Commentary: Sustainable Utilization of the Arctic's Natural Resources

As we approach the end of this century, the search for new petroleum and other energy sources continues unabated throughout the Circumpolar North. At the same time, scientists are increasingly concerned over the degradation of the arctic and subarctic environment stemming from fossil fuel, hydroelectric, nuclear, and other large-scale energy projects already under way. Additional apprehensions are expressed by indigenous and other northern peoples whose health, subsistence, and cultural way of life have often suffered from the impact of such developments. While the most dramatic evidence of environmental devastation and social disruption is found in the Russian North, serious problems are by no means confined to that area alone. Indeed, the deleterious environmental impact of today's global industrial economy has become sufficiently profound that increasing numbers of scientific and social analysts have begun to question the various rationales presently supporting large-scale natural resource development throughout the arctic and subarctic region.

One clear reflection of this concern is the attention now being focused on the concept of *sustainable development* and its application to natural resource extraction in the North and elsewhere. A particularly appealing feature of the concept is that it brings together in a common framework the limits that nature imposes on human beings and the potential for new directions in social development that is contained within those limits. On the negative side, there is a strong tendency to view this process as a simple compromise between economic growth and environmentalism, disregarding the fact that sustainability involves societal limitations as well as natural ones. For example, one problem long associated with a market-structured economy is that commodities are largely produced for those who can buy them rather than for those who need them — a process that actively encourages artificial demands, produces waste in the production process, and promotes inequalities in the distribution of the benefits and burdens within society.

Sustainable development is also a rather ambiguous term open to numerous interpretations with varying degrees of compatibility. Indeed, quite different rationales often underlie commonly stated commitments to promote sustainable forms of natural resource utilization in the North. Under such circumstances, satisfactory resolution of conflicts associated with environmental policy decisions requires that these differing rationales be recognized and addressed, including discussion of the premises and special interests that help to shape them.

The most common rationale underlying present-day approaches to sustainable development is the perceived need to *balance* economic growth with protection of the environment. Its appeal for industrial enterprise is obvious: capital accumulation requires continual growth. For governments, sustainable economic growth is equally attractive. In addition to providing an obvious bulwark for the maintenance of national power, it also reduces the pressure to reallocate national income to combat social deprivation. As expressed by the economist Herman Daly: "It offers the prospect of more for all with sacrifice for none." Given these and similar attractions, it is hardly surprising that balanced sustainable development has been actively endorsed by international organizations such as the World Bank; governmental and private agencies, including those in Canada, the United States, Scandinavia, and Russia; and regional, national, and multinational energy corporations.

On the other hand, critics of the balanced view of sustainable development sharply challenge the idea that this process must always be equated with economic growth. As recently stated by the editor of the Swedish environmental journal *Ambio*, such an approach "says nothing about the net costs due to degradation of certain elements of society and its natural resources." In the mind of this and similar critics, balanced development should be replaced with the view that effective environmental sustainability requires recognition be given to the limits of economic growth; that the continuation of historic levels of resource utilization is not compatible with long-term sustainability; and that relying on the "interest" rather than the "principal" of given ecological endowments is essential.

Another more culturally oriented approach to the sustainable utilization of the Arctic's natural resources can be found in the efforts of northern indigenous organizations such as the Inuit Circumpolar Conference. As stated in the environmental section of their 1992 *Principles and Elements for a Comprehensive Arctic Policy*: "When undertaking developmental or other activities of any nature, planners and decision-makers must not simply view the Arctic as an exploitable frontier. . . . Northern development must refer to more than economic growth. It must allow for and facilitate spiritual, social, and cultural development."

This latter emphasis on the spiritual, social, and cultural interjects a new human ecological perspective to environmental issues often lacking in other approaches associated with sustainability. Of special significance is the linking of nature with *stewardship*, a characteristic described by political scientists Franklyn Griffiths and Oran Young as "a way of life in which humans are seen as constituents of natural systems rather than as masters ruling over them and in which stewardship rather than domination is the criterion against which human actions are to be measured." Eco-feminists expand this theme even further, linking domination over nature with a corresponding domination by men over women.

Underlying each of these approaches to sustainable natural resource development in the Arctic are questions of political power, global economy, and social equity. Who participate in decisions concerning a given development project and who are excluded? Who are the major beneficiaries and who are being hurt? Are environmentally sensitive development policies more likely to be promoted by affluent populations than by the impoverished where the immediate meeting of basic needs is primary? To the extent that this is the case, should the interests of the advantaged be given more weight than those of the disadvantaged? Or is improving the standard of living of the latter more important? And even if the disadvantaged are given priority at the local and regional level, is this adequate when the demands of the global economy continue to systematically marginalize them?

