fifteen years ago extensive reviews were conducted by the Mackenzie Valley Pipeline Inquiry (Berger Inquiry)[10] and the National Energy Board (NEB)[11] of a proposal to ship Prudhoe Bay gas to market by way of a pipeline across the North Slope of Alaska and the Yukon and down the Mackenzie Valley. The proposal was rejected in the clearest possible terms both by Berger and the NEB. As an alternative, the Government of Canada approved the construction of the Alaska Highway Natural Gas Pipeline and entered into an international agreement with the United States.[12] The pipeline was to be built by Foothills Pipeline of Calgary; however, to this date, all that has been constructed is what is known as the "prebuild" portion in Alberta and British Columbia.[13] Despite the existing authorizations, it is increasingly unlikely that a pipeline on this route will be built, primarily because of the incremental costs involved.

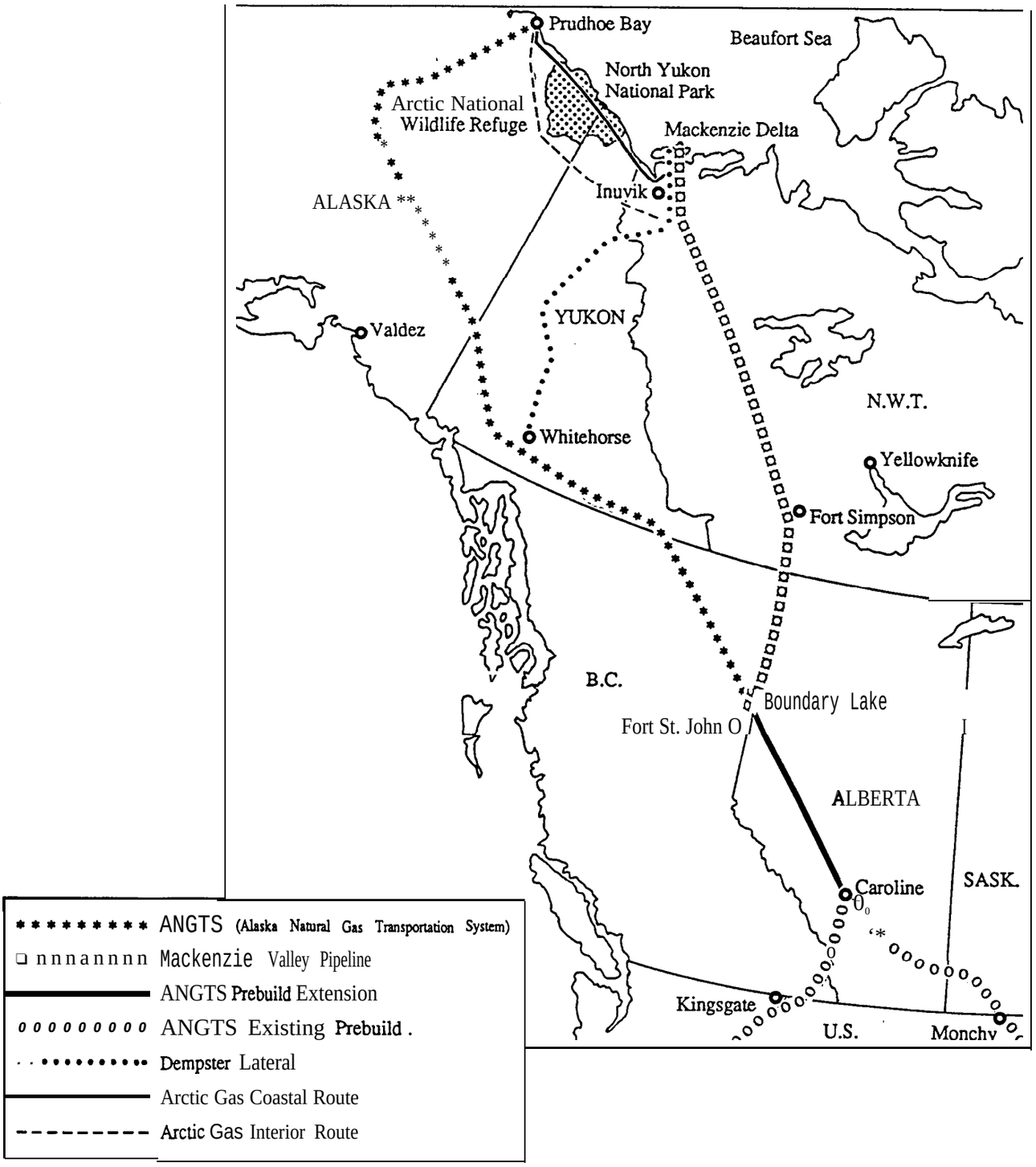
Instead there are at least three other possibilities. The first, which does not seem very likely, at least in the long run, is that Prudhoe Bay gas may simply not be produced. Second, the gas may be liquefied and shipped by tanker, the most likely destination being west to Japan (the acceptability of this proposal will turn very much on U.S. security concerns). Third, Canadian Beaufort–Mackenzie gas will be produced first (to supply U.S. consumers) and brought to market via a Mackenzie Valley pipeline rather than a Dempster Lateral linking to the proposed Alaska Highway Natural Gas Pipeline (see attached diagram 1). This seems the most likely option because a Mackenzie pipeline will be significantly cheaper at the outset than a Prudhoe Bay pipeline. Once a Mackenzie pipeline is built, pressure from U.S. producers and consumers will once again increase to bring Prudhoe Bay gas to the "lower 48" by means of a pipeline across the ANWR and the Yukon North Slope to join with the Mackenzies ystem.

It should be clear, from what we have indicated above in relation to the ANWR, that this third option would raise serious bilateral concerns in relation to important shared resources. The ecological importance of this area has already been thoroughly canvassed by the Berger Inquiry and the NEB and need not be discussed further here. Suffice it to point to two changes which have occurred since the Berger Inquiry which would have an important influence on the reincarnation of such a proposal. First, the most obvious route would pass through the Northern Yukon National Park. Second, although pipelines are not unknown in Canadian national parks (Trans Mountain's Edmonton–Vancouver oil pipeline passes through Jasper National Park), policies have since changed. As well, this particular park was created by the Inuvialuit Final Agreement (IFA). Section 12(8) of that agreement provides that "development activities inconsistent with the purposes of the National Park shall be prohibited, and any change in the character of the National Park shall require the consent of the Inuvialuit."

This Inuvialuit veto is constitutionally entrenched bys. 35 of the *Constitution Act, 1982*. However, it would be unsafe to assume that the veto would necessarily be exercised to preclude the North Slope option. Instead, it is possible that it might be used to lever significant economic benefits out of any project or to impose onerous environmental terms and conditions. The Inuvialuit, like

Diagram 1

Proposed Pipeline Alternatives for Transportation of Mackenzie Delta Natural Gas



any other group in society, must weigh the benefits associated with development against those associated with the protection of the north Yukon. For example, since the IFA entered into force the Inuvialuit have publicly split with other members of the ICC over the issue of shipping Beaufort oil to Japan.[14]

However, Canadian and U.S. environmental groups interested in the region would treat any reactivation of a North Slope pipeline as a fundamental attack upon everything they stand for.

The official position of the Government of Canada continues to be one of opposition to a northern Yukon pipeline. As recently as February 1988, Marcel Masse, in response to the *Eighth Report of the Standing Committee on Energy Mines and Resources: Oil Scarcity or Security?*, rejected the committee's recommendation that a transportation corridor be established across the North Slope.[15]

A North Slope Port

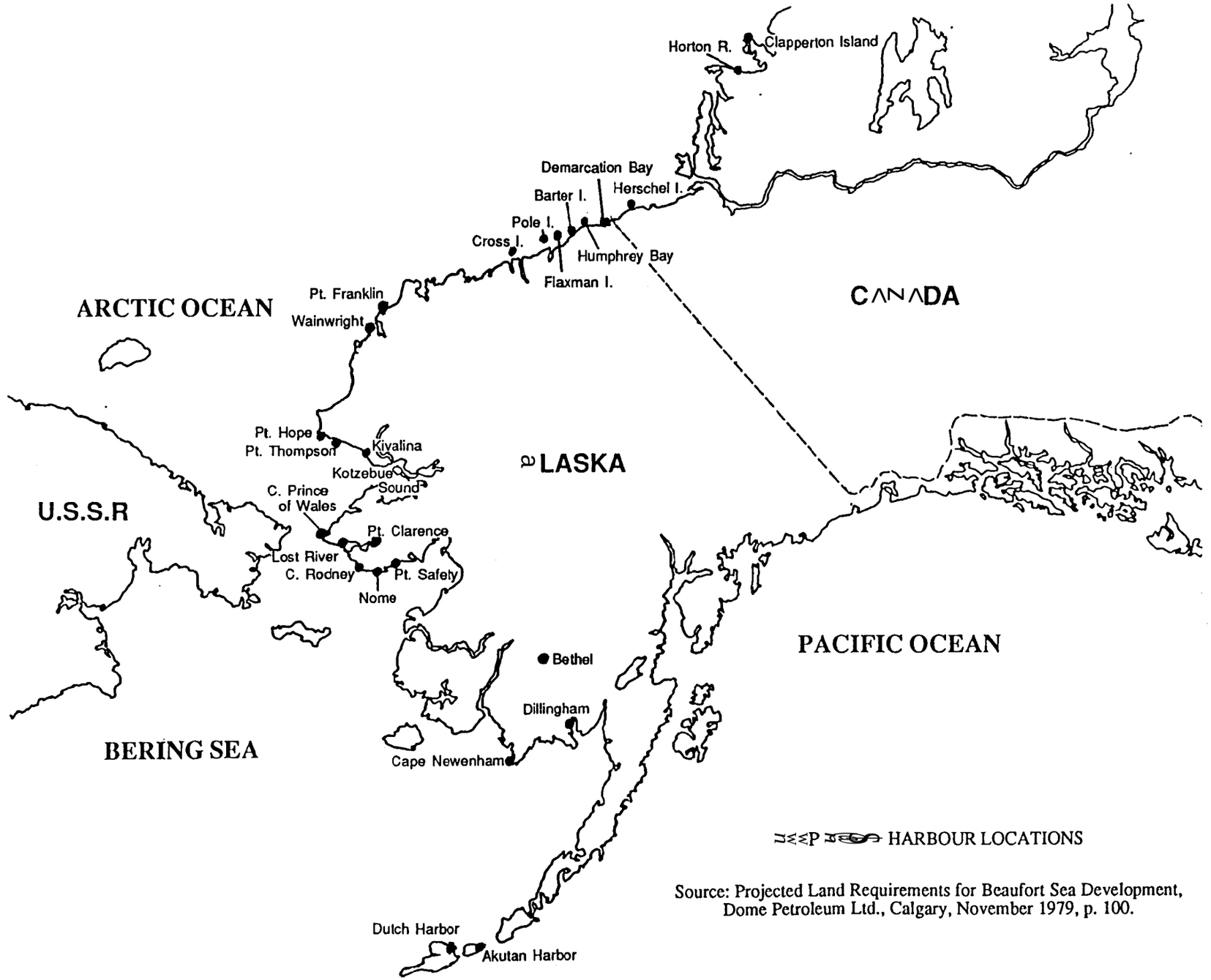
Almost as contentious as the North Slope pipeline proposals discussed by Beauchamp,[16] are the proposals which have been made from time to time to develop a deep-water port ontheNorth Slope of the Yukon (see map 2). These proposals have been developed by oil and gas operators in the offshore or by the oil and gas service industry. In the past, the oil industry has sought support for a major facility at Stokes Point (Gulf Canada) or King Point (Dome Petroleum Ltd.) to be used for exploration support and potentially as a production base depending on the location of discoveries. In addition, Peter Kiewit and Sons proposed the development of a quarry, haul road, and port between King Point and Shingle Point. The quarrying material would be used to aid in the construction of artificial islands. Proponents have also suggested that a port at King Point might be linked by road to the Dempster Highway to facilitate winter supply.

The port question has been considered by a facilities siting study of the Department of Indian Affairs and Northern Development (DIAND), by an *ad hoc* review group appointed by DIAND (1983), and by the report on the Beaufort Sea Environmental Assessment and Review Process (BEARP). The subject is also treated in the IFA. The LFA effectively permits temporary and limited use of Stokes Point but not its permanent development as a port (s. 12[14]). Controlled development is permitted at King Point. The BEARP rejected Stokes Point because of the threat to the Porcupine caribou herd, but believed that controlled development of King Point would be appropriate provided there was no access road. BEARP also favoured a single common-user facility rather than a series of "private" ports developed by individual proponents.[17]

Apart from navigational issues (dealt with below), the bilateral implications of a North Slope port are twofold: (1) threats to shared resources, and (2) possibilities for the joint supply of operations on both sides of the international boundary. The first matter has already been dealt with in the context of the BEARP comments and in the context of ANWR. The second is deserving of more thought but is not well treated in the literature. It is clear, however, that some proponents have envisaged a Canadian port that could supply operations in the U.S. sector; fill might be provided from Yukon quarrying operations to Alaskan OCS drilling sites. However, as far as we know, little study has been made of the possibility of a shared facility, other than in a Dome Petroleum commercial report of 1979, and a 1973 report for the U.S. Department of Commerce which concluded that, of 28 potential sites along the Alaska–Yukon coast, King Point offered the best deep-water terminal for oil and gas supertankers.[18] The absence of joint studies is not untypical for this region.

Currently, the industry no longer sees the need for a land-based port. Instead, operators such as Gulf Canada are overwintering their vessels in the Herschel Basin and using a floating marine base. Even in the production phase Gulf believes that it will be able to use an island-type structure for its Amauligak development and sees no need for a shore base.[19]

However, some interests, such as the Inuvialuit, would like to see the Northern Yukon National Park extended, which may fin-her prejudice the creation of a port. As an offset to impacts on the Porcupine caribou herd from Mackenzie Delta developments and the increasing traffic on the Dempster Highway, the Inuvialuit proposed to the NEB in 1989 (during its hearings on a series of gas export applications) the extension of the national park to a size equal to or larger than ANWR. The expanded national park would cover the entire Yukon North Slope, the Old Crow Flats, the Richardson Mountains, and a large area in the Northwest Territories west of the communities of Aklavik and Fort McPherson and including areas north and south of the Dempster Highway that constitute the main caribou migration routes.[20]



Map 2

Source: Projected Land Requirements for Beaufort Sea Development, Dome Petroleum Ltd., Calgary, November 1979, p. 100.

