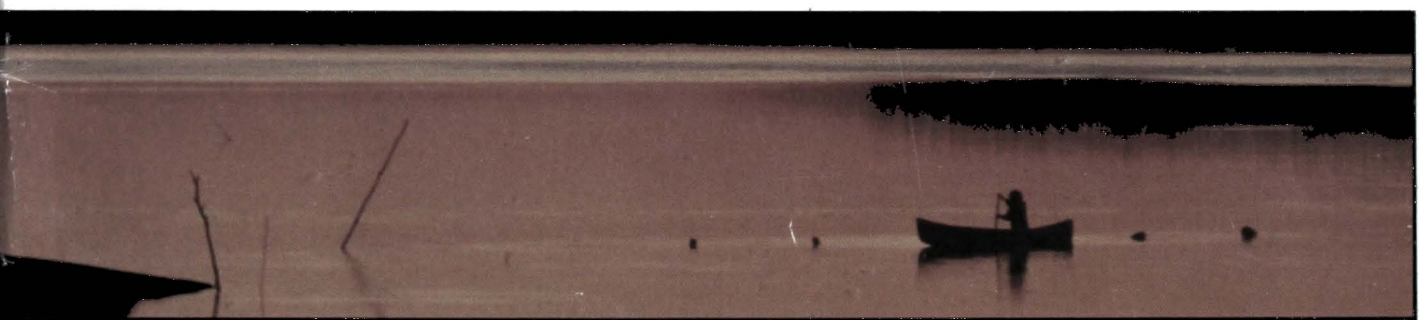


Report
of the

Task Force on Northern Conservation

December 1984



Report of the Task Force on Northern Conservation

COPIES AVAILABLE FROM:

- Minister of Indian Affairs and Northern Development, Ottawa
- Minister of Renewable Resources, Government of Yukon, Whitehorse, Yukon
- Minister of Renewable Resources, Government of Northwest Territories, Yellowknife, N.W.T.

This report may be cited as:
Task Force on Northern Conservation,
1984. Report of the Task Force on
Northern Conservation. Ottawa, Depart-
ment of Indian Affairs and Northern
Development.

Photo credit: George Calef



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Cover photos:

Mackenzie Delta from the air. (Photo credit: George Calef)

- Native fisherman checking his nets at his summer fish camp on the Peel River, N.W.T. (Photo credit: Nancy MacPherson)

- Caribou herd migrating across the barrens. (Photo credit: George Calef)

December 20, 1984

Minister of Indian Affairs and Northern Development, Ottawa,
Minister of Renewable Resources, Northwest Territories
Minister of Renewable Resources, Yukon Territory

Dear Ministers:

It is our pleasure to submit to you our report on northern conservation.

Since the formation of the Task Force on Northern Conservation in October, 1983 we have met on nine separate occasions. In addition, several working group meetings were held to consider particular issues in depth and a small drafting committee worked almost continually for several months preparing material and drafts of the report for review by the full committee.

The Task Force received 18 written submissions from the public. It also studied a large number of papers and reports provided by government, non-government organizations and individuals. All of this reference material will be made available at key locations throughout the North. The report itself will be available in both official languages and in Inuktitut. We understand that the Government of the Northwest Territories is prepared to arrange for translation of the report into other native languages where feasible.

Our original terms of reference were *"to provide advice to the Minister (Indian Affairs and Northern Development) on the following matters:*

- 1. A framework for a comprehensive conservation policy for northern Canada.*
- 2. A strategy, and ongoing mechanism, for implementing the policy.*
- 3. Conservation targets which can be met over the next two years.*

The Task Force is to report to the Minister and the Governments of the N.W.T. and Yukon by mid-1984."

The Task Force took the liberty, for purposes of clarification, of adding to the first term of reference the phrase *"including both terrestrial and marine components."* Further, the Task Force concluded that it would be inappropriate to advise on specific conservation targets that could be met over the next two years, as stipulated in the third term of reference. To do so would have by-passed the land-use planning processes recently negotiated between the two territorial governments and the federal government. We, therefore, broadened this term to read *"specific actions that could be taken over the next two years."*

The Task Force recommendations, taken together, should provide the basis for a comprehensive conservation policy and strategy for implementation. We identified two components of the conservation strategy: a process for the management of land and renewable resources; and, a system for the establishment of protected areas. Since the recommendations are highly interdependent and form a package, they should, in our judgment, be implemented in their entirety. In the view of the Task Force, this can be accomplished over the next two years.

In respect of the negotiated land-use planning processes, the Task Force understands it is anticipated by those involved that the first land-use plan will not be in place before 1986. It will probably be 1993 at least before the plans extend to the whole of the North. Because northern land-use planning is a new and complex process, it is quite possible that this schedule may not be met. Thus, if government were to rely totally upon the planning process for implementation, this could seriously jeopardize the success of the conservation strategy.

For this reason, the Task Force recommends the use of an interim mechanism to aid in the implementation of the recommendations.

A great deal of interest has been shown by native groups, conservation organizations and industry in the work of the Task Force. They have expressed concern that there be effective public participation in the phase following publication of the report. Although one of the report's recommendations deals with the matter of public information, it is considered sufficiently important to urge here that special efforts be made to undertake an information program related to northern conservation in concert with the land-use planning processes.



The northern conservation policy workshop held in Whitehorse in March, 1983 recommended to the Minister of Indian Affairs and Northern Development that he appoint a "balanced task force of senior government officials and non-government persons who have appropriate qualifications." In accepting that recommendation, the Minister, in consultation with the two territorial governments, established membership on the task force that represented industry, conservation, territorial government and federal government interests.

The diversity of the task force membership, and the variety of perspectives represented, is reflected in the report and its recommendations. The document is, in a sense, the product of negotiation; it reflects diverse opinions with respect to various political, economic, social, cultural and environmental factors. Although it is not a single-purpose document with a purely conservation orientation, it is our hope that this report, which takes a pragmatic approach, will provide an impetus for governments to adopt a northern conservation ethic and implement an effective conservation strategy.

Yours sincerely,

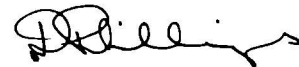
The Task Force on Northern Conservation



Rodger Schwass, chairman



Nancy MacPherson, member




Doug Phillips, member



Tom Beck, member



Bill Mair, member



Jim Bourque, member



Reg McCormack, member



Bob Cathro, member



Ken McKinnon, member



John Naysmith, executive director



Michael Kusugak, member



Everett Peterson, member



Julian Inglis, executive secretary

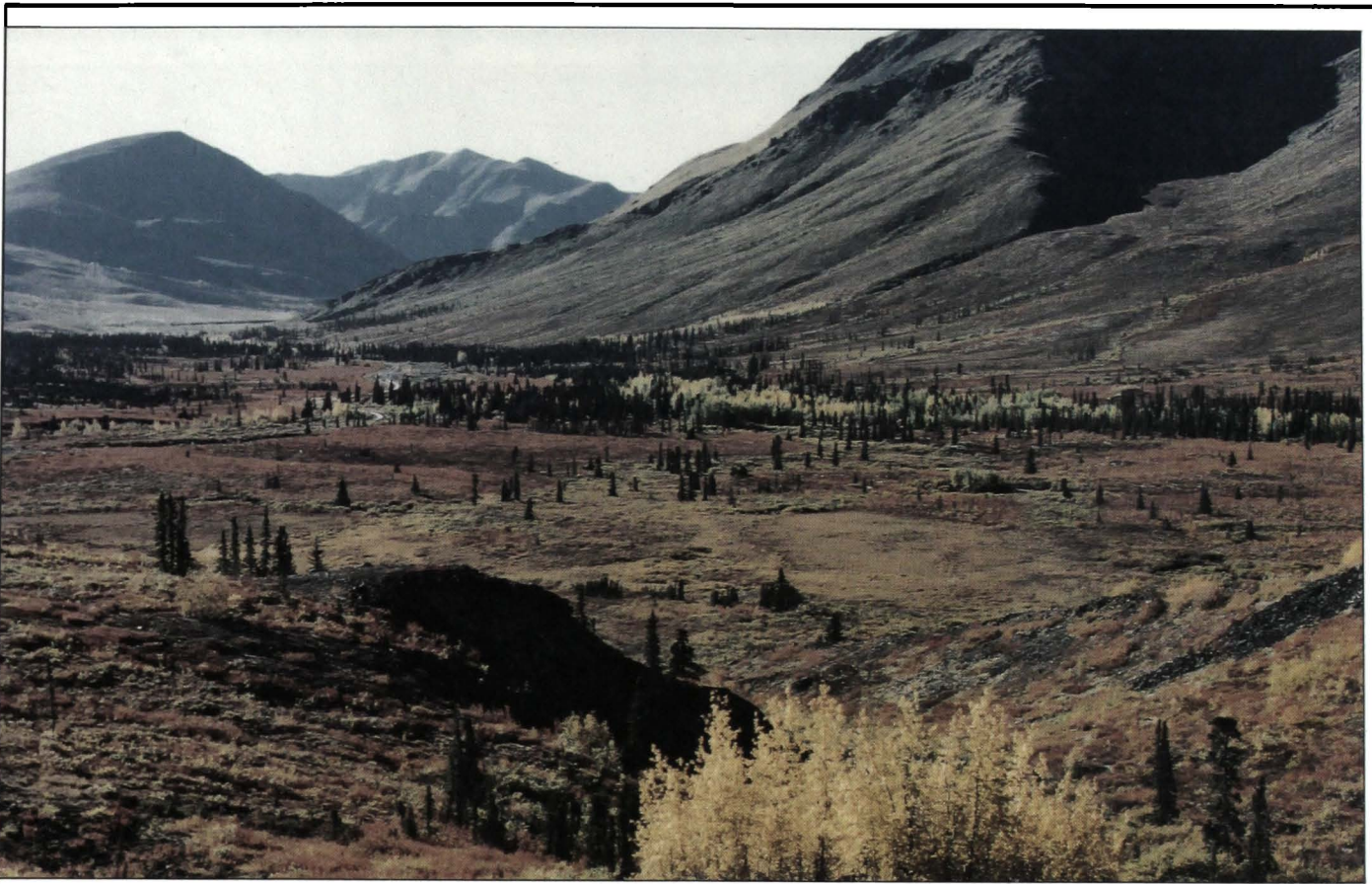
Acknowledgements

The Task Force wishes to express its appreciation to the many persons who contributed their knowledge, experience and time to its work. In the letter of transmittal we have made mention of the submissions and other reports and papers which were received and in Annex D we have listed them according to authors. Much time and thought went into these and we are indebted to the contributors for their effort.

We also wish to acknowledge the major contribution of the Executive Director, John Naysmith. In particular we would like to thank him and the members of his small drafting committee, especially Winston Mair, for their substantial contribution in the writing of this report.

The Task Force also wishes to thank Julian Inglis, Executive Secretary, for his substantial contribution to the work of the Task Force and Nancy MacPherson for her work on the photo selection of the publication. In addition, Al Hodgson from the Government of Yukon, Ron Livingston and John Donihee from the Government of the Northwest Territories, resource persons, provided valuable assistance to the Task Force. Secretarial services were provided by Narmin Dhanji and Joyce Gowin and the editing was ably done by Bruce Macdonald. Janet King and John Crook carried out specific research assignments and Bert Shaw served as Administrative Officer. We are grateful for the assistance of each of these individuals.

We would also like to express our appreciation for the assistance provided by the technical and professional staff of the Departments of Renewable Resources of the Governments of Yukon and Northwest Territories, the Northern Affairs Program and Office of Native Claims of the Department of Indian Affairs and Northern Development, Parks Canada and the Canadian Wildlife Service of the Department of Environment, the Department of Fisheries and Oceans and the Archaeological Survey of Canada.



(Photo credit: AV Action)

A. Introduction

The assignment of the Task Force on Northern Conservation has been to develop a framework for the creation of a comprehensive conservation policy for the Yukon Territory and Northwest Territories (N.W.T.), and a strategy for its implementation, that will help to ensure the wise use of all land, water and other natural resources.

Many people living in the North require - for reasons of culture, lifestyle and livelihood - an economy based at least in part on the use of renewable resources. Their quality of life is dependent upon preserving the quality of the natural environment. Although the area encompassed by the two territories is immense in size and only sparsely touched by the encroachment of development, there have already been industrial activities undertaken or proposed that have posed a significant threat to the land, fresh water or marine environment. Almost certainly, there will be increasing levels of resource development in the years immediately ahead. This will further intensify the need to have in place a sound northern conservation strategy. Such a strategy should be aimed at establishing a careful balance between large industrial undertakings, small and sustainable communi-

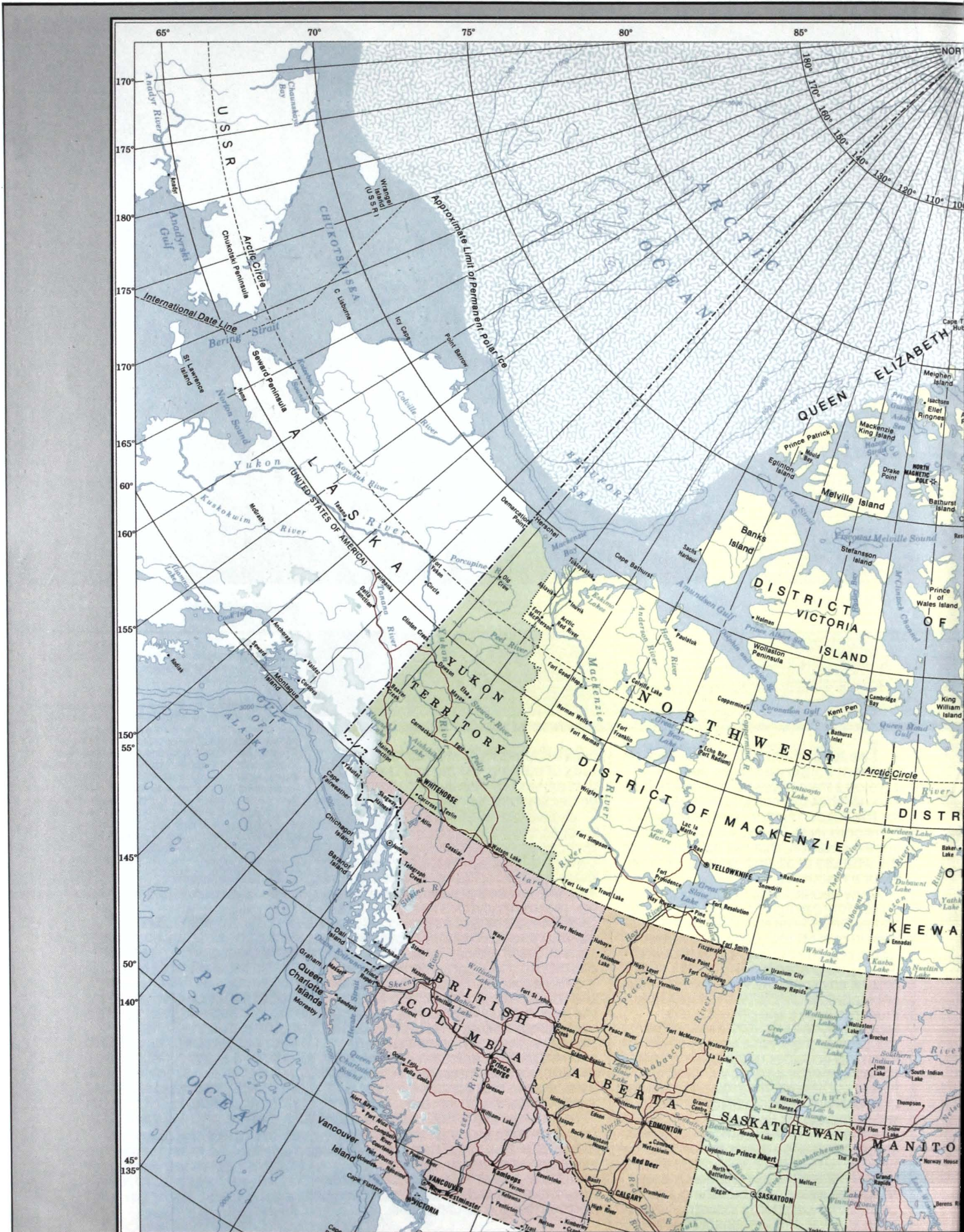
ty developments, and traditional pursuits of hunting, fishing and trapping that depend so heavily on continuing protection of the environment.

