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THE DEVELOPMENT OF NATURAL RESOURCES IN CANADA

(A lecture in the series "Natural Resources in World Affairs" delivered by Dr. H.L. Keenleyside, Deputy Minister of Mines and Resources, at the University of Michigan, Ann Arbor, Michigan, on July 27, 1949).

The general subject of this series of lectures is "American-Canadian Relations", but I understand that my contribution falls also within the scope of the University Series entitled "Natural Resources in World Affairs", and that during the present week you are directing particular attention to government policy with respect to natural resources.

In preparing what I now propose to place before you I have tried to keep these varied interests in mind. Thus in describing "The Development of Natural Resources in Canada" I shall place particular emphasis on those governmental activities and decisions that have influenced that development. And while I shall not make any extended comparisons between our policies and yours, I hope that a description of what we have done, of why we have done it, of the difficulties that we have met, and of the mistakes that we have made, may be of interest to you and may perhaps stimulate your thinking about similar problems in your great and democratic country.

The economic strength of a nation is measured by the extent of its natural resources combined with the ability of its people to put them to wise and efficient use. Judged on a per capita basis the known resources of Canada far exceed those of any other country. Given wise and imaginative domestic policies and an international framework of peace and free exchange, Canada should be the most prosperous of nations.

The roll of Canadian resources makes impressive reading. In the range of metals we stand first among the nations in the production of nickel, asbestos, and the platinum group; second in gold, zinc, aluminum, and uranium; third in copper, silver, and magnesium. Within the last two years we have proven oil and gas resources that will soon make Canada an exporter of these commodities instead of having to rely on imports for 90 percent of our consumption. During the same period, as a result of the admission of Newfoundland and the confirmation of enormous resources in the Labrador-Quebec border, we will shortly be a major source of iron. About one-quarter of Canada is under forest cover and of this about one-third is available for exploitation. The annual value of our forest products is already running at about one and one-quarter million dollars. Water for power and irrigation is readily available in most of our regional areas. Almost one-third of our power needs are now supplied by hydro installations. In arable land Canada can supply any needs that are likely to arise for generations in time and many millions of population increase. In fisheries and wildlife our position is high in the rank of the nations.

In view of these facts it is of interest to consider some of the special considerations that have influenced and still affect the development of Canadian resources. Outstanding among these are the division of responsibilities imposed by our federal constitution, and the constantly fluctuating

border-line between free enterprise and governmental activity in the discovery, processing, and utilization of our national heritage.

As in other fields of human activity a review of the past is essential to an appreciation of present conditions. In the subject now under review it is useful to start with conditions that existed almost 300 years ago.

I. Historical Background

Historical policies relating to the handling of natural resources are important, partly because practices that have been in effect for many years are bound to influence current patterns, and partly because the traditional methods of disposing of land and other resources do much to explain present ownership. And ownership, of course, has a direct bearing on policy. The Biblical aphorism "Where your treasure is there will your heart be also" is true of governments as well as of individuals, and is even more true of joint stock companies!

Canada in the 17th and early 18th centuries can be divided into three areas of significant activity. There was the early development of the St. Lawrence Valley, colonized almost exclusively by the French until after the British conquest in 1763. There were the Maritime Provinces, where progress was difficult because of the frequent changes in government that resulted from fluctuating fortunes in the world-wide conflict between France and Britain. Finally there were the vast and lonely regions inland from Hudson's Bay, where trade with the sparse native population was dominated by the English and the Scots.

Of these developments the movement up the St. Lawrence Valley was of first importance. It opened the great wealth of the fur trade, provided homes for European settlers, and gradually pushed tentacles into the western reaches of lake and prairie. Here it came into abrasive contact with the employees of the Company of Adventurers of England Trading into Hudson's Bay (the full-blown title of the Hudson's Bay Company). This Company, with its rivals and its successors, has exercised a notable influence on the development of Western Canada. From the beginning it represented the northern interest in the conflict between the St. Lawrence and the Hudson's Bay trade routes; a conflict which has continued with varying degrees of intensity, and through an even greater variety of agents, to the present day.

