change, particularly in urban-rural fringe areas. Several thematic mapping projects have illustrated land-use issues in key regions such as along the Windsor–Quebec axis and in the Vancouver–Victoria area. A computerized bibliographic reference system which currently houses outdoor recreation references exclusively is being expanded to cover a wide range of literature on land-use matters.

Another role of the directorate has been to assess the land-use impact of major development projects. Advice and guidelines have been provided for such proposals as the Vancouver Airport expansion.

## **Forest depletion**

The average annual forest depletion by cutting and fire is shown in Table 10.2 for the 10-year period 1964-73. The primary sources of Canada's current wood production are the areas of Crown forest land allocated to wood production and private forest land. These two ownerships constitute 404.8 million acres (163.8 million hectares). On a volume basis, it was estimated in 1968 that the annual permissible allowable cut to maintain productive forests was 8,481 million cu ft (240 million m<sup>3</sup>). In the 10-year period 1964-73, average annual utilization of wood harvested amounted to about 4,100 million cu ft (116 million m<sup>3</sup>) or about half the allowable cut. In addition to cutting and fire, extensive forest depletion is caused by insects, diseases and natural mortality but no reliable estimates of these losses, either physical or economic, are available.

A large surplus of timber exists in Canada although there are shortages in some regions and species which could be overcome by increased silvicultural and management techniques. In addition, greater utilization of individual trees and of certain species could further extend the resource.

A total of 7,777 forest fires occurred across Canada in 1974, destroying 2.3 million acres (one million hectares) of valuable forest land (Table 10.3). Through carelessness and incendiarism, man has been blamed for 73% of all forest fires reported in 1974 (Table 10.4). Lightning caused 2,141 fires or 27% of the total.

## Forest administration

## Federal forestry programs

The federal government is directly responsible through several departments and agencies for the protection and administration of forest resources in the Yukon Territory and Northwest Territories and on other federal lands such as the national parks, Indian reserves, military areas, and forest experiment stations. In addition, there are important federal responsibilities with respect to the nation's forest resources as a whole. These responsibilities, which relate to forestry research and development and the provision of information and technical services, are defined and established by the Forestry Development and Research Act (1966) and the Department of the Environment Act (1970).

The primary federal organization concerned with forestry is the Canadian Forestry Service of Fisheries and Environment Canada. Its program covers seven categories: forest policy and program planning; production forestry; environmental and amenity forestry; background research; operations; extension services; and international forestry.

To promote improved management of forest resources and better forest products, the Canadian Forestry Service, through publications, workshops, and seminars disseminates technical information to forest resource and wood processing managers. Forest advisory services are provided for federal departments and international agencies, and assessments are also made of operational trials and treatments conducted by resource organizations and industry. In the forest products field, special testing services (unavailable commercially) are provided both for government and industry. The service also participates in the development of codes and specifications for forest products. 10.1.3.1

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10.1.2