# Western Canada (The Prairies)

- 20% of Canada's area – almost 2 million sq. km
- 17% of the population – over 5 million
- 18% of Canada's GDP

- 8% of the population is aboriginal – almost ½ million

- Alberta, Saskatchewan, Manitoba

- Alberta
  - Over 661,000 sq. km
  - Population – over 3 million
  - 80% urban, 92% English
  - Over $ 40,000 GDP per capita, 6% + annual growth

- Saskatchewan
  - Over 652,000 sq. km
  - Population – over 1 million
  - 64% urban, 95% English
  - $ 30,000 GDP per capita, around 5% annual growth

- Manitoba
  - Almost 650,000 sq. km
  - Population – 1.2 million
  - 72% urban, 90% English
  - $ 28,000 GDP per capita, 2% annual growth

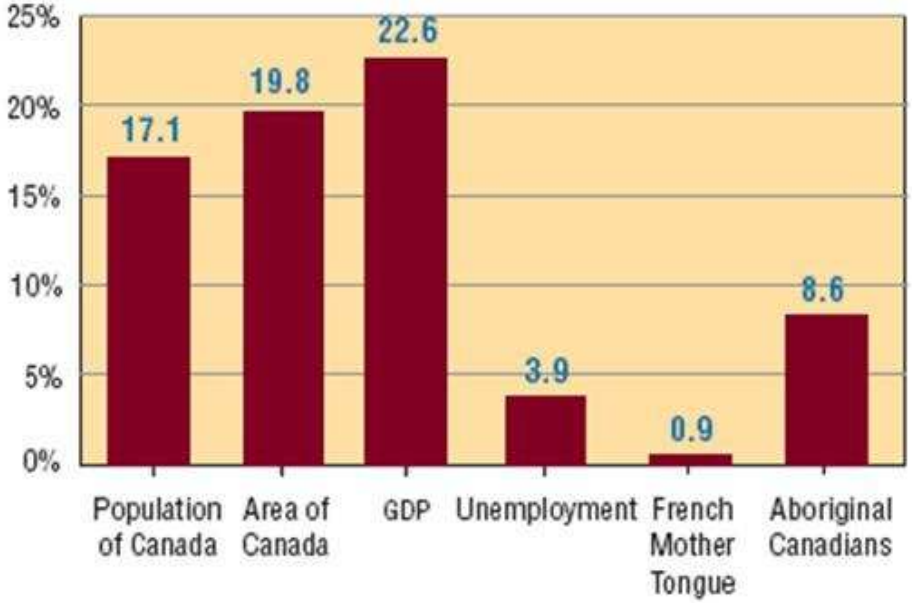



**Figure 8.1 Western Canada, 2006.** Although Western Canada covers a large area of the country, the region's population strength is more modest than its economic growth. The region has fewer French-speaking Canadians than other parts of the country, but a significant percentage of Aboriginal Canadians.
*Sources:* Tables 1.1, 1.7, and 4.18.

# Figure 8.1
# Western Canada, 2006

- Agricultural/industrial heartland: southern Manitoba to central Alberta
- Northern resource hinterland
- In transition: from mainly agricultural to urban, industrial & service economy
- Disadvantage: distance to major markets and seaports
- North (outside the core) – 5% of the population, small aboriginal settlements dominate

# Physical Geography

- Climate: from mid-latitude continental to sub-Arctic

- Four physiographic regions

    1. Interior plains – almost all of Alberta, southern ½ of Saskatchewan, SW Manitoba
    2. Canadian Shield – the western extension – northern 2/3 of Manitoba, 1/3 of Saskatchewan
    3. Hudson Bay lowland – NE Manitoba
    4. Cordillera – western and SW mountains, Alberta

