

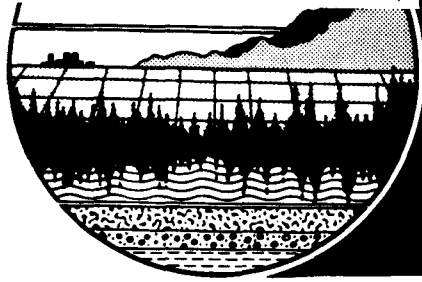


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THE IDENTIFICATION OF IMPACTS OF FEDERAL
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Analysis/Review



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THE IDENTIFICATION OF IMPACTS
OF FEDERAL PROGRAMS ON LAND USE:
A MANUAL FOR PROGRAM MANAGERS

Produced Under the Direction of
The Interdepartmental Committee on Land



Environment
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Canada

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INTRODUCTION

In November 1980, Cabinet directed that all departments would apply land use guidelines to federal policies, programs and activities which may affect land at all jurisdictional levels. The purpose of this manual is to assist program managers in dealing with the Federal Policy on Land Use. It will assist managers in identifying the potential land use impacts of their programs through a series of questions and explanations. If land use impacts are identified, further requirement for study and possible action to satisfy the guidelines of the Federal Policy on Land Use (attached) can be determined in association with representatives from the Interdepartmental Committee on Land (ICL).

Sound land use is fundamental to achieving the political, social and economic goals of a nation. Land provides food, **fibre**, minerals, fuels, shelter, water and oxygen, and is an essential element in the control of pollution and the maintenance of productive ecosystems. In Canada, the high quality land base for "production is limited, thus imposing a need to use the land wisely in order to obtain maximum sustained benefits.

The use of the Canadian land resource is important, not only in terms of long-term environmental concerns, but also because of the direct contribution that the land resource makes to all sectors of the economy and to the quality of life of Canadians. Many federal programs have the potential to influence land use through their impact on various land using sectors. In turn, the way in which the land is used and maintained may be critical in the achievement of the **government's** social, environmental and economic objectives. The productivity of many sectors and the capacity of the land resource to meet them has become of increasing concern, and the government has therefore adopted a policy, the Federal Policy on Land Use, to guide the way in which federal activities affect the nation's land resource.

This manual is designed to assist program managers throughout the government to determine whether or not the programs in which they are involved have the potential to influence land use in Canada. It consists of three parts:

Part One: Land Use Impacts of the Federal Government

Part One defines the nature and types of land use impacts found to occur from federal programs and activities.

Part Two: Program Categorization and Screening

Part two consists of a screening questionnaire which assists managers to categorize their programs by program sectors and directs them to the appropriate sections of Part Three which elaborates on the potential land use impacts of particular types of programs. Part Two also screens out those programs which are very unlikely to influence land use.

Part Three: Explanations of Land Use Impact for Each Program Sector

Part Three gives explanations and examples of the type of land use impact found to occur from programs of each general type.

Managers who are able to answer "yes" to one or more of the screening questions in Part Two should then consult Part Three and read the explanation provided for these particular questions. In Part Three, brief explanations are given on some of the ways in which specific types of federal programs and activities can influence the capability, use and management of Canada's land resource. Though by no means exhaustive, the explanations and examples provided in Part Three are intended to assist program managers to focus on land-use impacts which they may then apply to their own program. The known or suspected land-use impacts, if any, for the particular program should then be

described on the response form. There is no need to read all the explanations in Part Three. Instead, managers need only read the explanations for the screening questions to which they have responded "yes".

Managers are strongly encouraged to read the explanations in Part Three that are pertinent to the programs for which they are responsible. It will only take a few minutes of your time and it should assist you in answering the response form.

This manual is primarily directed toward the "program manager" (i.e., the Division Chief, Director, or equivalent). Given the differences in organizational terminology between departments, the document may be most appropriate at the level of the project, the sub-program, the activity element or a similar level of responsibility.

What To Do If Present Or Potential Land Use Impacts Are Identified?

Managers who have read the appropriate explanations in Part Three and determined that a program may have land use impacts, be they obvious or obscure, positive or negative, are advised to take the following actions. First, these managers should review the Guidelines of the Federal Policy on Land Use (attached). Second, they should complete the response form and contact their representative on the Interdepartmental Committee on Land (ICL) (or the ICL Secretariat, Lands Directorate, Environment Canada if there is no ICL representative in the Department). ICL members are available to further advise program managers on the ways by which the nature, type and extent of the land use impacts of programs may be determined.

Additional information and assistance is also available through the Lands Directorate, Environment Canada which provides the Secretariat to the ICL (telephone: 997-2470). Advice and assistance will be available from these sources to (1) clarify issues that are in doubt, and (2) determine if study of the land use impacts of the program might be needed. (Due to the broad range of potential land use impacts and the wide variety of federal programs involved, it is not possible to be more specific about the steps to follow and the assistance --available.) If further study is necessary,

the ICL Secretariat will be available to assist in the development of a research approach to assess the potential land use impacts of programs, and in the conduct of studies to assess the nature and significance of the potential land use impacts of present and planned programs. During preliminary discussions, or subsequent studies, it may also be possible to identify possible mitigative measures to adverse land use impacts or alternatively, measures to reinforce or enhance program effects that are beneficial to the capability, appropriate use and wise management of Canada's land resource.

PART ONE

LAND USE IMPACTS OF THE FEDERAL GOVERNMENT

A land use impact is "a result of action or inaction by individuals or governments which influences the use or the management of the land resource". Activity by the Federal Government can cause different types of land use impacts. These include:

Alteration/maintenance of land cover or use, e.g. - tree-cutting, reforestation, planting of particular crops, land fill in wetlands, construction, designation of a park or wildlife reserve;

Influence economic activity or potential of land parcels, or of regions, e.g. - infrastructure **development**, industrial incentives, public works, hazard lands designation;

Changes in land management, e.g. - more intensive agricultural practices, new forest **management** techniques, methods of industrial waste disposal;

Changes in land value and tenure, e.g. - increased value through infrastructure provision, increased productivity on the land;

Changes in physical capability of the land, both surface and sub-surface, e.g. - land clearance, **soil** depletion, erosion, **salinization**, acidification.

In the longer term, what is done by the Federal Government and others can seriously affect the physical potential of land for future land uses. From the standpoint of the Guidelines in the Federal Policy on Land Use, such impacts can be either positive or negative with respect to the long term potential of the land as a renewable resource.

Some federal activities may directly influence the use of the land resource, such as the management of federal lands, or programs which are directly aimed at the way in which particular areas of land are used (e.g., land clearance programs, land consolidation, easements). Other programs may have land use impacts in a more indirect and **complex** manner - through the influence on particular economic sectors which are ultimately translated into land use impacts (e.g., tax incentives, tariff policies). Impacts may occur immediately such as with

construction projects, or be cumulative in effect as economic or social programs work their way through the system and are ultimately translated into the way in which individuals use their land. Some impacts are of limited duration (e.g., change to a particular crop type); others are much longer term (e.g., reforestation). Federal impacts on land may also be limited in geographic scale (e.g., designation of a heritage site) or nationwide in their influence (e.g., monetary policies).