We shall return to the port questions later in the context of the assessment procedures on each side of the border, but it maybe suggested now that any port evaluation process should consider industrial needs and impacts on both sides of the border.

Offshore Developments: OCS Leasing in Alaska; Canadian Beaufort Oil and Gas Dispositions; and Canadian Beaufort Exploration, Production, and Transportation Scenarios

For a variety of reasons arctic offshore developments provide a ready source of potential and actual conflict between the United States and Canada. First, there are environmental threats to shared populations of renewable resources—especially marine mammals and migratory birds which are subject to degradation in areas within the sovereignty, or jurisdiction and control of the other state. Second, there is the threat of possible environmental degradation as a result of oil spills and disposal of wastes in one jurisdiction which carry into the other jurisdiction. Third, there are sovereignty-related concerns of two types: boundary delimitations, and questions as to the jurisdictional status of the archipelagic waters and the Northwest Passage.

The characterization of some disputes as sovereign in nature and others as environmental in nature is not meant to suggest a true dichotomy between them, for sovereignty lies at the heart of all environmental disputes; *viz*, does a state's permanent sovereign y over its natural resources give it the exclusive right to decide how to exploit and allocate those resources no matter what the consequences for other states? The answer is clearly No because an appreciable interference with the environment of another state may be a breach of that state's sovereignty. The most famous formulation of the balance between rights and obligations is principle 21 of the Stockholm Declaration, 1972:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction of control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.[21]

We shall deal first with the environmental issues including oil spill contingency and liability, and comprehensive issues. Sovereignty-related concerns will then be discussed.

Disturbance to, and Decline in, Shared Wildlife Populations

Shared Populations

At a minimum, the following shared wildlife populations and related bilateral concerns are evident in the context of Alaska OCS or Beaufort offshore developments: polar bears (the probable threat of man-bear conflicts); seals, especially ringed seals (the probable threat to ringed seal denning sites from ship traffic); bowhead and beluga whales (disturbance by ship and drilling noise on migration routes); fish, especially char, whitefish, and arctic cod (disturbance of migration routes and potential darn age to habitat); and some migratory birds (primary concerns are waterfowl, aircraft noise near breeding colonies, and the threat of an oil spill on staging areas at a time when there is little open water) .22 In addition to these offshore concerns, it must be recognized that shared terrestrial species may also be affected by ancillary onshore facilities such as ports, supply roads, and potential sand and gravel requirements.

Environmental assessment and project review processes, across both the Canadian and Alaskan Beaufort, have consistently and commonly identified both the direct and indirect threats to these shared populations. Additionally, wildlife managers in both Canada and Alaska have been notably consistent in their assessment of the nature, duration, and significance of the impacts associated with given types and levels of development. What is less certain and less common, is how national, state, and territorial governments will respond to the developments themselves (terms and conditions, and options for development) and their approach to the mitigation and monitoring of the impacts associated with these developments if they are approved.

Transboundary Environmental Degradation as a Result of Spills or Transit Passage

The threat of an oil spill to wildlife habitat, either as a result of a blowout or accident at a production platform, or as a result of a tanker accident such as the *Exxon Valdez*

incident, is a matter of bilateral concern and of specific concern to the marine peoples-the Inupiat, Inuvialuit, and Inuit who maybe affected in the event of a spill.

The risk of a spill should obviously be taken into account on both sides of the international boundary in any decision as to whether or not to open offshore lands for exploration and in deciding whether or not to authorize production. Because of the arctic gyre, Alaskan interests are probably more threatened by Canadian development decisions than the reverse.23 The BEARP was aware of this problem, but Alaskan interests can hardly have been comforted by the response, "The Panel shares this concern and believes that every effort should be made by the Proponents and the Government of Canada to establish liaison mechanisms with Alaskan oil companies and government agencies to arrange for mutually effective contingency plans." 24 We shall return to this point, but it is clear that the assessment procedures for the offshore in the Beaufort have not been sufficiently inclusive in relation to transboundary impacts.

The requirement for governments to assume a stronger leading role in the regulation of shipping practices has most recently been made evident in the report of the Alaska Oil Spill Commission reviewing the ***Exxon Valdez*** incident:

> The notion that safety can be insured in the shipping industry through self-regulation has proved false and should be abandoned as a premise for policy.[25]

Further, the report notes:

> In the past the oil transportation industry has attempted to reduce virtually every performance standard sought, asking that the government impose only minimum standards and claiming that most earners voluntarily will exceed those minimums. But when accidents have occurred, industry representatives have frequently claimed that it has no obligation to go beyond those minimums. The public should no longer tolerate this double standard.[26]

Transit passage offers the potential for jurisdictional problems for Canada (discussed *infra*) but, in addition, there are other difficulties associated with the co-ordination of construction and related requirements for arctic shipping. The problem could well be posed if, for example, Canadian Beaufort oil was to be shipped in large quantities to Japan. Regime building on this topic could usefully begin at a technical level. Co-operation could also focus on such technical matters as ice-forecasting.[27] The January 1988 *modus vivendi* between the United States and Canada (discussed below) presents a useful basis on which to build.

Once a project has been approved, the bilateral points of contention become such things as contingency response and clean-up capability, and liability and compensation (both in relation to the costs of clean-up and damage suffered by individuals or groups who lose harvesting opportunities). Both matters are clearly of heightened concern given the *Exxon Valdez* incident and the massive costs incurred by Exxon in its clean-up efforts.

Oil Spill Clean-up, and Liability and Compensation[28]

The *Exxon Valdez* oil spill is a recent and graphic reminder of the harsh realities that any contingency planning exercise ultimately faces. Within the first five hours of the disaster, 10.1 million gallons of oil of a total 10.8 million gallons (257 000 barrels) spilled from the tanker. Of this total, 32500 barrels were recovered over the course of the clean-up operation. An estimated 77100 barrels evaporated, while more than 147 000 barrels remain unrecovered.

New attention has been given in the Canadian Beaufortto contingency planning and response in light of *the Exxon Valdez* experience. To date, contingency planning has been largely the shared responsibility of industry and the federal government with the two territorial governments having no formal assigned role. Both, however, are now taking a more active interest in this area-as a response to the *Exxon Valdez*, and more significantly, as a feature of their active interest in assuming shared responsibility with the federal government for oil and gas management in the offshore under a Northern Oil and Gas Accord.

Contingency planning has been most recently reviewed in the context of the Canadian Beaufort by the Inuvialuit Environmental Impact Review Board (EIRB) established under the IFA. In its review of Gulf's *Kulluk* application, the EIRB concluded that, "there is a startling lack of preparedness evident on the part of government and on the part of Gulf to deal effectively with a major oil well blowout in the Beaufort Sea during the open water

season." The board referred in particular to the complacency of the operator and government and to the absence of a shoreline clean-up manual.[29]

In its earlier decision on an application by Esso, the EIRB had recommended a much needed and long overdue review of contingency planning requirements in the Beaufort Sea among representatives of industry, government, and the Inuvialuit. The board identified the following concerns: the early involvement of the Inuvialuit in contingency planning from the earliest stages of project design; the training of more local people in oil spill response techniques; meetings between the Inuvialuit, the companies operating in the Beaufort, the Canada Oil and Gas Lands Administration (COGLA), the Canadian Coast Guard, and the Government of the Northwest Territories on same-season relief well drilling policy; and the development of a "polar bear protection plan" by industry, government, and the Inuvialuit Game Council to establish mechanisms to protect polar bears near oil spills.[30]

In Alaska, it would appear that for some time co-operation between state and federal authorities and industry have been wanting as well. The "oilspill information" packet published by the state of Alaska states:

> In regard to contingency planning, the State of Alaska has been sharply at odds with both the federal government and the pipeline company owners virtually since the approval of pipeline construction .... In summary, the 10 years between 1977 and 1987 were marked by challenges to state authority both in court and through the regular contingency planning process.[31]

Current co-operative contingency planning and oil spill response capability between Canada and the United States appear inadequate and poorly developed in light of the *Exxon Valdez* spill.

The issues of liability and compensation for oil spill damage in a domestic setting are extremely complex; they become significantly more so in a bilateral or multilateral context. In the domestic context the contentious issues include burden of proof, attribution, ability to obtain compensation in the event of inability to attribute loss to particular actors, administrative simplicity, liability to compensate private actors for damage to public goods and resources, calculation of compensation for loss of livelihood or subsistence life style, and limits on liability and/or solvency. The issues are also complicated by the multiplicity of statutory regimes which may have a bearing depending on the type of the spill (e.g., blowout or tanker accident). In Canada, the relevant statutes are the *Arctic Waters Pollution Prevention Act*[32] (AWPPA), *Oil and Gas Production and Conservation Act*[33] (OGPCA), and the *Canada Shipping Act*."[34] In the Beaufort, reference must also be made to the IFA.[35]

The IFA offers some advantages to Inuvialuit beneficiaries. For instance, it imposes absolute liability on the developer for all types of compensable losses; it explicitly provides for a variety of ways in which income and harvesting losses can be recovered (relocation, and replacement and reimbursement in kind rather than a cash payment); it defines generously eligibility for compensation for Inuvialuit beneficiaries; and it gives the federal government a backstop financial responsibility if the developer cannot pay.

Notwithstanding these advantages, and following their review of the *Exxon Valdez* experience, the Inuvialuit have identified the need for an entirely new and predetermined system in the Beaufort designed and implemented with the specific purpose of addressing a major oil spill. They have proposed a special wildlife compensation fund of $120 million (as an initial estimate), supervised by an independent board, financed by the oil industry through contributions over a ten-year period and on an ongoing basis as funds are drawn down, and disbursable within days of a spill.[36] The fund would compensate all users of wildlife resources living in the western Arctic for economic losses on the basis of predetermined formulae; compensate businesses in the western Arctic deriving all or part of their gross income from renewable resource activities; and finance mitigative and remedial measures undertaken to restore wildlife populations in the arctic waters to their pre-spill status. This approach could serve as a bilateral model that would apply to all users of wildlife throughout the Canadian and Alaskan Beaufort Sea. The adequacy of domestic provisions in relation to liability was seriously questioned by the Inuvialuit EIRB in its *Kulluk* decision.[37]

In a bilateral or multilateral context other issues must also be studied: the ability of non-residents to claim under domestic compensation schemes; the potential liability or responsibility of the host state;[38] and the means by which the host state can channel liability to the private party. Several multilateral instruments address these questions in the context of shipping and tankers.[39] The efficacy of these instruments maybe open to question, but there is no comparable international framework to deal with damage resulting from fixed installations in the

Beaufort region. Furthermore, the adequacy of the tanker conventions will no doubt be subject to review in light of the ***Exxon Valdez*** incident. On the whole, tanker issues are best dealt with at a multilateral,[40] rather than a bilateral level, but there may be exceptions (such as Alyeska) where a shipper is using a dedicated fleet or where special conditions such as ice conditions require special construction standards suited to a particular geographical area. The multilateral agreements and conventions in relation to tankers are far too complex to be considered here in detail, and we shall content ourselves with making two specific points.

First, some of the international instruments (TOVALOP, CRISTAL, and PLATO)[41] are non-governmental arrangements; they represent the response of the tanker owners and shippers to public and governmental demands. Second, the U.S. government, in order to assuage Canadian fears in relation to tanker traffic down the west coast from Valdez to the lower 48, put a special regime in place at the time it authorized construction of the Trans-Alaska pipeline. Essentially, the regime provided that Canadian residents were to be treated no differently than U.S. residents when it came to access to the special compensation fund set up by the approving legislation.[42] Section 204 of the ***Trans-Alaska Pipeline Act,*** provided that:

> (1) Notwithstanding the provisions of any other law, if oil that has been transported through the Trans-Alaska pipeline is loaded on a vessel at the terminal facilities of the pipeline, the owner and operator of the vessel (jointly and severally) and the Trans-Alaska Pipeline Liability Fund established by this subsection, shall be strictly liable without regard to fault in accordance with the provisions of this subsection for all damages, including clean-up costs, sustained by any person or entity, public or private, including residents of Canada, as the result of discharges of oil from such vessel.[43]

The strict liability of all claims from one incident was limited to $100 million, with the owner and operator of the vessel being liable for the first $14 million and the liability fund for the balance. The fund was established by a levy on all oil shipped through the pipeline. In light of the *Exxon Valdez* incident the fund looks pitifully small, but the principle of non-discrimination and equal access is an important one to have established.

This principle might equally be applied to the compensation regimes in place or to be established to deal with drilling and production from offshore installations. The present regime for liability and compensation operating under the AWPPA and the OGPCA in the Canadian sector of the Beaufort Sea limits absolute liability for spills resulting from drilling activity to $40 million.[44] This is considerably lower than the levels provided for under the *Canada Shipping Act* for shipping-related spills. There are also doubts about the ability of non-Canadian residents to recover for damage suffered from a spill in Canadian waters.45 Those doubts led the United States to protest to the Canadian government in the early- and mid-1970s.[46] Canada's response was to require Beaufort Sea operators, as a condition of the drilling authorization, to enter into an indemnity agreement called the "Canada Agreement''.[47] Under this agreement, operators agreed to compensate U.S. interests for any losses arising up to $20 million. Security is posted in the form of a letter of credit. The agreement is not a very satisfactory response to the problem for a number of reasons. For example, the efficacy of the agreement depends on the political will of Canada. U.S. interests could not enforce it alone since they are not parties to the agreement. The agreement is still, however, insisted upon by DIAND, and the level of the security is fixed at $20 million.[48] Operators drilling in Davis Strait have also been required to enter into the agreement in relation to Greenlandic interests.[49]

Sovereignty-Related Concerns

In addition to the environmentally related resource concerns, there are at least two disputes between the two states which may be characterized as territorial/sovereignty disputes over resources. In the sections that follow we shall briefly canvass the two "sovereignty" disputes: the Beaufort Sea delimitation and the status of the archipelagic waters.