One possible solution to the problem of environmental destruction caused by past and present development practices in arctic-rim countries is to reduce the present "ecological demand" at both the *input* end (economic growth) and *output* end (waste). However, success in such an endeavor requires a basic transformation in the economies of these countries whereby the profit motive is diminished in favor of one more broadly attuned to the needs of the civil society and the environment in which its members reside. The issue is urgent enough. But given the magnitude of change required at this time, such an effort is difficult even to envision.

Instead, government and industrial leaders encourage the view that technological breakthroughs will eventually overcome our ecological problems, thereby enabling the continuation of economic growth with few environmental penalties. Still, even a brief look at the past suggests that seeking scientific breakthroughs — rather than solving problems associated with a deteriorating environment — often distances us from addressing those problems. While technological improvements are certainly to be encouraged, they appear not to offer a full solution to the problem of how best to develop northern resources.

Finally, there is the continuing need to address the question of equity and social justice. The relationship between sustainability and equity is frequently linked to environmental and societal degradation present generations are inflicting on future ones. But the problem is hardly limited to that sphere alone. The long history of colonialism and social inequity in the North has left indigenous populations highly vulnerable to environmental damage and human rights abuse. This condition has been described by the environmental anthropologist Barbara Johnston as one of *selective victimization*, where "preexisting social conditions result in the loss of critical resources and a healthy environment, exposing certain groups to hazardous environmental conditions while others are free to live, procreate, and die in a healthy setting."

Of course, indigenous peoples of the North are not the only ones having to pay for such an ideology. In northern Russia, there are over nine million non-indigenous "newcomers," many of whom also face serious problems of environmental degradation on lands where they reside. There is a deep concern, shared by indigenous and newcomer populations alike, that the Russian government's need for hard currency — to be obtained through export of gas, oil, and other nonrenewable resources — will keep it from adequately addressing grave ecological and social problems presently facing this large region.

This leads to a key set of questions now being debated throughout the Circumpolar North: What type of political, economic, legal, and social arrangements should guide indigenous and non-indigenous peoples in their relations to the land and the state? There is a rising tide of local and regional voices demanding more active protection of and control over their resources and territory. If improving the environment and living conditions of these populations is a necessary condition for the creation of a truly sustainable environment for all, what are the most effective steps that can be taken to insure such a sustainable future, culturally as well as environmentally?

To address complex questions such as these requires broad-based, longitudinal, comparative research studies in which collaborating colleagues representing differing disciplines, countries, and cultures design and carry out joint projects, the results of which encourage new modes of thinking regarding sustainable development and resource utilization in the North.

Second, increased indigenous involvement and leadership in northern resource development at the policy, planning, implementation, and evaluation levels is essential. Successful wildlife co-management agencies in the North have demonstrated repeatedly that such participation provides a strong foundation for sound management of renewable resources.

Third, more attention needs to be given to resolving existing environmental crises by promoting social changes now rather than relying on hoped-for technological solutions in the future.

Fourth, so-called economic "externalities" associated with natural resource development in the Arctic must be "internalized," thereby more adequately reflecting the true costs of such development.

Fifth, the vast intellectual divide presently separating physical and biological scientists from those involved in social science research must be bridged. Environmental impact assessment projects offer an excellent starting point for such endeavors. In place of the present preoccupation with procedures, ecologically oriented biological and social scientists have a holistic orientation enabling them to confront the substantive issues associated with conflicts over development policy far more effectively than those involved in narrower specialties.

Is this the extent of the northern scientist's responsibility? If we limit concern to our own areas of expertise, the answer can be a simple "yes." But if we seek a deeper understanding of the issues associated with environmental degradation in the North, it is necessary to go further and analyze those aspects of our economic, political, and cultural lives that contribute to the present harm. To do otherwise is to promote increased competition over increasingly scarce resources, in which ever greater environmental risks are taken, only to generate greater differences between those who reap the benefits and those who carry the burdens. In addressing this issue, we face the ultimate challenge of sustainable development: how to reconceptualize the demands, needs, and relations of our societies and the utilization of nature's resources.

I do not presume to suggest how this might best be done. But I am convinced that if northern-focused scientists, in cooperation with northern residents — indigenous and non-indigenous — assume leadership in promoting a new emphasis on issues of sustainability, we will find that this effort has tapped a deep wellspring of interest among younger arctic-oriented scholars — physical and social, Native and non-Native, within this country and abroad — who are quite willing to explore the kinds of collaborative efforts necessary in addressing this crucial problem.

Norman A. Chance
Senior Fellow, Institute of Arctic Studies, Dartmouth College, and
Research Associate, Department of Geography, McGill University