Federal Government Influence on Land Use

The Federal Government has the potential to influence land use in a variety of ways. These include:

- 1) The acquisition, disposal and management of federal lands, - may influence the use and quality of the particular land parcels, as well as adjacent lands through the type of activities undertaken on federal properties;
- 2) Construction activities - may occur on specific lands and as well influence the direction and nature of land development and of economic activities in areas of the nation; through, for example, construction or funding of infrastructure;
- 3) Regulatory powers - are designed to protect the environment, consumers, heritage sites, wildlife, hazard lands and public health. They also set standards for **economic** sectors such as housing, transportation, marketing, mining, **energy** production and the like. Such

regulations influence the nature, location and extent of economic activity, and ultimately, the demand, use and management of various types of land;

- 4) **Financial policies** - federal fiscal and monetary policies, trade and tariff policies and tax regulations influence the level of economic activity, both by economic sector and by region throughout the country;
- 5) **Sectoral support programs** - income **support**, tax incentive and credit assistance programs in various economic sectors (e.g. agriculture, forestry, manufacturing) affect the way in which each land-using sector uses land and its level of **demand** for land in particular parts of the country;
- 6) Regional development programs - designed to stimulate economic growth may influence the **demand** for land for particular types of resource development, secondary industries and the like in specific regions of Canada;
- 7) Research, information and planning activities - pertaining to land itself and to individual economic sectors - may influence the competitiveness of different sectors in the land market, the nature and extent of land requirements, the intensity of land use and the quality of land management. In most instances, land use impacts occur from the extensive application of research results rather than the actual conduct of the research itself.

PART TWO

PROGRAM CATEGORIZATION AND SCREENING

This part consists of a screening questionnaire that assists managers to categorize their programs by program sectors. By this means, the questionnaire directs managers to the pertinent sections of Part Three which describes the range of potential land use effects **from** different types of programs. Managers are requested to answer "yes" or "no" to each question and check the appropriate response in the space provided.

The questionnaire also screens out programs which are highly unlikely to influence land use. Managers who are able to answer "no" to all of the questions are very unlikely to be influencing, through their programs, the way in which the nation's land resource is used.

For example, managers in charge of internal **administrative** services for departments including personnel, finance, records, library services, administrative serves, etc., should be able to answer "no" to all questions.

Managers who have responded "yes" to particular screening questions should consult the corresponding explanations for the appropriate questions in Part Three of this manual. The explanation to each question outlines how various types of federal programs, whether financial, regulatory, **promotional**, research or other tend to influence the use, management and capability of the nation's land resource.

SCREENING QUESTIONS

Response
Yes No

REAL ESTATE

1. LAND ACQUISITION AND DISPOSAL: Does the program directly involve the buying, expropriation, selling or leasing of land, or does the program regulate, financially support or otherwise facilitate federal government land transactions? . Y N_

2. MANAGEMENT OF LAND: Does the program involve the management of land directly, or does the program regulate, financially support, or otherwise encourage or discourage particular land management practices? _Y N_

3. CONSTRUCTION: Does the program undertake, fund, regulate, promote, or otherwise encourage or influence the construction of buildings or infrastructure (e.g. sewers, roads, bridges)? _Y N_

SECTORAL OR REGIONAL SUPPORT

4. WILDLIFE AND FISHERIES: Does the program operate, regulate, finance, or provide research and information re: wildlife or fish preservation, the establishment of reserves, the maintenance of populations or the enhancement of habitat? Y N

5. AGRICULTURE: Does the program operate, regulate, finance, or provide research and information re: the agricultural industry, the marketing and trade of agricultural products, technical developments in the agricultural sector, or ultimately, the use and preservation of agricultural land for either crops or pasture? _Y N_

6. FORESTRY: Does the program regulate, finance, provide research support, or promote the forest industry, forest conservation, or technical developments in the forestry sector? Y N

7. RECREATION: Does the program provide, regulate, finance, or promote recreational or tourism activities and development? Y N

8. RESIDENTIAL: Does the program regulate, finance, subsidize, or provide research and information re: the housing sector and the supporting infrastructure and services for residential areas? Y N

9. TRANSPORTATION AND COMMUNICATIONS: Does the program provide, regulate, finance, manage, or perform research re: transportation or communication services? Y N

	Response	
	<u>Yes</u>	<u>No</u>
10. INDUSTRY AND COMMERCE: Does the program regulate, finance, manage, or promote industrial or commercial activities?	Y	N
11. MINING AND FOSSIL FUEL PRODUCTION: Does the program operate, regulate, finance, or provide research support re: mining or energy production from fossil fuels in all its phases, including exploration, extraction, transport, waste disposal and land reclamation?	Y	N
12. ELECTRICAL ENERGY GENERATION AND TRANSMISSION: Does the program regulate, finance, or provide research support re: electrical energy generation from hydro, thermal, nuclear or other sources, and its transmission to users?	Y	N
<u>ENVIRONMENTAL REGULATION</u>		
13. HAZARDOUS ACTIVITIES: Does the program operate, regulate, finance or support hazardous activities, such as nuclear power generation, laboratories, processing plants for petro-chemical or other toxic substances, industrial waste disposal areas, munitions manufacture, military firing ranges, radar sites, transport of hazardous materials, etc.?	Y	N
14. ENVIRONMENTAL PROTECTION: Does the program protect the environment through research support, establishment of standards, monitoring, regulation and enforcement, or financial assistance for clean-up to activities that degrade the environment?	Y	N
15. ENERGY CONSUMPTION/CONSERVATION: Does the program regulate, finance or promote energy conservation?	Y	N
<u>SPECIAL LANDS: DESIGNATED AREAS</u>		
16. HERITAGE LANDS: Does the program operate, promote , regulate, finance, or provide research and information re: the establishment, management or protection of cultural or historic sites and buildings?	Y	N
17. HAZARD LANDS: Does the program regulate, finance, promote or otherwise encourage the identification and designation of hazard lands, the restriction of development or the mitigation of risk in using these lands? Or conversely, does the program facilitate development activity on hazardous lands?	Y	N

	Response	
	Yes	No
18. ECOLOGICALLY SENSITIVE LANDS: Does the program regulate, finance, provide research and information, or promote the identification, designation, preservation or management of ecologically sensitive lands?	Y	N
<u>FINANCIAL POLICIES</u>		
19. LAND MARKET: Does the program affect the selling price of land (the land market) either nationwide through tax incentives, interest rates and other economic policies, or in local areas through a market stimulus (e.g., land acquisition, industrial incentives, and infrastructure support) or market depressant (e.g., hazard lands designation, location of a waste disposal site)?	Y	N
20. LAND OWNERSHIP: Does the program (1) facilitate the regulation of who owns land or (2) facilitate the transfer of land ownership through grants, loan guarantees, subsidies or other assistance to one of the parties in the land transaction?	Y	N
21. FINANCIAL POLICIES: Does the program involve the establishment and administration of monetary policies, fiscal programs or tax regulations?	Y	N
22. TRADE AND TARIFFS: Does the program regulate international or interprovincial trade through freight rates, quotas, tariffs or other protective measures, or alternatively, does the program enhance trade through a variety of promotional measures?	Y	N
<u>RESEARCH AND PLANNING</u>		
23. LAND RESEARCH: Does the program involve or facilitate research concerning land capability, use and management or provide information to the public or professionals on the nature, trends and problems regarding Canada's land resource?	Y	N
24. LAND PLANNING: Does the program assist, facilitate, abide by (or disrupt) regional and local land planning and zoning by other government levels?	Y	N

NOTE : The manager **who** has responded "yes" to one or more screening questions should read the corresponding explanations in Part Three.