The Beaufort Sea Delimitation

The Beaufort boundary has yet to be delimited and remains an area of dispute between Canada and the United States. The competing views that have ranged over this long-standing jurisdictional question are well documented. 50 Suffice it to say that as recently as

December 1986, Canada protested in Washington against an American proposal by the Department of the Interior for new offshore lease sales for oil and gas exploration in a portion of the Beaufort Canada considers under its jurisdiction. The U.S. proposal was intended to ensure that until the boundary dispute was settled, the United States would reserve its rights and those of its nationals in contentious areas. The United States contends that the boundary line is to be drawn perpendicular to the coast line at the point the boundary hits the sea (see map 3).

In turn, Canada has argued that the international boundary, on both land and sea, was established along the 141st meridian by the Treaty of 1825 between Great Britain and Russia to which Canada and the United States are bound [51] Most recently, in 1990, a Canadian proposal by COGLA included the disputed area in the candidate areas for possible sale of oil and gas exploration rights in the western Beaufort. Thus both states have offered oil and gas rights in the overlap area between the two claims, but, as yet, no drilling has been authorized in this area.

We confine ourselves here to commenting on the obvious: it will likely be easier to resolve the boundary location (whether by negotiation, arbitration, or decision of the International Court of Justice, full court or chamber thereof)[52] before, rather than after, there has been a major oil and gas discovery in, or adjacent to, the disputed area. Given the possibility that a petroleum deposit may be discovered which straddles the boundary wherever it is to be fixed, any agreement concluded between the parties should address this problem.[53] We would also suggest, especially in light of the tragic consequences of the ***Exxon Valdez***, where jurisdictional responsibilities were clearly defined and the financial capability of the ship's owner was considerable, that the inability of national governments to sort out long-standing boundary claims behooves them to develop and adopt new mechanisms of bilateral co-operation and responsibility for the mutual protection of their citizens and the environment they depend upon.

The Legal Status of the Northwest Passage and the Archipelagic Waters

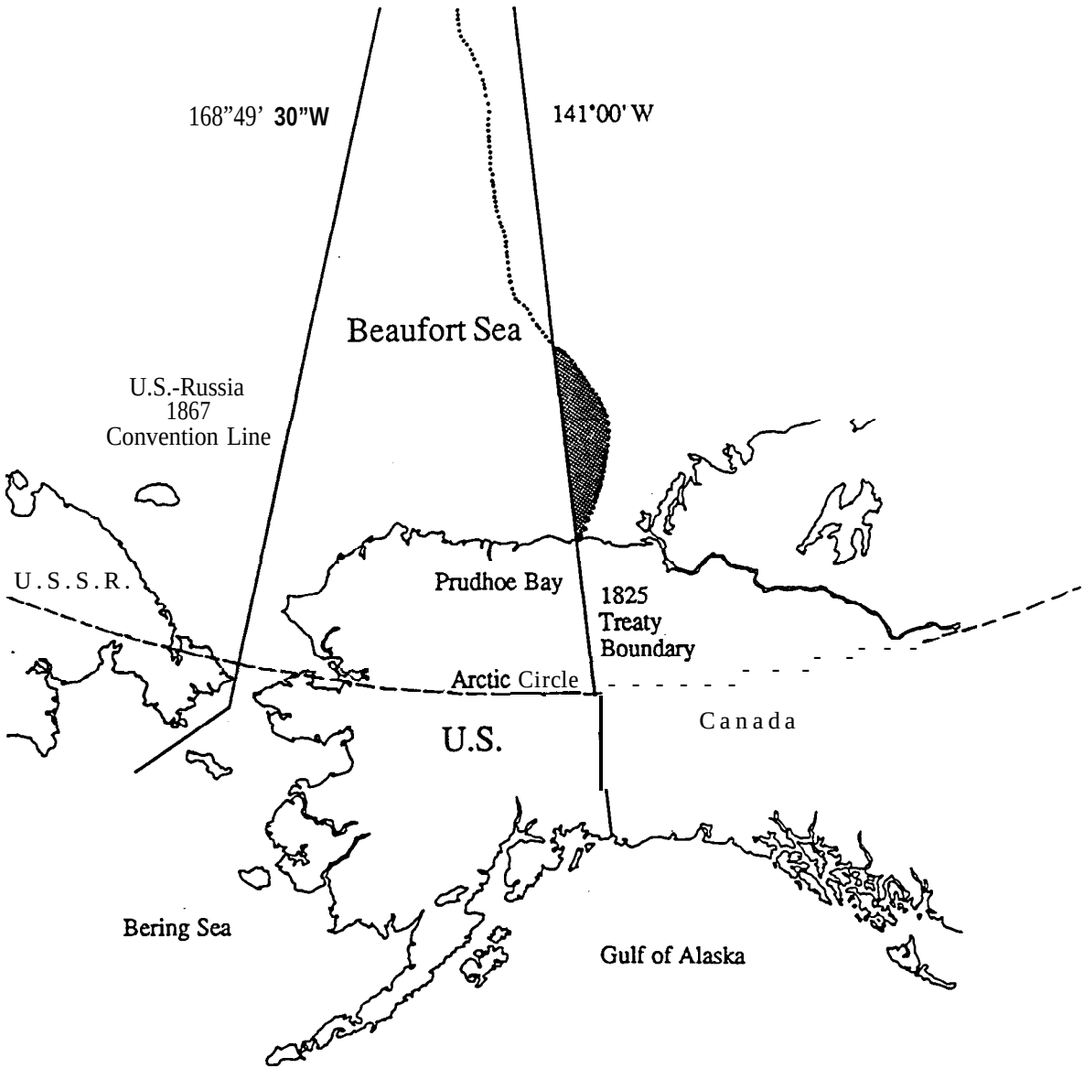
In both the distant and recent past the status of the archipelagic waters has been the subject of considerable dispute and tension between the parties.[54] From a U.S. perspective, broad global issues are at stake because of the precedential value of any settlement of the dispute.[55] In Canadian eyes the issue is a very emotional one intimately connected with perceived military bullying of the United States in the Arctic (e.g., meteorological stations, air bases, the DEW Line, CANOL, Alaska Highway) both during and after the Second World War.[56] As numerous commentators have pointed out, the Arctic looms much larger in the collective Canadian psyche than does Alaska in the psyche of the United States.[57]

The issue re-emerged most recently in 1985 with the transit of the United States Coast Guard ship *Polar Sea* through the Northwest Passage. The United States notified Canada of the transit but did not seek its consent. Since then the parties have come to some sort of ***modus vivendi*** and tensions have declined. The agreement of 11 January 1988, effected by an exchange of notes, was an attempt to formalize a level of consensus between the parties.[58] The agreement is replete with references to shared interests (in arctic development and security, and safe, effective ice-breaker navigation), and where consensus did not exist, namely the status of the archipelagic waters, the position of each party was preserved.[59] This technique allowed the parties to put their differences to one side and to propose co-operative procedures for such things as ice-breaker navigation and the sharing of research information-matters on which they could agree. Any precedential effect the agreement might have was reduced by reference to the uniqueness of ice-covered marine areas and the unique arctic environment.[60] As a result of this agreement, and while it remains in effect, the more serious potential threat to the Canadian interests in the area may now come from other states which might, sometime in the future, wish to use the passage for transit between Japan, other Pacific Rim states, and Europe. The problem for the Canadian government is now one of how to persuade those states to respect the Canadian position on the status of the waters.

Military Developments

In the context of environment and development issues in the Beaufort region we have, thus far, identified bilateral concerns primarily in relation to non-renewable resource projects (mainly oil and gas). Our consideration of military developments can be brief because there are no significant proposals for the region which pose serious bilateral environmental or resource concerns. Certainly, there is nothing proposed for the region of the scale of the Goose Bay (Labrador) NATO base. Limited cruise missile testing in the Mackenzie Valley raises arms control concerns, but not resource or serious environmental con-

Map 3



Map showing the disputed Canada-United States maritime boundary in the Beaufort Sea

Source: Karin Lawson, "Defining Continental Shelf Boundaries in the Arctic: The United States-Canada Beaufort Sea Boundary" (1981) 22Va.J.Int'1221 at 222

cerns. These two examples, however, do point to the potential for immense conflict between the wishes of the military planners and those of the residents of the region. The point is germane here because the Inuit, through the ICC, are in favour of demilitarizing the area. Canadian Inuit have been vociferous opponents of the now defunct proposal to equip the Canadian navy with nuclear-powered submarines—a concern which can now be seen to have been very real in light of the explosion and sinking of the Mike-Class Soviet submarine in the Norwegian Sea.[61]

Conflict is also possible in relation to the construction of the North Warning System. This specific issue has taken an unusual turn in the north Yukon because of the veto claimed by the Inuvialuit over development activities in the Northern Yukon National Park. Most recently, the proposed construction and operation of new radar sites and revamped DEW line stations associated with the construction of the North Warning System prompted the Inuvialuit and the Yukon Territorial Government to express concern over possible wildlife and habitat impacts on the Yukon coast for one site at Stokes Point and another at Komakuk Beach. As a result of the IFA's requirement for Inuvialuit consent to any development altering the character of the Northern Yukon National Park, the Inuvialuit held a formal public review into the Department of National Defence (DND) proposals. As a consequence of this review, recommendations were made to the federal Minister of the Environment for incorporation into the terms and conditions of project approval. They included stop-work authority, monitoring and compensation provisions, and seasonal work restrictions to reflect critical breeding, calving, migration, and staging periods for identified terrestrial and marine wildlife populations.[62]

It can be strongly argued that the efficacy of this mechanism in respect to these developments owes much to the legal status of the IFA. No such review of other North Warning System proposals has occurred in other areas where northern claims are currently under negotiation. The Inuvialuit response offers an interesting insight into how these and other development proposals will be handled in the future by other claimant groups such as the Council for Yukon Indians and the Tungavik Federation of Nunavut with strong conservation and environmental assessment provisions in their claims agreements.

The North Warning System, however, is not one on which there is a bilateral dispute between U.S. and Canadian governments, and this situation is unlikely to change for as long as both parties remain committed to NATO and NORAD. The conflict is between aboriginal residents and central government-not an unusual situation for arctic borderlands which are still subject, especially in Canada, to some of the vestiges of colonialism. Nevertheless, although currently there are no serious disagreements, Canada is certainly more predisposed to demilitarization of the region than the United States,[63] and this may be of concern between the two states in the future.

Now that we have completed our review of the bilateral issues the applicable rules of international law will be discussed.

Introduction

One basic fact underlies the resource management issues in the Beaufort region: many of the resources in question are shared resources in the sense that they are dependent on habitat located in both countries or in areas subject to the sovereign rights of both countries. Even in relation to non-renewable resources where shared resources in the "form of straddling petroleum deposits, for example, have yet to be discovered, it is clear that exploitation of those resources in the borderlands regions may have serious implications for other shared resources. The physical sharing is further emphasized by ocean currents and the common dependency on the resources of aboriginal peoples on both sides of the border.

The inescapable fact of shared resources provides the underpinning for much of the discussion between the two countries and the institutional arrangements which have been developed or proposed for the region. It also allows the parties to have recourse to some developing principles of international law in relation to this category of resources. At a procedural level these principles include the duties to inform, assess, consult, and negotiate where one state proposes to take an action which will have, or may have, an appreciable effect on the shared resource.[64] At a substantive level the informing principles are those of equitable apportionment of the resource, and the dut y to avoid appreciable harm.[65] Some of those principles have been recognized and relied on by Canada and the United States in their dealings with these resources. Canada in particular has relied on the shared nature of the resources in its representations on the 1002 lands.[66]

In addition to these general principles, a number of bilateral instruments govern or affect the responsibilities of the two states in relation to shared arctic resources. These include, most directly, the Migratory Birds Convention,[67] the Polar Bear Convention,[68] the Porcupine Caribou Agreement,[69] and the Pacific Salmon Treaty .70 Other treaties may also have a bearing on arctic resources including the International Whaling Convention,[71] UNCLOS III,[72] the Ramsar Wetlands Convention,[73] the Boundary Waters Treaty,[74] the Convention on International Trade in Endangered Species,[75] the UNESCO Heritage Convention,[76] the Migratory Species Convention,[77] and agreements dealing with such global problems as ozone depletion and long-range transfrontier air pollution.[78]

In the following sections we shall concentrate on those agreements which seem to have the most specific application to the borderlands region.

International Instruments

Joint undertakings to further the shared management and use of resources have been achieved through a variety of instruments by national, state, and territorial governments, and by aboriginal governments and organizations. The latter are often of particular interest but often ignored examples of the opportunity for regional interjurisdictional agreements between local user groups with a direct interest in shared resource management responsibilities.

The Migratory Birds Convention

Adopted in 1916, this is one of the oldest international conservation agreements. It was negotiated without consulting affected aboriginal peoples and without considering northern needs. This is particularly evident in the dates of the closed season (March 10-September 1) which are entirely inappropriate for northern conditions and traditional harvesting practices,[79] and which ignore Canada's treaty obligations to some Indian Peoples.[80] Similar problems prevail in Alaska.[81] Attempts to amend the convention by protocol to make it more sensitive to aboriginal and northern needs have failed because opposition in the United States resulted in the Senate failing to ratify the convention. The main opposition has come from conservation groups such as the National Wildlife Federation which have criticized the protocol for its failure (1) to establish bag limits, (2) to identify those authorized to claim subsistence rights, and (3) to define legitimate subsistence needs.[82]

Part of the problem in developing an acceptable protocol is the insistence of the United States and Alaska that any exceptional regime be treated as a northern harvesting issue rather than a native harvesting issue. In

Canada, a policy consensus has been reached between the federal and provincial governments regarding the necessity to accommodate a northern harvest although more formal legal and geographical expression has to be given to defining the "northern" boundary. In addition, concerns remain among some native organizations as to how well their interest can be accommodated within an amended protocol for all northerners.

Developing legal mechanisms for implementing this policy consensus nationally has produced considerable delays within Canada. One proposal within Canada would see a domestic national agreement composed of a set of regional agreements respecting unique regional requirements and conditions.[83] In the Yukon and Northwest Territories this would entail tripartite agreements between federal, territorial, and aboriginal governments for the management of migratory birds. Indeed, it could be argued that the two northern territories maybe in the best position to silence the fears of those who view an amended convention as opening the regulatory door to anew and expanded harvest rather than merely legitimizing what already occurs.