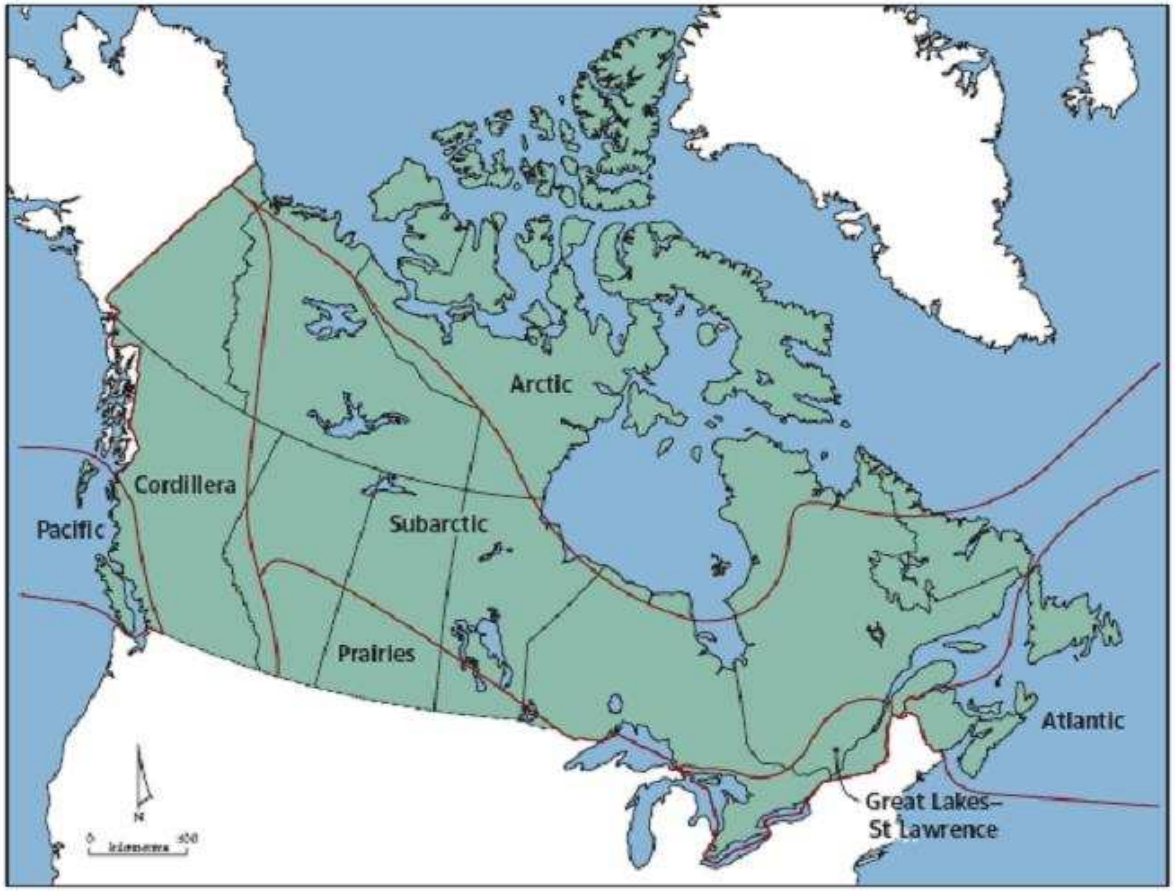



**Figure 2.6 Climatic zones of Canada.** Each climatic zone represents average climatic conditions in that area. Canada's most extensive climatic zone, the Subarctic, is associated with the boreal forest and podzolic soils. (Further resources: Student website, National Atlas section, Map 7. Website instructions are found on p. xx.)

# Figure 2.6 Climactic zones of Canada

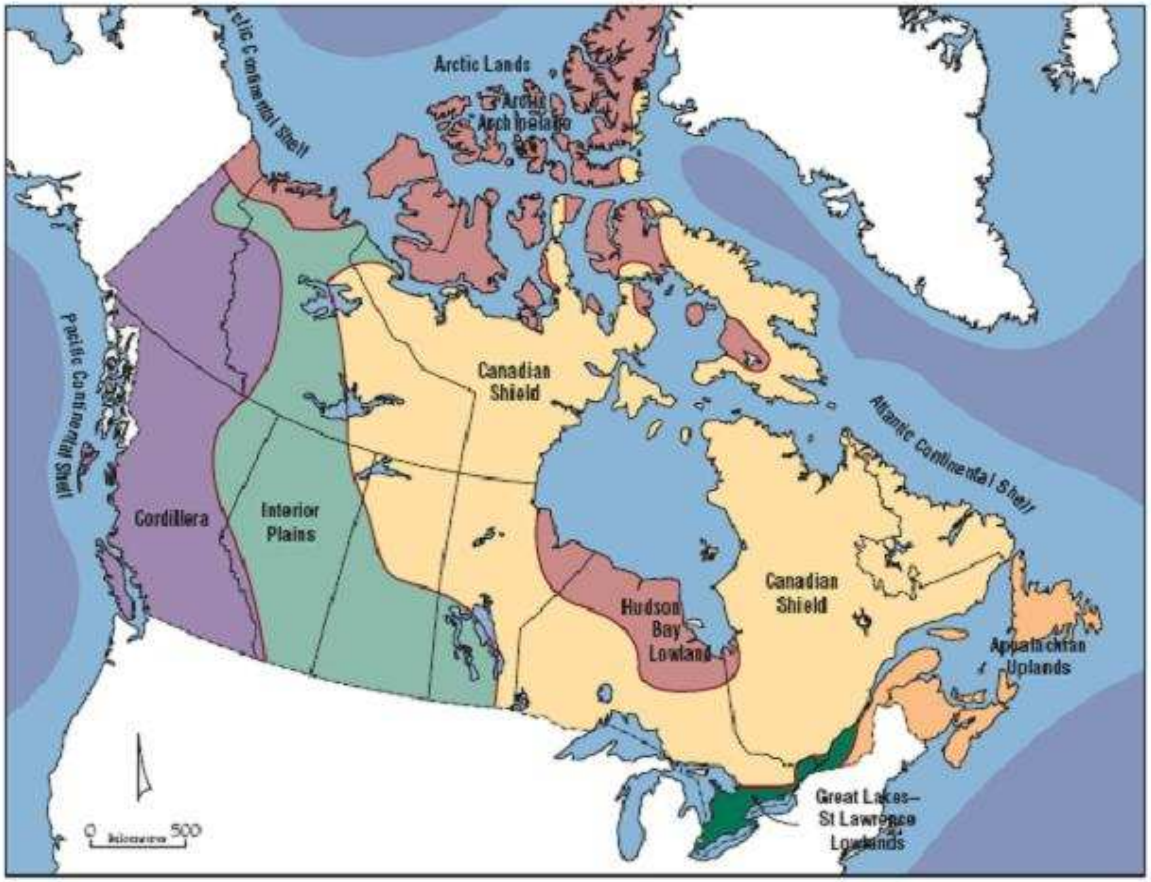



**Figure 2.1 Physiographic regions and continental shelves in Canada.** The Arctic Lands consist of a dozen large islands and numerous small islands that together are known as the Arctic Archipelago. The Canadian Shield is the largest physiographic region and extends beneath the Interior Plains, the Hudson Bay Lowland, and the Great Lakes–St Lawrence Lowlands. (Further resources: Student website, National Atlas section, Maps 2 and 3. Website instructions are found on p. xx.)

# Figure 2.1 Physiographic regions and continental shelves in Canada

# Historical Geography

- The early Prairies: the Plains Indians and the Metis (Manitoba
- A boost to settlement: the Dominion Act of 1872
- Late 1800s: The Canadian Pacific Railway and its impact on settlement of the Canadian West
- 1905: Alberta and Saskatchewan granted provincial status – population totals sufficient
- By World War I: the West settled by and large
- Grain-based agricultural economy by the early 1900s
- The 20th century economic transformation
- Diversification of the economy
- Alienation of the West - a persistent problem

- Economic handicaps
    1. Distance from markets – cost of transport
    2. Transport of grain to CPR lane by wagons
    3. Short and unpredictable growing season

# The Western Economy

- Relatively high percentage of employment in primary industries: more than 11% (Ontario: 2.7%)
- Secondary industrial employment – 16.2% (9.2% of the Canadian total)
- Western versus Eastern Canada – essentially a heartland/hinterland relationship
- Tertiary employment (services): 72.7% (same as Ontario)

# Agriculture

- 85% of total Canadian cropland
- 50% of Canada's farmers
- Grain-based: wheat – 30% of the cropland
- Over 20% of the world wheat market
- Increasing importance of livestock – cattle, hogs