PART THREE

EXPLANATIONS OF LAND USE IMPACT FOR EACH PROGRAM SECTOR

Part Three consists of the list of 24 questions for Part Two, and an explanation of the ways in which various types of federal programs and activities tend to influence the capability, use and management of Canada's land resource. The set of explanations in this section are designed as an educational tool to assist program managers in (1) determining if their programs do or do not influence land use and (2) identifying the nature and type of land use impacts which may be caused by their program. Managers who have answered "yes" to one or more of the questions in Part Two should read the explanations provided for those particular questions. There is no need to read all the questions and explanations, only those which are applicable to the program or activity in which you are involved.

The explanations and examples provided are indicative rather than exhaustive. The range of possible land use impacts are described for each program category and examples are given. Rather than being totally **comprehensive**, the explanations are intended to assist managers to focus on land use impacts which they may then apply to their own programs. In some instances, the land-use effects described will seem obvious. However, due to the broad range of federal programs and the wide array of land-use effects possible, some of which are less well known, it should prove worthwhile for all program managers who have responded "yes" to one or more screening questions to read the appropriate explanations.

1. LAND ACQUISITION AND DISPOSAL: Does the program directly involve the buying, expropriation, selling or leasing of land, or does the program regulate, financially support or otherwise facilitate federal government land transactions?

The Federal Government is a major land holder, not only north of 60°N latitude but also throughout the country. Federal holdings include airports, post offices, penal institutions, parks, Indian reserves, military bases, research stations, and **others**. Government decisions on how, where and when to acquire or dispose of land can have a pervasive influence on the land quality and use of the site, on surrounding land uses, and on the market value of land. For example, large tracts of agricultural land were acquired in the construction of **Mirabel** airport. In this case, the previous land uses as well as users were partially displaced. Similar influences can be felt through leasing arrangements. For example, in the Niagara Region, the St. Lawrence Seaway Authority leases out substantial areas of land on short-term leases thus largely precluding their medium-term development for intensive orchard and vineyard use.

Federal land acquisition can also serve as a strategic tool for local land planning, in cooperation with provincial and municipal governments, to facilitate downtown redevelopment, heritage preservation or other community objectives (e.g., Toronto's **Harbourfront** development). Conversely, federal activity can run counter to local planning objectives. The sale (or purchase) of large tracts of land, if not managed properly, could also depress (or inflate) a local land market, creating land shortages or surpluses.

2. MANAGEMENT OF LAND: Does the program directly involve the management of land directly, or does the program regulate, financially support or otherwise encourage or discourage particular land management practices?

It is clear that the control of the use of a land parcel and the management of the intensity and diversity of activities and facilities on this land can have significant land use impacts. A major concern is the extent to **which** the use is suited to the **resource** capability of the land. Industrial, urban and transport activities, for example, should not be located on prime agricultural land where possible. The management of the land to make the best and most intensive use of its inherent capability is another consideration. Experimental farms test and encourage intensive horticulture; however, surplus federal lands of high capability may go unused. An important aspect of land management is the implementation of conservation measures and regulations to protect renewable resources (e.g., minimize erosion) and reduce risks (e.g., avoid flood plains). Compatibility of the land activity with surrounding land uses or lack thereof (e.g., airports and bird sanctuaries, rifle ranges and housing developments) is a further management concern. Land management should consider the secondary effects of uses on surrounding areas either as a stimulus (e.g., more intensive use of military lands may generate economic activity in nearby centres), a stress (e.g. extended use of military lands may cause pressures on local schools, roads, sewage service and housing) or a restriction (e.g., noise zones around airports).

3. CONSTRUCTION: Does the program undertake, fund, regulate, **promote** or otherwise encourage or influence the construction of buildings or infrastructure (e.g., sewers, roads and bridges)?

Construction activity has major land use impacts, both during and after the actual construction process. Construction involves direct transformation of the site to a new land use such as a building, road, bridge, factory etc., which supplants the previous land use and permanently destroys the **potential** of the land for other uses such as agriculture, forestry and the like. Impacts on adjacent lands can also be significant, as the new facilities can provide access, generate other uses and influence the location within cities or regions of commercial, residential or other functions. Construction may also inadvertently take place on hazard lands, such as flood plains or fault lines. Significant construction projects such as dams, roads, bridges, airports and major office **complexes** can cause major temporary changes in land using activity and physical alterations in the resource itself through changes in stream patterns, flooding, soil removal, silting, etc. They also can help to determine long-term, land use patterns of entire regions. **Infrastructural** works in particular, including railroads, roads, airports, trunk sewers, industrial parks and the like may be the main factor in **promoting** the development of one region over others, with obvious longer-term changes in land use. The way in which buildings or major works are constructed can be regulated to minimize or mitigate impacts.

4. WILDLIFE AND FISHERIES: Does the program operate, regulate, finance, or provide research and information re: wildlife or fish preservation, the establishment of reserves, the maintenance of populations or the enhancement of habitat?

Management of wildlife and fisheries has the potential to directly influence the **level** of land management and control the use of land areas. Reservation of land for wildlife areas can serve to protect environmentally sensitive lands, ground water recharge areas, spawning grounds, etc. Enhancement of habitat and maintenance of wildlife and fish populations can provide a recreational resource for an area particularly along coastal zones, or as is the case in the north, form the basis for **economic** livelihood (hunting, trapping and fishing).

Impacts, however, may be broader than the confines of lands owned and managed for wildlife purposes. Wildlife reserves may preclude forestry uses and negatively affect crop and wildlife production. For example, wildfowl may depredate nearby **commercial** crops. Observers of wildlife may trespass on adjacent properties. Most impacts of wildlife reserve and habitat enhancement programs are positive but localized adverse impacts upon adjacent properties should be considered.

5* AGRICULTURE: Does the program operate, regulate, finance, or provide research and information re: the agricultural industry, the marketing and trade of agricultural products, technical developments in the agricultural sector, or ultimately, the use and preservation of agricultural land for either crops or pasture?

Many federal programs in the agricultural and rural development sectors have a wide range of land use impacts through research, information, regulation and inspections, **Subsidies**, tariff protection, infrastructure development and related support programs. Rural development programs and agreements have directly financed and assisted in farmland improvements (e.g., clearance, drainage, irrigation, crop planting) as well as in economic adjustment on the farm (e.g., farm consolidation, community pastures) and in the development of infrastructure for processing and marketing (e.g., access roads, the upgrading of food processing equipment). These **programs** have facilitated expansion and improvement of **farmland**, more intensified land use, increases in farm unit size, changes in crops grown and increased improvement and availability of grazing areas. Rural development programs as well as the agricultural research and information activities have created and resulted in the extensive application of new technical developments in seed, planting, pest control and farm machinery as well as improving overall farm management methods and skills. These advances tend to change patterns of cropping and grazing, increase farm

efficiency and production per unit area, and open some new land for farming while removing from production, marginal land not suited to modern farming methods.

