this chapter — despite the great many informative works available — the average reader is denied any of the context essential for grasping the political economy of these crucially important projects. The caution that produces this avoidance of interpretation similarly denies the reader the background needed to understand the politics of a variety of other issues, such as regional government, land use planning, and environmental protection.

Future editions of this potentially extremely valuable reference must specify its stance and status so that its contents can properly be interpreted. Ideally, DIAND will disclaim authorship or endorsement of the contents of the *Manual* and explicitly vest responsibility for it in an editorial board of stature which will then be free to recognize fully the controversies which are so fundamental to the North. Until this clarification is offered, the *Manual* will serve as a useful source of facts, but not of insights.

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NORTHERN POLITICS REVIEW 1983. Edited by W. HARRIET CRITCHLEY, FRANCES ABELE, and MARILYN SIMMS. Calgary: Northern Political Studies program, The University of Calgary, 1984. 95 p. Comb binding. Can \$30.00.

Northern policy research is growing up. Until recently social science regarding the Canadian North has been hampered by the lack of specialized bibliographic and reference works which organize relevant documentation, facilitate the dissemination of new information, and bridge subspecialties in more mature areas of scholarship. Directories have been published in the past, but these have focussed on researchers or projects rather than documentation, and they and the available northern indexes tend not to report the more ephemeral, but in many cases timely and extremely important materials.

Northern Politics Review 1983 makes a major contribution to remedying this lack of integration in the study of public policy in the Canadian North. Intended as an annual publication and with entries in both English and French, this bibliography reports an extremely broad range of materials, including speeches, consultants' reports, submissions to public inquiries, and unpublished materials, as well as the more standard books, articles, government documents, and conference proceedings. The citations encompass the full range of public policy issues, a strength of the volume which may not be apparent to prospective readers who take the word "politics" in the title to suggest political process narrowly construed rather than the wealth of substantive issues which the *Review* actually covers.

The *Review* is organized by subject categories, further subdivided by topic or region. The classification is appropriate, with two exceptions. Unfortunately, the *Review* treats renewable resources as a subcategory — and the last one — under economic development. This approach might be taken as offering aid and comfort to those who view hunting, fishing, and trapping as vestigial and insignificant elements of the northern economy. It will offend the native peoples whose insistence on the crucial importance of these activities is supported by many academic, governmental, and other observers.

The classification also needs revision to clarify the relationship between aboriginal claims on the one hand and the Denendeh and Nunavut proposals on the other. The point is that the latter are being sought, outside the claims negotiation processes, as public governments. They should be treated as matters of constitutional development, not confused with native claims, regardless of how closely linked they are with native aspirations.

Each section of the Review opens with a thumbnail survey of the relevant events and issues of the year. These are useful, particularly in integrating northern studies by suggesting the context of the cited items. Northernists interested in understanding debates and policies which fall outside their area of specialization but which impinge on their work because of the great interdependence of issues in the North particularly stand to benefit from this type of introduction. However, as with all annual reviews, these sketches fall prey to two shortcomings. The first is that their time frame is not that of public policy. The summaries in Northern Politics Review fail to convey a full sense of the history and evolution of issues; their focus is events, not process. The second problem is that the Review resolves the inevitable trade-off between space constraints and depth of discussion in favour of the former. While the highlights are reported, and in an admirably non-judgmental fashion, so little of their detail and flavour is conveyed that those who can benefit most from the Review - those who need to have things spelled out for them - will find that the summaries point them in the right direction, but do not give them the purchase on the issues they require. The introductory reviews should be at least twice as long.

In contrast, the extent of the bibliographies is impressive, particularly for a first exercise. The Review, on its first time out, has established itself as an indispensable reference for students and practitioners of northern policy. Of course, there is room for improvement. The section on the northern provinces is particularly skimpy, even given the lack of literature on the subject. If the editors have accepted the challenge of including the provincial North in their definition of the North, they must develop methods for ferreting out the literature that does exist on this topic. The Review would be more useful if it gave some sense of the business of the territorial and federal governments. Even a few pages summarizing budgets (or, in the case of Ottawa, relevant budget lines) passed during the year, and noting the titles of relevant legislation passed and the most important sessional papers tabled in the territorial legislative assemblies, would be most useful in bringing otherwise scattered information between the covers of a single volume. In addition, because many of the items are not available through conventional channels, it would be a convenience for researchers if the citations of the more important but less accessible items included information on their availability, price, and the addresses from which they could be bought.

While these marginal improvements would strengthen the *Review*, its editors must be saluted. The *Review*'s comprehensiveness, timeliness and organization make a major contribution to the integration of the field which is a prerequisite for a more mature and coherent study of public policy in the Canadian North.

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MARCHING TO THE BEAT OF THE SAME DRUM: TRANSPORT-ATION OF PETROLEUM AND NATURAL GAS NORTH OF 60°. Report of the Special Committee on the Northern Pipeline. Committee Chairman, SENATOR EARL A. HASTINGS. Ottawa: Queen's Printer, 1983. (Canadian Government Publishing Centre, Supply and Services Canada, Hull, Quebec, Canada K1A 0S9.) Bilingual. 84 p. Softbound. No price indicated.