Settlement in the Maritime Provinces was for many years based on fishing and a rather meagre agriculture. This area played little direct part in the economic development of the rest of the continent, although eventually, as was the case with New England in the United States, the exodus of the descendants of the early settlers and the influence of the intellectual and social life of the region made a marked impression on the national history.

In the St. Lawrence Valley, vigorous but restricted and sporadic efforts were made by the French Government to settle the country. Various inducements were used to stimulate emigration to the colony. Free land, government subsidies of various kinds, and (in the case of young ladies) even guaranteed husbands, were offered to those who would settle in New France. It was hoped that this policy would result in a rapid increase in population based firmly on an expanding agricultural and industrial economy. Thus the colony would become profitable in peace and defensible in war.

The desired results did not materialize. The people of France showed a marked disinclination to leave the fields of home for the snow drifts of the New World. The one class in the nation that - judged by the English analogy - might have provided eager and permanent settlers were the Huguenots. But these religious rebels were forbidden entry into New France where the power of the state church was directed towards the establishment of a loyal and orthodox community as a base from which the conversion of the Indians could be directed. The Church, and particularly the great missionary Order of the Society of Jesus, took an almost equally dark view of the fur traders, the Coureurs des Bois, whose commercial ethics and personal morals were sometimes a shock even to the pagan Hurons and Algonquins.

But not even the Church was able to alter the fact that the fashion of the day in Europe demanded beaver hats for gentlemen. As a result the market was brisk and prices on occasion fabulously high. Agricultural settlement was by its very nature diametrically opposed to the interests of the fur traders, for farms push back the forests, drive away wildlife. In spite, therefore, of the efforts and expenditures of the French court, of the Government, and of the Church, the quick profits of the fur trade dictated the early economy of New France. Settlement was slow and the population was less than 60,000 when Wolfe captured Quebec. From the French point of view the colony was an economic liability rather than an asset, and as was demonstrated on the Plains of Abraham, it was not defensible in war.

During the French Régime there was no evidence of any attempt at the conservation of the natural resources of the colony. It is true that the fur trade was run by a succession of monopolies and that rigid control of the number that might enter the trade was enforced. This control, however, was directed entirely towards protecting the market and not at all towards the conservation of the supply. But the commercial history of the fur trade was not a record of unbroken profits. Fashions changed and demand fluctuated. The expense of maintaining adequate protection against the Indians - who sometimes objected to the chicanery of the traders, the seizure of their lands or the raping of their wives - was a heavy drain.

Company succeeded company as holders of the monopoly. The most important of these transfers came in 1645 when a small group of leading colonists obtained the fur trading monopoly from the Company of New France, whose headquarters were in Paris and whose directors were chosen almost exclusively from the French nobility. The significance of this change was that it was the first successful Canadian revolt - even though limited in scope and short of life - against "absentee management", and absentee management has until very recently been an important, and almost invariably an unhappy, influence in the history of Canadian resource development.

Although agricultural settlement progressed slowly under the French Régime, it nevertheless made an important impact on the system of land tenure in Canada. In the new country, as in the old, land was granted under the seigneurial system. In France the seigneur had customarily been a powerful feudal overlord and his tenants were largely subject to his control. In Canada the system was modified by the circumstances of the new land and the seigneur sometimes found himself with more obligations than privileges. He was expected to live on his seigneury and to divide his land into farms for settlers. The financial rewards of agriculture were so meagre that he was seldom able to attain a position of real affluence or power. His influence was generally less than that of the soldier, bureaucrat or priest. Nevertheless, the pattern of land-holding then established remained almost unchanged until 1854. The physical arrangement of the seigneurial boundaries - long, narrow farms stretching back from the river - remains today characteristic of the largest Canadian Province - Quebec.