The increased scale and capital requirements of modern farms have made government financial programs very important. Agricultural funding programs endeavour to provide directly a more stable economic environment for the farm operator through protection from physical calamity (e.g., crop insurance), marketing **problems** (e.g., **agricultural** stabilization) and capital shortages for entry into farming or expansion of land or equipment (e.g., farm credit). These programs generally facilitate the economic viability of farming and the maintenance of farmland in production. Marketing related programs such as the Wheat Board, tariff regulations and trade quotas can cause farmers to shift to favoured commodities and away from uncompetitive products, thus influencing crop patterns, the raising of livestock and the intensity of land use and regional specialization.

Agricultural support programs, such as land clearance, assistance for drainage and rangeland improvement have the potential to remove land from previous uses including wildlife, forestry, or recreation for which it may have been highly suited, or reduce its capability to support these other uses. Consideration of these implications and trade-offs is critical to an understanding of the land use impacts of programs directed at the agricultural sector.

6. FORESTRY: Does the program regulate, finance, provide research support, or **promote** the forest industry, forest conservation, or technical developments in the forestry sector?

Many federal programs directly influence the way in which forest lands themselves are used and managed - through regulation, subsidies, information **infrastructural** assistance and related support programs. The conduct of research and the extensive application of the results in the areas of new species, production methods, forest protection, reforestation and the like can alter the productivity of forest lands and change the type or amount of land required for different tree species, ultimately altering the use of significant land areas. Product development, promotion and marketing also result in changing demands for forest products. These alterations in **demand** may be satisfied by changes in the area of land devoted to forestry or by changes in the manner in which it is managed. Subsidies to the forest sector for such activities as management improvement or reforestation can affect the viability of the industry in different regions and different forest activities, influencing the use of land with forest

potential, both directly through the attachment of conditions and project approval criteria or by default, through unconditional block funding.

Promotion or regulation of the forest industry or forest practices can have significant impacts not only on forest land use itself, but also on the use of land by other sectors - most notably recreation, agriculture and wildlife. Reservation of lands for exclusive forest industry use, may preclude recreation. Forestry activities may **disturb** wildlife and alter habitat if incorrectly managed. Forest development may result in replacement of agriculture or other uses.

Forest industry development can be positive or negative, dependent upon how it is managed with respect to community development, regional **economic** growth, drainage patterns and soil quality. Through these, the broader impacts of forestry can have profound effects on land use within entire regions. Consideration of these trade-offs is central to an understanding of the land-use impacts of programs directed at forests and at the forest industry.

7. RECREATION: Does the program provide, regulate, finance, **or** promote recreational or tourism activities and development?

The provision of recreation-based facilities or activities may either contribute to the preservation of natural areas or to the intensive development of land areas. The national parks system and other related programs have served to protect and provide regulated access and interpretation of ecologically sensitive areas, unique wildlife **habitat** and scenic natural features. Through **financial** and other forms of assistance, destination resorts (especially ski areas) have been developed with direct impacts on the site itself and spin-off development of accommodation, roads, residential areas and service facilities. Transport facilities with **some** recreational orientation such as small craft **harbours** provide a base or stopover for recreational pursuits. Each program has obvious side effects as well as anti'lary development impacts.

The encouragement of **domestic** and foreign tourism through promotion and development funding has numerous secondary effects which may have an impact on land use. Tourism development or **activity** may degrade the land resource (e.g., wildlife habitat) or destroy fragile natural features (e.g., sand dunes). The secondary development created may result in further commercial and residential land use. New access roads and improvements to existing road networks may also have impacts remote from the site. In addition, designation of natural areas for public **recreational** use may preclude their use for other purposes, such as forestry, private recreation, or extraction of mineral resources. The degree and type of land use impacts may depend upon the level of planning, management and control both within the designated areas and in their surroundings. Recreational programs can also serve as instruments **or** environmental protection as well as for regional development. Program managers should be aware of the diverse and use effects possible from retreat' onal activities.

8. RESIDENTIAL: Does the program regulate, finance, subsidize, or provide research and information re: the housing sector and the supporting infrastructure and services for residential areas?

Although the federal government does not have regulatory control over the form and layout of local residential areas, many federal programs can influence the cost, style and quality of housing and the location, pattern and density of residential areas. Mortgage financing and consumer subsidies can **influence** the supply and demand for different types and densities of housing, thus affecting the quantity of land required for residential use. Grants and loans for infrastructure (sewerage, schools, etc.) and funding for land assembly has the potential to affect the size, density and location of residential development with implications for other **competing** uses for which the land resource may be suitable (e.g., agriculture, recreation).

Financial assistance for **infilling**, inner city redevelopment or neighborhood rehabilitation can maintain or increase the housing stock accessible to central urban jobs and services. At the same **time**, it can reduce the need for development on the urban fringe which may absorb land suitable for agriculture and other resource uses. Regulations and supporting research such as the National Building Code and model site planning by-laws, **if** adopted by other agencies and government levels, can affect housing styles and residential patterns and **densities** which influence overall land requirements.

Research and demonstration programs regarding new forms of community design and rehabilitation, **if** adopted, can promote more compact urban form, thus protecting the land resource surrounding urban centres for other rural uses.

9. TRANSPORTATION AND COMMUNICATIONS: Does the program provide, regulate, finance, manage, or perform research re: transportation or communication services?

The transport or transmission of people and goods and transmission of messages require land-based operating facilities, including terminals, road beds and transmission lines. Federal facilities such as airports, canals, ports, **harbours**, rail networks and transmission corridors all require land. The land area occupied varies in size, from as small as a transmission tower to as large as an airport or **harbour**.

Major transportation facilities have a broad range of land impacts. The previous use, which may have been well suited to the resource capability of the land, is permanently replaced by construction of the facilities including related access roads, services and warehouses. Transport nodes also function as a stimulus to further development of ancillary industrial and commercial uses on nearby land, causing land use change. Operation of transport facilities may place certain restrictions on surrounding land use. For example, noise zones around airports can preclude development and waste disposal sites that attract birds are prohibited near airports. The management of surrounding lands required for buffering or future expansion of facilities (e.g., short-term leasing arrangements on Seaway lands or around **Mirabel**) may reduce the productivity of existing uses such as agriculture or commerce since tenants are not encouraged to make the necessary investments. The transport of hazardous materials increases the risk to land uses and the population along the transport route.

The transport lines themselves - rail lines, roads, communication towers - can have a locally disruptive influence on land use (e.g., the operation of a farm). **Also**, transport lines can cause degradation of the physical environment through disruption to stream flow, clear cutting of woodlands, etc..

The combination of new or expanded transportation terminals and networks of routes or communication facilities may serve as a stimulus to the regional economy and **alter** the regional land use pattern, causing the further development of industrial, commercial and residential uses **which** displace existing land uses. Conversely, the withdrawal of transport or communication services may lead to a decline in community development and a change in regional land use (e.g., rail line abandonment).

Research into the operational efficiency of transport vehicles, terminals or networks, for example, can indirectly affect land use through the requirement for fewer or smaller future facilities because of the increased efficiency of the operations.

Changes in transportation regulations governing the price of goods or their movement may cause changes in the flow of goods and services, which might ultimately cause changes in land patterns (e.g., cropping, livestock). Such changes often have the most severe land impacts at points of production and distribution. Similar changes in regulations and rates governing passenger services also has implications for economic development and land use. Program managers should be aware of the diverse land use impacts resulting from decisions concerning the transport sector.