Marching to the Beat of the Same Drum is a remarkable work. It is also remarkably disappointing as a study of the issues and crises surrounding the transportation of gas and oil north of 60°. The positively remarkable part is that it took several years to gather the evidence heard by the Senate Committee on the study of transportation of gas and oil in the far north. The Committee travelled across the north and heard evidence from the widest variety of witnesses: industry spokesmen, transportation industry experts, Inuit and Dene leaders and villagers. The Committee was tilted slightly toward western representation but included Senators from across Canada, including the two northern Senators. The disappointing part is that the report fails to come to grips with both its original mandate and the changing economic conditions, on which the Committee was hearing evidence. The Committee attempted to deal with the logistics of northern transportation of gas and oil, the effects of a complex high-technology transport system on northern residents, and the confusion of regulatory mechanisms affecting northern development. It is clear that the Senators' strength lies in dealing with the welter of regulatory processes centred in Ottawa, because that is the place where the report shines.

The report tries to identify the best means of transportation to be put into place to help make Canada self-sufficient by 1990. This goal was taken from the National Energy Program (NEP) which came down about the time the Committee was beginning its work. In fact, the Special Committee was beginning to write its report about the time that the Senate Standing Committee on Banking, Trade and Commerce was holding its hearings on the last of the bills to implement the NEP in the early summer of 1982.

Perhaps if the report had been able to surface by the fall of 1982, it would have seemed more in line with what was actually going on in the world. Unfortunately for the Senators who had performed a labour of love, by the time they reached a consensus on what they wanted to say, the last of the financial calculations on which the NEP and the drive for massive and rapid development in the north were based were no longer operative. In retrospect, it seems the Senate Committee engaged in an exercise of refining a government policy when the policy was collapsing and all the expert testimony against the policy was being borne out.

The whole question of aboriginal land rights was an area where the Committee itself was simply insensitive. The report suggests that the federal government push through aboriginal land agreements (land claims settlements) so that development can begin. While the Senators may have related well to the local communities which they visited, it is clear they did not come to terms with the basic issues in these complex and difficult negotiations. They don't confront the basic difference between the government position and the position articulated by both Dene and Inuit leaders. The government continues to insist on a policy of extinguishment of land rights while the Dene and Inuit, and every other First Nation, oppose the extinguishment policy.

The report places the onus on the Inuit for the effects on the environment of the tanker system which the Committee recommends. Meanwhile, an agreement was quietly being worked out with the Dene and Inuit leaders which is allowing a small-bore pipeline from Norman Wells as an experiment which may show the way further north. The Committe projects a price per barrel of oil from Norman Wells at \$75.60 by 1990, a figure which would require prices to triple over the next six years. It does not anticipate the direction that world energy markets have actually been taking.

The tanker recommendation assumes that technology now being developed for gas can readily be applied to oil. It also reflects the insensitivity which surfaces despite the consensus behind the report. When industry witnesses were advocating a tanker route down the west coast of Greenland, Senator Guay asked if Canada had not objected to similar proposals for Alaskan resources coming down our west coast. The answer was that it was "their ships and our coast". Apparently, when the tables are turned the other way — when the environmental hazard is to someone else's coast — the morality of "beggar thy neighbour" has a sort of imperial acceptability.

At the Northern Transportation Conference in Whitehorse on 5-7 October 1982, Marc Denhez, former legal counsel to the Inuit Tapirisat of Canada, presented a paper entitled "Some Inuit Concerns With Economic and Other Impacts of Transport Activities". In it he says: "Elsewhere in Canada, the infrastructure has either been provided or general subsidy formulas were adopted to compensate. A similar subsidy program should be introduced in the north, to bring northern costs in line with those of a developed system."

The Senate Committee does recommend that mega-projects be allowed to proceed following an "approval in principle" by the federal cabinet. This, their clearest recommendation, is intended to speed up an otherwise lengthy bureaucratic tangle of regulations and approvals. The report writers have done a reasonable job of clarifying a complicated procedure by attempting to explain why projects are held up and what the problems are with overlapping jurisdictions. It is less clear that either the Dene and Inuit or their Senate colleagues would favour allowing mega-projects to proceed by Order in Council without legislative action and a system for ensuring that prior conditions be met before each stage of development.

In June 1982, the Banking, Trade and Commerce Committee of the Senate (a body long headed by Canada's foremost expert on tax law and clearly dedicated to our present economic system) adopted a recommendation made by Dene Nation witnesses on the energy bills. They said that all recommendations affecting the local public interest in the north should be automatically referred to the appropriate policy committees of both Houses, as a political appeal process. Dene witnesses had based this recommendation on previous reports of another Senate Committee which routinely studies the form and structure of regulations and statutory instruments. It is clear that while the Senators interested in the transportation of gas and oil in the far north want to cut the bureaucratic red tape, both the Banking Committee and the Regulations Committee think it is time to revive some sense of due process and to introduce fair play into northern development. Unfortunately, the apparent tension between the "streamliners" and the "due processors" in the Senate has not yet surfaced into the direct confrontation which would provide a muchneeded public debate. This is an area where the Senate has true expertise and there are Senators on both sides of the issue with both knowledge and passionate conviction. Instead, they have wandered into an area that requires economic forecasting, to which they have primarily added confusion. Some recommendations assume a continuing rise in world prices. The report anticipates a constant price of \$34.00 a barrel. But a later section of the report admits prices are falling.