- Three agricultural zones
    1. The Fertile Belt
    2. The Dry Belt
    3. The Agricultural Fringe

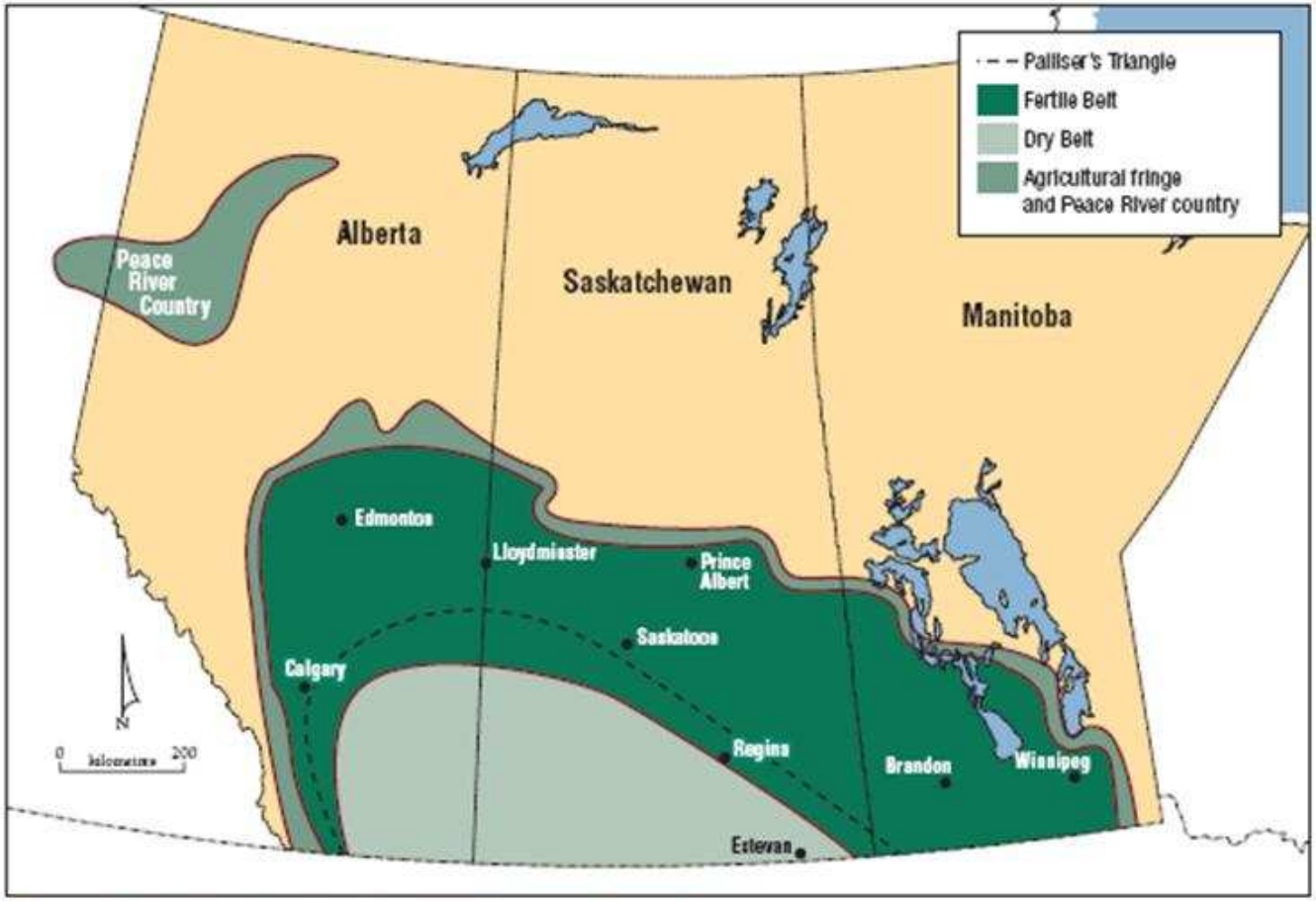



**Figure 8.4 Agricultural regions in Western Canada.** Farming in the Prairies can be divided into three areas: the Fertile Belt, the Dry Belt, and the agricultural fringe and Peace River country. Each region has a different type of agriculture because of variations in physical geography.