In Canada the aboriginal harvesting right may be resolved to the partial satisfaction of the aboriginal people on the basis of court challenges unders. 35 of the *Constitution Act, 1982.*84 This may place the federal govemment in a difficult position *vis-a-vis the* United States but it may also have the result that the *status quo* would be even less satisfactory to U.S. conservation groups. This may force a compromise, and it points to the need for both a new protocol and a co-management approach to the resource.

The IFA, as well as the land claims of the Council for Yukon Indians, the Dene–Metis, and the Tungavik Federation of Nunavut offer the opportunity for implementing new joint state and indigenous wildlife management regimes and greater control of large tracts of critical habitat by those users who are most dependent on the long-term health and stability of wildlife populations. Both territories, through recent efforts and new claims-related opportunities, will be in a supenorposition to most provinces to guarantee a regulated harvest within recognized allocations through the increasing and improved collection of harvest data by user groups, as well as joint government-native initiatives based on local and regional co-operative agreements.

Alaska is not unfamiliar with regional agreements between state governments and local organizations. The Hooper Bay Waterfowl Agreement of 1984 and the Yukon-Kuskokwim Delta Goose Management Plan were signed between the Alaska Department of Fish and Game, the California Department of Fish and Game, and the Association of Village Council Presidents (an umbrella organization for the 56 villages of the Yukon–Kuskokwim delta) with a view to reducing the spring harvest of several depleted species of ducks. In return for a pledge from the local villages to refrain from hunting depleted species at critical times, no bag or total harvest limits were set nor were restrictions made on harvest methods or means by government agencies. There are some obvious benefits to this sort of arrangement, not the least of which are the mutual trust and co-operation between resource users and managers which are central elements in any new realistic legal regime for arctic waterfowl management. However, the legal problems associated with these agreements are probably insuperable unless the convention itself can be amended since formal policies of non-enforcement have been struck down in both Canada and the United States.[85]

One of the remarkable features of the convention's domestic implementation in Canada has been the steps taken to set aside lands as migratory bird reserves despite the fact that no such action is called for by the treaty.[86] Canada has relied on its actions in establishing these reserves in its discussions with the United States on the 1002 lands. Canada has pointed out that it has demonstrated its commitment to the protection of the lesser snow goose as a shared resource by setting aside four large bird sanctuaries in the Arctic (presumably, Banks Island Nos. 1 and 2, Mackenzie River Delta, and Anderson River Delta). In return it seeks protection of the wetland habitat of the ANWR coastal plain as an essential staging ground for the geese .87

The North American Waterfowl Management Plan signed by Canada and the United States clearly recognizes the need for better co-operative management of the transboundary habitats of shared migratory waterfowl.[88] The plan provides a framework for achieving better international co-operation through the implementation of national, flyway, provincial, territorial, and state plans over a 15-year time horizon, with five-year reviews to meet changing circumstances. The plan recognizes that the regulation of harvesting (under the Migratory Birds Convention) is not an adequate instrument in itself to sustain waterfowl populations if critical habitat is neither enhanced nor protected. The plan also recognizes that unless a co-operative approach is taken to population management through the regulation of the waterfowl

harvest, little will be achieved. The expectations for a new regulatory framework are made clear:

> Canada and the United States should continue to expand subsistence harvest surveys. The two countries should ensure that subsistence users are cooperatively involved in management of the waterfowl resource and protection of its habitat. Efforts are currently underway on a protocol to amend the Migratory Bird Treaty to provide for the managed subsistence use of waterfowl innorthem Canada and Alaska.[89]

The challenge in northern Canada in realizing these observations will rest, to a large degree, on the willingness of federal and territorial governments to accommodate in a climate of respect, support, and co-operation, the native harvesting rights, and state and native wildlife, land, and water management regimes provided for or established under Canada's three northern land claims agreements.

This brief review of the convention and the plans, and our earlier statement of the issues indicates two pervasive concerns in relation to migratory birds. First, there is the question of habitat protection, and second, the relationship between the convention and aboriginal user groups. The position of the aboriginal people would be intolerable if the current law were enforced to the hilt but fortunately, ***most of the time,*** a more generous approach has been taken on an informal basis.

The Polar Bear Convention[90]

This, the sole multilateral convention negotiated by the arctic basin states—Canada, Denmark, Norway, the United States, and the Soviet Union—was negotiated at a time when perhaps some scientists suspected that the polar bear population was shared by the circumpolar states. Since then, further research has conclusively demonstrated that this is not the case although certain populations, especially on the Beaufort coast, do migrate across the border.

The agreement was negotiated almost entirely without aboriginal involvement. It restricts harvesting of polar bears (with an exception for traditional harvesting) and calls on states to:

> Art. II
>
> ... take appropriate action to protect the ecosystems of which polar bears are a part, with special attention to habitat components such as denning and feeding sites and migration patterns, and shall manage polar bear populations in accordance with sound conservation practices based on the best available scientific data.

Research is to be co-ordinated and the results shared, and the parties shall consult "on the management of migrating polar bear populations".

In the case of the Alaska-Yukon population, traditional harvesters on both sides of the border raised concerns as to the ability of the population to sustain the harvest. However, rather than take the matter up at the governmental level, discussions between the user groups were begun in 1985 through the Inuvialuit Game Council and the Alaska North Slope Borough Fish and Game Management Committee. By September 1986, a memorandum of understanding had been initialled and the final agreement was signed in January 1988.[91]

The memorandum of understanding established a joint committee of users and a technical committee. The agreement requires the technical committee to determine the annual sustainable harvest and for it to be "divided between Canada and Alaska according to annual review of scientific evidence". Distribution agreements are to be negotiated annually but each party determines the distribution of the harvest within its jurisdiction. Within the Inuvialuit Settlement Region, the Inuvialuit Game Council allocates harvest levels to communities, and community hunters and trappers committees sub-allocate to individual hunters. In Alaska it appears that the harvest is allocated on a village basis as well.

The agreement also called for the collection of certain categories of information and, in addition, proscribed certain activities including the use of aircraft or motorized vessels, the taking of bears in dens or while constructing dens, and the taking of family groups with cubs and yearlings. Since the agreement was negotiated without formal authority from government there was a recognition that domestic regimes would have to be complied with. The agreement also envisaged legislative changes (in both the United States and Canada) including the legalization of sales and exchanges of products between Alaska and Canada.

Although the agreement is still in its early life, it has tithe ingredients for success for it has the close involvement of the user groups who consequently have invested in the outcome. The agreement provides a useful model for dealing with one particular issue in relation to a shared resource, that being the resource distribution decision. A distinguishing feature of this case was the small number of user groups involved and the ease with which they could be brought together. In other circumstances it may be more difficult to achieve the necessary inclusivity or the necessary homogeneity to reach agreement. Witness, for example, the protracted negotiations between the Dene–Metis and the Tungavik Federation of Nunavut on a land claim boundary in the Northwest Territories where old rivalries, the many communities involved, the presence of consensual decision-making on each side, and a situation where the decision will be final and not subject to annual review, all combine to make it very difficult to reach agreement. It is also difficult to see how the polar bear agreement could be used as a precedent where the issue is not resource distribution but habitat protection. Indeed, in the context of the Beaufort polar bear population, habitat protection remains an unresolved issue because of the uncertain status of the 1002 lands and the lands to the east of the Northern Yukon National Park.

Agreement on the Conservation of the Porcupine Caribou Herd, July 17,198792

This agreement was negotiated with the strong involvement, if not leadership, of local user groups. It took over 10 years for the two governments to reach consensus, but it represents only a formal commitment to co-operate between the two parties rather than a resource management agreement. The point is most clearly made by one of the preambular statements to the effect that:

> Recognizing that co-operation and co-ordination under the Agreement should not alter domestic authorities regarding management of the Porcupine Caribou Herd and its habitat and should be implemented by existing rather than new management structures.

The parties commit themselves in general terms to conserve the Porcupine caribou herd and its habitat and to allow for customary and traditional uses of the herd. In another preambular reference it is recognized that user groups should participate in the conservation of the herd and its habitat. However, the agreement does not provide specific habitat protection measures or a clear procedure for determining or distributing an allowable harvest to users on either side of the international boundary. Instead, the bulk of the agreement is given over to a discussion of procedural mechanisms and the creation of an advisory board. The board may make recommendations on harvest limits and may identify sensitive habitat deserving of "special consideration" (not protection), but the agreement (s. 4[e]) explicitly provides that the recommendations are not binding. The board has a limited budget and it does not appear that it would itself have the expertise or resources to make allocation recommendations without assistance.

At a procedural level, the parties agree to ensure that the needs of the herd, its habitat, and users will be given "effective consideration" in evaluating proposed activities within the herd's range. Domestic impact assessment procedures will be used "consistent with domestic laws" and consultation will be offered where a "significant long-term adverse impact" is determined to be likely. Such activities are not prohibited but the two parties "should avoid or minimize" activities which would "significantly disrupt migration or other important behaviour patterns in the PCH or that would otherwise lessen the ability of users of Porcupine caribou to use the herd."

That the Porcupine caribou herd agreement is only a very partial solution to the range of differences between the parties is illustrated by the ongoing dispute over the 1002 lands. Canada has suggested that the 1002 lands be designated as wilderness,[93] and twinned with the Northern Yukon National Park.[94] Given the vital importance of the ANWR coastal plain lands as calving grounds, post calving aggregation grounds, and insect-relief habitat, it is difficult to imagine that anything short of wilderness designation will meet Canadian concerns. This is a case where significant investment by one party, Canada, in the form of a new national park will be significantly reduced in value if the ANWR lands are to be opened up to petroleum exploration.

In the same vein, on the Canadian side, in the absence of a conservation regime on the eastern portion of the Yukon North Slope, developments could diminish the significance of the national park to the West if wildlife populations are deflected from their migration routes. (Indeed, it is for this reason that the Inuvialuit have advanced a proposal to extend the boundaries of the national park eastward to the Mackenzie Delta and south-

ward to the Old Crow Flats to better protect the habitat of the Porcupine caribou herd.)

The failure of the parties to establish an authority with the capacity to make independent binding decisions on the allocation of the harvest is a missed opportunity .95 Currently, the Porcupine caribou herd seems to be in a healthy condition and resource harvesting demands can be met. However, circumstances would change dramatically if the population takes a downturn (perhaps due to increased hunter access from any of a number of projects or if ANWR lands are opened up and projected impacts materialize).

In Canada, the establishment and distribution of the harvest is accomplished pursuant to the Porcupine Caribou Management Agreement.[96] That agreement was negotiated between three governments (the Yukon, Northwest Territories, and federal governments) and three aboriginal user groups (the Council for Yukon Indians, the Inuvialuit Game Council, and the Dene Nation and the Metis Association of the Northwest Territones). The agreement establishes the Porcupine Caribou Management Board composed of equal government and native representation and equal representation of native users from the Yukon and Northwest Territories (Para. C[2][b]). The board recommends annual allowable harvest allocations and other matters but the territorial governments make the final determination of the allowable harvest while respecting the preferential right of native users. The territorial governments have the right to reserve an allocation for "other users" who are not party to the agreement. Once having done that, "the native users shall sub-allocate the native user allocation amongst themselves on a community basis" (Para. J[5][a]).

In light of these international and domestic agreements and the earlier statement of the issues and problems, there seem to be two important outstanding issues in relation to the Porcupine caribou herd: habitat protection and an international resource distribution regime for the herd.

This gives cause for reflection on the substance and mechanics of these agreements when considered against the concerns and goals of the International Porcupine Caribou Commission, an entity established by the native peoples most concerned. In 1982, native representatives from Inuit and Indian communities in northeast Alaska, the Yukon, and Northwest Territories gathered in Arctic Village to form a commission to protect the Porcupine caribou herd. The prospects of exploration within ANWR, and the establishment of harbour facilities along the Yukon coast to support offshore hydrocarbon exploration were of particular concern as they affected the caribou herd. This, coupled with a growing frustration by native groups over the inability of government within their respective countries to reach agreement on a treaty protecting the herd, led to the establishment of the commission.

In the charter document, the commission was charged "with the purpose of encouraging, supporting, and undertaking the conservation, protection, and management of the Porcupine caribou herd and its habitat throughout its range on behalf of the signatory user groups, villages, bands, and communities".[97] The charter also gave the commission the power to develop a management plan for the herd, undertake research, review and monitor the conservation and management of the entire habitat of the herd, and "take all the actions necessary to protect and ensure its continued productivity".

The commission is a clear demonstration of the ability of native organizations to achieve an international agreement through a co-operative approach by a group of local wildlife users of a common resource, and their ability to lead governments.

Agreement on Contingency Planning

Since 1974, there has been an agreement between Canada and the United States on a joint Marine Contingency Plan for spills of oil and other noxious substances 98 The agreement is expressed to be without prejudice to the jurisdictional claims of the parties. From time to time, annexes have been added implementing the plan for different coastal areas and, in 1977, an annex was added to deal with "waters off the Arctic Coast of Canada and the United States in the Beaufort Sea".[99] Other commentators[100] have pointed out that the Beaufort agreement falls short of the Marine Environment Co-operation Agreement between Canada and Denmark.[101] In addition to contingency plans, the agreement calls for co-operation in seven other areas:

1. to investigate alleged violations of pollution legislation;

2. to consult over a reasonable period of time with the other Party concerning works or undertakings having potential to create a significant risk of pollution;

3. to design and operate offshore installations so the risk of marine pollution is minimized;

4. to cooperate in the exchange of scientific and regulatory information;

5. to cooperate in identifying and monitoring vessel routing areas outside territorial waters;

6. to develop adequate compensation schemes for damage caused by exploration or exploitation of seabed resources; and

7. to resolve disputes concerning the interpretation or application of the Agreement, through negotiation or submission to an *ad hoc* tribunal of three members.[102]

In real terms the inadequacy of existing bilateral arrangements have been graphically drawn in a recent report of the Inuvialuit Petroleum Corporation following a fact-finding trip to Valdez. The report observes that in Norway, with oil production of 1.5 million barrels per day, the combined skimming capacity of a variety of vessels is 134000 barrels per hour. In the event of a North Sea oil spill, the total skimming capacity that could be mobilized throughout northwestern Europe on short notice is 500000 barrels per hour. By comparison, the report observes that in the case of Alaska where oil production and marine transportation is 2 million barrels per day, the total oil skimming capacity is only 10000 barrels per hour. In the Beaufort Sea the oil skimming capacity is only a fraction of that of Alaska.