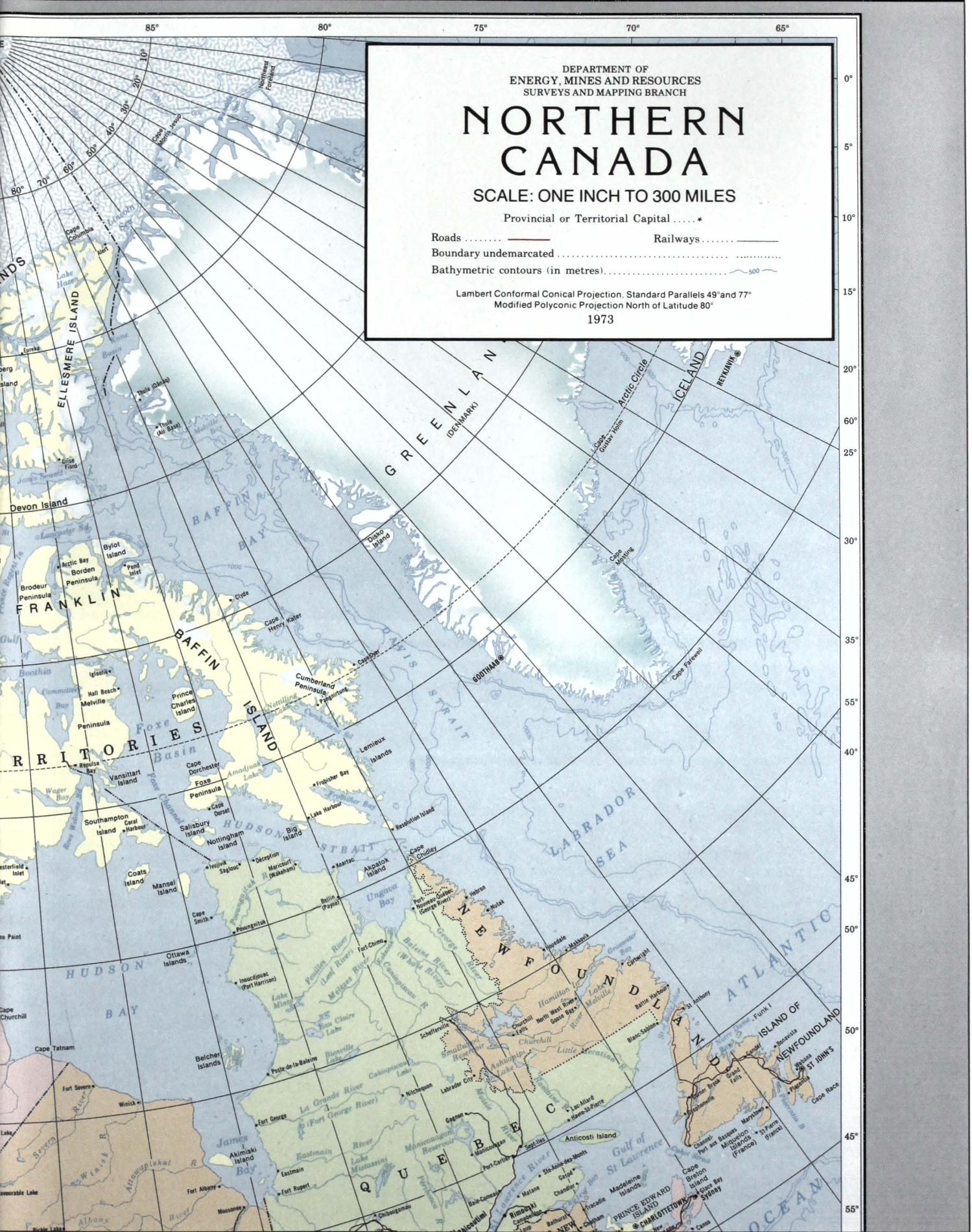
The work of the Task Force focusses on conservation and resource management approaches specific to northern Canada. It is recognized, however, that there are several key links with national and international programs. For example, recommendations related to integrated resource-use must recognize national and international obligations such as the Migratory Birds Convention and international agreements related to the management of polar bears, whales and other species that extend across the international boundaries.* Recommendations related to protected areas should recognize the importance of national parks in northern Canada, and the international interests in Canada's participation in programs such as the World Conservation Strategy, World Heritage Sites and Biosphere Reserves.** A conservation strategy, therefore, should take account of these obligations, while also ensuring the adoption of renewable resource-use options in the future that serve the best interests of northerners and all Canadians.

• Canada adopted legislation in 1917 to fulfill its obligation under the Migratory Birds Convention.

••

The *World Conservation Strategy* is a document prepared by the International Union for Conservation of Nature and Natural Resources in 1980 that sets out the national and international actions required to maintain ecological processes and life support systems, preserve genetic diversity and ensure the sustainable utilization of species and ecosystems. *World Heritage Sites* involve areas of "outstanding universal value" designated under the International Convention concerning the Protection of the World Cultural and Natural Heritage. *Biosphere Reserves* are protected areas containing representative examples of landscapes, each with its characteristic plants, animals and human uses, which have been given an international designation under UNESCO's Man and the Biosphere Programme.





DEPARTMENT OF
ENERGY, MINES AND RESOURCES
SURVEYS AND MAPPING BRANCH

NORTHERN CANADA

SCALE: ONE INCH TO 300 MILES

- Provincial or Territorial Capital*
- Roads ————
- Railways ————
- Boundary undemarcated - - - - -
- Bathymetric contours (in metres) ~~~~~ 500

Lambert Conformal Conical Projection, Standard Parallels 49° and 77°
Modified Polyconic Projection North of Latitude 80°
1973



▲ Grise Fiord, N.W.T. is an example of a small High Arctic Inuit community. (Photo credit: Government of the N.W.T.)

B. Background

1. SETTING

The Yukon and Northwest Territories encompass an immense area comprising nearly 40 percent of the area of Canada and extend east - west for nearly 3,000 kilometres as well as north and south for almost the same distance. Stretching from Alaska eastward and encompassed by the Arctic and Atlantic Oceans, they are regions of great beauty and contrast.

The Yukon is a rugged land of coastal plains, plateaus and mountains, contained within the Coast and St. Elias Ranges on the west and the Mackenzie and Richardson Mountains on the east. East of the Yukon - N.W.T. boundary, the Interior Plains extend north from the 60th parallel to Banks and Victoria Islands. The dominant feature here is the Mackenzie River and its delta, one of the major rivers of the world. Eastward again, there stretches the Precambrian Shield country of countless rock-rimmed lakes and fast rivers. It ends at the Atlantic seaboard with the mountains, spectacular cliffs and fiords of Baffin Island. The polar basin, to the northwest, is fronted by the thin sedimentary rock of

the Arctic Coastal Plain. The Beaufort Sea, Arctic Ocean and Baffin Bay surround many islands of the Canadian Arctic Archipelago.

The most obvious difference between the two territories relates to geography. The Yukon represents slightly more than 5 percent of Canada's land area and has a coastline that extends for some 250 kilometres. The Northwest Territories, by comparison, covers nearly 35 percent of Canada's land mass. It contains nearly 173,000 kilometres of coastline and vast areas of land-fast ice. Thus, marine resource-harvesting opportunities are key features of resource management in the Northwest Territories, but not in Yukon. The population of Yukon is just under 25,000, of which one-quarter comprises native people. By contrast, there are approximately 30,000 native people in the Northwest Territories, accounting for about 65 percent of the total population.

Finally, the evolution of each of the two territorial governments has proceeded at a different pace. In the Yukon, the first residents were elected to the Territorial Council in 1899 and the Council

became fully elected in 1908. The first residents of the Northwest Territories were elected to the Territorial Council only in 1951, and membership on the Council did not become fully elected until 1975. Prior to 1967, the administration of the Northwest Territories' ordinances and programs was based in Ottawa. Similar responsibility was based in the Yukon with the passage of the Yukon Act in 1898.

Prior to the arrival of the European, the native people were totally dependent for their physical well-being on the land and sea, which also had a strong cultural and spiritual meaning for them. They were self-sufficient, living more or less in balance with the natural conditions surrounding them. It was the skill and way of life of the native hunter, evolved over thousands of years, that were the essential ingredients in the success of the fur trade, which, ironically, represented the first significant incursion into the successful and self-sufficient economy of the native people. The whaling trade, too, had an impact upon the native people of both the eastern and western Arctic. The near elimination of whale stocks created problems in respect of conservation that persist to the present time.

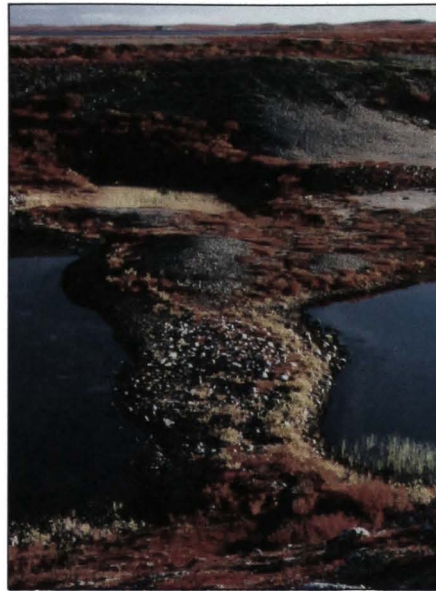
Mining activity in the Yukon at the end of the 19th century ushered in the next phase of northern resource use. The gold rush brought thousands of outsiders to the area. Construction of

the Alaska Highway and the Canol oil pipeline during World War II brought another influx of outsiders and the eventual establishment of a well-developed transportation system.

Most of the Indian communities in the Yukon, with the major exception of Old Crow in the northwest sector, are now established along the highway system. Metal mining, gold placer mining and hunting, fishing and tourism are the primary activities involving the use of natural resources. Government services now constitute a major sector of the economy, providing a substantial source of cash income.

The Northwest Territories also experienced some early industrial development, especially mining. Some oil production commenced at Norman Wells in 1920, which led to the building of the Canol pipeline to Whitehorse. However, it remained essentially a fur-producing area until after the war. Water provided the only major transportation system until recent years. Post-war oil and gas exploration brought irrevocable change in the social and economic climate of the area. Despite the altered economic balance, however, trapping, hunting and fishing remain the prime activities of a substantial proportion of the people. More than 90 percent of the Inuit population currently resides along the Arctic coast.

Two major facts of life in the North, then, must be taken into account in formulating northern conservation strategy: the major economic and employment generating role of the non-re-



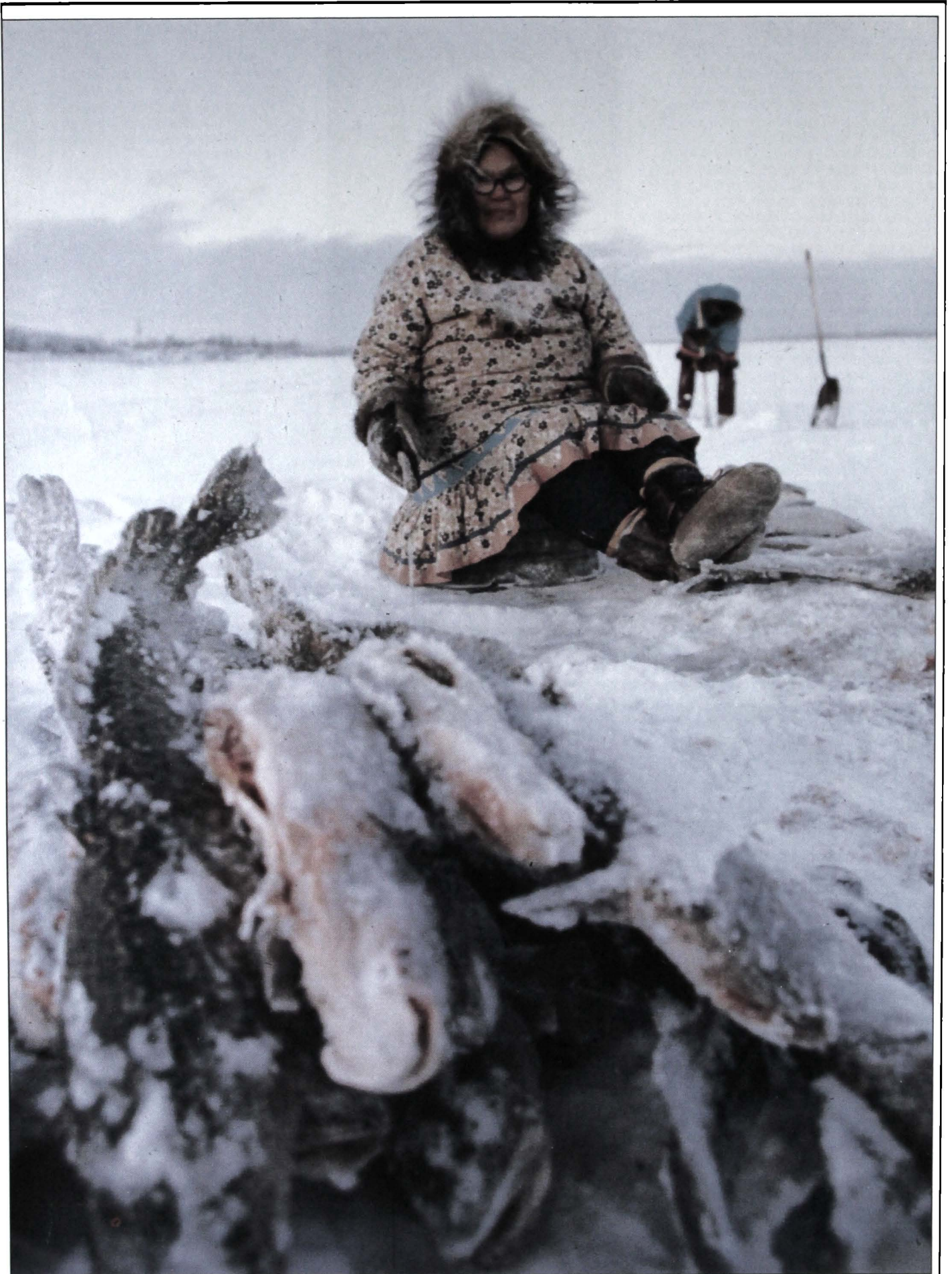
▲ Several areas representative of the ice-scoured tundra of the N.W.T., commonly called the barren-lands, have been recommended for protection. (Photo credit: George Calef)

newable resource sector, and the critical long-term economic, social and cultural importance of the land, water and renewable resources. Without industrial and sustainable renewable resource development, opportunities in the wage economy would be limited and the burden of any cash economy would rest on government.