10. INDUSTRY AND COMMERCE: Does the program regulate, finance, manage, or promote industrial or commercial activities?

Industrial and commercial activities have a wide range of land impacts. Industries and some commercial activities often locate on the edge of urban centres where land prices are lower and requirements for space can be met, thus removing land from agriculture, forestry and other uses. The disruption of existing land resource uses may be increased if the industrial and commercial expansion 'takes the form of strip development along major roads or dispersed development throughout the urban fringe. The location of commercial activities can also have a significant impact on adjacent land uses, influencing traffic patterns, land values, the nature of residential development and the expansion of existing facilities. **Many** of the adverse consequences on adjacent land uses, however, can be reduced through the establishment of industrial parks.

Financial incentives that serve to establish a new industrial **plant** or commercial site through tax breaks, low interest loans or grants have successive economic impacts commencing with the creation of new jobs. The increase in employment within a community stimulates the housing and services sectors which require land for building purposes.

Generation and disposal of industrial wastes can have land impacts including land required for disposal and buffer zones, as **well** as have the potential for contamination of not only **the** land on the site but pollution of much wider *areas such as* drainage basins. Airborne industrial emissions can be transported over some distance and their effects on land may be evidenced in another region as is the case of acid rain. Research, financial assistance, monitoring and regulation by governments can help to control and mitigate the land use effects of industrial wastes. Program managers should be aware of the diverse impacts on land use of decisions concerning the industrial and commercial sectors.

11. MINING AND FOSSIL FUEL PRODUCTION: Does the program operate, regulate, finance, or provide research support re: mining or energy production from fossil fuels in all its phases, including exploration, extraction, transport, waste disposal and land reclamation?

Many federal programs directly influence mining and fossil fuel production, especially in northern Canada. Oil, gas, coal and mineral exploration is assisted by various surveys and mapping services (e.g., geological survey), while licensing and permit systems control both the rate and the location where exploration may occur. Government financial incentives or tax write-offs help to support exploration, extraction and transport facilities and operations. Government capital funding and planning mechanisms support the development of communities and infrastructure (e.g., access roads) needed for mining, particularly in the north. Quotas, regulations and trade agreements can affect the volume of fossil fuels and mineral wealth exported (and imported) with consequences for the level of mining activity and surrounding land use. Regulatory activities serve to control the location of mines, wells and pipelines. The impact of mining or quarrying on surrounding land use and the mitigation of adverse environmental effects can be monitored by regulatory mechanisms. Government supported research and its subsequent application assists with improvements to exploration, extraction and land reclamation techniques and to the increased monitoring of environmentally sensitive areas.

Mining and petroleum production affect land use in diverse ways. They serve as the economic basis for other land uses, notably transportation and industrial activities. They can become the *raison d'être* for the development of communities and transportation networks, especially in remote and northern areas. Extraction activities, however, displace other possible land uses such as agriculture, forestry, recreation or wildlife on the site for the foreseeable future. Construction of facilities and subsequent operational activities for exploration, extraction and pipelines can often permanently disrupt environmentally sensitive areas including coastal zones, wetlands and northern tundra. Likewise, the aesthetic and scenic quality of the landscape for residential or recreational purposes can be temporarily or permanently destroyed by mining activities, sometimes over wide areas where appropriate planning and regulatory measures are not followed. Disposal of waste from mining activities can pollute the ground water (thus affecting other land uses), damage environmentally sensitive areas, decrease the scenic value of an area and, in some cases, prove hazardous to human health.

Consideration of the costs to other land uses and the trade offs involved is central to an understanding of the land use impacts of programs directed at the development and regulation of the mining and fossil fuels sectors.

12. ELECTRICAL ENERGY GENERATION AND

TRANSMISSION: Does the program regulate, finance, or provide research support re: electrical energy generation **from** hydro, thermal, nuclear or other sources, and **its** transmission to users?

The generation and transmission of electricity, has varying land use impacts depending upon method. "Previous uses of the land such as agriculture, forestry, wildlife habitat, etc., which may have been well suited to the resource capability of the land, are permanently replaced by the siting of large generation plants, the construction of dams and reservoirs, and the development of related facilities, services and access roads. Electrical generation facilities can cause a change in the viability of adjacent land uses. Industrial development may, for example, be stimulated by the ready availability of power. The development of reservoirs, however, can cause habitat destruction or enhancement depending upon the nature of the species and the site. Destruction of spawning habitats, for example, can eliminate fish species. Similarly, the recreation potential of an area can be affected by the development of a reservoir. Due to the potential hazards of nuclear power generation, an area of land surrounding a nuclear power facility should likely be retained as a buffer zone.

Electrical transmission corridors can have a locally disruptive influence on land use (e.g., the operation of a farm) and limit the scenic **value** of adjacent lands for recreational and residential purposes. The development of transmission corridors can **also** cause degradation of the physical environment through the clear cutting of woodlands, the spraying of foliage and the like. Within urban areas in particular, transmission corridors are **sometimes** used, however, for recreational purposes. such as walking paths, bicycle trails or allotment gardens.

Emissions and waste from certain forms of electrical generation can lead to the degradation and contamination of the land resource. **Sulphur** dioxide emissions **from** coal-fired thermal electricity plants contribute significantly to acid rain, affecting large land areas well beyond the source of **emission**. The temporary storage of radioactive wastes (no permanent disposal area exists yet) restricts the use of the site and may **limit** the marketability of nearby land. Improper storage of radioactive waste can result in contamination of the land resource.

Consideration of these implications and trade-offs is central to an understanding of the land use impacts of programs concerned with the generation and transmission of electrical energy.

13. HAZARDOUS ACTIVITIES: Does the program **operate, regulate, finance or support hazardous activities, such as nuclear power generation, laboratories, processing plants for petro-chemical or other toxic substances, industrial waste disposal areas, munitions manufacture, military firing ranges, radar sites, transport of hazardous materials, etc. ?**

Hazardous activities, from which fires, explosions, radiation or toxic substances might **emanate** could (or perhaps should) -- restrict the site and a wide area of land surrounding the site from residential, agricultural, recreational and other uses. The land resource itself may also be contaminated by radiation or toxic substances, effectively precluding its safe use for other activities. The operation of hazardous activities must be strictly regulated and regularly monitored to minimize the risk of terms of both human health and **economic** viability for existing land uses.

Many different government programs or program phases are concerned with hazardous activities so as to prevent negative impacts from occurring, including those dealing with (1) evaluation of the need for the activity; (2) selection of location; (3) siting of processing facilities; (4) **waste** disposal; (5) shipment of hazardous materials and (6)

research into alternative technologies and mitigative actions. Evaluation of need is a significant phase, since if the need for a hazardous facility (e.g., nuclear power facility) is not confirmed and approved (e.g., the benefits do not match the estimated **economic** and environmental costs), then the full range of adverse project impacts will not occur. Location selection is a critical phase since it provides the opportunity to situate hazardous activities away **from communities, high capability resource lands, and unstable geologic features. Site design for hazardous facilities - offers the opportunity to provide** for buffering **from** the surrounding area (through large land areas, berms, etc.), to build on bedrock, and to 'avoid high ground water levels and other undesirable site features. Waste disposal, whether **temporary** or permanent, requires proper location and site selection of the facility, with the key requirement often being a highly stable geologic formation. Proper route selection and safety regulations are essential to minimize risk in the transport of hazardous materials. Research and its subsequent application can assist in mitigating the land use and environmental effects of hazardous activities in many ways, including development of alternative production processes and new methods to neutralize and dispose of wastes.