The ice-filled waters of the Beaufort Sea pose special challenges to those involved in offshore development as has the adoption of extended drilling seasons. While spill clean-up and relief well drilling technologies have made great advances, we would suggest that the *Exxon Valdez* spill provides ample evidence of the need for a much improved bilateral contingency planning regime across the Beaufort.

The state of contingency planning between the two countries was also commented on adversely by the EIRB in its *Kulluk* review. The board was of the view that the Inuvialuit and Inupiat should be involved in discussions with governments and the industry, and that "the participants should work towards the development of a formal trans-boundary agreement covering co-operation in contingency planning and countermeasure operations relating to Beaufort Sea oil spills."[103] The EIRB also took this opportunity to comment on the absence of a bilateral agreement on liability.[104]

On a more positive note, industry has co-operated on both sides of the border on oil pollution research,[105] and controlled spill research has been done on a co-operative basis in the Canadian Arctic.[106] Co-operation has also been facilitated in recent years by the use of Gulf's Beaudril system by Alaskan operators. For the last two seasons (1988 and 1989), this system has operated on the Alaskan side of the boundary and in future years will be operating in the Chuckchi Sea.[107] However, there is clearly a need for more co-operation and detailed planning.

Representatives of the U.S. oil and gas industry present at the conference were of the view that Canadians had probably underestimated the degree of co-operation between the U.S. and Canadian actors. In particular, it was suggested that the U.S. industry had received tremendous indirect benefits from the subsidization of oil and gas exploration in the Canadian sector through the Petroleum Incentives Program of the early- and mid-1980s.

The International Application of Domestic Procedures[108]

Thus far, in our consideration of institutional mechanisms, we have focused on relevant bilateral and multilateral instruments which provide some measure of regulation on how two states must deal with shared resources. In this section we shall make some brief comments about the assessment procedures in place in each country. In particular, we shall consider the extent to which the assessment procedures adopted in relation to the 1002 issues, Canadian Beaufort Sea developments, and the Alaska OCS lands assessment are able to take account of impacts on the other state and the cumulative impact of these three developments. We are not concerned with ascertaining which assessment process is "better" or whether each is equally capable of taking account of socio-economic matters. These are second order questions to the issue of whether or not the assessment processes function at all in any international sense.

This is the one example in which, at least on the surface, some formal attempt has been made to take account of the interests of the other state. This maybe attributed to the clear focus given to the bilateral issue by the existence of the Porcupine caribou herd but also perhaps to the long-standing attempts to create the ANWR.[109] Canadian concerns in relation to the coastal plain are addressed on two occasions in ANILCA.[110] First, section 1001 provides that in carrying out the study of federal lands called for by the act, "the Secretary shall consult with *inter alia the* Government of Canada". Nevertheless, the Secretary was to make findings that very much emphasized the national interest. After completion of the study, the Secretary shall make findings on:

> (1) the potential oil and gas resources of these lands;
>
> (2) the impact of oil and gas development on the wildlife resources on these lands, particularly the Arctic and Porcupine caribou herds and the polar bear;
>
> (3) the national need for development of the oil and gas resources of all or any portion of these lands;
>
> (4) the national interest in preservation of the wilderness characteristics of these lands; and
>
> (5) the national interest in protection of the wildlife resources of these lands.

The emphasis was on consultation with Canada, not assessment of the interests and needs of Canadian users on a non-discriminatory basis. Somewhat more precise was s. 1005, which provided that in the wildlife portion of the study, "the Secretary shall consult with the appropriate agencies of the Government of Canada in evaluating such impacts particularly with respect to the Porcupine caribou herd." The Government of Canada has availed itself of the opportunities provided bys. 1005, to give the United States a critique of both the draft Environmental Impact Study (EIS) and the final legislative EIS. At the same time Canada has also levelled criticism at the way in which the process has worked. In its February 1987 position paper, the Government of Canada noted that it had not been consulted prior to the release of the draft EIS. Had it been, Canada would have hoped that more of its concerns and the concerns of its agencies and the territorial governments might have been taken into account. Canada returned to this theme in its comments of November 1987 on the final EIS, suggesting that in downgrading the status of Porcupine caribou herd calving grounds in the Jago River area, the report "misrepresents the 'consultations with Canada'".[111] Canada also noted that the EIS did a poor job of taking into account cumulative impacts,*[12] and failed to adequately recognize the importance of Canadian subsistence harvesting of theherd.113

The Beaufort Sea Environmental Assessment Panel

The procedure followed by the Beaufort Sea Environmental Assessment Panel provided no effective means for evaluating impacts outside Canadian territory or any mechanism for considering the cumulative impacts of developments which might be centred outside Canadian territory. The terms of reference for the panel indicated that:

> The Panel does not have the mandate to hold public meetings or assess environmental impacts outside of Canada. Nonetheless, it should be prepared to receive interventions from Greenland and Alaska and to include their views in its final report. The Panel is to work directly with the Federal Environmental Assessment Review Office (FEARO) and the Department of External Affairs when making any arrangements for contacts and communications with other countries in matters dealing with information exchange. [114]

The panel did receive some input at the scoping stage from the Alaska North Slope Borough but no interventions were made by Alaskan or Greenlandic representatives. Some further written representations were made on specific issues but the panel concluded somewhat lamely and rather narrowly that, "Because some residents of Alaska and Greenland could be affected by tanker traffic, the Panel believes these concerns should be addressed".[115] It further recommended that copies of the report be made available to Alaskan and Greenlandic interests.[116] The panel's conclusions on this point seem narrow because of the recognition, in other parts of the

report, that shared populations might be affected not only by transportation, but also by oil and gas drilling and production, and by the risk of spills.117 The lack of international coverage is further emphasized by noting that the proponents were relying on an eastern route for any tanker transportation and the panel did not consider the western routing option at all.[118]

Although the panel was authorized to have regard to other "previous and possible future northern activities which are relevant to this specific proposal", and the terms of reference specifically adverted to a number of Canadian projects including the Arctic Pilot Project, there is little evidence that the panel concerned itself with cumulative impacts and no evidence that it was concerned about cumulative impacts of an international nature. This is especially surprising in that the coastal fringe of the Yukon North Slope offers ample evidence of the impacts on habitat from incremental developments associated with the "use it and leave it" philosophy of private and public sector developments from 1950 through 1970. (Most notable is the 40-gallon drum legacy of DND and DIAND associated with the DEW line.)

Finally, as we have noted previously, the federal government is currently conducting a lease sale of Beaufort lands and offshore areas up to the international boundary. Consistent with Canadian federal practice (with the exception of the west coast), there has been no formal environmental assessment conducted of the call for bids. In serving notice of the departure from this approach, the Environmental Impact Screening Committee (established under the IPA) indicated to the federal agency responsible for the lease sale (COGLA) that, in its opinion, the proposed disposal of onshore and offshore acreages constituted a "development proposal" and, as such, was eligible for environmental screening and review.119 COGLA responded that it would not observe the screening request because a call to nominate lands for a given use was not, in its view, a development proposal.[120] Again, that raises interesting questions (on both sides of the international border) as to what constitutes "eligibility" for environmental screening and review, and at what point in development planning and project design, environmental assessment should apply.

An opportunity to review the international implications of western-bound tanker traffic was passed up when Gulf Canada was first proposing to ship oil from the Amauligak structure to Japan in 1986.[121] Under the terms of the IFA, the Environmental Impact Screening Committee could easily have required that the proposal be subjected to a full public review process. However, they chose not to despite the opposition of the Inupiat (especially the village of Kaktovik) and ICC. No assessment of this project was ever conducted taking into account its international impacts.

We also note that, while we have identified areas of shared concern and co-operative management initiatives between the Inuvialuit and Inupiat (eg., polar bears), we have no indication that this has been incorporated into regionally based environmental screening mechanisms. For instance, the IFA based Environmental Impact Screening Committee is confiied in its assessment of potential impacts to those within the Inuvialuit settlement region proper. Consequently, the screening committee gave no notice of its screening or record of decision on the Amauligak test production and shipping project to the Alaska North Slope Borough, even though the project was of public concern to Kaktovik with clear transboundary implications.

The difficulties here are well illustrated by the *Kulluk* review by the Inuvialuit EIRB. Gulf's application did acknowledge the possibility of oil from a blowout reaching the Alaskan coast, but the board questioned the failure of Canadian regulatory agencies to notify or canvass the opinion of Alaskan or U.S. interests regarding this potential scenario. Those concerns were shared by the Inuvialuit Game Council and other interveners. The game council in particular did not want to jeopardize their co-operative relationship with the Inupiat and wanted the Inupiat to be kept informed.[122]

We suggest that, in the spirit of the co-operative wildlife management agreements between the Inupiat and the Inuvialuit, the screening committee and the EIRB and other relevant public review bodies should, as a matter of procedure, ensure that all public notices of development applications and records of decision with obvious or potential transboundary impacts be distributed to North Slope Borough organizations. We suggest this recognizing the unique and co-operative capability of regional organizations in Alaska, the Yukon, and the Northwest Territories in other areas of common concern related to resource use and management.

The OCS Lands Assessment[123]

So far as we can tell, the assessment process for Alaskan OCS lands does not take into account impacts in Canada

or to Canadian residents in a systematic way. The United States Minerals Management Service and the National Oceanic and Atmospheric Administration have attempted to fill in the major gaps in scientific knowledge on Alaska and have published voluminous reports on "varied aspects of Alaskan ecosystems, pollutants, hazards, and petroleum transportation."[124] The assessment process tends to be bureaucratic with decisions on particular lease sales often contested in the courts. The U.S./Alaskan approach has not adopted the big public hearing approach so characteristic of Canada. It is possible that this makes the American system more opaque and less easy to penetrate for an outsider thus making it difficult for international matters to be taken into consideration, but this is largely speculation on our part. Mitchell remarked in 1985 that the most promising bases for international co-operation lie "in the fields of data gathering, research, environmental impact assessment and industrial site selection methodology . . . . The time is ripe for analyzing the research agendas, common impact assessment strategies, and standardized facilities siting methodologies".[125]

Conclusions

In part, for sound economic reasons associated with the full internalization of project costs, writers[126] and organizations such as the Organisation for Economic Co-operation and Development (OECD)[127] have increasingly come to emphasize the principles of non-discrimination and equal access in project assessment. The first principle holds that a state should assess project benefits and disbenefits in the same way whether they occur within or outside the territory of the initiating state. The second requires that a state's assessment procedures be open to governments and citizens of other states. Although both Canada and the United States pay lip service to these principles the above review suggests that much still needs to be done.

Some participants at the Whitehorse conference felt that the new Canadian environmental assessment legislation may offer an important opening here and indeed this topic is well treated in the bill which was tabled in June 1990. Perhaps we can also anticipate that circumpolar native groups will attempt to participate in, and hence internationalize, domestic assessment processes.[128]

Introduction

Some of the problems which have an impact on the environment in the Beaufort region do not originate either within, or solely within, Canada and/or the United States or areas subject to their jurisdiction or control. Problems of diverse ongin do not lend themselves to characterization or resolution solely in bilateral terms. That is not to suggest that the parties should not endeavour to follow bilateral, multilateral, or global initiatives (Canada and the United States often follow this approach),[129] but it does suggest that complete solutions will only be achievable in these instances with a multilateral agreement even though the formal instrument may take the form of an umbrella agreement encouraging the negotiation of both bilateral agreements and multilateral protocols on specific problems.

In order not to lengthen this paper unduly we shall list briefly the issues which seem to fall into the above category: (a) transit passage insofar as we envisage the possibility of a maritime trading route between Europe and the Far East, including liability and compensation issues, vessel traffic management etc. (at a minimum this would involve the United States, Canada, and Denmark where optimal routes lie in the Danish exclusive economic zone rather than the Canadian and perhaps the more significant flag states of the world); (b) air/ocean pollution issues including toxics, contaminants in food chains, and arctic haze; and (c) atmospheric problems including ozone depletion and global warming.

Of these issues, we have already addressed some brief comments to the first in the context of jurisdictional issues. The third is truly a global problem and is therefore best left to other fora even though the consequences of global warming and ozone depletion may be greatly exaggerated in the polar regions. The second is worth addressing in this context because significant progress could be made at a regional level by involving the seven arctic states.

The Inuit and ICC

Multilateral initiatives by the basin states of the Arctic have been few and far between. There have been no regional seas initiatives at a governmental level,[130] and there is only one convention which deals with an arctic problem at a multilateral level, that being the polar bear convention. The real leaders at the multilateral level have been the Inuit. Through the vehicle of the ICC, the Inuit have met on a biennial basis to discuss circumpolar issues with a notable emphasis on environmental issues.[131] In particular, they have developed an arctic conservation strategy based on the World Conservation Strategy. This is a tremendous initiative for a non-govemmental group and it has paved the way for circumpolar co-operation at a governmental level, and for academic and public policy initiatives such as the Arctic Basin Council Project funded by the Walter and Duncan Gordon Charitable Foundational 32

The Rovaniemi Initiative

At the governmental level, the most recent and far-reaching initiative has been taken by the Finnish government. In September 1989, Finland convened a meeting of eight arctic countries on the Protection of the Arctic Environment at Rovaniemi. Representatives of indigenous peoples were not invited. The report of the conference noted that:

> A common concern about the arctic environment was expressed. The Arctic environment already shows signs of serious deterioration. Economic activities in the Arctic region and long-range transportation of pollutants, have contributed to this alarming situation. The pollution is already causing changes in some parts of the Arctic ecosystem and there is particular concern over threats to the health of indigenous peoples from toxic substances in the Arctic food chain. The importance of the interaction between the environment in the Arctic and other geographical areas was stressed. The Polar basin seems to function as the final depository of a number of air and seaborne pollutants. Air pollution also contributes to deterioration of the forests and the state of the environment more generally.[133]

The report went onto note that while a number of bilateral and multilateral instruments had some application to the Arctic, none elaborated on arctic problems, and no delegation believed that the status *quo* was adequate. The meeting called for a series of reports to be prepared on *inter alia*: state of the environment reports on pollutants in different parts of the ecosystem, on an international monitorings ystem for the Arctic, and on an arctic sustainable development strategy. In this context, the report of the meeting included an informal working paper on an arctic sustainable development strategy which included a draft statement of objectives and principles. The document is remarkable for the emphasis which it places on the needs, values, and customs of peoples resident in the region.