Clearly, the choice of futures facing many northerners is closely tied to the use of the land and water, which have shaped their society fundamentally. Regardless of the economic strategy that is pursued, the productive capacity of the area's renewable resources must be enhanced and its ecological diversity at least maintained.

▼ Kluane National Park in the Yukon Territory contains the largest glaciers and ice fields in North America. (Photo credit: Government of Yukon)







▲ Oil and gas exploration in Arctic waters. (Photo credit: Government of Yukon)

◀ An Inuk woman jigs for burbot through the ice in the Mackenzie Delta, N.W.T. (Photo credit: George Calef)

2. TERMS OF REFERENCE

Terms of Reference of the Task Force on Northern Conservation, which have been modified as explained in the letter of transmittal, are to provide advice and report to the appropriate Ministers of government on the following:

- 1) a framework for a comprehensive conservation policy for northern Canada, including both terrestrial and marine components;
- 2) a strategy, and ongoing mechanism, for implementing the policy; and
- 3) specific actions that could be taken over the next two years.

The Department of Indian Affairs and Northern Development (DIAND) has found itself in an increasingly difficult position over the years because of potential conflicts between its responsibilities with respect to both resource and social development, and its assigned role of coordinating the activities of other federal departments that exercise certain responsibilities in the North. Up until now, the basic problem has stemmed from the absence of any organized system to guide DIAND in the exercise of its multiple mandates. Prior to the 1970's, virtually no policy, legislation or administrative framework existed for the management of the North's renewable resources.

In 1972, DIAND announced a new policy for the North that placed a much

higher priority on protection of the environment. Subsequently, however, little progress has been made in practice in promoting conservation either through active resource management or through designation of further protected areas.

There are at present two important developments in progress that will have a very significant impact with respect to the management and regulatory processes that should be established to conserve northern resources. One of those is the creation by the federal and territorial governments of a new planning process governing the use of all land, fresh water and marine areas (which is discussed at greater length later). The other development involves a series of native claim settlements in various stages of resolution that include - or are likely to include - provisions with respect to land use that will almost certainly have major implications for conservation. While these developments will undoubtedly facilitate the process of resource management, they will also make it more complex. Such developments also make more imperative the need for a comprehensive review of conservation issues and the development of fundamentally new approaches.

In October, 1982, DIAND prepared a draft paper entitled, *A Comprehensive Conservation Policy and Strategy for the Northwest Territories and Yukon*. This

paper formed the basis for discussion at a National Workshop on Northern Conservation Policy, which was held in Whitehorse early in 1983 and attended by some 80 participants representing a wide cross-section of northern interests. The workshop formulated an Action Plan, which included a recommendation that a task force be established to provide advice on a comprehensive northern conservation policy and a strategy to provide for its implementation.

The Minister of Indian Affairs and Northern Development accepted the recommendation of the Whitehorse Workshop, establishing this Task Force on Northern Conservation in the fall of 1983. Members were drawn from a wide range of non-government and government ranks. This document is the report of the Task Force to the federal Minister of Indian Affairs and Northern Development and the Ministers of Renewable Resources of the Yukon and the Northwest Territories.

3. THE PROBLEM

As explained more fully below, the Task Force believes that the following problem areas in particular must be addressed:

- a) reliance upon a regulatory system that tends to be restrictive, narrow and reactive rather than on an active, forward looking approach to resource management;
- b) institutional competition between governments and among government agencies;
- c) failure to consider adequately resource values - social, cultural and economic - and alternative choices as they apply to both development and conservation initiatives prior to making land-use decisions;
- d) insufficient opportunity for northerners to participate effectively in the decision-making process involving northern resource utilization;
- e) legislation for the disposition of land, forests, water and non-renewable resources that is deficient with respect to conservation measures such as planning, management, protection and restoration; and
- f) lack of sustained political commitment to ensure that resource-use decisions reflect conservation requirements.

Effective administration by government of an area so vast and varied as the Yukon and the Northwest Territories poses major problems. In the past, rugged terrain, ice and severe weather posed formidable barriers to travel and communication, while administrators were few and widely dispersed. It is, thus, not surprising that land and resource administration largely became a regulatory and restrictive function related to the issuance of permits and the harvest of fur and game.

Today, travel and communications facilities have considerably improved. As well, the administrative staff of government has increased substantially. Nevertheless, government remains tied

to a regimented, regulatory regime that is quite inadequate to deal with present and future needs for active development and conservation.

The Task Force believes that conservation and development are not necessarily mutually exclusive and that, with proper planning, both interests can be served in most northern areas. The current resource-use decision-making process, however, contains two major flaws. It is regulatory and reactive and make-shift decisions made under this process are often inconsistent and provide little opportunity for local input. The Task Force is convinced that a northern conservation strategy cannot be effectively implemented until a new planning and management process is put in place that is oriented toward the active management of resources and, at the same time, responsive to the public will.

The lack of a goal-oriented, problem-solving management system involving input from the affected areas leads to narrow interpretation of the mandates of government departments and of their implementing regulations. This has resulted in institutional competition between government agencies reflecting different social interests, thus contributing to the adversarial climate associated with northern conservation initiatives.

Another problem in the North has been the inadequate resource inventory base and consequent failure to consider alternate conservation choices and resource values prior to making management decisions. This has been the case both with respect to development initiatives and proposals to designate protected areas. The above noted issue of conflicting government roles and mandates has made the problem worse. The challenge is to protect the vital resource base without making industrial activity impossible or impractical.

Finally, there appears to be a lack of firm political direction. While the federal

government's northern policy statement of 1972 expressed good intentions - namely, to maintain and enhance the northern environment - those intentions have not been reflected in many of the subsequent decisions respecting resource use. In addition, most of the existing legislation dealing with resources, such as the federal *Territorial Lands Act*, lacks any statement with respect to conservation goals, provision for planning and management, or restoration after resource utilization has taken place. This lack of clear policy direction leaves government agencies, industry and the public uncertain as to the ground rules for conservation and development.

▼ Northern Canada contains most of the remaining unspoiled wild rivers in North America. (Photo credit: George Calef)





▲ Arctic Bearberry brightens the autumn tundra near the abandoned Hudson's Bay post at Wager Bay, N.W.T. (Photo credit: George Calef)

C. Conservation Defined

The Task Force has adapted from the World Conservation Strategy the following definition:

Conservation is the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations, while maintaining its potential to meet the needs and aspirations of future generations; it emphasizes the maintenance of cultural resources and representative or unique ecosystems, their ecological processes and genetic diversity.

Conservation has also been described as a concept to guide man's use of all natural resources. It constitutes a rule of conduct for survival based upon

stewardship and wise use that must underlie all decisions concerning the utilization of precious natural resources. It further ascribes an intrinsic value to natural resources regardless of any human interest that may accrue to them.

The implementation of this concept requires that a new, more enlightened approach to natural resource use be developed and become widely accepted. An 'ethic' of conservation must be adopted, which might be described as an attitude toward the use of natural resources dictated not by immediate gain or determined by the fine points of law, but by an understanding and appreciation of their inherent and endur-

ing value in the natural system.

To be adopted widely, such attitudinal change must begin in government, starting with the top.



▲ The wilderness mountains of barren-lands of the Yukon and Northwest Territories provide some of the last strongholds for the grizzly bear. (Photo credit: George Calef)

D. Conservation Principles and Goals

An effective northern conservation strategy must stand on its own and be based upon principles and goals that are not dependent on existing institutions, mandates and administrative procedures. After those principles and goals have been accepted, the new administrative procedures and respective responsibilities required to carry them into effect can then be determined.

1. The following *principles* for management should be accepted:

- a) genetic diversity of natural organisms and essential ecological processes should be maintained;
- b) resource management should reflect the concept of stewardship and should be aimed at achieving the integrated use of resources to the extent they can be made mutually compatible;
- c) sustainable utilization of species and ecosystems should be assured for the benefit of the people of the North, as well as for all Canadians; and
- d) projected benefits should meet the needs and values of the people of the North, as expressed through their participation in the conservation and development processes.

2. A comprehensive northern conservation strategy, based upon the conservation ethic and concern for stewardship, should seek to achieve the following *goals*:

▼ An Indian boy helps to smoke caribou during the spring hunt near Old Crow, Yukon Territory. (Photo credit: George Calef)



a) to manage the human use of natural resources, renewable and non-renewable, so that they may yield the greatest sustainable benefit to present generations, while maintaining their potential to meet the needs and aspirations of future generations; and

b) to establish a network of protected areas where necessary to maintain in perpetuity cultural resources and representative or unique ecosystems, their ecological processes and genetic diversity.

To achieve those goals the following steps must be taken:

- a) establish management systems that maintain and/or enhance overall resource productivity;
- b) establish a process for the selection and designation of protected areas that will contribute to the most effective management and use of the land and water resources;
- c) ensure the establishment of a land-use planning process for the implementation of a northern conservation policy and a supporting advisory mechanism as appropriate;
- d) increase the public's awareness of the need for applying the principles of conservation in the development and utilization of natural resources;
- e) increase the level of research to improve baseline data and the understanding of natural ecosystems, particularly in the marine environment, thus enabling management of land and marine resources to be more effective; and

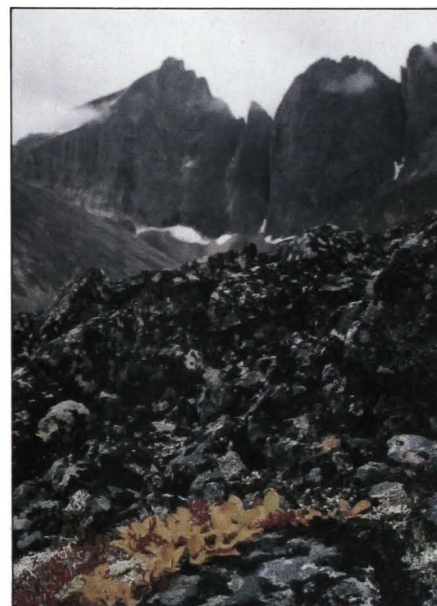
f) amend or supplement existing resource legislation in order to provide the necessary legal basis for implementing northern conservation.

The Task Force is of the opinion that sound conservation principles should pertain throughout the North. It assumes that Ministers, when considering the goals, will not differentiate between

private, territorial and federal lands.



▲ The rare and endangered peregrine falcon still nests in the Yukon and Northwest Territories. (Photo credit: George Calef)



▲ The Tombstone Mountains of the Yukon Territory offer breathtaking geologic features. (Photo credit: Government of Yukon)

E. Conservation Strategy

Traditionally, initiatives to achieve conservation in the North have tended to focus almost exclusively on attempts to protect particular geographic areas within the general expanse of land, fresh water and marine areas open to resource development. These initiatives have been inclined to foster a confrontational approach to the whole issue of conservation and have enjoyed little success.

To give effect to the conservation goals that it recommends, the Task Force proposes adoption of a strategy consisting of two mutually-supportive components - a system of integrated resource use, and a comprehensive network of areas that requires measures of special protection. Together, these two components would form a conservation strategy for all land, fresh water and marine areas of the Yukon and Northwest Territories (See Figure 1).

Philosophically, this approach recognizes the ecological and intrinsic values, as well as the economic values, of all natural resources. Practically, it accepts the need for a goal-oriented, problem-solving approach to resource management and recognizes the need for protecting particularly sensitive or unique areas as part of that management approach. Institutions must develop ways of building conservation into all resource

policies, processes and activities.

The Task Force perceives the two basic components of integrated resource management and protected area management as mutually dependent upon, and supportive of, each other. This mutually supportive relationship of the components is based upon at least two considerations. One is that even the most highly protected areas of land and sea cannot be maintained as undisturbed 'islands' if the surrounding areas are not also managed wisely. The second consideration is that resource management generally can be improved by knowledge gained from the protected areas when the latter are used for education, research or places to record long-term natural change.

1. INTEGRATED RESOURCE MANAGEMENT

In the Yukon and the Northwest Territories, the administration and management of natural resources traditionally have been carried out on a single-sector basis. For example, water is administered quite separately from land, forests or wildlife. This type of institutional separation is quite artificial and fails to take account of a very basic consideration - namely, that which is done in one sector of the resource base nearly always has an impact on the others.

What has been lacking to date is any comprehensive planning that takes account of the interrelationship between a wide variety of resources. No regional management plans have been developed, for example, to take account of the impact of hydro-electric development on fish and wildlife, or of forestry development on soil and wildlife habitat. Within recent years, some effort has been made on occasion to develop an integrated approach to resource management in respect of particular projects through the environmental impact assessment process (usually the federal Environmental Assessment and Review Process), which generally provides some opportunity for public hearings. Such an approach is frequently unsatisfactory because of the existence of time constraints and the pressures for the acceptance of unsatisfactory compromises so as to enable the project to proceed as planned by its proponents.

The Task Force considers that this underlying problem can be overcome to a very large extent through the establishment of a system for the integrated

management of resources. Under such a system, each major land or water area - such as a watershed, delta, plain or marine area - is viewed as a management unit with a certain productive capability. Account is taken of all the land, water and living resources of each unit and the relationship of units to each other. Through proper planning and active management, consideration is given to all the resource values - economic, social and cultural, including the dependency of native people upon renewable resources for country food and their traditional way of life. The objective is to develop each area in a way that will provide the best or greatest yield, measured in terms of the quality of life.

Integrated resource management requires an active, decision-oriented approach rather than one that is reactive and largely dependent upon regulation. Such management must be based upon research, inventory and evaluation and result in the making of decisions within the framework of a comprehensive planning system that provides for extensive public input and political accountability. It demands that difficult decisions be made with respect to which resources will be utilized and/or which resources will receive priority over the others.

In a region such as the Slave River valley, for example, the management system would take account of a variety of resources such as wildlife, fish, minerals, forests and water, as well as activities such as subsistence and sport hunting and fishing, trapping, mineral and timber production, flood control, farming and recreation.

In a region such as Lancaster Sound, by contrast, the resources include wildlife, marine mammals, fish, minerals, oil and gas. The activities undertaken there might range from subsistence hunting, fishing and trapping to mineral and petroleum production and tanker transportation.

The following two examples may serve to illustrate the kind of problems that can be encountered when resort is made to a decision-making process carried out in the absence of specific policy in an effort to resolve emergent land-use conflicts.

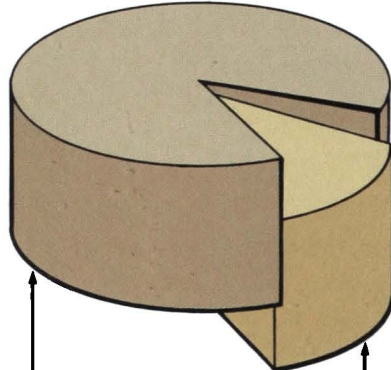
In 1978, a major area of the Yukon North Slope was withdrawn from disposition or any resource use other than those involving the traditional pursuits of native people. This was in response to land-claim negotiations, including proposals for a park or wildlife range to protect archaeological resources, the Porcupine caribou herd, and other wildlife and scenic values. Subsequent discussions among the various federal departments involved and between the federal and territorial governments failed to lead to any conclusion as to how the area could best be utilized.