14. ENVIRONMENTAL PROTECTION: Does the program protect the environment through research support, establishment of standards, monitoring, regulation and enforcement, or financial assistance for clean-up to activities that degrade the environment?

Federal programs which seek to protect the environment often also influence the potential, quality and use of land. The research, development and enforcement of water effluent standards for industrial processes protect water bodies and the associated biological communities, both aquatic and terrestrial. The maintenance of high water quality also encourages recreational and other uses of shore zones and helps to ensure a healthful water supply for residential areas. Programs that seek to reduce the level of acid rain through research, monitoring and regulation to lower emissions of sulphur-dioxide, protect the land from the degradation of its capability for agricultural and forestry production, and

help to preserve fisheries and related uses. Research, standards and regulations for the use and disposal of toxic substances have the potential to protect the land resource from contamination which could preclude its use for residential, recreational, agricultural and other activities.

Financial assistance programs also have the potential to prevent degradation of the land resource through the attachment of environmental protection criteria to loan approvals. Programs concerning clean air, water and reduced toxic substances can also have land use impacts through their incentives or restrictions to particular economic activities. Environmental protection may also involve international negotiations and cooperative action. Most environmental protection activities are positive in their land use impacts, but have the potential for locally disruptive effects.

15. ENERGY CONSUMPTION/CONSERVATION: Does the program regulate, finance, or promote energy conservation?

Federal involvement in energy use is primarily through energy pricing which influences **commercial**, industrial, residential, recreational, agricultural, and **other land uses**. **High gasoline prices**, for example, may discourage long-distance commuting and, therefore, urban sprawl and **ex-urban** settlement. High energy costs for --industrial processes may influence industries to situate near large markets. Tractor fuel, **petro-chemical** based pesticides, fertilizers and other energy input costs may force farmers either to manage their land more intensively or to withdraw partially or entirely from agriculture. High energy prices may also encourage the use of agricultural or forest land for energy production through biomass.

Programs such as the "off oil" effort which discourage the use of **hydro-carbon** based "energy sources may encourage the use of nuclear power, hydro or coal-fired thermal **electricity** generation, or renewable **forms** of energy, each of which has its own land-use impacts - on the site as well as on surrounding areas and transmission corridors. Programs for energy conservation through improved land use planning may have the result of not only reducing mining exploration and exploitation impacts on land, but of also reducing land requirements for transportation as a result of increased use of mass transit, and for residential **development** through a more **compact** urban form, thus leaving land suitable for agriculture and forestry, etc., in production.

16. HERITAGE LANDS: Does the program operate, promote, regulate, finance, or provide information re: the establishment, management or protection of cultural or historic sites and buildings?

Cultural or historic sites are deemed to be of national significance because of their historic, cultural, or aesthetic value. These unique lands are protected to maintain their inherent value by the federal government, usually through designation or **acquisition**.

The land areas they occupy, however, are restricted to only the specific designated use, thus precluding other suitable land uses. Most cultural or heritage sites are designed for public accessibility to promote educational enrichment and consequently attract not only people but also associated services. As a result, nearby communities and surrounding land areas may undergo the **development** of access routes, parking facilities, accommodation, restaurants, shops and other tourist facilities which can supplant or disrupt existing uses, and also degrade the quality of the land resource.

Land designated as a heritage or historic site not only restricts the use of that particular site, but also affects the surrounding land uses and land values. The degree and type of land use impact may depend upon the **level** of planning, management and control both within the designated areas and in their surroundings.

17. **HAZARD LANDS:** Does the program regulate, finance, promote or otherwise encourage the identification and designation of hazard lands, the restriction of development or the mitigation of risk in using these lands? Or conversely, does the program facilitate development activity on hazard lands?

Hazard lands include flood plains, steep slopes, earthquake fault zones, areas of soil instability, and areas susceptible to subsidence, land slides or severe erosion. The location of activities or the construction of permanent buildings and facilities on hazard lands increases the risk of disruption to activities, severe damage to buildings and other structures, financial disaster and the loss of human life. The Federal Government can help to reduce the mis-use of hazard lands through (1) support of the identification and designation of these areas (e.g., seismic monitoring, flood plain mapping); (2) support for regulations and zoning that restrict permanent development on hazardous sites; (3) ensuring that federal facilities are not inappropriately constructed on hazard lands; (4) ensuring that construction financed in whole or in part by the Federal Government does not occur on hazard lands. Where communities, roads, rail lines and other facilities are already located on hazardous areas, funding can be made available for protective public works such as dikes, flood control dams, spillways or snow sheds for avalanche protection. Action to guard against hazardous conditions (e.g., protection of wetlands to prevent downstream flooding) or to redress previously created hazard lands (e.g., reforestation of severely eroded slopes) can also be undertaken.

18. **ECOLOGICALLY SENSITIVE LANDS:** Does the program **regulate**, finance, provide research and information, or **promote** the identification, designation, preservation or management of ecologically sensitive lands?

Identification and preservation programs clearly have the potential to affect the lands which are covered by them. The Federal Policy on Land Use states that the Federal Government will "identify and protect through designation or acquisition, lands of particular value to the nation because of... **ecological importance**". Protection of ecologically sensitive areas such as beaches, sand dunes, marshes and critical wildlife and fish habitat is important for the maintenance of the diversity of landscapes and biological systems, for the preservation of ground water recharge areas and for recreational purposes.

These lands, however, may also have agricultural, forestry, recreational, mining or other capabilities, whose use could be restricted or affected due to any designation procedure. In addition, these lands may be the source of nuisances such as mosquito breeding grounds and have adverse consequences for nearby land uses. Moreover, identification or designation of sites could generate visitor activity which itself requires land for parking lots and roads, etc., or generate **commercial** land uses. Major increases in access could result in degradation of the site itself. The degree and type of land use impact may depend upon the level of planning, management and control both within the designated areas and in their surroundings.

19. LAND MARKET: Does the program affect the selling price of land (the land market) either nationwide through tax incentives, interest rates and other economic policies, or in local areas through a market stimulus (e.g., land acquisition, industrial incentives, and infrastructure support) or a market depressant (e.g., hazard lands designation, location of a waste disposal site)?

The market price of land is an important indicator of perceived value in its existing or future land uses. Market value can reflect the inherent productivity of the land for agriculture, forestry, mining or other uses, access to natural amenities, availability of utilities and infrastructure and access to public services and employment.

Federal programs can influence land markets both positively and negatively. They can enhance land values locally through financing the provision of services and employment

opportunities. At the local level, programs can depress land values through the siting of hazardous or unwanted land uses, introducing land use **restrictions** or implementing large transfers of activities and personnel out of a community as happens, for example, when a military base is closed. Entry into the local market to expropriate, purchase or sell land can also be locally disruptive.

At the national scale, the raising or lowering of interest rates can inversely affect land value. Federal tax regulations **can directly** affect the level of speculation in the land market. High levels of speculation over an extended period can leave lands idle, prematurely removing these areas from productive uses such as agriculture or forestry on the rural-urban fringe.