# Figure 8.4
# Agricultural regions in Western Canada

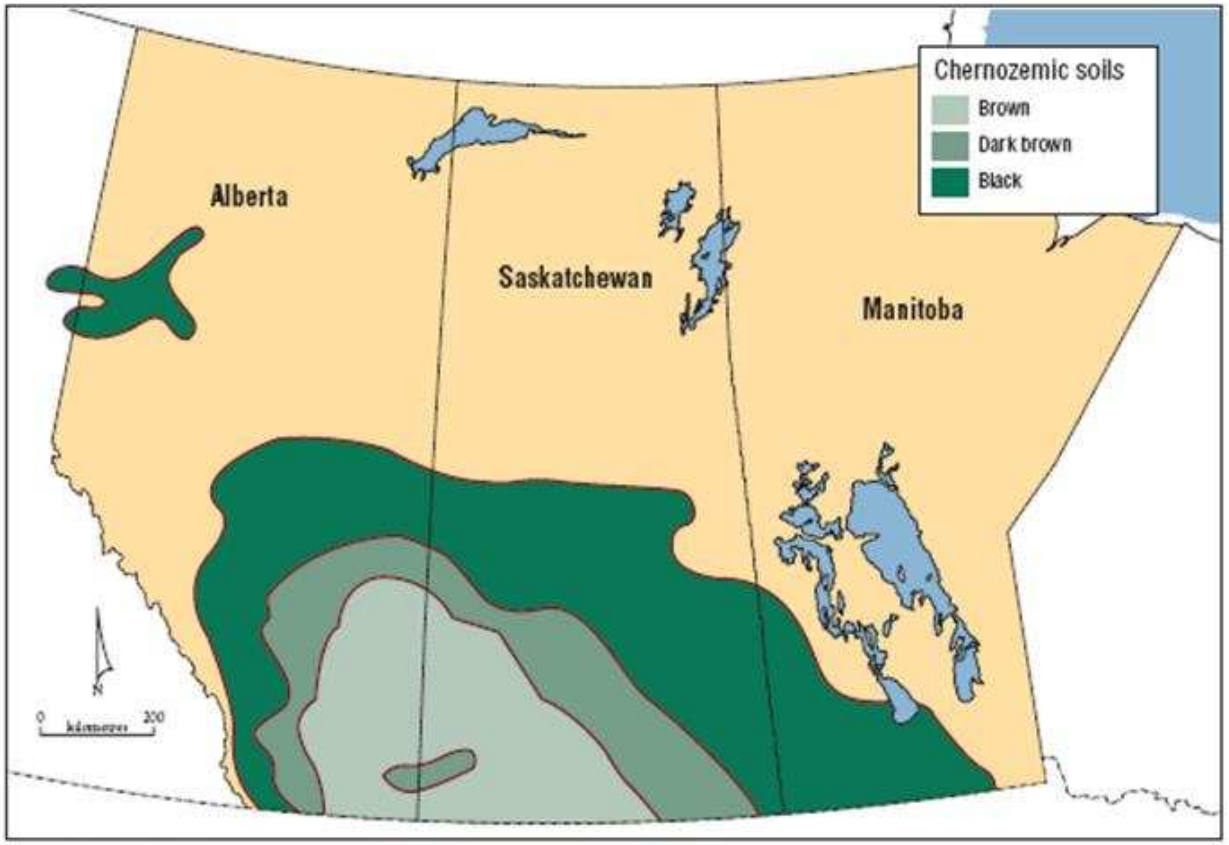



**Figure 8.3 Chernozemic soils in Western Canada.** There are three types of chernozemic soils in the Canadian Prairies: black, dark brown, and brown. The differences in colour are due to varying amounts of humus in the soil. The Peace River country's soil, formed under an aspen forest, is 'degraded' black soil.

# Figure 8.3
# Chernozemic soils in Western Canada

- Recently: a significant decline due to
    1. Low world prices for grain
    2. Rising cost of transportation
    3. Loss of subsidies: The Crow rate – 1995: ½ of the cost of shipping!
    4. Subsidies in place elsewhere (U.S., E.U.)

- Results and consequences
    - Numerous bankruptcies over the years
    - Alternative employment necessary in many instances
    - Decrease in overall number of farms
    - Decaying or abandoned farming communities

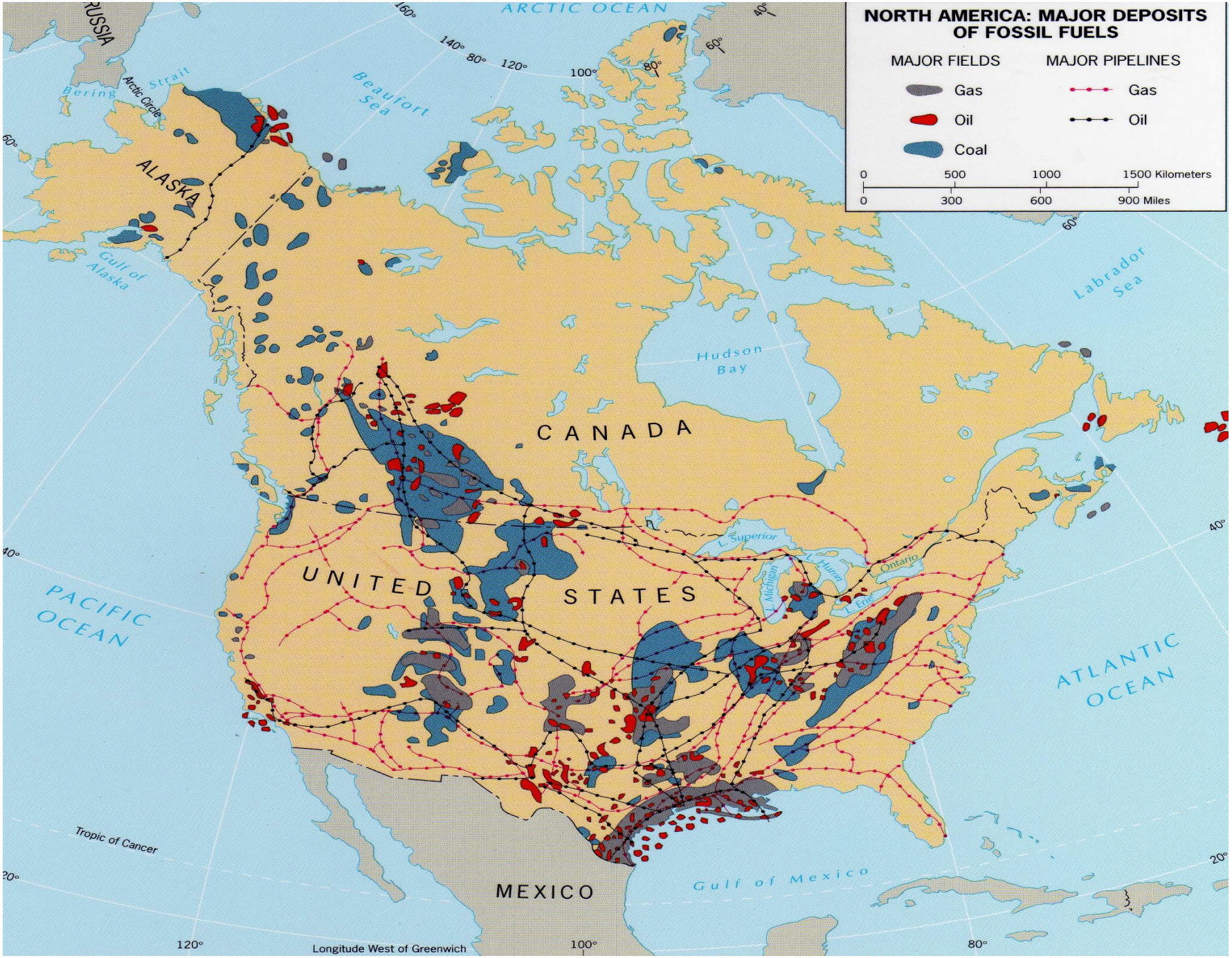
# The Resource Base

- Mining
  - Great variety
  - full range of minerals
  - Over $ 36 billion in annual value
  - Potash in Saskatchewan, minerals in Manitoba (copper, zinc, nickel), uranium in northern Saskatchewan