In 1983, an oil company applied for shore-based facilities within the area at Stokes Point. About the same time, another company proposed to mine and export rock through yet another port. Faced with a growing confrontation between supporters and opponents of these proposals, the federal government

CONSERVATION COMPONENTS

FIGURE 1

All land, fresh water and marine areas of the Yukon and Northwest Territories



INTEGRATED RESOURCE USE AREAS

Integrated resource management to apply to all resource utilization in order to maintain the quality and biological productivity of the resource base while taking into account the needs of the resource users.

PROTECTED AREAS

Designated geographic land, fresh water and marine areas, e.g.,

- archaeological sites
- historic sites
- specific traditional resource use areas
- outstanding landscapes and marine areas
- critical fish and wildlife habitat
- unique areas for research or maintaining genetic resources.

▼ A hunter's camp in the remote wilderness of the Yukon mountains. (Photo credit: George Caief)



decided to defer any action until a number of management issues were clarified and land-claim settlements for the area were resolved.

The Western Arctic (Inuvialuit) Claims Settlement Act, proclaimed law on July 25, 1984, as well as approving and giving effect to the Agreement between the Inuvialuit and the Government of Canada, also amended the National Parks Act to provide for the establishment of a national park on the Yukon North Slope. In July, 1984, the federal government announced the establishment of a national park on the Yukon North Slope extending from the Alaska - Yukon border eastward to the Babbage River and southward to the height of land separating the Porcupine River and Beaufort Sea watersheds.

The land claims Agreement also refers to the Yukon North Slope east of the Babbage River and states that it "shall be designated as an area in which controlled development may take place, subject to the provisions of this Agreement and to the laws of general application." As well, the Agreement sets out the conditions under which "temporary use", that is active occupation not to exceed six years, of Stokes Point may occur. Thus, six years after the original land withdrawal some form of resource management is emerging, and this through a native land claim settlement.

The second example of the kind of problem that can arise in the absence of proper planning relates to the Caribou Hills, an outstanding rise of land that dominates the landscape of the Mackenzie Delta for a distance of over 40 kilometres. The landforms, treeline stands of white spruce, and several species of rare plants in the Caribou Hills combine to form an area of exceptional scientific value and aesthetic appeal. All of these were deemed to be the primary resource values. But the Hills also contain vast and accessible quantities of sand and gravel of considerable economic significance, which in the circumstances were considered to represent secondary resource values.

The oil and gas industry had expressed considerable interest in quarrying the tens of millions of cubic yards of gravel located in the most scientifically-valuable section of the Caribou Hills to supply construction materials for exploration and development activities in the region. In an effort to accommodate the needs of industry and protect the most important features of the area, a detailed geotechnical evaluation and survey of the site was undertaken in the mid-1970's, together with ecological and hydrological investigations.

On the basis of this multi-disciplinary investigation involving scientists, resource managers and engineering consultants, a resource management plan was drawn up. For scientific and aesthetic reasons, removal of gravel from the key area was not permitted. However, industry has been allowed access to gravel from an adjacent source, the development of which will result in minimal effect on the primary resource values - those involving the aesthetic and scientific features of the Hills. In



▲ The northern Yukon contains the greatest diversity of environments and living things in the Canadian North. (Photo credit: George Calef)

contrast with the Yukon North Slope issue, the entire process of resource inventory, management planning and decision making was completed in a period of 18 months.

As noted earlier, both the Yukon North Slope and the Caribou Hills cases involved resort to make-shift processes in an effort to meet development problems. While the latter appears to have been resolved satisfactorily, in the former case the issues of where and under what terms industrial development might take place still remain to be settled. In the view of the Task Force, the problems that emerged in both of these cases might well have been substantially reduced if an effective integrated resource management system of the kind we are proposing had been in effect.

In those regions that do not contain the same extensive array of resources nor generate a broad range of different activities - for example, the Sabine Peninsula of Melville Island or northern Baffin Island - management may entail less resource conflict. The management objective here would be to minimize any detrimental effects resulting from resource development and production and would include: protecting the living resources, maintaining the productive capacity of both the soil and water, protecting soil from erosion, and maintaining water in an unpolluted state.

2. PROTECTED AREAS

In addition to the integrated resource management proposal for the two territories generally, the Task Force also advocates that certain limited areas be

▼ The Bathurst Inlet region of the N.W.T. provides a fine example of tundra landscape. (Photo credit: George Calef)



set aside as part of a comprehensive network of land and/or water areas subject to special protection.

The rapid alteration of natural and man-made environments has created a need for categories of management that will restrict or control human intervention and destructive outside influences. Six such categories or systems are identified, as shown in Figure 1.

These protected areas would be designated in order to preserve their primary use for cultural, scientific, educational, aesthetic, recreational or biological purposes, so as to maintain natural conditions or preserve certain features such as artifacts in the case of important archaeological sites. (See Table 1). Such protection might be permanent, seasonal (as in the case of caribou calving grounds or migration routes) or temporary, depending on circumstances.

Within each protected area, primary and secondary uses would be identified, and the secondary uses permitted when compatible with the primary value of the area.

A carefully planned network of protected areas is required to deal with these management needs, reflecting concerns at local, territorial, national and international levels. Some territorial legislation is now in place - for example, territorial parks and heritage site ordinances - and there is a larger body of



▲ Each spring, the cows of barren-ground caribou migrate to traditional calving areas on the tundra to give birth to their young. (Photo credit: George Calef)

federal legislation based upon national objectives such as the *National Parks Act* and the *Canada Wildlife Act*. Additionally, Canada has some special obligations arising from international commitments such as those under the *Migratory Birds Convention Act*. The task here is to meet the special needs of the North while respecting the broader obligations of the national and international communities.

a) Selection Criteria for Protected Areas

In order to qualify for consideration as protected areas, land and/or waters would have to satisfy one or more of the following criteria:

i) contain sites of significant cultural, archaeological, historic or traditional resource-gathering value;

ii) contain examples at specific sites of outstanding or unique landforms or geological features such as the pingos of the western Arctic;

iii) contain habitat essential for the survival of a significant portion of a migratory bird, terrestrial or marine mammal, or marine or freshwater fish population;

iv) contain outstanding examples of representative land or seascapes;

v) contain sites necessary for the preservation of genetic diversity;

vi) contain habitat essential for the preservation and enhancement of rare and endangered species; and/or

vii) contain outstanding areas for public recreation and tourism.

Annex A provides an illustration of the manner in which the criteria might be applied to select protected areas. As noted in this Annex, the subjective nature of the judgments about the individual selection criteria is acceptable to the Task Force only because there is no obvious alternative. We believe, however, that the shortcomings inherent in such a subjective approach are offset to a considerable extent by the opportunity that would be provided through public hearings and other means to take account of the views of northern residents, resource managers and technical specialists. It is evident from the selection criteria recommended in this report (as well as in the Heritage Rivers Report cited in Annex D), that there is an obligation on specialists to make their case to

the communities through the land-use planning process that a proposed protected area is either unique or representative, or that it contains outstanding, rare or endangered features.

b) Protected Area Guidelines

The Task Force considers that the requirement for a network of protected areas in the North is beyond question. Indeed, a new or better defined category specifically to protect marine areas may be required. Whether lands are public or private, it is proposed that guidelines for the establishment of a comprehensive network of protected areas - including terrestrial and marine - be as follows:

i) protected areas should be established to protect values that will be adversely affected by human activity; the degree of protection should be consistent with the associated risk and may be permanent, seasonal or temporary; and activities that have proven to be compatible may be permitted;

ii) areas should be sufficiently large to ensure protection of those elements that are at risk, plus - where appropriate - a reasonable buffer zone;

iii) several classes of protected areas should be incorporated within a single designated area where feasible;

iv) where appropriate, alternative sites should be identified that might meet the specific conservation objectives; where comparable alternative sites exist, priority should be given to protected areas that have the lesser potential for conflict in resource use;

v) sufficient resource inventory on potential sites should be conducted to justify the need for, and importance of, a protected area prior to the final establishment of its boundaries;

vi) specific traditional resource-use areas should be considered for protection so as to contribute to the greatest extent possible to the continuation of traditional life styles consistent with the maintenance of renewable resources;

vii) evidence should be presented to demonstrate that protected area proposals take into account local knowledge and sensitivities respecting resource uses of the area;

viii) the network should be managed to promote a better understanding of conservation and, where appropriate, encourage research;

▼ Wild rivers like the Firth in northern Yukon attract ever-increasing numbers of canoeists, kayakers and white-water rafters from around the world. (Photo credit: George Calef)



▲ The Tuktoyaktuk Peninsula is perhaps the best place in the world to observe the peculiar ice-cored hills called pingos. (Photo credit: Government of the Northwest Territories)



ix) the designation of certain private lands as protected areas should not be precluded and they may become part of the protected area network under private management; and

x) provision should be made for periodic review of protected areas related to their creation, modification and management in order to ensure that the original objectives are being met.

At present, certain parts of the territories have been set aside and designated for special treatment under various systems - as national or territorial parks, for example, or as archaeological sites - that make up the existing protected area network. Presumably, such lands would be included as part of a new protected area network. Table 1 provides an outline of existing protective mechanisms and provides examples of potential approaches for establishing a comprehensive network of protected areas in future. Proposals for land withdrawals for such purposes would be subject to the selection criteria and management guidelines described above and would be viewed within the context of the appropriate system such as that embracing national parks or wildlife areas. They would also be subjected to the land-use planning process referred to in this report. In keeping with this approach, land might be temporarily withdrawn from general use as an interim measure. This would be pending consideration as to whether it should form part of a protected area on a more permanent basis and, if so, what area should be encompassed.

Over the past decade, considerable attention has been given to the importance of designating and protecting ecologically sensitive areas in the Yukon and Northwest Territories. To date, however, no such areas have been established. The Task Force believes that this component of the protected area network should be an integral part of a northern conservation strategy. Although usually small in size, such areas are important because they contain representative, unique or sensitive components of educational or research value, or sites of genetic diversity. Some of the provinces have already enacted specific legislation to provide for the designation and management of such areas, but no such legislation is in effect in the two territories. It is the view of the Task Force that legislation should be enacted to provide for the joint establishment and management by the fed-



► Areas used for nesting and feeding by sea birds such as these black guillemots require protection from pollution and disturbance. (Photo credit: George Calef)

► Muskoxen, once on the brink of extinction, are now on the increase in many areas of the N.W.T. and in northern Yukon. (Photo credit: Government of the Northwest Territories)

eral and territorial governments of a system of ecological areas. Such a system should be completed following analysis of the purposes and management needs of ecological areas and a review of the criteria and guidelines outlined in this report.

We consider that the identification, investigation, documentation, salvage and protection of archaeological resources in the Yukon and Northwest Territories have not been given adequate attention in the past by the various agencies concerned. In our judgment, archaeological heritage merits equal status with other components of a comprehensive northern conservation strategy. A policy is required, together with appropriate legislation, that recognizes that preservation of our archaeological heritage has a unique place within the protected area network with regard to management and protection.

Although not all potential marine or land areas requiring protection can be identified and/or set aside now, an effective method of identifying, evaluating and placing priorities on critical areas for designation is required. Due to lack of data and a practical system, current methods of designation are largely subjective. A substantial amount of research has been done recently, however, in an effort to develop more objective evaluation systems. Further development of practical techniques for identifying and designating protected areas should be pursued.

3. MARINE CONSERVATION

Under emerging international law, Canada has authority to implement a resource conservation/management strategy within her offshore economic zone. Canada, however, does not have either an integrated Arctic Ocean policy or legislation to provide for the integrated management of marine resources.

Such policies as have been developed deal mainly with special problems through special legislation. Indeed, a clear concept of ocean management is lacking and no clearly identified agency exists to provide leadership and coordination in the development of Arctic marine conservation policies and management plans. The Department of Fisheries and Oceans (DFO) has a mandate for *"the coordination of the policies and programs of the government of Canada respecting oceans..."*, but to date it has never fully exercised that mandate.

In any event, coordination does not of itself imply leadership nor does it necessarily provide the means for effecting the integrated management of marine resources. The Fisheries Act appears to be limited in its authority for planning and management that goes beyond regulation of harvest or provision of controls related to specific development proposals.

The same philosophical framework and principles should apply to marine resource management as apply to land.



▲ Excavation of a Thule house structure near Tuktoyaktuk, N.W.T. (Photo credit: Susan Cross, Prince of Wales Northern Heritage Centre)

However, though many parallels can be drawn between the two environments, there are differences of status, scale and knowledge with respect to the area of ocean planning and management. Several of those differences are outlined below:

a) unlike land and freshwater areas, private ownership is rarely, if ever, granted for marine areas; an ocean is a common resource that coastal states share laterally with their neighbors and seaward with the world community, although jurisdiction in some areas is uncertain;

b) the physically open nature of an ocean requires, even more than on land, a comprehensive management approach that applies the conservation ethic, from which flows a need to understand the comprehensive nature of ecological processes and systems;

c) the marine environment - influenced by salinity, currents and large-scale mobility of living matter - may not lend itself neatly to traditional land designations such as wildlife sanctuaries, and ecological areas and buffer zones; fixed linear boundaries may have little relevance for the protection of highly mobile marine species;

Table 1

Existing and Potential Approaches to the Establishment of a Protected Area Network

Components	Examples	Means of Protection	Existing Legislation		
			Federal	N.W.T.	Yukon
A. Cultural Heritage					
I) Prehistoric and historic archaeological sites	Archaeological sites such as pictographs, petroglyphs, caribou fences, rock cairns, battlegrounds, explorer sites, historic trails or settlements, and pre-historic sites and settlements	<ul style="list-style-type: none"> - Historic and archaeological sites - Territorial parks - National Parks - Museums - Heritage buildings 	<ul style="list-style-type: none"> - National Parks Act - Territorial Lands Act - Historic Sites and Monuments Act 	<ul style="list-style-type: none"> - Parks Ordinance - Archaeological Sites Regulations - Historical Resources Ordinance 	<ul style="list-style-type: none"> - Parks Ordinance - Historic Sites and Monuments Ordinance - Archaeological Sites Regulations
II) Burial grounds (non-archaeological)	Burial mounds, graves	<ul style="list-style-type: none"> - Cemeteries and burial sites 	<ul style="list-style-type: none"> - Territorial Lands Act 		<ul style="list-style-type: none"> - Cemeteries and Burial Sites Ordinance
III) Traditional resource gathering	Seabird and seaduck nesting areas, soapstone deposits, hunting and trapping sites	<ul style="list-style-type: none"> - Migratory bird sanctuaries - Wildlife reserves - Wildlife preserves and sanctuaries - National wildlife areas - National parks 	<ul style="list-style-type: none"> - Migratory Birds Convention Act - Canada Wildlife Act - Territorial Lands Act - National Parks Act 	<ul style="list-style-type: none"> - Wildlife Ordinance 	<ul style="list-style-type: none"> - Wildlife Ordinance
B. Natural Environment					
I) Outstanding and unique landmarks	Site specific features such as pingos, fossils, caves, mineral springs, dunes, badlands, others	<ul style="list-style-type: none"> - National landmarks* - Territorial parks - National parks - Ecological areas* 	<ul style="list-style-type: none"> - National Parks Act - Territorial Lands Act 	<ul style="list-style-type: none"> - Parks Ordinance 	<ul style="list-style-type: none"> - Parks Ordinance
III) Outstanding and representative landscapes	Coastlines, mountains, wild rivers, unglaciated terrain, and other representative landforms	<ul style="list-style-type: none"> - National parks - Territorial parks - Heritage trails and rivers* - Ecological areas* 	<ul style="list-style-type: none"> - National parks act - Territorial Lands Act 	<ul style="list-style-type: none"> - Parks Ordinance 	<ul style="list-style-type: none"> - Parks Ordinance

d) the interface of marine and terrestrial zones (i.e. coastal zone) unites two dissimilar systems, thus requiring special management regimes; and

e) ice cover, unique to polar regions, creates a hybrid area with both terrestrial and marine characteristics that raises new management questions in implementing a conservation strategy.