As a result, managers whose programs affect the land market should be aware of the end result that their policies can have on the use of Canada's land resource, at both the local and national level.

20. LAND OWNERSHIP: Does the program (1) facilitate the regulation of who owns land or (2) facilitate the transfer of land ownership through grants, loan guarantees or other assistance to one of the parties in a land transaction?

The federal government is not generally a key actor in land ownership issues (e.g., it has no control over property assessment, property taxation, land registry, subdivision regulations, etc.). It does, however, have some influence over (1) who **owns** land and (2) the transfer of land **ownership**.

Regulations governing the establishment of new businesses in Canada and the acquisition of Canadian businesses by foreign firms, including farms and property management firms, can affect the level of investment capital available in Canada for land development. Such regulations may also increase the opportunity for Canadians to control land development and land **management** decisions to better reflect national and

regional priorities. Regulations permitted under the Citizenship Act also enable other government levels to restrict the **ownership** of critical lands such as coast lines, ecologically sensitive areas and farmlands by foreign residents, corporations or absentee owners presumably in order to facilitate the better management of the land according to its inherent capability.

Programs can facilitate the transfer of land ownership through subsidies and loan guarantees in rural areas to enlarge land **parcels** into economically productive units. Programs involving grants, loans and **loan** guarantees have also assisted families especially first-time home-buyers, to purchase **homes**, thus affecting the level of residential development and the amount of land converted to urban use. Consequently, managers whose programs influence land ownership should be cognizant of the end result that their policies and actions can have on the use of the nation's land resource.

21. FINANCIAL POLICIES: Does the program involve the establishment and administration of monetary policies, fiscal programs or tax regulations?

Government financial programs can affect the use of the nation's land resource through their strong influence on land-using economic **sectors**. High interest rates can substantially reduce investment in new residential areas, the development of new industrial capacity and the effective use of Canada's farmland. Policies regarding the **value** of the Canadian dollar can influence the flow of international trade for Canadian commodities (e.g., mineral and forest products) and tourism (e.g., use of national parks), thus affecting use of these resource lands. The level of tax write-offs and financial subsidies can influence the viability and level of investment in many industries, and hence, the expansion, contraction and intensity of use of lands for agriculture, forestry, mining, recreation and other uses. The way in which a tax is applied, whether to raw or finished products, can influence the location and land use of involved industries. As a consequence, managers of financial programs **should** be aware of the end result that their policies can have on the use of the nation's land resource.

22. TRADE AND TARIFFS: Does the program regulate international or **interprovincial** trade through freight rates, quotas, tariffs, or other protective measures, or alternatively, does the program enhance trade through a variety of promotional measures?

Activities which control or promote trade can influence where and to what extent various land uses are located on a regional or national basis. Tariff barriers can protect and even stimulate the expansion of specific land uses such as tender fruit production or have widespread land use effects. For **example**, tariffs have maintained the textile manufacturing and shoe industries as viable industrial land uses in **Quebec** and Ontario, thus maintaining certain communities and the supporting infrastructure.

Freight rates may focus production in selected areas. For example, beef quotas, freight rates, and the Livestock Feed Assistance Act have together encouraged beef feed lots to locate in the east while western grain is shipped to them. National marketing agencies and boards have the potential to expand or provide stability to markets (e.g., grains, dairy, and poultry in the agricultural sector), thus enhancing the viability of an industry and expanding the extent of land used or the intensity of production.

The land use effects of changes in trade controls or promotional activities can be highly significant in specific economic sectors (e.g., the vegetable industry) or in local areas (e.g., the Niagara Peninsula). **As** a result, program managers must be aware of the end results that tariff protection and policies can have on the use of the nation's land resource.

23. LAND RESEARCH: Does the program involve or facilitate research concerning land capability, use and management or provide information to the public or professionals on the nature, trends and problems regarding Canada's land resource?

Research programs, which provide information regarding soils, resource depletion, the capability of the land resource for different purposes, trends in land **use, or important land** issues can serve as a basis for informed decisions on land use and land management, both by individual landowners and government policy makers. Research leading to improved soil conservation practices, for example, can assist the individual farmer. The Canada Land Inventory information on the agricultural capability of land formed the basis for land designation under the agricultural land reserve policies in British Columbia, **Quebec** and **some** municipalities elsewhere. Forest land management research can result in improved methods of forestry with benefits both for production and land resource maintenance. In order to affect land use, the results of land research obviously must be accepted and applied by decision-makers. Land researchers should be cognizant of the potential end uses for their product when choosing, designing, conducting and reporting on **their** research.

24. LAND PLANNING: Does the program assist, facilitate, abide by (or disrupt) regional and **local** land planning and zoning by other government levels?

Wise land use planning can facilitate **economic development** and environmental protection, ensure that land use coincides with its physical capability, promote the **compatibility** of land uses and improve the overall efficiency of land use patterns. Although the federal government does not have **constitutional** responsibility for land planning except in the north, federal programs can influence provincial and municipal land planning in many ways. Research programs can develop new approaches and information bases for local land planning. Regional **economic** development programs, including infrastructure assistance, industrial location incentives and transport and infrastructure planning can either reinforce or disrupt local planning efforts. The acquisition, disposal and management of federal properties, especially if they form a **sizeable** part of a region, can strongly influence local land planning. Federal land management can be employed as a strategic tool for local land planning, in concert with local governments, to facilitate downtown redevelopment, heritage preservation, agricultural land retention and other important objectives.

Federal Policy on Land Use

The purpose of this publication is to outline the **Federal Policy on Land Use: A policy to guide federal policies and programs as they affect land use and to guide the management of federal lands.**

The federal government recognizes that the wise use and sound management of the nation's land resources are essential to the attainment of many of the nation's goals. The provincial governments have legislative jurisdiction over the general regulation and control of land within their boundaries and the federal government has no intention of intruding in the area of provincial jurisdiction with respect to land. The federal government has legislative jurisdiction over the general regulation and control of large areas of land in the Territories and over some land, mainly federally owned, in the provinces. Furthermore, federal government policies and programs markedly affect the allocation, use and management of both private and public lands.

Land is the basis of national sovereignty, a primary factor in production of food and **fibre**, and its use a determinant of the quality of life for present and future generations. Sound land use is fundamental to achieving the political, social and economic goals of a society. Land provides food, **fibre**, minerals, fuels, shelter, water and oxygen, and is an essential element in the control of pollution and the maintenance of productive ecosystems. Consequently, the way in which land is used will shape the way in which a society functions.

In Canada, the nature, extent and capability of the land resource vary widely from region to region. In all instances, however, the high quality land base for production is limited, thus imposing a need to use the land wisely in order to obtain maximum sustained benefits. The inter-regional exchange of commodities derived from land is a significant factor in the national economy and achievement of national **goals.**

Current land issues relevant to Canadian society include the loss of high quality agricultural land; the increased need for industrial and residential land and its high cost; the concerns over location of transportation and energy facilities; access for mineral exploration and development; the settlement of native claims; the preservation of unique habitats for wildlife; and preservation of land of recreational, historical, cultural or aesthetic importance. The increased demands for such land and the resulting land-use conflicts make it imperative that rational land-use decisions are made in order to meet Canada's present and future needs. To this end it is essential that effective means for assessing, allocating and managing Canada's limited land resources are developed.