- Coal mining: eastern slopes of Alberta mountains

- Petroleum and natural gas
  - Chief mineral resource: annual value - $ 30 billion
  - Southern ½ of the Western Sedimentary Basin
  - Megaprojects: Alberta oil sands
  - Natural gas: southeastern Alberta

- Forestry
  - Mostly in northern Prairies (coniferous boreal forest)
  - 13% of Canada's timber harvest, 75% in Alberta
  - Pulp and paper mills: in southern margins of the forest zone


NORTH AMERICA: MAJOR DEPOSITS OF FOSSIL FUELS
MAJOR FIELDS
Gas
Oil
Coal
MAJOR PIPELINES
Gas
Oil
0 500 1000 1500 Kilometers
0 300 600 900 Miles
ARCTIC OCEAN
RUSSIA
Bering Strait
Arctic Circle
Beaufort Sea
ALASKA
Gulf of Alaska
Hudson Bay
Labrador Sea
CANADA
UNITED STATES
L. Superior
L. Michigan
L. Huron
L. Erie
Ontario
PACIFIC OCEAN
ATLANTIC OCEAN
Tropic of Cancer
MEXICO
Gulf of Mexico
Longitude West of Greenwich
160°
140°
120°
100°
80°
60°
40°
20°

# The Urban Prairies

- The urbanization rate: 75%
- Most live in the five major centres
  - Calgary – over 1 million
  - Edmonton – almost 1 million
  - Winnipeg – 690,000
  - Saskatoon – 250,000
  - Regina – 210,000
- 2nd order urban centres: between 25,000 and 100,000
- Rapid urban growth of Alberta, moderate in Saskatchewan, stagnant in Manitoba
- North: an “oasis” pattern – resource-based

The Assiniboine River at the Legislature

# BRITISH COLUMBIA

- Area: over 948,000 sq. km – 9.5% of Canada
- Heavily forested: 60% of the province's area, 50% of Canada's softwood lumber
- Population: almost 5 million, 14% of Canada's total

- Heavy population concentrations in the lower Fraser Valley and southern Vancouver Island
- Population "clusters" elsewhere
  - Okanagan Valley
  - Northwestern Pacific coast
  - Central Vancouver Island
  - South – along the U.S. border

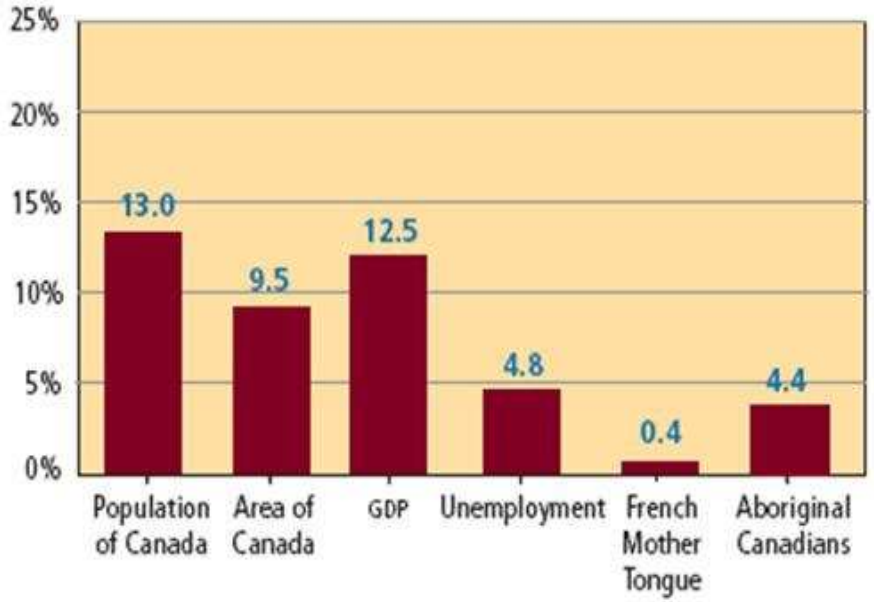



**Figure 7.1 British Columbia, 2006.** BC's strong place in Canada is revealed by its share of Canada's GDP and population. The Aboriginal population and French by mother tongue show the weak position of Aboriginal peoples and French-speaking Canadians in the province. The small percentage of Aboriginal peoples, however, does not reflect the extent of First Nations' potential ownership of land in BC through ongoing land-claim negotiations.
*Sources:* Tables 1.1, 1.7, and 4.18.