In contrast to marine areas, land boundaries are mainly well defined and accepted, the concept of land ownership is well understood, and rights and responsibilities respecting land have been developed over the years. Institutions for dealing with trans-boundary lakes and streams are in place, if not working to perfection. In respect of oceans, however, national rights and responsibilities are still emerging. Development



▲ During the ice-free periods, polar bears congregate in summer refuges where they scavenge on land or hunt seals in open water. (Photo credit: George Calef)

has moved very rapidly into the marine environment, but government management systems and research have not kept pace.

To illustrate the problem it might be noted that the environment that sustains the renewable offshore resources on which much of the Inuit population depends is particularly at risk both because of major industrial developments in the North and the shipping that supports those operations. Administrative and management techniques developed for the use and protection of land may prove equally applicable to the northern seas, but such application requires trial and verification. The problem is compounded by the fact that adequate surveillance of international shipping activities is difficult to achieve. New initiatives may be required to bring technique and knowledge to the level now demanded by energy and other potential offshore developments.

The desirability of establishing marine

Existing and Potential Approaches to the Establishment of a Protected Area Network

Components	Examples	Means of Protection	Existing Legislation		
			<u>Federal</u>	<u>N.W.T.</u>	<u>Yukon</u>
iii) Critical fish and wildlife habitat. Fish and marine mammals	- Rearing and feeding areas (fresh water and marine)	- National marine parks * - National parks - Territorial parks - Protected waters *	- National Parks Act - Fisheries Act	- Wildlife Ordinance - Parks Ordinance	- Wildlife Ordinance - Parks Ordinance
Migratory birds	- Nesting, rearing, staging, moulting and feeding areas	- Migratory bird - National wildlife areas	Migratory Birds Convention Act - Canada Wildlife Act		
Terrestrial wildlife	Calving, wintering, migrating, and feeding areas	- Wildlife reserves (national & territorial) - Protected habitat areas	- Canada Wildlife Act	- Parks Ordinance - Wildlife Ordinance	- Parks Ordinance - Wildlife Ordinance
Habitat for rare/endangered species	Whooping crane, peregrine falcons, trumpeter swans and polar bears	- Ecological areas * - National parks - National wildlife areas - Migratory bird sanctuaries	- National Parks Act - Canada Wildlife Act - Migratory Birds Convention Act	- Wildlife Ordinance	- Wildlife Ordinance
iv) Representative, unique or sensitive areas for education and research	Alpine meadows, outstanding arctic flora sites, terrestrial oases, unusual ecosystems, transition vegetation	- National parks - Territorial parks - Ecological areas * - National wildlife areas - National landmarks * - National marine parks *	- National Parks Act - Canada Wildlife Act - Migratory Birds Convention Act	- Parks Ordinance - Wildlife Ordinance - Commissioner's Land Ordinance	- Parks Ordinance - Wildlife Ordinances - Lands Ordinance
v) Sites for preservation of genetic diversity	Seed, plant and animal collection areas	- National wildlife areas - National parks - Territorial parks - Ecological areas * - Forest reserves * - National marine parks * - Migratory bird sanctuaries	- Parks Act - Territorial Lands Act - Canada Wildlife Act - Migratory Birds Convention Act	- Parks Ordinance - Commissioner's Land Ordinance - Wildlife Ordinance	- Parks Ordinance - Wildlife Ordinance - Lands Ordinance
vi) Recreation and tourism areas	Outstanding beaches, lakes, waterfalls, roadside parks	- Territorial parks - Municipal parks - National parks - National wildlife areas - Heritage rivers * - National marine parks *	- National Parks Act - Canada Wildlife Act	- Parks Ordinance - Municipal Ordinance	- Parks Ordinance - Municipal Ordinance

* Designations not currently represented in the N.W.T. or Yukon.

N.B. Polar Bear Pass is an ecological area but is protected as a National Wildlife Area.

areas is, we believe, fully borne out by the following considerations:

i) the Arctic marine environment, like the terrestrial environment, is not uniformly productive; specific areas are very productive and, thus, important to protect;

ii) marine ecosystems tend to be large and open-ended, but they contain key component areas that require protection in order to ensure the maintenance of the larger ecosystems;

iii) some form of protective status must be extended to areas that are of particular importance with respect to marine bird, fish and mammal populations - for example, bays, river mouths, upwellings and areas of land-fast ice critical to the abundance and survival of important



▲ Beluga whales migrate into northern waters each year to bear their calves in estuaries such as Shallow Bay in the Mackenzie River Delta. (Photo credit: George Calef)

species should be given high priority for protection; and

iv) representative areas require protection as the basis for scientific research, baseline data and understanding of the Arctic marine environment.

The rationale for marine area designations for special protection is clearly much the same as for land areas. Acceptable criteria for identifying and establishing protected marine areas, however, have not yet been developed in any systematic way - this, we are told, despite considerable effort by staff of the Department of Fisheries and Oceans.

A critical issue requiring consideration is the need for some agency to take the lead in establishing policy for marine conservation, to promote new management initiatives, and to serve as an active participant in the northern resource planning process. Apart from all of the



▲ After feeding in marine waters of the Arctic coastline and High Arctic Islands, seals often rest and bask on favourite rocky shores. (Photo credit: George Calef)

considerations outlined above, this process is seriously hampered by the inadequacy of the information base required for integrated marine resource management. Industry is probably now a major repository of marine research data and other information, but understandably, much of that information will be related to its specific needs. A much greater effort must be made to bring the state of knowledge required by governments to at least that for the terrestrial environment. In particular, sustained and extensive research involving comprehensive marine ecological processes and systems is required.

Finally, we consider it important to underline our obligations to other countries as they involve the preservation of marine resources. Conservation and management of marine mammals in the North cannot be effected without at least bilateral agreements or working arrangements with Greenland and Denmark in the east and Alaska/United States in the west. Discussions with these states should be initiated at an early date. Looking to the world community, Canada is a signatory to the Law of the Sea Convention and played a key role in the formulation of the conservation obligations of the Convention. Canada should now take the lead by making marine conservation and management a major component of a comprehensive northern conservation strategy.



▲ Wolves are still a part of the unspoiled wilderness of the north. (Photo credit: Government of Yukon)

F. Implementation

The test of any strategy is the success of its implementation. The Task Force believes that two major initiatives already under way, briefly referred to earlier, can play an important role in the development of a northern conservation strategy. These and other key supportive elements are outlined below.

1. MECHANISMS FOR IMPLEMENTATION

a) Land Claims Settlements

The comprehensive land claim agreements for the Inuvialuit of the Western Arctic and the Inuit of the Eastern Arctic both contain provisions related to conservation. It may be expected that the Dene of the Mackenzie Valley and the Indians of the Yukon will have similar provisions in their agreements.

Although each of the agreements will have unique features that reflect social and cultural values of the particular native group, as well as the natural fea-

tures of the region, they are also likely to reflect conservation themes that are common to all.

For example, each agreement makes provision for a Wildlife Management

▼ Huge herds of barren-ground caribou numbering in the tens of thousands travel over the tundra during mid-summer. (Photo credit: George Calef)



Board that will provide native groups with a major voice in all decisions respecting wildlife use and conservation. In advising Ministers, these Boards will, in part, provide advice on harvesting with respect to limits, allocations and methods.

Each agreement will provide for the formal transfer of various rights with respect to certain lands to the native people. The principles guiding land selection are generally the same in each agreement and include the following:

i) preservation and enhancement of the cultural values of native people;

ii) protection and conservation of the wildlife and productivity of the land;

iii) protection of hunting, trapping and fishing areas;

iv) protection of lands of historical and spiritual value; and

v) provision for present and future economic development.

The resolution of the four northern land claims will result in native people acquiring some very specific rights - for example, rights with respect to wildlife harvesting, resource management and ownership and economic measures - as well as ownership of substantial areas of land. In addition, however, the comprehensive land claim agreements contain a substantial compensation component.

Under the Inuvialuit settlement for example, a developer, before gaining access to Inuvialuit lands, must enter into a Participation Agreement with the Inuvialuit Land Administration. Such agreements may include specific conservation measures such as wildlife compensation, restoration and mitigation as well as non-conservation provisions such as land rent and equity participation.

The Western Arctic (Inuvialuit) Claims Settlement Act, which as noted earlier, was proclaimed law in July, 1984, gave effect to the earlier Agreement signed between the Inuvialuit and the government of Canada. Several conservation measures are contained in the Agreement, including the establishment of a national park on the Yukon North Slope and the creation of an Environmental Impact Review Board, a Wildlife Management Advisory Council and a Fisheries Joint Management Committee. As well, the Agreement provides for wildlife compensation, and wildlife and fisheries management regimes.

It is the view of the Task Force that many of the components of the Inuvialuit settlement may be more effective in achieving the goals of conservation than much of the current resource management legislation. The Task Force believes, however, that it is important to obtain legal clarification of the applicability of conservation laws to private lands, including lands acquired by native people through land claim settlements. It is essential to any effective conservation strategy that the laws of general application pertaining to natural resources and conservation apply to all lands in Yukon and the Northwest Territories.

b) Northern Land-Use Planning

The ministries to whom this report is submitted have indicated that they consider the land-use planning process a principal vehicle in the implementation of the recommendations of the Task Force on Northern Conservation. The land-use planning agreements between the federal and territorial governments (only the one with the Government of the N.W.T. had been signed at the time of writing this report) state that "the plans will provide for conservation, development, and utilization of land, resources, inland waters and the off-

shore". A further stated purpose of the agreement is "to plan ahead and to anticipate, resolve, and minimize competing demands or land-use conflicts to optimize allocation or best use of resource lands and to ensure integrated management of resources." The agreements provide for the establishment in each territory of a land-use planning commission. Each commission will be made up of members drawn from outside of the ranks of government. The commissions will have responsibility for ensuring plan development and public participation, for providing recommendations on plans and on the planning

▼ Walrus are hunted by northerners as part of the renewable resource economy so important to their lifestyle. (Photo credit: Government of the Northwest Territories)





▲ Polaris Mine on Little Cornwallis Island is an example of a modern operation. (Photo credit: Government of the N.W.T.)

process, and for monitoring implementation to determine the adequacy of plans.

In the judgment of the Task Force, however, it is important that such land-use agreements be supplemented by a clear statement outlining the conceptual framework that should be covered by such plans, indicating the manner in which they should be developed, and suggesting the guidelines these plans should provide to assist decision makers in their task. We further believe that, for the planning process to be fully effective, it must eventually be based in legislation.

On June 18, 1984, the Government of the Northwest Territories and the Government of Canada signed a Letter of Agreement on Northern Land Use Planning. The Task Force notes the following statement contained in the Letter of Agreement:

"This agreement is in no way intended to supplant or modify the current jurisdictional authorities and responsibilities of the parties involved."

This report deals later with the question of institutional arrangements and, in contrast with the intent of the Letter of Agreement, one of the Task Force recommendations concerns the devolution of certain powers from the federal government to the territorial governments.

It is the view of the Task Force that the land-use planning process, when fully operational, can form an important mechanism in the implementation of a northern conservation strategy. It is based on an extensive public involvement and, hence, reflects the priorities and values of those involved in the planning area. In addition, the process as envisaged is also important because of the ultimate involvement of Ministers in the making of decisions. This extensive involvement of the public and of political leaders in the process can have a significant influence in persuading prospective users of resources to meet the conservation requirements.

The Task Force is concerned with the lack of marine specialists involved in resource planning. It notes that the Inuit, because of their extensive experience with and knowledge of Arctic waters and ice, can make a significant contribution to marine resource management issues. It is clear that their knowledge should be utilized, in concert with that of the scientists and planners, in the development of both management processes and regional plans. Indeed, it is essential that communities throughout the North should be actively involved in the planning process to ensure consideration of local need and subsequent community support for the plans that are eventually adopted.

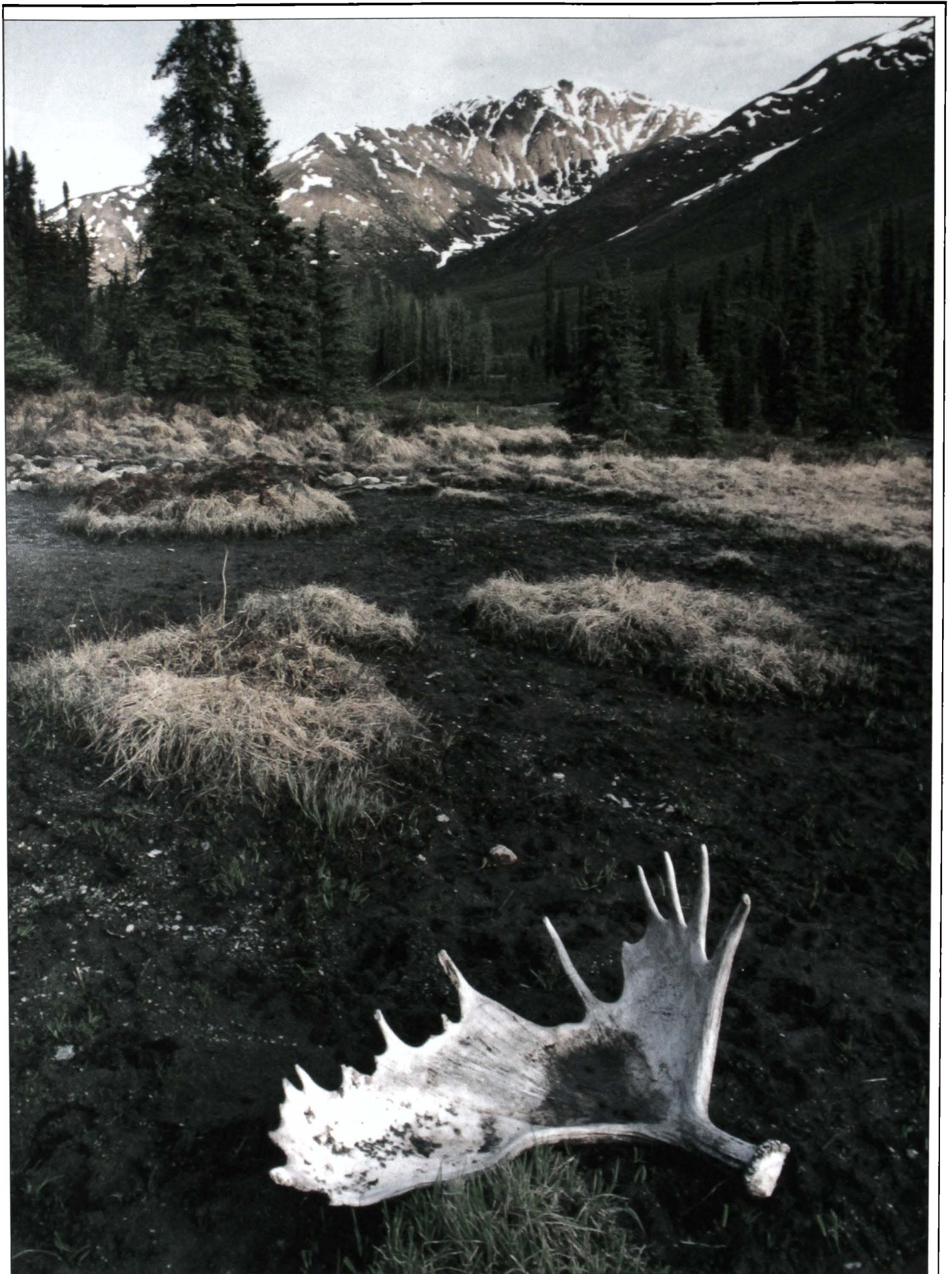
We also wish to register a further concern with respect to the length of

time it has taken to implement the land-use planning process. For example, the Agreement between the Government of Yukon and the Government of Canada had not been signed at the time of writing. Even if the planning process were to get underway in the latter part of 1984, it is highly unlikely that any regional plan could be completed and put into effect before 1986, at the earliest. It would also appear unlikely that plans for the entire North will be completed before 1993.