Although the meeting did not include indigenous peoples, a working group agreed that they "should be involved in future work since they bear the burdens of environmental degradation directly". Problems of inclusivity in relation to other states were also addressed because of concerns that the sources of many of the pollutants in question were outside the region. The meeting dealt with this by inviting observers from other countries, but leaving control very much with those states which had "broader responsibilities in the Arctic".

Further meetings are scheduled for 1990. A technical preparatory meeting was held in the spring of 1990, in Yello wknife, and a meeting at the ministerial level is scheduled for the fall of 1990, when it is hoped by some that an agreement might be ready for signature although this certainly seems very optimistic. Canada is generally supportive of the Rovaniemi initiative, and has appointed a senior diplomat, Alan Beesley, to lead the Canadian delegation. Representatives of the governments of the Yukon and Northwest Territories sit as "observer" members of the Canadian delegation. The United States is considerably less enthusiastic and only participated at Rovaniemi as an observer. However, it elected to participate in the Yellowknife meetings as a full party. The Soviet Union, which, for many years, eschewed arctic contacts has been doing much to facilitate both bilateral and multilateral co-operation in the region. [134]

The Yellowknife meeting established an important precedent with the involvement of aboriginal people. The president of ICC, Mary Simon, was invited to participate in the discussions and not just be present as an observer, and took the opportunity to submit documents on sustainable and equitable development in the Arctic. In addition, a member of the Finnish delegation, in consultation with the Swedish and Norwegian delegations, submitted "The Circumpolar Peoples and Protection of Arctic Environment: A Saami Viewpoint".[135]

Territorial Governments and Multilateral Initiatives

At the Whitehorse conference, Premier Tony Penikett of the Yukon Territory, placed great emphasis on the extent to which his government as a territorial unit within Canada was developing its own initiatives and contacts with the rest of the circumpolar world. For example, Mr Penikett led a mission to Sweden in 1988, and has developed good contacts with Gro Brundtland in Norway in the context of sustainable development strategies for the circumpolar world. Finally, he pointed out that territorial ministers have enjoyed the same status as ministers of nation states at circumpolar conferences on health and education, and the Rovaniemi initiative may extend this to environmental areas. A similar pattern is evident in the Northwest Territories where good relations have been developed with Greenland.

Steve Cowper, Governor of Alaska, also took the opportunity to emphasize links which his government was building with arctic regions of the Soviet Union.

It is obvious that circumpolar nations share many common problems based on climate, geographical location, and culture. Both Messrs Penikett and Cowper were confident that the existence of shared problems would lead to greater contact and co-operation among circumpolar states.

Some Common Themes and Problems

This paper has emphasized a number of themes or problems which may be summarized as follows. The first, and most prevalent, is that the arctic borderlands contain a number of shared resources which form an essential part of the subsistence economy of the people of the region. Exploitation of those resources and other non-renewable resources may, or will, have an effect on the interests of the other state and its inhabitants (especially aboriginal inhabitants). The two governments have made some attempt to address this problem—most notably in the case of the Porcupine caribou herd and migratory birds—but those attempts are lacking in the areas of habitat protection and resource distribution. We have also noted that the two states have failed to develop assessment procedures which are truly international and non-discriminatory, and furthermore, not all shared resources are covered by appropriate agreements. For example, there is no bilateral agreement dealing with marine mammals or arctic fish.

Second, international regimes for arctic resources need to be developed in ways which are sensitive to the needs of the residents of the region, particularly aboriginal residents and subsistence users. Several of the agreements examined were deficient in this respect, notably the Migratory Birds Convention.

Third, questions of liability and compensation have not been dealt with at a bilateral level and domestic procedures, at least in Canada, are inadequate and not available on a non-discriminatory basis to residents of other countries.

Fourth, good working relations exist between some different aboriginal peoples. This allows them to discuss issues, such as polar bear and caribou management, even though they may disagree about issues such as Beaufort oil tanker traffic. Co-operative relations are particularly well developed among Inuit peoples, and comparatively less well developed among arctic Indian peoples. Some co-operation also occurs within the oil and gas industry, but the industry has no integrated planning approach for the borderlands and co-operation is at its highest only when dictated by commercial need—as when Gulf Canada hires out its Beaudril equipment to Alaskan operators. Common problems (arctic navigation, forecasting, vessel construction, etc.) all seem to cry out for a higher level of co-operation.

Fifth, multilateral relations in the Arctic have not been well developed by either the United States, Canada, or other states in the region outside the Nordic bloc. Only the Inuit in the region have led the way. The prevalence of common problems throughout the Arctic suggests that much can still be achieved at the multilateral level. This is particularly true of such matters as data collection and information exchange on a regional basis. Much of the impetus here may well come from the state and territorial governments rather than the federal governments.

Solutions Proposed by Others

Before making our own suggestions to facilitate co-operation in the Beaufort region and addressing some of the concerns which have been identified, we shall review some of the proposals which have been made by others. In doing so we keep in mind the "politics of regime formation", and the comments of Oran Young that, "the mere existence of transboundary or commons problems hardly ensures that the affected parties will succeed in coordinating their actions to overcome them."[136] Young[137] and other commentators such as Friedheim[138] advise that the two states should engage in integrative rather than distributional bargaining where possible, and should attempt to maximize the size of the pie rather than focusing on its division.

The following review, although far from complete, makes it clear that imaginative authors have proposed a broad range of solutions to the perceived problems of arctic relations between Canada and the United States.

Two Canadian writers, Lamson and Vanderswaag,[139] have offered a wide-ranging list of six proposals to facilitate co-operation in the Beaufort region:

(i) A Beaufort Sea Boundary Agreement
The two states should negotiate a boundary agreement. Four possible paths could be followed: (1) adjudica-

tion, (2) referral to a conciliation commission, (3) a joint development zone, and (4) negotiation of a boundary.

(ii) A Beaufort Marine Co-operation Agreement
The authors envisaged a far-ranging co-operation agreement based on the Canada-Denmark Agreement of 1983. In addition, the authors also suggested a joint environmental assessment process for transboundary projects based perhaps on the International Joint Commission (IJC).

(iii) A Northwest Passage Agreement
The authors suggested an agreement in which the United States would acknowledge Canadian sovereignty based on the unique circumstances of the archipelagic waters. Canada would guarantee U.S. transit rights. The agreement might also deal with navigational and communication aids for the passage.

(iv) An Equal Access Agreement
Under this agreement, assessment, compensation, and judicial regimes would be open to nationals of the other country on a non-discriminatory basis.

(v) A Marine Mammal Conservation Agreement
The authors envisaged a trilateral agreement between the Soviet Union, United States, and Canada on bowhead and beluga whales.

(vi) An Arctic Regional Action Plan
This would be an action plan for the Arctic Ocean developed underUNEP's Regional Seas Program.

These proposals are obviously far-reaching and ambitious (although some have been adopted at least in part and each of them would require analysis over many pages for proper assessment). The same two authors, in a different article, properly caution that we should be cautious of the "quick fix" and of formal treaties and executive agreements. [140]

Other authors have also proposed sophisticated structures to deal with perceived problems of arctic marine management. For example, Westermeyer and Goyal,[141] two American writers, recognize the need for co-operation on a variety of navigational support matters including navigation aids, ice forecasting, search and rescue, pilotage, ice breaker support, construction standards, and liability levels. The authors construct a matrix of jurisdictional and management options to meet the need for co-operation. At the management level the options range from an extension of the Annual Review of Hydrocarbon and Related Developments in the Beaufort Sea,[142] through to Young and Osherenko's Arctic Resources Council and an Arctic International Waters Joint Commission based on the model of the IJC.

In the same volume of *Arctic* as the Westermeyer article, Don McRae, another Canadian, takes the position that any management regime is founded on a set of assumptions about the jurisdictional claims of the parties.[143] Consequently, he is none too sanguine about the possibility of co-operative management and a model such as the IJC for the archipelagic waters. For him, such a model would not work since there would be insufficient equality of interest between the participating parties because of Canada's greater interest in its archipelagic waters. He is also sceptical that the parties would, in any event, agree to create another bilateral institution with such far-reaching powers as those of the IJC.

Moving from marine areas to the Alaska-Yukon boundary there have been fewer attempts to propose new co-operative arrangements. Proposals have tended to focus on such things as the twinning of national parks or wilderness areas and the negotiation of resource management regimes for particular shared resources, such as the Porcupine caribou herd.[144]

At a multilateral level we have already briefly alluded to the proposals of Franklyn Griffiths, Rosemarie Kuptana, and the Canadian Institute of International Affairs to establish an Arctic Basin Council. The council would be composed of the arctic littoral states and members of the Nordic Council. It would be advisory and might consider the following matters:

(i) scientific and exploratory activities in the arctic basin;

(ii) problems of resource and economic development in the Arctic;

(iii) conservation and environmental issues relevant to the Arctic;

(iv) indigenous peoples, arctic settlements, and demographic questions;

(v) application of Law of the Sea principles to the unique circumpolar situation; and

(vi) interchange of information about activities carried out under the Antarctic Treaty, wherever such information appears relevant.[145]

Other comments on the multilateral situation have focused on a regional seas approach to the Arctic.[146]

At a less formal level, but still part of regime building, various authors have suggested the utility of informal meetings of experts, policy makers, and stake holders. [147] Examples include this sort of conference, the United States-Canada Arctic Policy Forum, of 1984,[148] and the Arctic Ocean conference convened by the Law of the Sea Institute.[149] Other authors[150] have focused on scientific co-operation[151] and the development of personal contacts and working relationships.

It should be apparent thus far that many different options have been proposed for facilitating co-operation between Canada and the United States but that most of these have dealt with navigational issues and most have focused on the Northwest Passage and archipelagic waters rather than the Beaufort Sea. Very few such arrangements have been proposed for terrestrial areas.

Some Observations

1) Proposals with respect to navigation issues in the Northwest Passage are not especially useful in the context of the Beaufort Sea and adacent terrestrial areas. While we share McRae's skepticism about internationalist solutions because of the inequality of interests in the archipelagic waters, we believe that the sharing of resources in the Beaufort region means that there is greater equality of both interest and concern between the United States and Canada. Both states have their own views on the location of the boundary but neither claims a special jurisdictional status for the waters of the Beaufort Sea. As a starting point therefore, Beaufort issues should be disentangled from those related to the Northwest Passage. The United States-Canada *modus vivendi* should allow this to be accomplished. Canadians feel far less "threatened" in the Beaufort precisely because special claims cannot be readily justified and therefore a higher degree of co-operation and integration maybe possible.

Special arrangements between the two states however, must take into account the interests of other powers with potential future interests in transit passage. These states (Japan and European powers) may be less concerned about shared resource issues.

2) For ease of presentation in the first part of this paper we attempted a separate description of renewable and non-renewable resource concerns and also of offshore and onshore concerns. Even the casual reader will have noticed that these distinctions are almost impossible to maintain with any cogency. There are two reasons for this. First, the issues are often the same, and second, the issues are intertwined. This suggests that we should be thinking of tackling the problems in ways which cut across the resource sectors. At the same time however, we must recognize that specific bilateral arrangements have already been negotiated for some resources (e.g., caribou and migratory birds).

A two-fold strategy is therefore necessary. First, the parties should attempt to fill gaps which exist in co-operative structures with respect to particular resources. Attention could be focused first of all on those resources or matters of most pressing concern. This might include agreements with respect to marine mammals and resolution of outstanding matters in relation to the salmon stocks of the Yukon and Porcupine rivers. In addition, amendments might be made to existing resource-specific regimes to make them more sensitive to northern needs. Here we refer particularly to the Migratory Birds Convention, and issues of habitat protection in relation to a number of resources, especially caribou.

Second, the parties should address those issues which transcend particular resources and the offshore/onshore distinction Here, we have in mind, liability, compensation, and contingency planning issues and the possible adoption of more inclusive assessment processes. Both should be based on the principles of non-discrimination and equal access. The Canada-Denmark agreement provides a possible starting point, while a more inclusive assessment process finds some support in Canada-United States practice in the work of the IJC. This is particularly so in relation to the Great Lakes, where the IJC has

general rather than project specific assessment responsibilities under the Great Lakes Water Quality Agreement of 1978.[152] That agreement is particularly notable because of its adoption of the ecosystem approach to the management of the Great Lakes.

3) In addition to these specific bilateral initiatives, it does seem to us that much could be done to encourage a higher level of co-operation between the two states. The patties must work at this as lines of communication in Canada and Alaska are structured north-south rather than west–east, and national sentiments continue to assert a strong pull. New co-operative ventures could build on existing arrangements, especially those which currently exist between aboriginal peoples in the North Slope area and between oil and gas operators on both sides of the border. The emphasis should continue to be on the people and needs of the region, but we see the need to provide a forum which will facilitate co-operation (in the physical, biological, and social sciences) and identify new areas where the states could benefit from a mutual exchange of information. This might be done through a biennial meeting of the premiers of the territories and the Governor of Alaska, building on the experience of annual joint meetings between the premiers of British Columbia and the Yukon, and the Governor of Alaska.

4) We also see the need to facilitate co-operation at a circumpolar level. This presents more serious difficulties because there is no history of co-operation at a governmental level and therefore no institutional support. Also the circumpolar states display a great diversity of political background and structure. Nevertheless, we believe that it should be possible to negotiate a multilateral regime emphasizing information exchange and data gathering and yet, at the same time, providing for the possibility of more far reaching co-operation in the areas of pollution control, liability, and contingency planning. A possible model here is the Convention on the Long Range Transport of Air Pollutants (LRTAP)[153] which was negotiated under the auspices of the Economic Commission for Europe (ECE) and grew out of the Helsinki Final Act. The ECE has an unusual composition bringing together the Warsaw Pact, NATO, and neutral countries.

The LRTAP convention began as a data gathering and information exchange convention but has been given real strength with the negotiation of protocols dealing with Sulphur Dioxide (SO_2)[154] and Nitrogen Oxides (NO_x)[155] emissions. Critical to the success of the convention have been the existence of a secretariat and regular high level meetings of the parties. This has provided a forum and an information base from which to negotiate further protocols. Both elements would be essential to the success of a future Arctic Environment Convention, but the more contentious will likely be the provision of, and funding for, a secretariat.