The first charter of the Hudson's Bay Company, granted by Charles II in 1670, gave the Adventurers of England complete trading rights and judicial, legislative, and executive jurisdiction over all the lands watered by rivers flowing into Hudson's Bay - a watershed which extended well down into what is now the United States and westward to the great mountains. As the French fur traders moved north and westward past the Great Lakes, they came into direct conflict with representatives of the Company. Bitter and continuous feuds developed, but it was not until much later in Canadian history that this area came to exert its full influence on national development.

After the British conquest the development of what was then known as Upper Canada, and is now called Ontario, began. Here, too, the problem of landholding became a subject of furious controversy. Unlike the situation in comparable areas of the United States it was hard for the ordinary settler to get clear title to his land, while large tracts were given to people with money or influence. The establishment of Clergy Reserves and Crown reserves

was a main source of bitterness and of economic dislocation. Each of these was equal to one-seventh of the land granted to settlers and was to be their equivalent in quality and location. The reserves remained undeveloped bush lots but their holders profited as their value increased with the improvement of the surrounding areas. The Clergy Reserves (in practice granted almost exclusively to the Anglican Church), were a source of particular discontent as the spirit of the frontier, even in the comparatively traditional atmosphere of Upper Canada, was hostile to the whole concept of a State Church.

Somewhat similar abuses were taking place in Lower Canada where a small number of people belonging to the well-to-do and privileged classes obtained control over large areas of forest, which was then exceedingly valuable because of the boom in the shipbuilding industry. (It was not only New England that produced the fast-sailing clippers, and the masts and spars of the British Navy grew straight and firm in the forests of the New World). The resulting commercial profits went into the pockets of friends of the government.

The land-grant abuses were largely responsible for the development of radical movements in both Upper and Lower Canada, for the demand for responsible government, and ultimately for the rebellions which broke out in both provinces. (It is worth recalling that in Upper Canada the rebellion was led by William Lyon Mackenzie, grandfather of the most successful political leader in Canadian history, William Lyon Mackenzie King, who recently retired after serving as Prime Minister longer than any other statesman in the history of democratic government.)

It was not until after responsible government was granted and control over the public domain was vested in the colonial rather than the imperial government that the situation in Canada improved. In general, the homestead system was then adopted and free title was granted to anyone who would accept and develop the land. In 1854 both the Clergy Reserves and Seigneurial Tenure were abolished, although the church lands in Lower Canada were left untouched.

II. Division of Responsibility between Federal and Provincial Governments

In 1867 Canada (the title "Dominion of Canada" has no legal basis and is now seldom used in official papers) was formed by the amalgamation of the colony of Canada and of the two maritime colonies of New Brunswick and Nova Scotia. The colony which gave its name to the new federation was split into its two former divisions of Upper and Lower Canada, which now became Ontario and Quebec. Manitoba entered Confederation in 1870, British Columbia in 1871, Prince Edward Island in 1873, Saskatchewan and Alberta in 1905, and finally Newfoundland in 1949. The Yukon and Northwest Territories, which comprise over one third of the area of modern Canada (but have only about 1/10 of one percent of the population), have not yet acquired provincial status.

The creation of a federal state, ruled by a national and ten provincial governments, made necessary a division of responsibilities in every field of governmental activity. Among these was the control of natural resources. The British North America Act, provided:

- (a) that "All lands, mines, minerals and royalties.....shall belong to the several provinces.....in which they are.....situate or arise....."
- (b) that the federal government shall have jurisdiction over the coast and inland fisheries.
- (c) that the provincial and federal governments shall have concurrent rights concerning agriculture, but provincial laws shall be valid only to the extent that they are not repugnant to Federal legislation.

Thus under the terms of the Act the four original Provinces of Ontario, Quebec, New Brunswick and Nova Scotia retained control over their lands, forests, mines, and other resources except fisheries. It would seem logical to assume that the other provinces should have obtained similar jurisdiction as they became respectively parts of the new nation. This did, in fact, happen in the cases of Prince Edward Island, Newfoundland and, with certain adaptations, British Columbia. In Manitoba, Saskatchewan and Alberta, however, all Crown lands and other resources were retained under the jurisdiction of the Federal Government.

