

## CANADIAN RESOURCES AND AMERICAN REQUIREMENTS

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THE position of economic dependence which Canada occupies in relation to its southern neighbour excites great interest and concern in this country about the health of the American economy. The current debate about American ownership of Canadian manufacturing industry overshadows similar problems in the realm of natural resource commodities, but then Canadians have long and often bemoaned their lot as hewers of wood and drawers of water for the mills of American industry. Three books recently published for Resources for the Future, Inc.<sup>1</sup> offer an opportunity to examine Canada's role as a supplier of natural resources in terms of what Americans are now saying about their resource requirements and especially the problem of resource scarcity.

The three books comprise another major review of the resource situation in the United States. Such reviews occur at intervals<sup>2</sup> and constitute an unofficial substitute for a planning mechanism in a predominantly privately run economy. With high regard for consumer sovereignty, production goals are set and commodity requirements are examined in terms of projections of demand. The projections of production goals, and the developmental decisions that follow, provide an informal *national plan* for the resource sector of the economy. It is a highly permissive plan, and in order to be successful has to be favourably regarded by both government agencies and innumerable private decision-makers. There is reason to believe that such "plans" are regarded with sufficient respect to become partially self-fulfilling prophecies.

The kind of "planning" here described involves long-range predictions over twenty- and forty-year periods. Unlike the five-year plans of socialist states, the day of judgment for these plans will never arrive. Long before 1980 the

<sup>1</sup>N. Potter and F. T. Christy, Jr., *Trends in Natural Resource Commodities* (Baltimore, 1962). H. J. Barnett and C. Morse, *Scarcity and Growth: The Economics of Natural Resource Availability* (Baltimore, 1963). H. H. Landsberg, L. L. Fischman, and J. L. Fischer, *Resources in America's Future* (Baltimore, 1963).

<sup>2</sup>Previous reviews include the Report of the President's Materials Policy Commission, *Resources for Freedom*, 5 vols. (USGPO, Washington 25, DC, 1952).

"plan" will have been superseded by others. Nevertheless, the projections made will play a role in shaping the policy decisions of both public and private sectors over the next five to ten years.

The three volumes under consideration have been reviewed elsewhere in terms of their contribution to resource policy and theory in the United States.<sup>3</sup> The question here is the matter of their relevance to, and implications for, Canada. The Potter and Christy volume examines past trends in natural resource commodities, in terms of prices and inputs of labour, in order to see what evidence exists for Malthusian or Ricardian scarcity over the past ninety years. The large quantity of data for over a hundred commodities which is thus brought together is then used by Barnett and Morse as the factual basis for their theoretical examination of the notion of increasing resource scarcity. They conclude that there is no evidence of over-all scarcity in the period under review, and that commodity prices have shown a downward rather than an upward trend in real terms. The nature of man's physical environment or his resource base is such that it "presents man with a never ending stream of problems but imposes a far less rigid and certain physical obstacle to a continual increase in the return to effort than economists have been wont to believe" (p. 244). "The finite limits of the globe, so real in their unqueried simplicity, lose definition under examination," and although "An absolute limit to the possibilities of escape may exist . . . it cannot be defined or specified" (p. 245). These optimistic conclusions are not equally valid for all commodities, and there is evidence to suggest that the scarcity hypothesis holds at least in part for forest products, although costs of these products seem to have increased more in the early part of the period than in recent decades. The rise is most marked for timber and much less so for pulpwood.

The failure of natural resource commodity prices to rise cannot be attributed except in small part to imports. "Net imports have not played a significant role in facilitating the decline in unit cost of U.S. production of agricultural goods" (p. 188). "Except for the substitution of imports, [in certain mineral commodities] the record . . . might have shown a more moderate decline" (p. 189) and "in the case of lead, zinc and fluorspar the relative substitution of imports may have averted a unit cost increase in domestic production" (p. 189). "Substitution of imports for indigenous output probably contributed significantly to the stabilization [of labour cost per unit of product] by moderating pressure on domestic forest resources, since the United States shifted from net exporter to net importer of forest products," but "If net imports played this role, they did so primarily by supplying a considerably increased volume of pulpwood while the United States continued to export lumber and other forest products" (p. 194).

The Landsberg, Fischman, and Fisher volume examines the patterns of requirements and availabilities in the period 1960-2000. The authors do not foresee any general resource scarcity, but are concerned to anticipate problems which may arise in particular areas and to meet them by careful advance

<sup>3</sup>I. Burton and R. W. Kates, "Slaying the Malthusian Dragon: A New Assessment of American Experience." *Economic Geography*, XL, no. 1, Jan., 1964, 82-9.

planning rather than by emergency action at the eleventh hour. The authors envisage increasing reliance upon Canadian supplies, particularly of iron ore, natural gas, and forest products. Canada is seen as "likely to be at the beginning of a phenomenal climb to the position of the world's top iron exporter" (p. 432). In natural gas, "A number of major projects for importing from Canada have recently come before the FPC and the Canadian regulatory authorities. They would among them bring over one billion cubic feet per day from British Columbia and Alberta, mainly to the Pacific Northwest, California, and northern Lake States. These quantities, most of them now flowing or about to flow, are equivalent to over 3 per cent of total current natural gas consumption in the United States. Thus Canadian supply is beginning to supplement domestic sources significantly, and may do so increasingly in the future, given the large reserves and the relatively limited home market" (p. 410).