This document enunciates a policy **goal** with accompanying principles, policy statements and guidelines by which the federal government will assess, develop and adapt its programs and policies to ensure a positive contribution to the wise use of Canada's land resources and thereby contribute to the achievement of Canada's goals.

The Goal

To ensure that federal policies and programs and the management of federal lands contribute to the wise use of Canada's land resources.

Guiding Principles

The federal government will pursue this goal by applying policy statements and land-use guidelines while observing these principles:

- A widely understood, comprehensive and current appreciation of land, its characteristics and use is fundamental to sound land-use decisions by Canadians and their governments.
- The free exercise of a) private rights and obligations associated with land ownership; and b) the operation of the market as the prime allocator of privately-owned land must be preserved unless clearly demonstrated to be contrary to the public interest.
- The provinces have legislative jurisdiction over the general regulation and control of land use within their boundaries, with the exception of federal lands.
- Governments must be accountable for the current impact and long-term effects of their land policies and programs.
- Between governments and within any government, harmony of policies and programs that affect land is fundamental to dealing with land-use problems.
- Land-use policies, while recognizing biological and physical constraints, at the same time must reflect changing economic, technological and environmental conditions, and public attitudes.

Policy Statements

- 1. The federal government will pursue the achievement of the policy goal through a cooperative federal/provincial approach, and will support those provincial land-use objectives, policies and programs that it views to be operating in the national interest.**
- 2. The federal government will acquire and manage lands necessary for those activities for which it is responsible, so as to combine efficient provision of federal government services with the achievement of broader social, economic and environmental objectives.**

The Treasury Board Advisory Committee on Federal Land Management will consider 1) the Policy Statements and 2) the Guidelines in this document to develop policies and guidelines in support of the federal land management policy. Federal departments and agencies (listed in schedules A, B and C of the *Financial Administration Act*) will ensure the sound planning and safe development of lands for which they are responsible by ensuring that the Treasury Board Advisory Committee on Federal Land Management reviews all plans for federal facilities such as:

- airports
- canals
- ports and harbours
- parks and wildlife areas
- small craft harbours
- community pastures
- defence and public works

on all lands owned or to be acquired by the federal government.

Ministers will provide these Guidelines to federal Schedule D Crown Corporations to guide their land-use decisions.

3. The federal government will review its policies and programs in order to identify where and how its activities influence the use of private and public land and the evolution of land-use patterns.

-- The responsibility to conduct such reviews rests with individual departments, with guidance as required from the Interdepartmental Committee on Land.

4. The federal government will ensure that all significant land-related projects initiated by the federal government, for which federal funds are provided, or for which federal property is required, are subject to the Federal Environmental Assessment and Review Process or a provincial equivalent so that potential environmental and land-use ill effects can be identified and mitigated.

5. The federal government will identify and, as appropriate, protect through designation or acquisition, lands of particular value to the nation because of historical, cultural, recreational, aesthetic or ecological importance.

Programs that deal specifically with these lands are being carried out within the Department of Indian and Northern Affairs and the Department of the Environment.

Representative samples of Canada's natural landscapes, seascapes and ecosystems are acquired and maintained through the *National Parks Act*.

Under the *Historical Sites and Monuments Act*, sites of historical and cultural value to the nation are preserved and, as required, acquired by the federal government.

The *Territorial/ Lands Act* is used in the Territories to set aside lands of particular value such as game sanctuaries and national forests. Federal/

provincial/territorial agreements under the Agreements for Recreation and Conservation Program identify and protect lands considered to be important recreational resources.

Under the *Canadian Wildlife Act* and *Migratory Birds Convention Act*, wildlife areas and sanctuaries are designated and acquired.

6. The federal government will provide a coordinated program of surveys and socioeconomic, scientific and technical research on land capability, characteristics, tenure and use.

Surveys and research in the fields of:

- geological surveys
- topographic mapping
- soils
- ecological mapping
- social, economic and environmental aspects of land use
- identification of critical lands
- land-use monitoring
- forest inventories
- water surveys
- collection of socio-economic data relating to land use

are key elements in the formulation of sound land-management strategies by all who influence the use of land.

7. The federal government will provide information to the public on the land resource and its use as a primary means of achieving wise management of this resource.

Current and accurate information should be central to decisions made by land owners. The federal government will ensure that its departments and agencies coordinate their activities so that the required information is provided in the most effective and efficient manner.

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8. **The federal government will discourage inappropriate use of hazard-prone lands such as those subject to floods, erosion, slumping, avalanches, seismic activity and other manmade or natural hazards.**

Present programs within the Department of the Environment and other departments identify and designate potential risk areas. These include programs to discourage new investment in flood risk areas under the federal/provincial Flood Damage Reduction Program, and regulations under the *Aeronautics Act* to regulate the use of land surrounding airports.

9. **The federal government will honour its obligations to native peoples with respect to the settlement of land claims and in satisfaction of outstanding treaty land entitlements. It will ensure that all lands made available in satisfaction of native land claim settlements are subject to appropriate environmental provisions.**

10. **The federal government recognizes that foreign land ownership issues are most effectively managed by the provinces.**

Parliament in 1973 delegated administrative authority to the provinces to control the ownership of land by foreigners.

11. **The federal government will apply the following land-use guidelines to federal policies, programs and activities which may affect land and to the management of its land holdings.**

Land-Use Guidelines

These guidelines reflect concern for the nation's land resource and will be used to guide federal policies and programs. Where possible, all government departments and agencies will apply these guidelines in the implementation of their policies, programs and activities. The guidelines will be reviewed periodically and may be revised in the light of changing socio-economic and environmental conditions.

- A. The impact of policies and programs on urban land will be considered. Appropriate action will be taken to support urban land use which leads to economically efficient urban areas, and a high quality physical and social environment for urban residents.
- B. The impact of policies and programs on land with high agricultural capacity will be considered. Appropriate action will be taken to minimize the conversion of such lands to uses incompatible with long-term food production.
- C. The impact of policies and programs on land with high forestry capacity will be considered. Appropriate action will be taken to ensure the maintenance of such lands for sustained fibre production.
- D. The impact of policies and programs on the use and development of lands with potential for production of non-renewable resources such as minerals, hydrocarbons and aggregates will be considered. Appropriate action will be taken to ensure access and, where required, rehabilitation.
- E. The impact of policies and programs on land required for transportation and communication services will be considered. Appropriate action will be taken to help ensure that it will be available for future requirements.
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- F. The impact of policies and programs on watersheds, aquifers, recharge and storage areas, and other lands critical to the quality and quantity of the nation's water supply will be considered. Appropriate action will be taken to ensure their protection.
 - G. The impact of policies and programs on lands which are of particular value because of historical, cultural, recreational, aesthetic or ecological importance will be considered and appropriate action will be taken to preserve or enhance their value as a national heritage.
 - H. The impact of policies and programs on fragile and critical habitats will be considered and appropriate action will be taken to prevent unnecessary damage to such lands.
 - 1. Federal policies and programs will not contribute to inappropriate use of hazard lands or inappropriate siting of hazardous processes.
 - J. Local, regional and provincial concerns, plans and zoning will be considered, and appropriate action will be taken to ensure that the federal influence on land and local environments has a positive impact.

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