The reasons for this discrimination were complex and can only be understood by reverting to history and, in particular, to the fortunes of the Hudson's Bay Company.

After the British conquest competition from the French fur traders collapsed, but their place was taken by a number of Scottish traders working out of Montreal. After a period of violent trade warfare among themselves these independent merchants eventually combined their interests in a single organization known as the North-West Company. This company had its vicissitudes but carried on an aggressive and mutually detrimental war against the Hudson's Bay Company until 1821 when the two combatants, worn out by their physical and legal battles, amalgamated, keeping the name of the Hudson's Bay Company in order to retain its charter. From that time until 1870 this company exercised almost undisputed sovereignty over central and northern Canada. The results were generally detrimental to the national interest, and it was not until after the Canadian Government had bought control over the North and West that hopes for western progress began to materialize.

When the Province of Manitoba was created in 1870 out of what had been Hudson's Bay Company territory, the Federal Government decided to retain control of the public domain in the new Province. In justification of this decision it was argued that Ottawa had purchased the land from the Company and therefore had the right to control it, and that in any case such control was essential in the interests of a national immigration and development policy. The resources were to be used to promote the progress of the nation.

The people of the new Province protested vigorously but without result. These protests continued through the years and increased when the Federal Government began to make tremendous grants of land to the railway companies that were pushing steel lines across the prairie. It was argued both that the railways were getting too much land and that the provincial resources were being used to pay a bill owed by the nation as a whole.

The people of Alberta and Saskatchewan (which were admitted as Provinces in 1905) were equally critical of the determination of Ottawa to retain control of the natural resources of the Middle West.

A number of financial arrangements were made between the Federal Government and the Prairie Provinces as partial compensation for federal ownership of provincial resources but these concessions were all regarded by the westerners as nothing more than conscience money paid for lands unjustly seized. It was not until 1930 that Alberta, Saskatchewan and Manitoba were placed on an equality with their sister Provinces in the matter of the control of their natural resources.

Today the land, mineral, and forest resources of Canada, in so far as they have not been alienated to private interests, and excluding those located in the Northwest Territories and the Yukon, belong to the Provinces. With this ownership goes the primary responsibility for development, conservation and beneficial use. It is only in the fisheries that the Federal Government retains legal rights and even here practice has weakened the significance of the title. It must be remembered, however, that the Federal Government has unfettered power of taxation, and taxation is a potent weapon to mould development policy.

III. Present Policies and Practices

As all the Provinces now own their natural resources, it might logically be assumed that the Federal Government would confine its activities in the field of resource development to those areas in which provincial administrations have not been established, that is, the Northwest Territories and the Yukon.

There are two basic and sufficient reasons why this restricted policy has not been adopted.

In the first place, the Government of Canada has, along with the governments of most other democratic countries, adopted as a primary object of policy the maintenance of a high and stable level of employment and income. It recognized, to quote its white paper on "Employment and Income" that "it will not be enough that (this) is an object of government policy. It must be an object of national endeavour. The active co-operation of all governments and groups in the country will be essential to success".

In striving to maintain this high and stable level of employment and income the government has three instruments available; taxation, enlightened trade policies, and judicious public expenditure.

Because of the importance of Canada's natural resources and their effect on the whole national economy, it is no exaggeration to say that the way in which they are used has a material effect, direct or indirect, on almost every source of employment and every source of its tax revenue. Consequently, the policies of taxation, of conservation, and of development that are adopted with respect to the country's natural resources are fundamental to any attempt to offset a business recession and maintain economic stability.

A second reason for federal participation in the development of the national heritage is found in the fact that in many cases desirable policies cannot be effectively carried out or a natural resource effectively exploited by a single province. To take an example, this is true in the case of certain of our water resources. Whether the water is used for irrigation, navigation, forest and farm production, power, or a combination of these factors, it is frequently found that more than one Province has a direct interest. Again, it might well happen that the Province in which the major proportion of the asset is located is either unable or unprepared to provide for its development in the way that would contribute most to national welfare. In other cases, and this happens particularly in the realm of forestry, many areas may be effected by a common problem (like the spruce bud worm) for which they are individually unable to provide a solution. In such cases it is appropriate that the Federal Government should be expected, and should be ready, to accept at least a share of the responsibility.