5) One of the most notable features of both bilateral and multilateral relations in the Beaufort region is the leadership role played by arctic aboriginal peoples, especially the Inuit. This takes the form of regional planning and policy development in the context of ICC but also in relation to specific resources, notably caribou, polar bears, and, more recently, whales. However, those initiatives have often been thwarted or seriously diluted by the actions of central governments. This is hardly cause for celebration, but quick solutions may be difficult to devise. Solutions will be easiest where the issues are local (e.g., polar bears, caribou, and perhaps the allocation of a bowhead harvest, although the deep ecologists may turn this into a national issue). In such cases, it is difficult to see any objection to local resolution. However, where the issues are national in scope, local solutions will not be so readily rubber stamped (e.g., habitat protection proposals where the result will be to place strategic resources off limits, or where there are regional co-operation proposals involving the Soviet Union). In these cases, both central governments and indigenous peoples must attempt to develop positions co-operatively. Indigenous peoples have often been assisted in their endeavors by territorial and state governments and indeed these governments often share with aboriginal people a common cause against central governments on international questions.

NOTES

1. By "deep ecologists" we mean those writers and individuals who claim that minerals, trees, and even in some cases, non-living things such as mountains have rights, either on a utilitarian basis or on a deontological basis. See P.S. Elder, "Legal Rights for Nature-The Wrong Answer to the Right(s) Question" (1984) 22 Osgoode Hall LJ. 285. Whether or not the interests **of these groups will grow remains to be seen, but they may well** have an impact on marine and territorial mammal harvesting by aboriginal peoples.

2. For a general review see she report of the Berger Inquiry, Mackenzie Valley Pipeline Inquiry, *Northern Frontier, Northern Homeland: The Repart of the Mackenzie Valley Pipeline inquiry*, Vol. 1 (Ottawa Ministry of Supply and Services, 1977). See also C. Lamson & D. Vanderzwaag, "Arctic Water: Needs and options for Canadian-American Cooperation" (1987) 18 ODIL 49. This article is an excellent primer on bilateral marine issues in the Beaufort area. Although we have made a division between renewable and non-renewable resources for ease of description, it is never an easy distinction to make and cannot be maintained in relationto something like "wilderness values".

3. The resolution of the Yukon salmon issue was effectively postponed by the Pacific Salmon Treaty, 28 January 1985. For discussion see J.A. Yanaginda, "The Pacific Salmon Treaty" (1987)81 A.J.I.L. 577 and T.C. Jensen, "The United States - Canada Pacific Salmon Interception Treaty An Historical and Legal Overview" (1985-86) 16 Environmental Law 363.

4. For background so this legislation 16 U.S.C.A. see N. Farquhar, "Federal-State Natural Resource Issues in Arctic Alaska" in W. Westermeyer & K. Shusterich (eds.), *United States* Arctic Interest: *The 1980s and 1990s* (New York: Springer-Verlag, 1984).

5. See *Position Paper of Canada on the United States Department of the* Interior's *Draft "Arctic National Wildlife Refuge, Alaska Coastal Plains Resource Assessment"* (Ottawa: Canada, 3 February 1987) and Comments *by Canada on Arctic National Wildlife Refuge, Alaska, Coastal Plain Resowce Assessment: Report and Recommendations to the Congress of the United States and Find Legislative Impact Assessment (Ottawa* Canada, November 1987).

6. *Ibid.*, November 1987 Comment at 2.

7. This suggestion was made by Don Gamble of the Rawson Academy of Aquatic Science, Ottawa, telephone conversation, 30 March 1990.

8. *Northern Pipeline Act,* R.S.C.1985, c. AT-26.

9. *Agreement between Canada and the United States of America on Principles Applicable to a Northern Natural Gas* Pipeline, Ottawa, 20 September 1977, reproduced *ibid*, Schedule 1. The agreement has a term of 35 years.

10. Berger Inquiry, *supra*, nose 2.

11. Canada, National Energy Board, *Reasons for Decision on a Northern Pipeline (Ottawa:* Ministry of Supply and Services, 1977).

12. *Supra*, note 8.

13. For the background to this contested decision on prebuild see *Waddell* v. *Schreyer* (1981) 126 D.L.R. (3d) 431 (II.C.S.C.), and F. Bregha, "Ironclad Commitments: The Selling of a Pipeline", *Northern Perspectives 8:7&8* (Ottawa: Canadian Arctic Resources Committee, 1980). The federal government recently renewed the agreement with Foothills on the Dempster Lateral: *The [Toronto] Globe and Mail* (18 April 1990) 13.

14. N. C. Doubleday, "Co-Management Provisions of the Inuvialuit Final Agreement" in E. Pinkerton (cd.), *Co-Operative Management of Local Fisheries: New Directions for Improved Management and Community Development* (Vancouver: University of British Columbia Press, 1989) at 225-226. Similarly, just before the Whitehorse conference convened, Roger Gruben of the Inuvialuit Regional Corporation went on record at the annual North Slope Conference at Dawson City suggesting that the option of establishing a permanent supply base for the oil industry at Stokes Point was worth considering.

15. Canada, *Response to the Eighth Report of the Standing Committee* on *Energy, Mines and Resources: Oil Scarcity or Security?* (Ottawa, February 1988) at 17-18. What is remarkable about this is nor Hon. Masse's response but that the committee even suggested this as a possibility. The committee also suggested that ANWR lands should be opened up at she same rime as she Government of Canada was lobbying in Washington for precisely she opposite conclusion.

16. See K. Beauchamp, *Port Policy for the Canadian Coast* (Ottawa: Canadian Arctic Resources Committee, March 1985), and T. Fenge et al., "A Proposed Port on the North Slope of Yukon: The Anatomy of Conflict" in B. Sadler (cd.), *Environmental Prelection and Resource Development: Convergence for Today* (Calgary: The University of Calgary Press, 1985) at 127-178. The following paragraphs draw upon these two studies.

17. Environmental Assessment Panel, *Beaufort Sea Hydrocarbon Production and Transportation Proposal: Report of the Environmental Assessment Panel* (Ottawa: Ministry of Supply and Services, 1984) at 75-76.

18. *Supra*, note 16 at 43.

19. Telephone conversation with T. Antoniuk, Gulf Canada Resources, Calgary, 9 April 1990.

20. For a review of concerns in relation to the North Slope see Canada, National Energy Board, *Reasons for Decision on the Gas Export Application of Esso Resources Limited, Shell Canada Limited and Gulf Canada Resources Limited, GH-10-88 (Ottawa:* Ministry of Supply and Services, August 1989), Chapter 8.

21. Report of the United Nations Conference on the Human Environment, Stockholm, 5 -16 June, 1972 U.N. Dec. A/Conf. 48/14 Rev. 1.

22 The potential impacts are discussed *supra, note 17.*

23. The arctic gyre is the term given to *she generally* clockwise circulation of waters within the arctic Mediterranean. For a discussion of the gyre and transport of pollutants see generally L. Rey (cd.), The *Arctic Ocean: The Hydrographic Environment and the Fate of Pollutants* (London: Macmillan Press Ltd., 1982) and I. Stirling &W. Calvert, "Ertvironmenral Threats to Marine Mammals in the Canadian Arctic" (1983) 21 Polar Record 433, esp. at 441, "For example, in the eastern Beaufort Sea, oil from an uncontrolled blowout could be carried by currents and the Beaufort Gyre westward along the mainland coast into Alaskan waters, and conceivably into the polar basin, creating significant ecological problems for countries far from the original site".

24. *Supra*, note 22 at 37-38.

25. Alaska Oil Spill Commission, *Report of the Alaska Oil Spill Commission,* January 1990.

26. *Ibid.* at 17.

27. G. Osherenko & O. Young, *The Age of the Arctic* (Cambridge: Cambridge University Press, 1989) at 255.

28. Although we are. discussing the question of liabilit y and compensation in the context of *offshore* development primarily because of she risk of spills migrating across the boundary, bilateral state liability questions may also arise because of damage to shared populations even where there is no possibility of a spill crossing the boundary. See International Law Commission, *Liability for Injurious Consequences Arising from Acts not Prohibited by International Law. The work is* reviewed by D. B. Magraw, "Transboundary Harm: The International Law Commission's Study of International Liability" (1986) 80 A.J.I.L. 305.

29. Environmental Impact Review Board, *Public Review of the Gulf Canada Resources Limited Kulluk Drilling Program 1990-1992,* [Inuvik: Environmental Impact Review Board, 1990].

30. Environmental Impact Review Board, *Public Review of the Esso Chevron et al. Isserk 1-15 Drilling Program,* 1 *November 1989,* [Inuvik: Environmental Impact Review Board, 1989].

31. Cited in *Report on the trip to Valdez to investigate the matter of compensation,* prepared by Inuvialuit Petroleum Corporation, March 1990, Calgary, unpublished manuscript, at 20-21.

32. *Arctic Waters Pollution Prevention Act,* R.S.C. 1985, *C.* A-12

33. *Oil and Gas Production and Conservation Act,* R.S.C. 1985, *C. O-7*

34. *Canada Shipping Act,* R.S.C. 1985, c. .$9. The *Fisheries Act,* R.S.C. 1985, c. F-14, may also apply to some spills.

35. Canada, Indian Affairs and Northern Development, *The Western Arctic* Claim:

The Inuvialuit Final Agreement, (Ottawa: 1984), section *13.*

36. *Supra, note31.*

37. *Supra, note 29.*

38. *See G.* Handl, "State Liability for Accidental Transnational Environmental Damage by Private Persons" (1980)74 A.J.I.L. 525.

39. *International Convention for the Prevention of Pollution of the Sea by Oil,* London, 12 May 1954, C.T.S. 1958 No. 31 amended, London, 15 September 1964, C.T.S. No. 30; *International Convention for the Prevention of Pollution from Ships,* London, 2 November 1973, 12 In['l Leg. Mat. 1319, both agreements have subsequently been amended and added to. There are also three private agreements: *Tanker* Owners *Voluntary Agreement Concerning Liability for Oil Pollution (TOVALOP), 7* January 1969,8 Int'l Leg. Mat. 497 ; Contract *Regarding an Interim Supplement to Tanker Liability for Oil Pollution,* (CRISTAL) London, 4 January 1971, 10 Int'l Leg. Mat. 646; *Pollution Liability Agreement Among Tanker Owners,* (PLATO) 5 June 1985, its K. R. Simmonds (cd.), New Directions in *the Law of the Sea* (London: Oceana Publications Ltd., 1983), release 86-2.

40. This is simply because global standards are needed to permit ships to travel broadly.

41. *Supra,* note 39.

42. Anderson, *Report to the Premier* on Oil *Transportation and Oil Spills,* (Victoria, 1989) at 109.

43. *Trans-Alaska Pipelines Act, 43* U.S.C.A. 1653.

44. *Oil and Gas Spills Debris Liability Regu/a/ions,SOR/87-331* (OGPCA) and *Arctic Water Pollution Prevention Regulations,* C.R.C. 1978, c. 354,s. 8(f).

45. See for examples. 24(3) of the OGPCA *supra,* note *33,* which extends the definition of the loss or damage for which compensation might be claimable, but only for the aboriginal peoples of Canada.

46. A.L.C. Mestral, "Carradian Practice in International Law, 1977" (1978) Cart. Y.B. of Int'l Law 393-394.

47. The agreement is discussed in C. G. Yoder, *Liability for Drilling and Production - Source Oil Pollution in the Canadian Offshore (Calgary:* Canadian Institute of Resources Law, 1986)at71-74.

48. Telephone conversation with Brian Gibson, Water Resources, DIAND, 3 April 1990.

49. *Ibid,*

50. For a review of the literature see, D. R. Rothwell, *Maritime Boundaries and Resource Development: Options for the Beaufort Sea (Calgary: Canadian Institute of Resources Law, 1988).*

51. Convention between Great Britain and Russia concerning the Limits of their Respective Possessions on the North-West Coast of America and the Navigation of the Pacific Ocean, 16 February 1825.

52. A Chamber of the International Court was favoured by the United Stares and Canada for resolution of the Gulf of Maine dispute.

53. For surveys of the applicable customary law and treaty provisions see R. Lagoni, "Gil and Gas Deposits Across National Frontiers" (1979) 73 Am. J. Int'l L. 215; W.T. Onorato, "Apportionment of an International Common Petroleum Deposit" (1968) 17 Int'l Comp.L.Q. 85 and (1977) 26 Int'l Comp. LQ. *324;* J.C. Woodcliffe, "International Unitization of an Offshore Gas Field" (1977) 26 Int'l Comp. L.Q. 338.

54. The literature on the subject is daunting. For a recent review see D. Pharand, *Canada, Arctic Waters in International Law* (Cambridge: Cambridge University Press, 1988).

55. For the U.S. perspective see W. E. Westermeyer & V. Goyal, "Jurisdiction and Management of Arctic Marine Transportation" (1986) 39 Arctic 338; O. R. Young, "Arctic Shipping: An American Perspective" in F. Griffiths (cd.) *Politics of/k Northwest Passage* (Kingston and Montreal: McGill - Queen's University Press, 1987) at 115-133; more generally W.M. Reisman, "The Regime of Straits and National Security: An Appraisal of International Lawmaking" (1980) 74 A.J.I.L. 48.

56. For an excellent review of the historical background see S. D. Grant, Sovereignly or *Security: Canadian Government Policy in the North, 1936-50,* (Vancouver: University of British Columbia Press, 1988).

57. See G. Osherenko & O. R. Young, *supra,* note 27; W.E. Westermeyer "United States Arctic Interests: Background for Policy" in W. E. Westermeyer & K.E. Shusterich (eds.), *United States Arctic Interests: The 1980s and 1990s (New York:* Springer Verlag, 1984) 1-18 at 2-3; J. Kirton, "Beyond Bilateralism: United States - Canadian Cooperation in the Arctic" id., 295-318 at 296; D. M. Johnston (cd.), *Arctic Ocean Issues in the 1980s* (Honolulu: Law of the.% Institute, 1982).

58. Agreement *between the Government of the United States and the Government Canada on Arctic Co-operation, Ottawa,* 11 January 1988, (1987)28 Int'l Leg. Mat. 141.