# Figure 7.1
# British Columbia, 2006

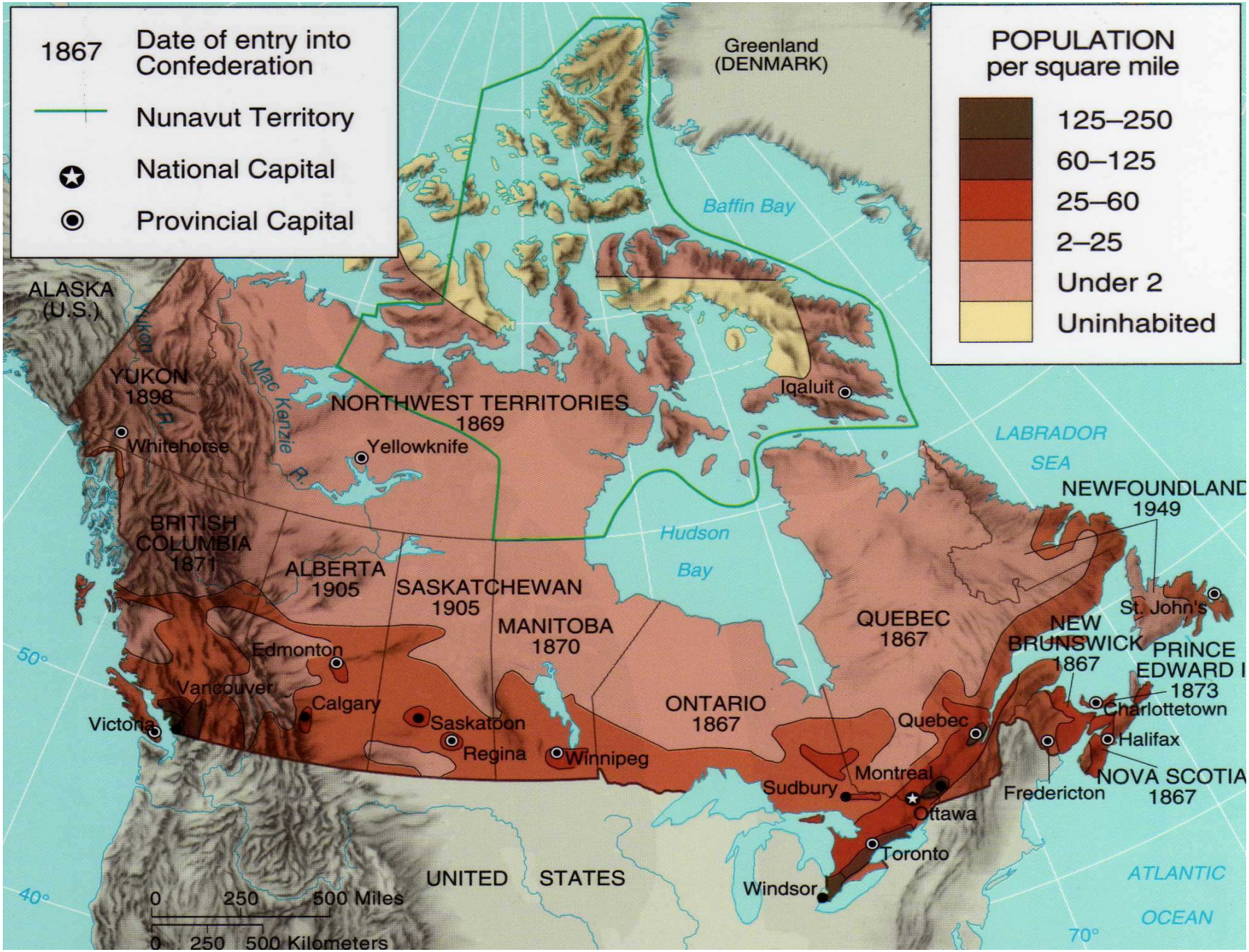
- 82% urban, 91% English, almost 4% aboriginal

- $ 30,000 GDP per capita, variable economic growth
- The most rapidly growing Canadian province until 1998

- Growth based on natural resources – fishing, forestry, minerals
- Present growth potential: high-tech, services

- Core/periphery population and economic pattern

- Excellent Pacific Rim access: trade advantage


1867 Date of entry into Confederation
Nunavut Territory
National Capital
Provincial Capital
POPULATION per square mile
125–250
60–125
25–60
2–25
Under 2
Uninhabited
Greenland (DENMARK)
Baffin Bay
ALASKA (U.S.)
Yukon R.
YUKON 1898
Whitehorse
Mac Kenzie R.
NORTHWEST TERRITORIES 1869
Yellowknife
Iqaluit
LABRADOR SEA
NEWFOUNDLAND 1949
BRITISH COLUMBIA 1871
ALBERTA 1905
SASKATCHEWAN 1905
MANITOBA 1870
Hudson Bay
QUEBEC 1867
St. John's
NEW BRUNSWICK 1867
PRINCE EDWARD I 1873
Charlottetown
Halifax
NOVA SCOTIA 1867
Fredericton
Edmonton
Vancouver
Victoria
Calgary
Saskatoon
Regina
Winnipeg
ONTARIO 1867
Quebec
Montreal
Sudbury
Ottawa
Toronto
Windsor
UNITED STATES
ATLANTIC OCEAN
50°
40°
70°
0 250 500 Miles
0 250 500 Kilometers

# Physical Geography

- Climate: three distinct zones

    1. West Coast Marine: the Pacific coast, western mountain slopes

    2. Cordillera Mountain climate: great variability depending on elevation, latitude, slope orientation, distance from the Pacific