The exercise of these policies and responsibility may take many forms, but of these, four are of special importance. These are:

- (1) Financial assistance in the development of resources which are beyond the fiscal capacity of the Province in which they are located.
- (2) Scientific research devoted to the solution of problems common to more than one Province.
- (3) Assistance to the Province in the role of "honest broker" in negotiations relating to the fair distribution of rights to the beneficial use of joint resources.
- (4) The formulation of, and so far as possible, the adherence to policies which stimulate and foster the expansion of international trade. (As this is a wide and controversial subject and as Canadian action is governed to a considerable degree by external conditions over which Canada can exert only a limited influence, it will not be further discussed.)

Under these and certain other minor headings the Federal Government carries on a number of highly important developmental activities. This is usually done by agreement with the Provinces although, in some cases, these agreements are informal and even tacit in character. A brief summary of how these principles work out in the various fields of resource development will provide an interesting basis for comparison with policies followed in the United States.

Forestry provides one of the best examples of the type and extent of the responsibility accepted by the Federal Government. The new Canada Forestry Act which is now before the Federal Parliament has been drafted to define federal responsibility in this field. It provides that the national government may secure forest areas for permanent research projects acceptable to the provincial government concerned; may grant funds to assist the Provinces in the protection and beneficial utilization of forest resources; and may make agreements with public or private corporations or individuals for the initiation of economic studies of forest resources and forest industries.

A specific example of Federal-Provincial co-operation in forestry is the agreement between the federal authorities and the Province of Alberta under which a joint Board administers the Eastern Rocky Mountain Forest Conservation Act which was passed by Parliament in 1947. The duty of the Board is to develop and conserve some 8,500 square miles of forest area on the eastern slope of the Rocky Mountains, and it thus controls and protects the sources of the Saskatchewan River and in this way will eventually make available a greater volume of water for irrigation on the open plains.

There is in Canada a constantly increasing recognition by provincial and federal authorities and by industry of the significance of forest conservation in the broadest sense. But there is much yet to be done. Apart from the appalling annual losses by forest fires, we still waste approximately three-quarters of every tree that is felled in Canada. The principal of sustained yield is still largely a matter of conservation rather than commercial practice.

In the management of forests as a permanent asset, Canadian governments are in a peculiarly strategic position because of their control of the conditions under which Crown lands can be leased to operators.

The general policy of both Federal and Provincial Governments has been to dispose of the timber by means of licences to cut, rather than by sale of the land. Under this system the state retains ownership of the land and eventual control of the cutting operations.

The tendency today - although it is still only a tendency - is to require that forest operations shall be conducted in such a way as to protect the resource.

An important phase of forest conservation is protection against fire. Here both the Federal and the Provincial Governments play important parts. The Federal Government is responsible for fire-protection measures in the forests under its administration, in the Territories and in the great system of national parks, while the Provinces maintain fire-protection organizations, and co-operate with owners and licensees for the protection of all timbered areas within their respective jurisdictions. The Dominion Forest Service, moreover, conducts significant research in the field of fire protection.

Insects and diseases also take a heavy toll on Canadian forests. Here also research and control measures are undertaken by both Federal and Provincial Governments. An interesting example of this co-operation is afforded by the Forests Insects Control Board, operated under the federal Department of Mines and Resources, and composed of ten members representing the Federal Government, Provincial Governments, and the pulp and paper industry. Its purpose is to co-ordinate all efforts into one programme aimed at the solution of the forest insect problem in Canada.

Federal government assistance to the mining industry can be divided into two chief categories. There is first the development of major policies in the fields of taxation concessions, aid to transportation, marketing facilities, and national and international trade and monetary programmes. The second type of assistance is by direct contribution to the solution of scientific problems, including geological mapping to assist in the location of orebodies and research to solve problems in ore dressing, metallurgical processes, and new methods of utilization.