59. There maybe a polar analogy here with Article IV of she Antarctic Treaty, Washington, December 1,1959,12 U.S.T. 794,402 UNTS 701. Article IV of the Treaty is widely credited with allowing the significant level of co-operation which has occurred between treaty parries whether claimant or non-claimant states. For a general review see F.M. Auburn, *Antarctic Law* and *Po/ides* (Bloomington: Indiana University Press, 1982). We are not suggesting that the Antarctic Treaty regime in its entirety or even its general approach is suited to the needs of the Arctic but specific elements of the regime may be worth considering (e.g., the regular meetings of consultative parties do provide m excellent basis for multilateral regime building). Oran Young, amongst others, has warned *us* of too general an application of an Antarctic model, O. Young, "Arctic Waters: The Politics of Regime Formation" (1987) 18 ODIL 101.

60. There is obvious support for special arrangements for ice-covered areas in article 234 of the *Law of the Sea Convention,* Montego Bay, 21 October 1982, (1982)21 Int'l Leg. Mat. 1245. On the value of emphasizing unique characteristics as a means of facilitating consensus see Young, *ibid.,* and *supra,* note 55.

61. Osherenko and Young, *supra,* note 27.

62 R Homal, "Report of a Public Review Relating to the Proposed Short Range Radar Installations at Stokes Point and Komakuk Beach", December 1989.

63. Special Joint Committee on Canada's International Relations, *Independence and Internationalism: Report of the Special Joint Committee on Canada's International Relations (Ottawa:* Queen's Printer, 1986) at 135.

64. The principles are particularly well developed for international drainage basins, C.B. Bourne, "Procedure in the Development of International Drainage Basins: The Duty to Consult and Negotiate" (1972) 10 Cdn. Y.B. Int'l L. 212, *idem.,* "Procedure in the Development of International Drainage Basins" (1972) 22 U. of T.L.J. 172; N. Bankes, "A Migratory Caribou Convention" (1980) 18 Can. Y.B. of Int'l L. 285.

65. See G. Handl, "National Uses of Transboundary Air Resources: The International Entitlement Issue Reconsidered" (1986) 26 Nat. Res. J. 405; *idem,* "The Principle of 'Equitable Use' Applied to Internationally Shared Natural Resources: Iis Role in Resolving Potential International Disputes over Transfrontier Pollution" (1978-79)14 Rev. Beige dedroitint'140.

66. *Supra,* note 5.

67. *Migratory Birds Convention,* Washington, 16 August 1916, USTS 628.

68. *Polar Bear Convention,* Oslo, 15 November 1973, [1973] C.T.S. No. 24.

69. *Agreement on the Conservation of the Per. cupine Caribou Herd,* Ottawa, Jtdy 17, 1987; the agreement is reproduced in the *Third Annual Report of the Porcupine Caribou Management Board.*

70. *Pacific Salmon Treaty, 28* January 1985, in force 18 March 1985; this is not dealt with in the text.

71. Canada is no longer a party to this convention.

72. Neither Canada nor the United States has ratified the UNCLOS III, *supra, note 60*

73. *3* February 1971, in B. Ruster and B. Simma (eds.), *International Protection of the Environment,* (Dobbs Ferry: Oceana, 1975) Vol. 5 at 2161. For the convention's role in arctic habitat protection see D. Navid, "The Ramsar Convention and Arctic Conservation" in G. Nelsen *et* al. (eds.), *Arctic Heritage: Proceedings of a Symposium August 24-28,1985 Banff, Alberta, Canada,* (Ottawa: Association of Canadian Universities for Northern Studies, 1987).

74. *Boundary Waters Treaty*, Washington, 11 January 1909, Ruster and Simma, *ibid.*, vol. 10 at 5158.

75. *Convention on International Trade in Endangered Species*, Washington, 3 March 1973, Ruster & Simma, *ibid.*, VOL 5 at 2228.

76. *Unesco Heritage Convention*, Paris, 16 November 1972, Ruster & Simma, *ibid.* at *7238. This* convention may be of particular interest where both Canada and the United States have designated (or in the future designate) joint sites such as the Wrangell Mt. St Elias Parks.

77. *Migratory Species Convention*, Bonn, 23 June 1979 (1980) 19 Int'l Leg. Mat. 15, neither Canada or the U.S. is a party.

78. See discussion, *infra.*

77. Migratory *Species Convention*, Born, 23 June 1979 (1980) 19 Int'l Leg. Mat. 15, neither Canada or the U.S. is a party.

78. See discussion, *infra.*

79. C. D. Hunt, "Legal Aspects of Implementing Sustainable Development in Canada's Northern Territories", in O. Saunders (cd.), *The Legal Challenge of Sustainable Development* (Calgary: Canadian Institute of Resources Law, 1990) 268-299at281 - 283.

80. See *R.* V. *Sikyea* (1964) 46 W.W.R. 65, aff'd on appeal [1964] S.C.R. 642, holding that Indian treaty rights had been abrogated by legislation implementing the convention, at 74 per Johnson, J. A.: "I cannot believe that the Government of Canada realized that in implementing the Convention they were at the same time breaching the treaties that they had made with the Indians. It is much more likely that these obligations under the treaties were overlooked - a case of the left hand having forgotten what the right band had dent".

81. P. Maguire, "*Alaska Fish and Wildlife Federation v. Dunkk: Fouled Up Waterfowl Management* on *the Yukon-Kuskokwim Delta" (1989) 19* Env'l L. 909; and Digest *of United States Practice in International Law, 1980* at 901-904.

82 *Ibid,* at *932.*

83. Telephone conversation with Hugh Monaghan, Director of Wildlife, Department of Renewable Resources, Yukon Territorial Government, 12 April 1990.

84. For example *R. v. Arcand (1989) 65* Alta. L.R. (2d) 327 (Alta. Q. B.); *R. v. Flett,* [1989] 4 C.N.L.R. 128. There maybe some question about the ability of-the Inuvialuit to take advantage of this interpretation, see IFA, *supra,* note *35, section* 14.

85. R. v. *Catagas* (1977) 81 DLR (3d) 3% (Man. C.A.), Maguire, *supra,* note 81, and the *Dunkk case.*

86. Migratory *Bird Sanctuary Regulations,* C.R.C. 1978, c. 1036.

87. Ramsar Wetlands Convention, *supra,* note *73,* Article 2(b). In Canada's National Report (1990), to the Fourth Conference of the Parties to Ramsar it was indicated (at para 4.3) that "Carsada and the United States share many ecosystems and formally and informally share views and information on our various RAMSAR efforts. Recently, we have begun to look at a continental approach to RAMSAR planning although this is still embryonic.

88. Canadian Wildlife Service, *North American Waterfowl Management Plan: A Strategy for Co-operation* (Ottawa, Minister of Supply and Services Canada, 1986).

89. *Ibid.*, at 16.

90. *Supra,* note 68.

91. Polar *Bear Management Agreement for the Southern Beaufort Sea between the Inuvialuit Game Council and the North Slope Borough Fish and Game Management Committee,* January 1988, unpublished. Discussed in Hunt, *supra,* note 79.

92. *Supra, note 69.*

93. *Supra, note 5.*

94. *Supra,* note *35.*

95. At least one participant at the conference objected to this characterization. In his view, if attention had been paid to distribution questions it would have diverted the focus from habitat protection and in some way let the government off the hook. Thus the failure to address distribution was quite deliberate.

One matter would deserve further consideration and that is the connection between a distribution entitlement and habitat protection. If one state degrades habitat should it have its share reduced? The only useful analogy we can think of is with the Pacific Salmon Treaty which accords the investing state the benefit of enhancement measures. Could this work in reverse?

96. 26 October 1985, reproduced in the Management Board's annual report, *supra,* note 69.

97. "International Porcupine Caribou Commission" *Arctic Policy Review,* February 1983.

98. Ottawa, 19 June 1974, C.T.S. 1974, No. 22

99. Ottawa, 30 August 1977, C.T.S. 1977, No. 25.

100. Lamson and Vanderzwaag, *supra, note 2.*

101. *Agreement between the Government of Canada and the Government of the Kingdom of Denmark for Cooperation Relating to the Marine Environment,* Copenhagen, 26 August 1983.

102. Lsmson and Vanderzwaag, *supra,* note 2 at 77.

103. *Supra,* note 29 at 68.

104. *Ibid.*

105. Lamson and Vanderzwaag, *supra,* note *2* at 74.

106. Jrr addition, Beaufort operators assisted with the *Exxon Valdez spill,* (1989) 12 Arctic Petroleum Review 5.

107. Personal communication with Terry Antoniuk, Gulf Canada Resources.

108. See. generally J.K. Mitchell, "Coastal and Marine Are-a Management in the Arctic" in Nelson *et* al., *supra,* note 73 at 446-469.

109. *Supra,* note 5, Berger Inquiry, *supra,* note 2, and *Proceedings of the Arctic International Wildlife Range Conference,* 21-22 October 1970, (1971) 6 U.B.C. L Rev. special supplement.

110. *Supra,* note 4.

111. *Supra.*, at 5 (Nov.'87).

112. *Ibid.*, at 12.

113. *Ibid., at 4* and 13.

114. *Supra,* note 17 at 140.

115. *Ibid,* at 100.

116. *Ibid.*

117. *Ibid,* at 37-38.

118. *Ibid,* at *27.*

119. Communication from E. Cotterill to M. Taschereau, 30 August 1989.

120. Communication from M. Taschereau to E. Cotterill, 1989.

121. The following paragraph is based upon Doubleday, *supra, note* 14.

122. *Supra, note 29* at 54.

123. This section is based upon Mitchell, *supra,* note 108.

124. *Ibid,* at 456.

125. *Ibid, at 463.*

126. *Environmental Protection and Sustainable Development, Legal Principles and Recommendations,* adopted by the Experts Group on Environmental Law of the World Commission on Environment and Development (London: Graham & Trotman/Martinus Nijhoff, 1987), esp. Arta. 6,18 and 20,

127. E.g. OECD Council Recommendation (77) 28 (Final) on "Implementation of a Regime of Equal Right of Access and Non Discrimination in Relation to Transfrontier Pollution" (1977)16 Int'l Leg. MaL 977.

128. *Bill C-78,* 2d Sess., *34th* Parlt., 38-39 Eliz. II, 1989-90, esp. ss. 43-14.

129. For example, on the problem of acid rain Canada pursues a multilateral initiative through the United Nations Economic Commission for Europe while at the same time endeavouring to negotiate a bilateral and acid rain agreement. See N. Bankes and A. Saunders, "Acid Rain: Multilateral and Bilateral Approaches to Transboundary Pollution Under International Law" (1984) 33 U.N.B. L. Rev. 155.

130. Marry commentators have suggested that the arctic basin states might negotiate regional seas agreement with the assistance of UNEP. Sce Lamson and Vanderzwaag, *supra*, note 2 and Nelson and Needham "The Arctic as a Regional Sea"' in Arctic Heritage, *supra, note 73* at 625-646, N. Bankes "Canada and the Natural Resources of the Polar Regions" in *International La* w: *Critical Choices for Canada* 1985-2090, special edition (Kingston: Queen's Law Journal, 1986) at 292-323.

131. R. Keith&M. Sirnon, "Sustainable Development in the Northern Circumpolar World" in P. Jacobs and D. Munro (eds.), *Conservation with Equity* at 209-225.

132. The Arctic Basin Council finds support from a number of commentators including F. Griffiths and O. Young. The idea was also suggested by P.M. Briars Mulroney in a speech in Leningrad in November 1989.

133. *Report of the Consultative Meeting on the Protection of the Arctic Environment* Rovaniemi: (20-26 September 1989) at 2.

134. See R. Friedheim "The Regime of the Arctic - Distributional or Integrative Bargaining" (1988) 19 ODIL 493 at 506-507.

135. Derived from the unpublished report *Protecting the Arctic Environment: Report on the Yellowknife* Preparatory *Meeting*, Yellowknife, N.W.T., Canada, 18-23 April 1990, (Ottawa: 1990).

136. 0. Young, "Arctic Waters: The Politics of Regime Formation" (1987) 18 ODJL 101 at 102.

137. *Ibid*, and Young, *supra*, note 55.

138. Freidheim, *supra*, note 134.

139. *Supra*, note 2.

140. D. Vanderzwaag & C. Lamson, "Ocean Development and Management in the Arctic: Issues in Canadian American Relations" (1986)39 Arctic 327.

141. W. Westermeyer and V. Goyal, "Jurisdiction and Management of Arctic Marine Transportation" (1986) 39 Arctic 338.

142. This is a committee which meets annually and which is composed of representatives from the United States Department of States, the Canada Department of External Affairs, and Beaufort Sea operators on both sides of the borders.

143. D.M. McRae, "Management of Arctic Marine Transportation: A Canadian Perspective" (1986) 39 Arctic 350.

144. For example, U.B.C.L. Rev., special supp., *supra*, note 109.

145. Working Group of the National Capital Branch of the Canadian Institute of International Affairs, The *North and Canada's International Relations: The Report of a Working Group of the* National *Capital Branch of the Canadian institute of International Affairs* (Ottawa:Canadian Arctic Resources Committee, 1988) at 59.

146. *Supra*, note 130.

147. Osherenko and Young, *supra*, note 27; Westermeyer and Goyal, *supra*, note 141.

148. For a published appraisal see R. Friedheim, "The U.S.-Canada Arctic Policy Forum: Impressions from the American Co-Chair" (1986) 39 Arctic 360.

149. D. M. Johnstots (cd.), *Arctic Ocean Issues in the 1980's*, (Honolulu: Law of the Sea Institute, 1982).

150. Friedheim, *supra*, note 134. Friedheim refers for example to the possible creation of an arctic SCAR (the Scientific Committee on Antarctic Resources) which has provided invaluable advice to the consultative pasties to the Antarctic Treaty.

151. Jsr the United States significant impetus seems to have been given to scientific cooperation (the social, physical, and biological sciences) by the *Arctic Research and Policy Act of 1984*. See *Arctic Social Science an Agenda for Action*, (Washington: *National* Academy Press, 1989).

152. Great Lakes *Water Quality Agreement*, Ottawa, 22 November 1978, plus supplement of 7 October 1983 and protocol of 18 November 1987.

153. Geneva, 1979, (1979) 18 Int'l Leg. Mat. 1442.

154. Helsinki, 8 July 1985, (1988)27 Int'l Leg. Mat. 707, in force 2 September 1987.

155. Sophia, 31 October 1988, (1989),28 Int'l Leg. Mat. 212.