The absence of a functional mechanism to implement a conservation strategy will result in continuation of the present make-shift resource management process that frustrates development plans and places areas in need of protection at risk. To make the necessary decisions arising from its report, the Task Force strongly urges the adoption of an interim mechanism until a fully operational land-use planning process is in place.

c) Conservation Advisory Board

It is obvious from the previous discussion of northern land-use planning that some form of interim mechanism - such as a Conservation Advisory Board - will have to be put in place if government wishes to begin to implement a northern





▲ Migratory birds such as this red phalarope come from the length and breadth of the Americas to nest in the north. (Photo credit: George Calef)

◀ Big game animals such as Dall's sheep, caribou and moose come to mineral licks like this one in the Selwyn Mountains, N.W.T. each spring to replenish their depleted stores of minerals. (Photo credit: George Calef)

conservation policy as a matter of some urgency. The need for such a mechanism is reinforced by the fact that there are a number of decisions that have to be made at an early date with respect to specific development activities.

A number of representations to the Task Force have underlined the desirability of having one or more advisory bodies reporting, on a continuing basis, to Ministers with respect to particular issues or areas that fall outside the normal purview of resource planning staffs. We accept the thrust of this argument, but it is our conviction that this requirement could be fulfilled by a single advisory body. We propose the formation of a Conservation Advisory Board composed of about 12 members to be drawn from a wide area of interest and experience.

The members of the Conservation Advisory Board should be selected through consultations among the three Ministers to whom this report is addressed. The Board should be established and commence work as soon as possible to maintain initiatives developed to date. This might include consideration, for example, of the means of implementing some of the proposals put forward in this report. The Board might also serve as a public forum for early discussions of the Task Force report. As well as advising Ministers on policy matters over the long term, the Board would provide advice on specific issues as required from time to time.

d) Institutional Arrangements

Two of the problems identified earlier in this report are the present reactive regulatory process of decision-making respecting resource conservation, and weaknesses stemming from institutional competition between government departments and agencies. To bring about change, a more forward-looking, action-oriented approach by government is required so as to make possible the sound management of our many resources on an integrated basis. Some restructuring of institutions and organizations seems essential to create the environment within which such change could occur.

There is some appeal inherent in the notion that all northern natural resource administration and management be consolidated within a single department as one means of achieving an integrated approach. (One example of resource management problems that are created by the present arrangements relates to Yukon placer gold mining. Mining and water are administered by DIAND, fish habitat is managed by DFO, and Department of the Environment administers Section 33 of the Fisheries Act which deals with the deposition of deleterious substances.) The present size of the federal departments and their national and international obligations, however, make that difficult - if not impossible - to achieve. Furthermore, consolidation within such a super-department would

not, of itself, guarantee more effective resource management. In our judgment, the best solution is to adopt a series of important steps at both the federal and territorial level.

The Task Force sees the need for a uniform federal approach with respect to conservation. Recognizing the difficulty - and perhaps the impracticality - of establishing a super-department, we propose as an alternative that a new Cabinet Committee on Northern Natural Resources be created comprising those federal Ministers having a responsibility for such resources. Such a Committee would not only provide the essential political direction that is required, but it would also provide a much higher profile at the national level with respect to the proper conservation of the North's natural resources.

The second step is for individual federal departments that have responsibility for more than one resource - for example, land, water, mines, parks or wildlife - to develop an integrated approach to their management. At present, the prevailing practice is to manage each resource as distinct and separate from the others, rather than on an integrated basis that takes account of the extent to which such resources are often interrelated and interdependent. In the case of other departments, there may be only one resource administered - for example, fisheries - but there may be several different and separate areas

of administration, which also may result in a departure from a concerted, integrated approach. All agencies must be required to adopt a coordinated system of management and agreed-upon goals.

While there are at present important limits on the natural resources under their control, the territorial governments operate very close to the people whose daily lives are affected by resource use. The need for integrated resource management is, thus, just as great at this level. However, unlike the federal government, a single department in each territory responsible for the administration and management of all of the natural resources under territorial government control is both possible and desirable. The Task Force believes that management of natural resources should be undertaken as closely as possible to the people affected. One of the first subjects to be considered in this respect should be the transfer of responsibility for freshwater fisheries management to the territories on a basis similar to that now in effect with provincial governments.

As explained earlier, ocean management poses rather different issues than those with respect to land and fresh water. The Task Force considers the same philosophical framework and principles for conservation should apply. However, although the marine component of northern conservation should be dealt with through the same planning process as for land, the federal government should maintain the major role in the management system. In particular, the Department of Fisheries and Oceans should exercise its mandate to provide leadership in Arctic marine conservation through the following means:

- policy direction;
- identification of conservation requirements;
- coordination of interdepartmental activities;
- promotion of marine conservation nationally and internationally; and
- public information.

Given the present pace of development in northern offshore waters, two urgent requirements are the development of:

- i) a marine conservation policy and plan to guide resource allocations and decisions; and
- ii) a process for resolving conflicts between the public, government and industry.

The federal Environmental Assessment and Review Process, established to examine the possible impacts on the environment of specific development proposals, should not be used to attempt resolution of potentially conflicting interests or uses. It cannot replace a land-use planning process.



▲ These highly eroded mud hills on the Hayes River represent one of many unique geological features left behind by the ice-age. (Photo credit: Government of the Northwest Territories)

e) Conservation Management Agreements

As noted earlier, one of the problems that the Task Force feels must be addressed is the heavy reliance on a restrictive system of regulation. Rules, prohibitions and penalties cannot serve to meet the problems posed by the impact of resource development upon the northern environment. The vastness of the North alone makes it almost certain that a narrowly-focussed administrative approach to resource management will fail. This is not to suggest that there should be no rules and regulations for resource development activity. Rather, it is to urge that new, more imaginative and forward-looking ap-

proaches to management be devised.

One approach might be to place additional responsibilities and obligations for resource management on industry. Such responsibilities would be formalized through a contractual arrangement, in the form of a conservation management agreement, between the licensee and government.

Conservation management agreements should - depending on circumstance - include not only commitments to adopt sound conservation practices in the conduct of a developer's operations, but also commitments to undertake special enhancement, restoration or protection programs or, where applicable, to manage protected areas. The provisions of such agreements would

differ according to the nature of the development and the type of area in which it took place - for example, offshore, tundra or forest.

It should be noted that such agreements would not be confined to a description of how a licensee is to comply with regulatory requirements such as minimizing terrain disturbance or water pollution. Rather, they would describe provisions whereby the developer would share with government the responsibility for resource management, with the ultimate objective of achieving a net environmental gain.

The following existing examples illustrate the type of provisions that might be included in a conservation management agreement:

i) Research

With respect to a pipeline right of way, the proponent would conduct:

a) on-site studies related to, for example, erosion control and slope stabilization in permafrost terrain and/or river crossings; and

b) field studies to develop special seed mixes and techniques for revegetation in various climatic regimes.

ii) Inventory Surveys

With respect to a gas-gathering system in the western Arctic, the developer would:

a) gather geotechnical information related to permafrost and ice-content that could also aid in the planning of public works and other projects in adjacent areas; and

b) conduct surveys related to fish and marine mammals in the Beaufort Sea.

iii) Data Collection and Monitoring

With respect to a mining operation in the eastern Arctic, the operator would:

a) install, monitor and maintain stream measurement and weather data instruments; and

b) collect and compile all relevant data.

iv) Enhancement Programs

With respect to a forest operation in southwest Yukon, the licensee would:

undertake, at his expense, silvicultural treatments of cut-over areas, including scarification, seeding, planting and fertilizing. The increase in the volume of the allowable cut attributable to those treatments would be available to the licensee at a reduced stumpage charge.

Similar arrangements will pertain to at least some of the land claim settlements. For example, as was noted earlier, under the Agreement between the

Inuvialuit of the western Arctic and the Government of Canada, exploration companies will have to negotiate participation agreements with the Inuvialuit in order to gain entry to their lands. These participation agreements will likely include conservation provisions because the Inuvialuit lands, as private lands, will no longer be subject to control under the Territorial Land Use Regulations. Such conservation agreements would have to dovetail with conservation requirements respecting lands bordering the Inuvialuit lands, but they could provide the means of exacting higher standards and better compliance

than are gained under present legislation.

The success of conservation management agreements will depend in large part on the degree to which the public, particularly local residents, are involved.

▼ Pure white Dall's sheep range throughout the Yukon and the Mackenzie Mountains in the Northwest Territories. (Photo credit: George Calef)





▲ Moose are the mainstay of native hunting in many northern forested regions. (Photo credit: George Calef)

► The Arctic seas contain many highly productive areas requiring protection. (Photo credit: George Calef)

f) Communications Programs

Conservation is not a resource discipline or technique of management that is capable of being taught or dealt with in the normal administrative way. It is, rather, a way of perceiving things, of applying an attitude of stewardship to all resource use.

Constructive public participation in the northern conservation strategy will depend upon an informed public, both in the North and in the South. It is critically important, therefore, that a well-developed information-education component form part of a new approach to northern conservation. That program should be addressed to all participants - governments, industry and the public.

One-way information, however, does not ensure common understanding or consent. It does not constitute communication. There must be dialogue within and among governments, industry and the public if the conservation strategy is to be made effective.

Training of government staffs, industry representatives and elements of the public with respect to many aspects of conservation will be necessary. As with information, education and communication, there is no single or 'best' approach to training. But there is a considerable body of experience available. Techniques that have proved effective should be adapted to northern requirements. Of critical concern will be continuity of programs and appropriate funding.

g) Research

The Task Force has not included among its recommendations an increase in or special direction for research. Enough data are already available to begin implementation of those recommendations, and possible gaps in information should not be permitted to delay positive action. The Task Force is very aware, however, of the need for adequate research, the development of inventory data, and monitoring as basic tools for land, fresh water and marine resources management, as well as for the preliminary processes that we propose. Both integrated resource management and planning will require that a common data base be used by all participants in those processes. Information gathered in a random way will not be sufficient for the proper implementation of the conservation strategy. Marine conservation, in particular, requires attention to bring the level of knowledge of the ecosystems of Arctic waters to that required for ocean management within an integrated system.

2. LEGISLATIVE BASE

A large body of existing federal and territorial legislation provides an important part of the foundation required for the establishment of a sound northern conservation strategy. There are at least 40 Acts or Ordinances related to the administration, management and protection of the natural resource base - land and sea. Additionally, Canada is party to a considerable number of international treaties that have relevance to the North, particularly the sea. It would seem, then, that there are no major legal barriers to implementation of a desirable conservation strategy.

Examination of the situation, however, reveals a number of weaknesses and a few gaps in legislation. The more notable of these are as follows:

a) few of the acts provide a frame of reference directed to achieving active management of natural resources. Where wide discretion is permitted in their application, there is little guidance for the individual so empowered. Hence, the administrator must rely on regulatory restrictions, rather than management principles;

b) much of the legislation is sectoral, single in purpose and regulatory, rather than management-oriented. Prepared in response to existing problems, there is little or no provision for planning and





▲ Biologist weighing and banding young gyrfalcons in their nest. (Photo credit: David Mossop)

▶ This cabin at Dalton Post in the Yukon typifies the many relics of early exploration of Canada's North. (Photo credit: Government of Yukon)

integrated resource management. For example, there is no marine conservation legislation that is directed to either of these ends;

c) duplication occurs between a number of acts and, in the case of some, jurisdiction is shared by two or more departments. This leads to inaction or conflicting action due to lack of clear mandate;

d) legislation is divided between the federal and territorial governments. The ability of the territorial governments to fulfill their apparent mandates is severely constrained by their lack of control over water and land;

e) no legislation provides for the management of forests in the territories, and management capability under the Fisheries Act is significantly restricted;

f) legislation relating to the establishment of ecological areas, preservation of cultural sites, or the designation and management of marine conservation areas is either of uncertain application or is lacking;

g) no comprehensive means exist to provide for the preservation of archaeologically important areas; and

h) conservation management agreements with industry may now be possible, but the intent is not spelled out clearly in legislation.

The legislative situation is sufficiently complex that the reader is referred for further information to the relevant background documents and to Annex B. It is clear that some legislative gaps must be filled. As well, there must be an in-depth review and updating of existing legislation and regulations to provide for active management of resources. That will take considerable effort, but it is an essential prerequisite for full implementation of the conservation strategy.





G. Summary and Conclusions

The Department of Indian Affairs and Northern Development recognizes that the stated goals of the government's conservation policies have not been fully realized. It seeks a northern conservation policy and implementation strategy aimed at establishing a cooperative relationship based on a reasonable balance between conservation and development - to the extent that is possible.

The existing reactive regulatory approach to resources administration poses a major problem, however, because it is outmoded and quite inadequate to achievement of the kind of balance described above. A northern conservation strategy cannot be effectively implemented until a new process is substituted that is more management oriented and expressive of the public will.

The Task Force sees conservation as embracing human activity in both development and protection of the North's natural resources. It is to be achieved through the managed use of natural resources for present and future generations, while preserving in perpetuity representative or unique examples of cultural areas and ecosystems for their intrinsic value, scientific importance and/or continuing benefit of mankind. Six shorter-term steps have been identified to achieve these objectives (in Section D on Conservation Principles and Goals). Additionally, however, a basic philosophy of conservation is required. The stewardship of resources must underly all actions by government, industry or other users. Based upon that concept, four principles for management of resources have also been identified.

Underlying the recommendations of the Task Force is a two-fold approach to conservation that provides for balanced, integrated resource use for most re-

gions of the North and establishment of a comprehensive network of areas that require special protection for a variety of reasons.

The land and water area allocated to integrated resource-use management would be utilized for activities producing economic, social and cultural benefits for people of the North, in particular, as well as for other Canadians. The management would seek to integrate or blend the various resource-use potentials in such a manner as to yield the greatest benefits, as measured by quality of life. This would require sound research, planning and implementation, as well as hard decision-making.