Mineral rights, once they are relinquished to private enterprise, become the property of the company or individual concerned and no conservation policies are enforced. Nor is there normally any tax on proved reserves, as is the case in some parts of the United States. An important exception to this general policy is found in the case of natural gas and petroleum resources in the Province of Alberta, where the Petroleum and Natural Gas Conservation Board exercises strict control over the number of wells, the volume of production, and so on.

Ownership of hydro-electric power installations in Canada is fairly well distributed between public and private bodies, both forms existing side by side in many of the Provinces. In Ontario, Saskatchewan, and New Brunswick public ownership predominates and it is expected that this will shortly be true of Manitoba also. At the other extreme is Newfoundland where all plants are privately owned. In between come Alberta, British Columbia, Quebec, Nova Scotia, and Prince Edward Island.

There is no major example of the co-ordinated "Valley" type of water resource development in Canada, although a few small regional programmes have been developed. It has been suggested that a "T.V.A." development might be undertaken in the Saskatchewan River Valley and in the Fraser River Valley but there is no immediate prospect of an effective programme.

Land settlement in Canada is undertaken by sale, by homesteading or on very long leases, varying from province to province. However, this is no longer of major importance as virtually all the agricultural land of first quality has been alienated.

In the case of agricultural development apart from the problem of land tenure, there exists in Canada a concurrent jurisdiction between the Federal Government and the Provinces and this naturally results in close co-operation between the legislative and administrative units concerned. In general, the Provincial Governments limit their agricultural legislation to problems effecting their particular provinces, while the Federal Government concerns itself with nation-wide or broad regional problems. For example, during the economic depression of the 30's the Prairie Provinces suffered a prolonged drought. Poor crops and low prices resulted in a rapid decline of farm income and it became impossible for farmers to combat drought and the other menaces which normally accompany it, such as insect infestations, soil erosion, weeds, and so on. The problems soon grew beyond private and provincial resources, and in 1935 the Federal Parliament passed the Prairie Farm Rehabilitation Act to provide for the restoration of the effected areas in Manitoba, Saskatchewan and Alberta. Federal funds on a large scale were made available for assistance to the Provinces. The federal Department of Agriculture directed the work but joint federal-provincial committees co-ordinated the work of all agricultural bodies, including that of some private commercial and financial organizations.

This Act is still in effect. Its work is divided into three main divisions; (a) land culture practices, (b) land utilization, and (c) water development. Under these terms the Federal Government provides funds and direction for the construction of water reservoirs, for economic and soil surveys, for land classification and determination of use, for the study of cultural practices, and for the provision of illustration stations to demonstrate the proper use of land for the regrassing of devastated lands and for the establishment of community pastures. Combined with these undertakings there has been an extension of federal research in a broad range of subjects such as soils, forestry, entomology, crop production, agricultural engineering etc. This work started in 1935. is

Another important contribution of the Federal Government is the work of the system of Experimental Farms. A Central Farm was established at Ottawa in 1887 and from it a network of farms and stations have been spread across the country, so located as to serve each of the agricultural areas. These farms and stations carry on fundamental research in a wide variety of problems.

Reference has already been made to the fact that under the constitution, the fisheries of Canada, both coastal and inland, are a federal responsibility.

But as practice has developed, the situation is now less clear-cut than the constitutional provisions would suggest. In general, the Federal Government exercises legislative and administrative functions in relations to the coastal and deep-sea fisheries of the Maritime Provinces and British Columbia. This has involved the negotiation and execution of such international conservation agreements as the Salmon Fisheries Convention, the North Pacific Halibut Fisheries Convention and the Fur Seal Agreement. These agreements are all developments resulting from the mutual needs and friendly relations of the United States and Canada. They may well be supplemented in the not distant future by a more fundamental development in international law which will allow nations under certain circumstances to extend some measure of territorial control into fishing areas on the high seas.