    3. Sub-Arctic: north & NE of the province, a “rain shadow”

- A complex topography: a series of mountain ranges and valleys

    1. The island mountains – Vancouver Island, Queen Charlotte islands

    2. Coastal mountain ranges – the highest elevations

    3. The interior plateau - much more arid

    4. The Rocky Mountain Trench

    5. Rocky Mountains

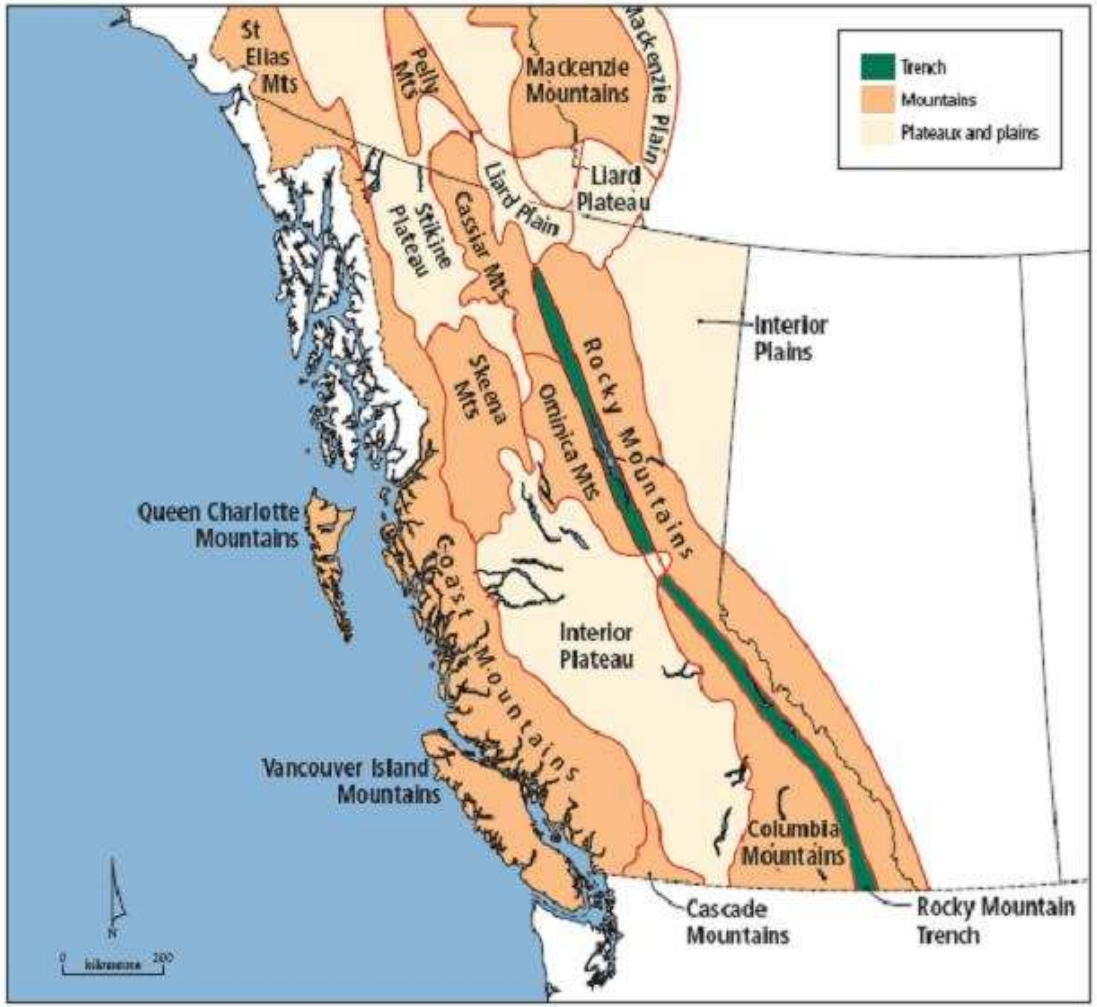


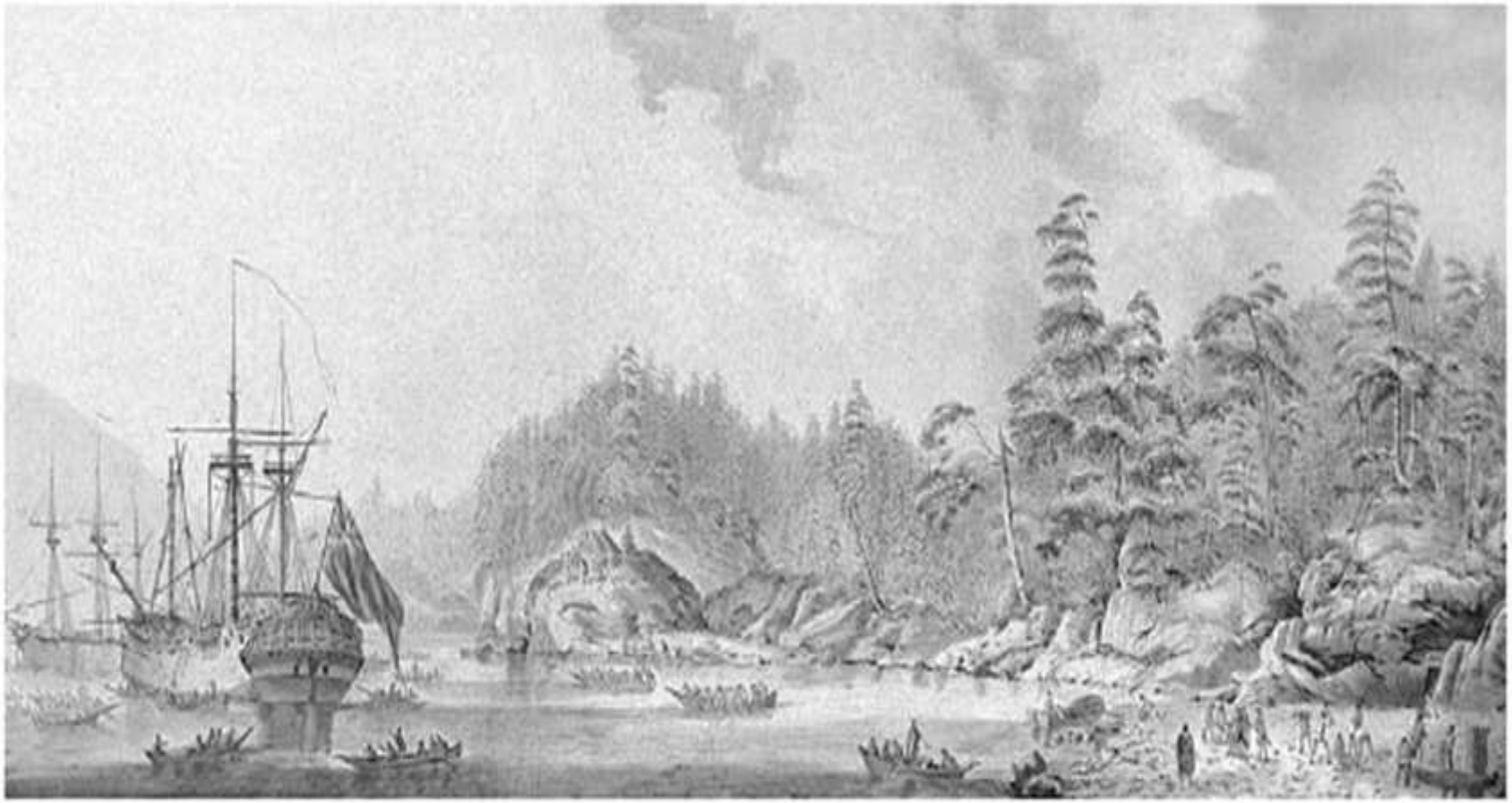

**Figure 7.3 Physiography of the Cordillera.** British Columbia's complex physiography is evident in the physiographic subregions of the Cordillera. The difficulty of constructing east–west transportation routes can be appreciated if one considers the number of north–south mountain ranges that must be traversed. For that reason, the importance of the Pacific Ocean for transportation prior to the completion of the CPR in 1885 becomes clear. As well, the grain of the land makes north–south land transportation construction into the Pacific Northwest of the United States relatively simple. Herein rest the natural factors behind the political concept of Cascadia and the feeling that BC is California North. (Further resources: Student website, National Atlas section, Map 25. Website instructions are found on p. xx.)