By contrast, protected areas would be managed to permit either no development or only such use of resources as could be undertaken without jeopardy to the resource that prompted the institution of special protective measures in the first place. The protected area network would comprise categories of use based upon accepted world standards, with areas designated for inclusion according to established criteria. This does not imply a totally closed or static network, but rather one of some agreed dimensions to which areas could be added or removed with changing knowledge. This would be done according to some rigorous process that denies capricious meddling. A Conservation Advisory Board would be established to advise Ministers on this and other matters relating to the conservation strategy.

Eight mechanisms or procedures are proposed for implementation of the strategy. The first two, the native land claim settlements and the land-use planning process, are already in the course of being put in place. The latter, in particular, is considered a major vehicle for implementing the conservation strategy. However, key elements of im-

plementation are found in five additional action proposals: formation of a Conservation Advisory Board; the use of conservation management agreements with industry; major communications programs; research; and the updating and infilling of the legislative base to reflect new policy and strategy. Finally, changes in institutional arrangements are proposed to provide for the policy decision-making and program focus that must underly a successful conservation strategy.

In the final analysis, however, only sustained political will and continuity of direction on the part of the three governments can guarantee the successful attainment of northern conservation goals.

◀ The ice-rich soil on the Yukon coastal plain cracks to form patterned ground. (Photo credit: George Calef)

▼ Trumpeter swans concentrate in the open waters of the large lakes of the southern Yukon during spring migration. (Photo credit: George Calef)



H. Recommendations

To achieve the stated goals the Task Force puts forward the following recommendations, all of which it believes are capable of implementation in the next two years if they are accorded sufficiently strong political support.

POLICY BASIS

Institute a northern resource conservation policy, supported by decision-oriented management practices and directed to achieving the goals set out in this report. This policy should have a status equal to that of policies focussing on development. It can, in our judgment, be achieved by implementing the following recommendations.

CONSERVATION STRATEGY

1. *Integrated Resource Management*

a) establish an integrated resource management process for land, fresh water and marine areas based upon the deliberate integration of various uses and values in a way that will provide the greatest yield in terms of quality of life; and

b) give priority to the preparation of integrated resource management plans for areas of particular resource-use conflict such as the northern Yukon, the Mackenzie Delta - Beaufort Sea and Lancaster Sound.

2. *Protected Area Management*

a) establish immediately a comprehensive network of protected areas;

b) designate the protected areas according to a predetermined set of criteria;

c) establish without delay those protected areas already sufficiently well documented that meet the criteria;

d) withdraw from general use other endangered potential protected areas, the status and boundaries of which would not be finalized until subjected to the land-use planning process;

e) accompany all withdrawals with a timetable for action and final decision;

f) review of all withdrawals after three years by the responsible legislative authority; and

g) issue a public statement explaining the reason for the revocation of protection previously applied to a given area.

IMPLEMENTATION

3. *Land-Use Planning*

Implement the land-use planning agreements between the Governments of Canada, Yukon and the Northwest Territories as the basic vehicles for effecting the northern conservation strategy, including the marine resources conservation component.

4. *Conservation Advisory Board*

Establish a Conservation Advisory Board consisting of experienced individuals from a wide constituency of interests to undertake both an interim and long-term role as follows:

Interim Role

a) aid in the implementation of Task Force recommendations, in concert with the land-use planning process, over the next two years;

b) facilitate the establishment of a system of protected areas and early designation of key areas;

c) provide advice to the appropriate legislative authorities on land withdrawals pending possible designation as protected areas until the land-use planning authority is in place and fully operational.

Long-term Role

d) provide the public with a forum on broad matters of northern conservation policy and strategy; and

e) provide ongoing advice regarding northern conservation policy and strategy to the appropriate Ministers of government.

5. *Institutional Arrangements*

a) establishment of a Cabinet Committee made up of those federal Ministers having a responsibility for northern natural resources to ensure a common federal response to conservation issues;

b) consolidation of all territorial government responsibilities for administering and managing land and other natural resources within one department in each of the territorial governments to ensure a common territorial response to conservation issues;

c) integration of the administration and management of natural resource programs by any territorial or federal government department having responsibility for more than one resource;

d) acceptance and implementation by the Department of Fisheries and Oceans of its legitimate responsibility as the lead agency for Arctic marine conservation; and

e) development of federal-territorial agreements whereby the territorial governments carry out resource administration and management including freshwater fisheries either by transfer or on behalf of the federal government under federal legislation.

6. *Communications Programs*

Make special efforts to undertake a communication program related to northern conservation in concert with the land use planning process. As a key element of strategy implementation, governments should reinforce programs for information, education, communication and training to develop:

a) early understanding of the northern conservation strategy and implementation process;

b) long-term understanding and acceptance of the conservation ethic and principles;

c) two-way communication among government departments and between government and the public; and

d) effective participation by local resource users in natural resource management.

7. Legal Requirements

a) modify legislation to provide a conservation/management frame of reference and to reduce or eliminate existing or potential conflict or duplication (for example the conflict between the Fisheries Act and the Yukon Placer Mining Act);

b) enact legislation to fill present legislative gaps, including provisions for comprehensive fishery resource management, forest management, the establishment of marine and terrestrial protected areas, and protection of cultural heritage resources including archaeological sites;

c) supplement existing legislation to provide for conservation management agreements between industry and government, and other similar management mechanisms in order to implement integrated resource management;

d) enact federal marine legislation to give effect to Canada's recognized offshore jurisdiction to implement and enforce effective conservation measures respecting the marine environment; and

e) ensure that the laws of general application pertaining to natural resources and conservation apply to all land in the Yukon and the Northwest Territories.

▼ Stone cairns called inukshuks mark an area traditionally used by Inuit hunters on Victoria Island, N.W.T. (Photo credit: George Calef)



Annex A

APPLICATION OF SELECTION CRITERIA FOR PROPOSED PROTECTED AREAS

1. Introduction

A key recommendation in this report is that while a system of integrated resource use should be developed for the greater part of the territories, provision should also be made for the protection of certain special areas, which have been termed 'protected areas'. These would be selected for designation as protected areas in accordance with a predetermined set of criteria.

Information presented to the Task Force indicated that one reason why proposals for protected areas often reach an impasse is that neither proponents nor those who must make decisions about the sites proposed for protection have a workable set of criteria on which to make a proper evaluation. The Task Force considered three steps that might lessen this difficulty:

Step 1 - Selection Criteria

- to be considered as a protected area, a site must satisfy one or more of several selection criteria.

Step 2 - Evaluation Criteria

- if there is more than one proposal to designate a protected area that would be representative of a given region or ecological zone, then selection of the best area from among the candidate proposals may require the use of other, more detailed evaluation criteria.

Step 3 - Protected Area Guidelines

- if a proposed site meets one or more of the specified selection criteria, certain guidelines should be followed for the designation and management of the selected protected areas.

Background documents reviewed by the Task Force revealed recurring proposals for a sequence of steps similar to the three listed above. It is not clear, however, whether such steps are of practical assistance to a Minister faced with the necessity of arriving at a defensible decision or whether they would

subsequently help a proponent or opponent understand the reasons for any given decision. Is it helpful, and if so, at what stage should selection criteria of a technical nature be imposed upon a process that ultimately ends with a political decision?

The Task Force decided to test the three suggested steps by applying the criteria and guidelines to some areas currently proposed for protection. This annex outlines the nature of that test.

2. Background

The recommended approach, one in which protected areas are designated within an overall system of integrated resource use, is actually not a new idea. A 1970's example of a conceptually similar approach is useful to review here because it is, in a sense, a "real-life" test of the approach recommended by the Task Force. The example has its origins in the Expanded Guidelines for Northern Pipelines of 1972.

The 1972 pipeline guidelines stated that in relation to certain pipeline corridors the government will:

...identify geographic areas of specific environmental and social concern or sensitivity, areas in which it will impose specific restrictions concerning route or pipeline activities, and possibly areas excluded from pipeline construction. These concerns and restrictions will pertain to fishing, hunting, and trapping areas, potential recreation areas, ecologically sensitive areas, hazardous terrain conditions, construction material sources, and other similar matters. Statements announcing the above will be released through the office of the Director, Environmental-Social Program, Northern Pipelines.¹

In 1973, the Director, Environmental-Social Program, Northern Pipelines, commissioned a study to test the practical application of Guideline Number 4 by requesting documentation of an area worthy of exclusion of pipeline-related activities. The resulting report dealt with an upland area around Campbell Lake, near Inuvik, that was proposed for exclusion of pipeline construction activities "to protect the unique peregrine falcon (*Falco peregrinus anatum*) population."² This proposed area of exclusion

was not acted upon by government in the context of this guideline, nor did the terms and conditions laid down in Volume II of the Report of the Mackenzie Valley Pipeline Inquiry, conducted by Mr. Justice Thomas Berger, call for the Campbell Hills area to be given special protective status. In the meantime, the Canadian Wildlife Service proposed the establishment of a 172 square-mile "Campbell Lake Hills National Wildlife Area" under the Canada Wildlife Act.³ Without documenting all the intermediate steps of the decade since nomination of the Campbell Hills area, it is noteworthy that in 1984 this area is scheduled to be designated by the Government of the Northwest Territories as the Campbell Hills Territorial Park.

Coincident with the events outlined above, the two northern panels of the Canadian International Biological Programme (IBP) submitted applications to the Minister of Indian Affairs and Northern Development in 1975 requesting that several nominated areas be designated as ecological sites. One such nomination was the Campbell Hills site, referred to above, and another was the Willow Lake (Brackett Lake) area near Fort Norman.

These two nominated sites - Campbell Hills and Willow Lake - were selected by the Task Force for a test of the suggested approach. The candidate sites seemed appropriate to consider in such a test because both areas contain biological resources and habitats of recognized significance. Location of both of these sites within the Mackenzie valley region also eliminates a number of variables that one would need to consider if the Campbell Hills site were to be compared with a candidate site in the Yukon or in the eastern Arctic region. The differing fate of these two concurrent applications - with one candidate site (Campbell Hills) to be given protective status as a Territorial Park and the other site (Willow Lake) receiving no special designation in the last decade - adds to the interest in these two areas for a test of the selection criteria and protected area guidelines considered by the Task Force.

These two sites were originally proposed for very different reasons. Peregrine falcons and unusual assemblages of plant species were the key features to be protected on the Campbell Hills site. The key features identified for protection in the Willow Lake site were a large area of wetland of a kind relatively uncommon in the Mackenzie Valley region, an important staging area for migratory waterfowl, and significant resource-harvesting values. Because these two candidates were proposed on their own merits and for different reasons, they were not intended to be alternative choices for a protected area that would be representative of the Mackenzie Valley region. Therefore, only two of the three decision-making steps considered by this Task Force need to be addressed. Do each of these candidates meet one or more of the seven selection criteria described in Section E.2(a) of this report (Step 1)? If so, are the sites amenable to the suggested protected area guidelines listed in Section E.2(b) (Step 3)?

¹ Guideline Number 4 of the 1972 Expanded Guidelines for Northern Pipelines, cited on p. 189 of Report Number 74-17 of the Environmental-Social Committee, Northern Pipelines (1974) entitled *Mackenzie Valley - Northern Yukon Pipelines, Socio-Economic and Environmental Aspects*.

² Surrendi, D.C. 1974. Campbell Lake peregrine falcon nesting area: Example of an environmental exclusion in support of Guideline Number 4, 1972 Revised Northern Pipeline Guidelines. Unpublished report submitted to the Environmental-Social Program, Northern Pipeline.

³ Windsor, J. and A. Gill. 1975. A proposal to establish the "Campbell Lake Hills National Wildlife Area". Northwest Territories. Unpublished report prepared by Canadian Wildlife Service, Edmonton. 64 pp.

3. A Test of Step 1 (Selection Criteria)

The Task Force is recommending that to qualify for consideration as a protected area, the lands or waters (fresh water or marine) to be protected must satisfy one or more of seven criteria. Based on information presented in the application documents for the Campbell Hills and Willow Lake (Brackett Lake) sites, the following table provides a subjective evaluation of the two sites in relation to the seven specified selection criteria.

It can be argued that the yes/no choices in the accompanying table are extremely subjective, but the Task Force does not believe this is reason to reject the approach; background documents reviewed by the Task Force suggested that there is not, in fact, any practical alternative to the subjective judgments required in Step 1. The Task Force concluded that a workable system of nominating sites as protected areas can be built around the seven selection criteria listed in the summary table above.

This conclusion is supported by a recent statement by Parks Canada with respect to establishment of the proposed Canadian Heritage Rivers System.⁴ The natural heritage values, human heritage values, recreational values and integrity guidelines specified for the selection of Canadian heritage rivers include at least five of the seven selection criteria listed in the table following (a, b, d, f, and g). In addition, outstanding natural heritage value will be recognized for a river environment if it includes "areas where outstanding concentrations of plants and animals of Canadian interest and significance are found". If the latter is taken to have the same intent as the phrase "habitat essential for the survival of a significant portion" of a bird, mammal or fish population, then there is even more in common

	Campbell Hills Site	Willow Lake Site
a) contain sites of significant cultural, archaeological, historic, or traditional resource-gathering values?	no	yes
b) contain examples of outstanding site-specific or unique land-forms or geological features?	no	no
c) contain habitat essential for the survival of a significant portion of a migratory bird, terrestrial or marine mammal, or marine or freshwater fish population?	yes	yes
d) contain outstanding examples of representative land or seascapes?	no	no
e) contain sites necessary for the preservation of genetic diversity?	yes	no
f) contain habitat essential for the preservation and enhancement of rare and endangered species?	yes	no
g) contain outstanding areas for public recreation and tourism	no	no

between the Heritage River selection criteria and the selection criteria recommended by this Task Force.

The criteria for selection of Canadian Heritage Rivers could not have reached their present published form without approval of all or most of the provincial, territorial and federal agencies that participated in the proposed Canadian Heritage River System. In this sense, they have already withstood considerable testing. Because those guidelines are so similar - both in intent and wording - to the selection criteria recommended here, the latter should be expected to enjoy an acceptability comparable to the Heritage River selection criteria.

Rivers link the land to the sea by a variety of functional processes. For this reason, it is hard to imagine why selection criteria acceptable for designation of Heritage Rivers would not also apply to land bordering the river or to estuaries, bays or areas of land-fast ice near a river's mouth. Some of the natural heritage values specified for rivers in the Parks Canada report cited earlier refer to features "along its course", which could mean lakes as well as adjacent lands. Furthermore, the integrity guidelines for Heritage Rivers cannot be fulfilled without attention to land areas and lakes that interact with the river. For all of these reasons, the Task Force endorses the selection criteria specified for Heritage Rivers in Canada and urges that comparable criteria be applied to the selection of land, freshwater and marine protected areas in northern Canada. The selection criteria listed in Section E.2(a) of this report are considered to meet this suggested compatibility with the Heritage Rivers approach.

4. A Test of Step 2 (Evaluation Criteria)

Several submissions to the Task Force suggested additional evaluation criteria to consider when placing priorities on nominated protected areas. This suggested approach is significant only for protected areas that are nominated as representative sites of a region or an ecological zone. By definition, if a site is representative, there must be other areas like it elsewhere and, this being the case, it is appropriate for a planner to ask whether the site proposed for protection is actually representative or whether it is in the best location, when compared to other alternatives.