In its relations with the other Provinces the Federal Government has developed a pattern under which it legislates in accordance with provincial desires and leaves the fisheries administration to the provincial authorities. An exception is made in the case of Newfoundland, where the provincial government has not yet decided whether it wishes to administer the laws concerning inland fishing. Also, the Newfoundland Fish Marketing Board, which was in operation prior to confederation, will continue to control the marketing of salted fish for five years unless the provincial government wishes to terminate the arrangements prior to that date.

The Federal Government operates all fisheries inspection services throughout Canada. It also carries on research and experimental work in biological stations at many different points.

In addition to these varied forms of assistance to the industries mentioned the Canadian Federal Government provides a number of general services that have a direct bearing on the development of the resources of the nation.

Outstanding among these are the surveys - geological, topographical, hydrographic, geodetic, magnetic, and geographical. As a result of their activities the whole surface of Canada is being mapped rapidly and in detail. In air mapping Canada has led the world and in a comparatively short time there will be a complete photographic coverage of the whole country. This is being done almost entirely at federal expense and the various surveys are also charged exclusively to the national government. Their value to such industries as agriculture, forestry, fishing, and mining cannot be easily exaggerated.

Finally, reference should also be made to the Federal Government's policy of building, or assisting to build, roads into the mineralized areas of Canada, and its very large expenditure on the construction of airports and landing fields in isolated areas where these are required to assist in the development of the latent resources of the regions concerned.

Neither the Federal nor the Provincial Governments in Canada has a clear, definite, and consistent policy in regard to the division of responsibilities in the field of resource development as between public and private bodies. The line is not clearly and permanently marked. Even in the socialistic Province of Saskatchewan there are large areas left to private enterprise. In Ontario almost all the activities in this field are left to private capital - except for the ownership and arrangement of water power which is almost entirely under the state. And so the record goes. It is a mixed economy. Decisions are not usually taken in accordance with a basic and unalterable theory of government but are largely the result of the particular circumstances which exist at a given time in a given field. Like the British, Canadians are not by nature doctrinaire. We compromise

and sometimes follow contradictory policies. Perhaps we should be more consistent. But for the moment at least we prefer to experiment and act in what appears to be the practical way. On the whole it seems to work. Where else in the history of the world have 13,000,000 people accomplished so much in the way of economic development.

V. Conclusion

In conclusion, it would be easy to repeat the optimistic and gratifying summary of Canadian advantages in the field of natural resources with which this paper opened. But such a summary would be incomplete.

Draw the picture brightly as we may, it must be recognized that our supplies are not inexhaustible and that at the present rising rate of consumption we - and the rest of the world - may well be faced with acute shortages within our own life-time. Dr. Vogt may have exaggerated but his general thesis is grimly valid.

New technique of discovery, conservation, and utilization must be developed and applied. The flying magnetometer, the Geiger counter, and other geophysical methods must be increasingly employed. Science and a lively sense of responsibility must be called in to redress the unbalance caused by ignorance and greed.

If nation-wide plans on the scale required are to be developed in Canada, it will not suffice to rely exclusively on private industry. Indeed, industry is becoming increasingly insistent that governments must make a major contribution to the development and implementation of the essential work of planning and research. In Canada this demand is directed particularly towards the national government.

If the state is to contribute as it must to the work of identifying, developing, and conserving the national heritage, it must be prepared to use every resource of human intelligence and co-operative industry that is or can be made available within the bounds of financial responsibility. There must be willingness to try new methods, to experiment extensively in research, to eliminate the dilatory and inefficient ways that have so often marked government bureaucracy and to substitute for them a tight, concentrated determination to serve the nation through direct, practical assistance to those who are engaged in the development of our basic resources.

In seeking to attain this end Canada has much to learn from the United States. I believe that in some fields the United States may profit by Canadian example. Here is another opportunity for these great and friendly nations - the greatest international trading community in the world - to carry to still further heights the practice of co-operation and exchange that have marked so long, and so uniquely, the history of our friendship.

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Erratum

Reference Paper No. 51, The Development of Natural Resources in Canada, page one, paragraph four, line twelve, for "million dollars" read "billion dollars".