The Committee has drawn up guidelines responsive to industry pressures, based on a deadline no-one believes anymore. They have coined the phrase "marching to the beat of the same drum" from the idea of coordinating government policy with company expectations. But by the time they were able to deliver a report in published form, the government was already changing its beat. And economic circumstance was giving a slight edge to the Inuit resistance against being pushed into the oil drum.

The Special Committee was originally created to oversee regulations on the Northern Gas Pipeline from Alaska (as was a parallel Commons Committee which restricted its work to reports of the Pipeline Agency, which never got off the ground). The Senate Committee has been transformed into a Standing (permanent) Committee on Energy. It is now beginning to do a study on future directions for the NEP. This is probably the most positive development to arise from the previous report of the Hastings Committee. It will allow a very able and dedicated group of Senators to now consider in public what we may suspect they knew all along: the National Energy Program, seen in its most positive light, was obsolete by the time it was legislated.

They will also need to address the point that the Dene made to their sister Committee regarding the whole idea of Canada Lands. Canada Lands can be divided into two kinds: those that are underwater and those on which Dene or Inuit live. If the federal Parliament is going to maintain responsibility for northern development it will have to distinguish between submerged lands and populated lands before northerners are impressed by a system that keeps power in Ottawa.

They will have to consider that dynamic tension between the demand for due process (fair play) and streamlined regulatory procedures is nowhere greater than in the combined fields of energy and northern development. This tension, which has characterized parliamentary politics for the past century, is fast coming to a head because of high technology. It assures the need for continued Senate Committee studies. But it raises serious doubts about the usefulness of book-length reports which cannot be published for eight months after the evidence is heard. Perhaps the Committee should consult with the Dene and Inuit leaders on reaching a consensus.

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CONTRIBUTIONS TO THE SCIENCE OF ENVIRONMENTAL IMPACT ASSESSMENT: THREE PAPERS ON THE ARCTIC CISCO (Coregonus autumnalis) OF NORTHERN ALASKA. Edited by D.W. NORTON. Biological Papers of the University of Alaska, No. 21. Fairbanks: Institute of Arctic Biology, 1983. (University of Alaska, Fairbanks, Alaska 99701, U.S.A.) ISSN 0568-8604. 61 p. Softbound. US \$5.00.

This collection of three interrelated papers on the Arctic cisco, *Coregonus autumnalis*, as well as the introduction by the series editor, might well be taken as a stimulating challenge to those who have questioned the money spent and the validity of much biological work carried out in the name of environmental impact assessment. However, it is another gauntlet — probably rather casually dropped — that I would like to pick up, but only after an examination of the papers themselves.

The first paper is an assessment of the arctic cisco stock in the Colville River Delta as revealed by the results of a fishery there over a 15-year period, combined with considerable monitoring of the catch. The model developed, barring one glaring exception, gives a remarkably good fit to the data. The rather extraordinary and unusual feature is that very little information is available on the abundance of the spawning stock, its location, or frequency of spawning. (Apparent internal contradiction of statements on the percentage of spawners is resolved when it is realized that "sexually mature" means those fish physiologically capable of spawning rather than those in a pre-spawning or ripening state.) It is rather difficult to know exactly what these catch data represent beyond the bare fact that they reflect changes in abundance and regular fluctuations in size distribution. This is largely because of the great remoteness, apparently over 400 km distant in the Mackenzie delta, and lack of information on the spawning component of the stock from which these fish originate.

The second paper investigates the temperature/salinity preferences of the arctic cisco, and this is clearly done in standard conditions using accepted methods. The results confirm what is generally recognized about fishes and their temperature preferences, including the fact that arctic freshwater and anadromous fishes usually express temperature preferenda well above those they are normally likely to experience.

The third paper is a valiant attempt to put the observations and results obtained in the previous two papers together into a coherent model, within the environmental context of the north coast of Alaska and the recently constructed causeway at Prudhoe Bay, over 3.4 km in length, but including a breach to allow the passage of migrating fishes. Like many models of this kind it appears to be rather crude initially but becomes more persuasive with experience. However, such a model, it seems, is only as good as the field data; this is clearly apparent when stocks are subjected to stochastic and quite dominating effects about which a computer model can have very little warning. Nevertheless the exercise is, I believe, a useful stimulant to thought; danger only arises if one puts too much confidence in the results.

This combination of field and laboratory work is undoubtedly the way to approach environmental problems, but it must be supplemented with a considerable amount of thought; if computer simulations can assist hard conceptual thinking then they certainly have a place in the process.

The one aspect missing, particularly from an "environmental" standpoint,