These kinds of decisions are not needed for sites proposed for their unique features. If something is unique there is no alternative to replace it. In such cases the only documentation required is verification that the proposed sites, or certain features in the proposed sites, are unique and do not occur elsewhere.

Because representative landscapes and seascapes are, by definition, more widespread geographically than are unique features, there has been a tendency for a majority of protected area proposals to involve unique sites, rather than representative sites. Presumably the rationale is that if a "one-of-a-kind" site is lost or changed by incompatible land-use activities it is lost forever; by contrast, it is easier to defer the protection of representative areas because there are alternative candidates available. The Task Force did not debate the pros and cons of this rationale, but did conclude that for the large proportion of candidate protected areas that are proposed for reasons of uniqueness there is no point in further evaluation of their merits by use of criteria such as rarity, diversity, productivity or fragility.

There is one circumstance where there may be a practical reason to consider more detailed evaluation criteria and that is where land-use planners face the task of selecting the "best" site from among several candidates, all of which claim to be representative samples of a

⁴ Parks Canada. 1984. The Canadian Heritage Rivers System. Objectives, Principles and Procedures.

given region or ecological zone. An example would be the 11 ecological sites proposed by the International Biological Programme panels as representative of the treeline region (transitional between subarctic forest and tundra vegetation types) in the Northwest Territories. These 11 sites from northwest to southeast, are listed below.

Name of proposed International Biological Programme site	Area proposed for protection, (sq. kilometres)
Caribou Hills	625
Kugaluk River	3,120
Anderson River	1,300
Crossley Lakes	1,820
Colville Lakes	200
Caribou Point	6,000
Beniah Lake	900
East Arm of Great Slave Lake - Artillery Lakes	5,700
Thelon River	5,000
Ennadai Lake	2,600
Baralzon Lake	725

Several submissions made to the Task Force recommended evaluation criteria that would place a numerical weighting on criteria such as uniqueness, rarity, diversity, productivity, critical habitat, endangered species, fragility, vulnerability to man, or cultural factors. Despite the existence of many articles that suggest how one might make such evaluations more precise, tests conducted by the Task Force on the available information for the 11 candidate sites listed for the treeline region of the Northwest Territories led to the conclusion that it is not possible to make defensible judgments about such variables.

The difficulty is not only a matter of inadequate information. We are of the opinion that if each of the 11 treeline sites had been documented in considerable detail by scientifically acceptable plant and animal survey methods, it would still be misleading to quantify the information in an effort to make a numerical comparison of variables such as diversity or fragility.

The Task Force concluded that land-use planners and resource managers would not benefit from the evaluation procedures suggested in Step 2. This conclusion, too, is consistent with the approach recommended for the Canadian Heritage Rivers System, where the procedure is to involve essentially only two steps: (i) a screening of candidate sites in terms of specific selection criteria, and (ii) a consideration of integrity guidelines. These two steps coincide with Steps 1 and 3 considered by the Task Force.

The recommendation that Step 2 (evaluation criteria) be rejected because it is of no practical value for decision-making about protected areas is not an attack on the continued scientific use of variables such as diversity, fragility or productivity in the documentation of land, fresh water and marine ecosys-

tems. In this context, the Task force is aware that the selection criteria of Step 1 also involve subjective judgments not unlike those that led to rejection of the detailed evaluations of Step 2. The subjective nature of judgments about the individual selection criteria in Step 1 is acceptable to the Task Force only because there is no obvious alternative. It is in this acceptance of an inevitable amount of subjectivity that the Task Force acknowledges the importance of opinions offered by northern residents, resources managers and technical specialists. It is evident from the selection criteria recommended in this report, as well as in the heritage rivers report, that there is an obligation for specialists to present the case that a candidate area is either unique or representative, or that it contains outstanding, rare, or endangered features. In many cases, to present such a case, specialists will need to base their professional assessments on variables such as diversity, productivity or vulnerability. The Task Force respects this approach at the scientific level, but cannot recommend the use of such evaluation criteria for the day-to-day decisions of land-use planning.

5. A Test of Step 3 (Protected Area Guidelines)

Ideally, all management guidelines should be applicable to all selected areas. This ideal is tested in the table below for the Campbell Hills and Willow Lake sites by expressing in question form the first eight protected area guidelines in Section E.2(b) of this report. The last two guidelines are not considered relevant for this test.

The guidelines contained in the questions above must not be confused with selection criteria. The yes/no choices of Step 3 are not intended to aid the decision on which of these two sites is "best" or most deserving of special protective measures. In considering whether a candidate site should be designated as a protected area, however, consideration should be given to the degree to which the desired protected area guidelines can be met. In this context, the Task Force considers that Step 3 is an important element in the land-use planning process. It is at this step that the required protective measures are defined in detail and constraints with respect to the adoption of such measures become evident.

6. Conclusions

The Task Force recommends the development of planning and administrative procedures based on a common approach to selection criteria and protected area guidelines for all protected

areas in northern Canada, whether the candidate sites involve land, rivers, lakes or marine areas. The selection criteria recommended by the Task Force involve subjective judgments. The acceptability of these judgments is enhanced if they are based on public consultation and input from a representative spectrum of interests. The use of detailed evaluation criteria to compare the ecological characteristics of candidate representative sites is recognized as an important step for specialists who may be asked for professional judgments on priority setting among alternative representative sites. However, attempts to quantify such ecological variables are not recommended as practical aids to land-use planning.

	Campbell Hills site	Willow Lake site
a) does the candidate protected area contain values or features that would be adversely affected by human activity?	yes	yes
b) is the proposed area sufficiently large to ensure protection of the values at risk?	yes	yes
c) can several classes of protected area be incorporated within a single designated area?	yes	yes
d) are there alternative sites that would meet the objective of the proposed site?	no	no
e) has the candidate site been adequately inventoried prior to final establishment of boundaries?	yes	no
f) will the protected area contribute to a continuation of traditional life styles, consistent with the maintenance of renewable resources?	yes	yes
g) does the proposal reflect the local sensitivities and interests respecting resource uses?	yes	yes
h) can the system be managed to promote a better understanding of conservation and to encourage research?	yes	yes

Annex B

SUMMARY OF EXISTING LEGISLATION APPLICABLE TO PROTECTED AREAS (1)

Legislation	Protection	Restoration	Planning	Research	Monitoring	Administration	Rules	Compliance
Territorial Lands Act and Land Use Regulations	Y ^D	Y	N	N	Y ^C	Y	Y	Y
N.W.T. Area Development Ordinance	*	N	Y	N	N	Y	Y	Y
Yukon Lands Ordinance	*	N	Y ^P	N	N	-	-	-
Northern Inland Waters Act and Regulations	Y	N	Y	Y ^P	Y ^C	Y	Y	Y
Canada Water Act	Y	N	Y	Y	Y	Y	Y	Y
N.W.T. Wildlife Ordinance	Y	Y	N	Y ^P	Y ^C	Y	Y	Y
Yukon Wildlife Act	Y	Y	N	Y ^P	Y ^C	Y	Y	Y
Canada Wildlife Act	Y	N	Y ^P	Y	Y	Y	Y	Y
Migratory Birds Convention Act and MBS Regulations	Y	N	N	N	Y ^C	Y	Y	Y
Fisheries Act	Y	Y	N	N	Y	Y	Y	Y
Territorial Timber Regulations	Y ^I	Y	N	N	Y ^{C,I}	Y	Y	Y
Canada Oil and Gas Act	N	Y ^P	N	Y	N	Y	Y	Y
Oil and Gas Production and Conservation Act	Y	Y ^P	N	N	N	Y	Y	Y
Canada Oil and Gas Drilling Regulations	Y	Y	Y ^P	N	Y ^C	Y	Y	Y
Canada Oil and Gas Operations Regulations	Y ^P	-	-	-	-	-	-	-
Canada Mining Regulations	Y ^D	Y	N	N	Y ^P	Y	Y	Y
Yukon Placer Mining Act	Y ^{P,D}	-	-	-	-	-	-	-
Yukon Quartz Mining Act	N	-	-	-	-	-	-	-
(2) National Parks Act	Y	-	Y	Y ^P	Y	Y	Y	Y
(2) Yukon Parks Ordinance	Y	Y	Y	Y ^I	Y ^I	Y	Y	Y ^I
(2) N.W.T. Territorial Parks Ordinance	Y	Y	Y	Y	Y ^I	Y ^I	Y	Y

Y = provisions exist

N = no provisions

Y^C = for compliance to licences, permits, regulations, etc. only

Y^D = provisions or their implementation are deficient (see Rueggeberg and Thompson report)

Y^I = activity or goal is implicit

Y^P = (partial) only some aspects are provided for

- = not applicable

* = some clauses could pertain

(1) From "Conservation in the North: A Legislative Analysis" by H. Rueggeberg and Andrew R. Thompson - April, 1984

(2) Not from the Rueggeberg and Thompson report. Information provided by respective agencies.

Note: In addition to these pieces of existing legislation there are several areas requiring new legislation such as marine and terrestrial ecological reserves, forest management and archaeological sites.

Yukon Area New Ord?

Annex C

TYPE AND EXTENT OF PROTECTED AREAS IN THE NORTHWEST TERRITORIES AND YUKON (square kilometres)

	<u>YUKON</u>	<u>N.W.T.</u>	<u>CONSTRAINTS</u>	<u>CANADA</u>
National parks	31065	35690	- No non-renewable resource development	138706
Territorial parks	110	53	- Surface use controls to protect physical and biological character	212069
Game sanctuaries and preserves	7063	115306	- No non-renewable resource development in Thelon Game Sanctuary; surface use controls	***
National wildlife areas	0	2291	- No non-renewable resource development in Polar Bear Pass, N.W.T.	2791
Migratory bird sanctuaries	0	107423	- Surface use control to protect birds and habitat	111548
Ecological areas	0	**	- Site specific management plans to regulate surface use	***
Archaeological sites/cultural areas	*	*	- total protection	***
Marine areas	0	0		0
Heritage rivers	0	0	- management plans	0
TOTAL	38238	260763		465114
Land and fresh water area	483450	3,426,320		9,970,610
% of area	7.9 ⁽²⁾	7.6		4.7 ⁽¹⁾

Notes: * Insignificant in area

** Polar Bear Pass listed as National wildlife area

*** Included in Provincial parks figure

(1) Comparable figure for world is 2.7% with 9 countries having protected areas exceeding 10% of their land area

(2) Comparable figure for Alaska is 22.4

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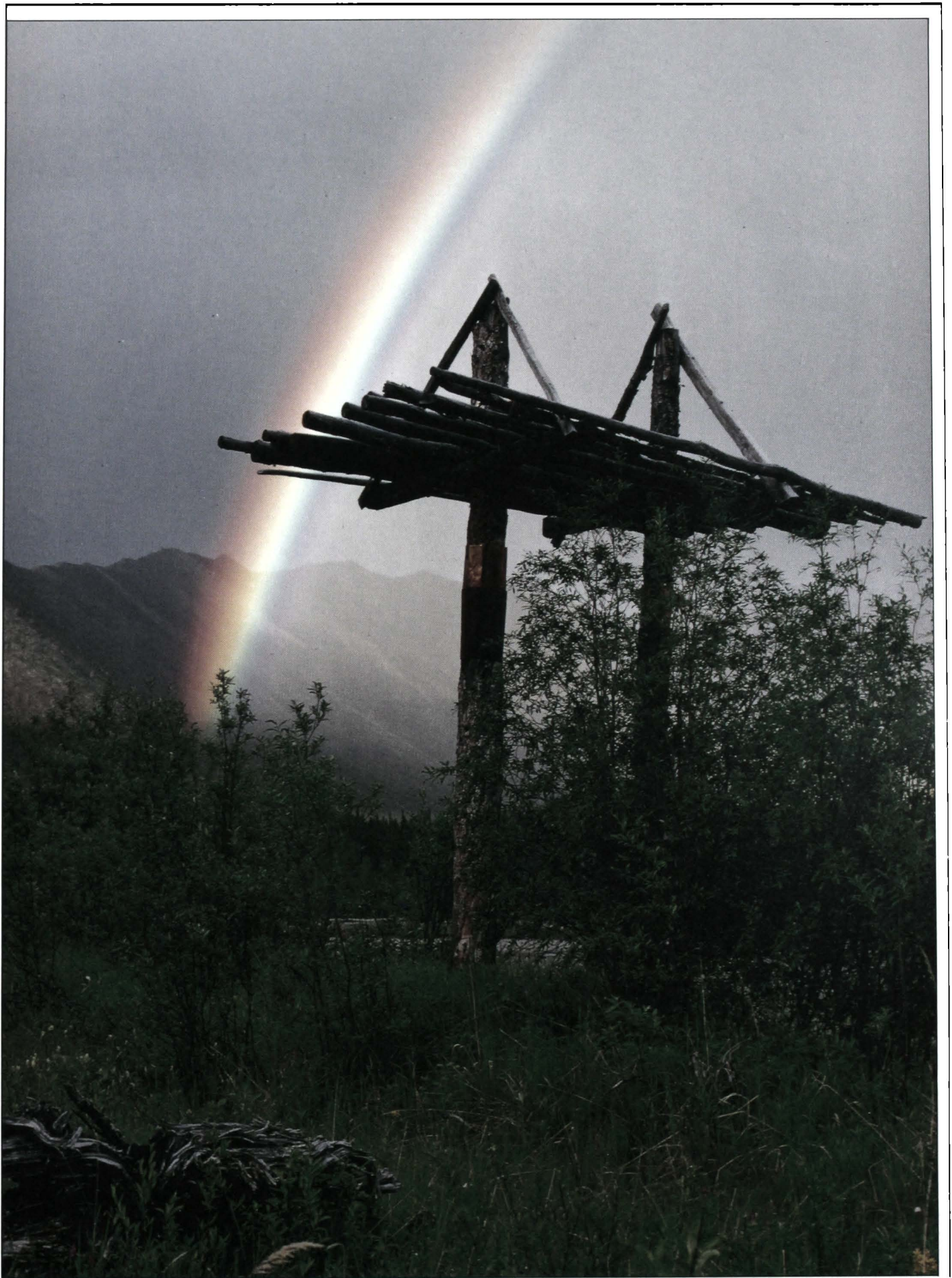
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An abandoned trapper's cache stands beside the Dempster Highway in the Ogilvie Mountains, Yukon Territory. (Photo credit: George Calef) ▶

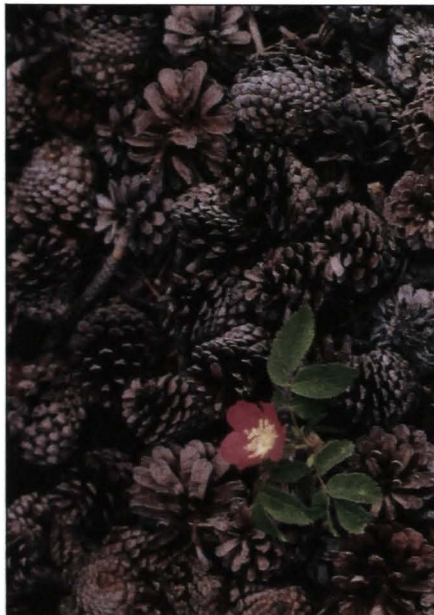


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Design and Production:
Harvey and Associates Advertising Ltd.,
Whitehorse

Printed and bound in Canada by:
Agency Press Limited, Vancouver

(Photo credit: Government of Yukon)





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