United States imports of between two and four billion cubic feet of softwood are predicted for 1980. The Gordon Commission estimated an allowable cut for softwood in 1980 at 6.8 billion,<sup>4</sup> and domestic requirements will probably be in the order of 1.5 billion. This does not mean that 6.8 billion cubic feet of softwood will be cut in Canada in 1980, but that such a volume could be cut if an effective demand exists. Further growth of Canadian forestry will depend in large part upon the competitive position of the industry, not primarily in relation to other producers, but in relation to the costs of alternative products. Barnett and Morse have shown that "The greatly increased use of cost-induced and preferred substitutes—such other structural materials as metals, masonry, and plastics—has significantly eased the pressure on timber resources. This seems to be an important reason why unit cost of forest products has held constant, rather than increased, since about 1920" (p. 184).

Canada is also cited as a source for such other resources as platinum, chromium, cobalt, copper, lead, phosphate, sulphur, titanium, tungsten, and zinc. The possibility of supplying water across the international boundary is not discussed, although there are clear instances where such arrangements might be made in the future, such as the diversion of the headwaters of streams that flow to Hudson Bay, south into the Great Lakes in order to permit more diversion by Chicago, and more withdrawal by other US (and Canadian) cities.

One clear implication for Canada from this work is that there is no direct relationship between natural resource endowment and economic growth. Natural resources may be of vital importance in the early stages of growth, but they are of diminishing significance as the level of development increases. An indicator is the relative position of natural resource commodities in the mix of gross national product. The value of industrial crude materials consumption, a limited measure of natural resource commodities, is about 7.1 per cent of the gross national product in Canada, but in the United States, it is only 5.1 per cent (both figures are 1955-57 averages). The Canadian figure is expected to *decline* to 6.3 per cent by 1980 by which time the American

<sup>4</sup>Royal Commission on Canada's Economic Prospects, *Final Report* (Ottawa, 1958).

figure will be about 4.7 per cent. The projected Canadian percentage for 1980 is close to the 6.1 per cent which was the American position in 1929.<sup>5</sup>

The general conclusion from the Potter-Christy volume, that there is little evidence of Malthusian or Ricardian scarcity in terms of price and inputs of labour in natural resource commodities in the United States over the past ninety years also has implications for Canada. Forecasts of a Canadian bonanza due to a rich resource endowment have been in large part based upon doctrines of increasing resource scarcity. Among those who thought that "the twentieth century will be Canada's" the notion prevailed that as the industrial countries, especially the United States, used up their stock of better quality natural resources, they would have to turn to Canada, which would then experience windfall profits from resource exploitation. The projections for iron ore notwithstanding, the theories propounded by Barnett and Morse, and the evidence presented by Potter and Christy cast heavy doubt that such a day will ever dawn. Not only does the value of natural resource commodities show a relative decline as an economy approaches a higher level of development, but under conditions of rapidly improving technology the price of resource commodities, with few exceptions, shows a persistent decline.

It makes little sense under such circumstances to conserve Canadian resources for some future date when their value will in all probability be less; there is certainly no guarantee that their relative value will be increased. If Canada would do well by future generations, this end can best be served by developing resources now, both for domestic consumption and for export. To limit the export of natural resource commodities to the United States on the grounds that they will be needed at home in the future will be prejudicial to the interest of future Canadians, and will certainly harm Canada now more than the United States.

Although the outlook of the three volumes discussed is optimistic in that there seems little reason to fear that natural resources will become scarce, nevertheless there is cause for concern about what Barnett and Morse refer to as the quality of life. Pollution of certain areas of the natural environment by human, industrial and military wastes, undesirable patterns of land use, unavailability of recreational areas, lack of international arrangements concerning the use of natural resources, as well as such broader questions as the appropriate distribution of income, the allocation of benefits and costs through the market mechanism, and the intangible satisfactions derived from the appearance of the environment—all these and more, might give rise to a consensus that total welfare has not risen along with economic welfare. There is clear opportunity for Canada to profit from mistakes made in the United States, both by substituting Canadian resources for American deficiencies, such as in the development of recreational resources, and by avoiding, in the process of growth, those choices which are known to lead to an impairment of the quality of life.

<sup>5</sup>W. G. Fritz, *The Future of Industrial Raw Materials in North America*. (Canadian-American Committee, National Planning Assn., and Private Planning Assn. of Canada, 1960).

The first opportunity has been partly realized, but many complex questions are raised when resources are viewed as consumption rather than production goods. The three studies under review touch only obliquely on such matters. To what extent is it possible to export recreational amenities by importing consumers? To what extent can water be exported, or how can Canada improve the international supply of game birds that nest in Canadian breeding grounds and then be repaid for the benefits? What is the nature of Canada's interest in the possible power developments on the Passamaquoddy? Such opportunities for development are blocked by the lack of appropriate institutions. New forms and levels of organization and social arrangements are required that have not been necessary for the more conventional business of resource exports.

The second opportunity, that of avoiding the errors of growth that impair the quality of life, is yet more difficult to achieve. It presupposes a society in which a well-established priority of values can be readily articulated. There is little to suggest that Canada can meet this test at the present time.