# Figure 7.3

## Physiography of the Cordillera

# Historical Geography

- Early Indians – coast: 10,000 years ago
- Spanish explorers in the 1500s, other Europeans – mid-1700s (coast)
- The British – late 1700s
- Impetus to growth: the Gold Rush of the late 1850s
- 1871: the provincial status achieved, joins Canada
- 1885: CPR reaches the coast – result: an explosive population and economic growth
- World War II: resource boom
- Post World war II: further population growth and expansion of resource industries
- Rapid development and expansion of forestry



Captain James Cook's ships were moored in Nootka Sound, as depicted in a watercolour by M.B. Messer. Four years earlier, the Spanish explorer Juan Hernandez sailed along the BC coast. However, there is the possibility that Francis Drake, while on a secret mission to find a western entrance to the Northwest Passage, reached these waters in 1579 (Hume, 2000: B1). (*Library and Archives Canada C11201*).

# B.C. at Present

- The overall economy
  - Primary industries still very important
  - Secondary industries of a relatively lesser importance
  - Tertiary industries extremely, and increasingly important

- Primary industries
  - Forestry: most important primary industrial activity
  - Fishing: salmon fishing the most significant
  - Mining: natural gas, coal the most important
  - Hydropower: ideal topography; Fraser, Nechako, Columbia

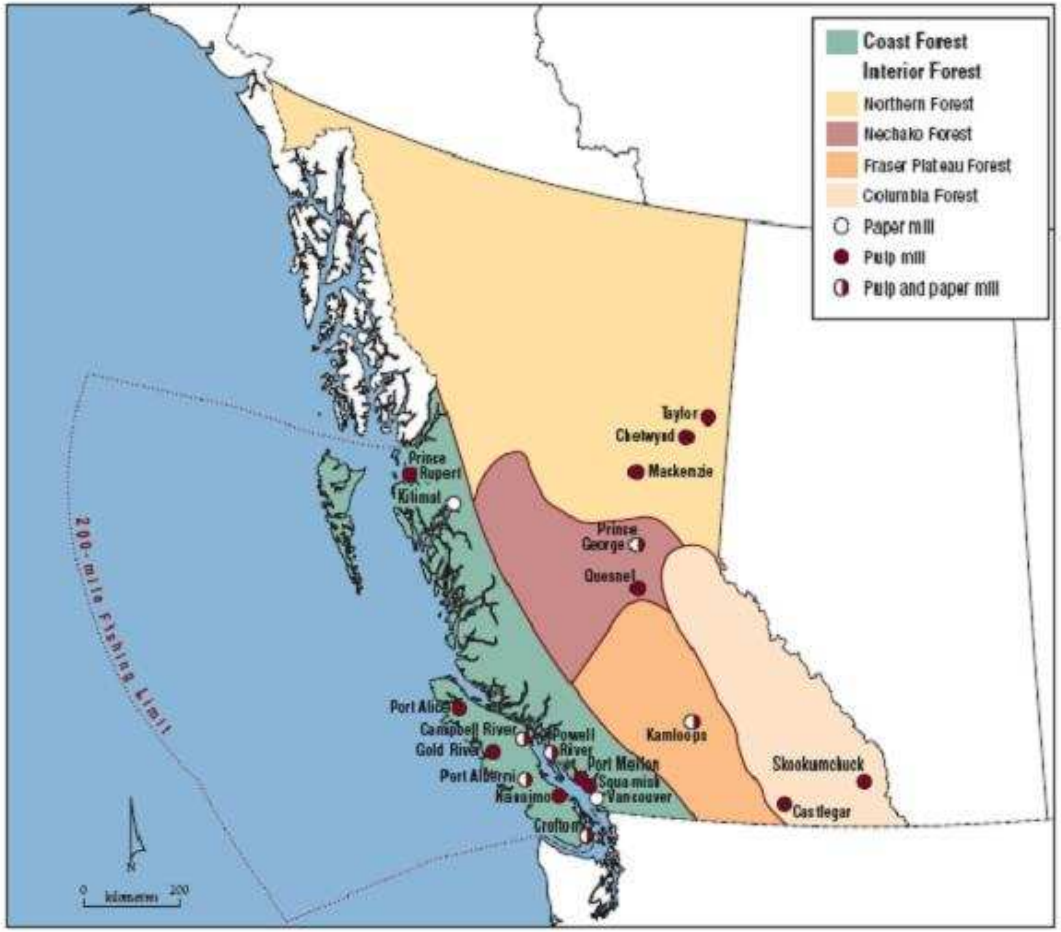
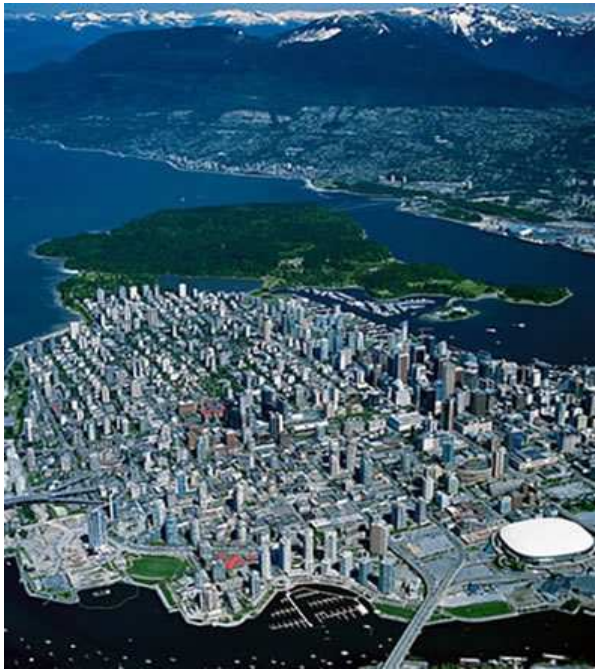



**Figure 7.6 Forest Regions in British Columbia.** The two principal regions are the Coast Rainforest and the Interior Boreal Forest. The Interior Forest is subdivided into four areas that reflect variations in growing conditions. (Further resources: Student website, National Atlas section, Maps 21, 22, and 23. Website instructions are found on p. xx.)

# Figure 7.6
# Forest Regions in British Columbia

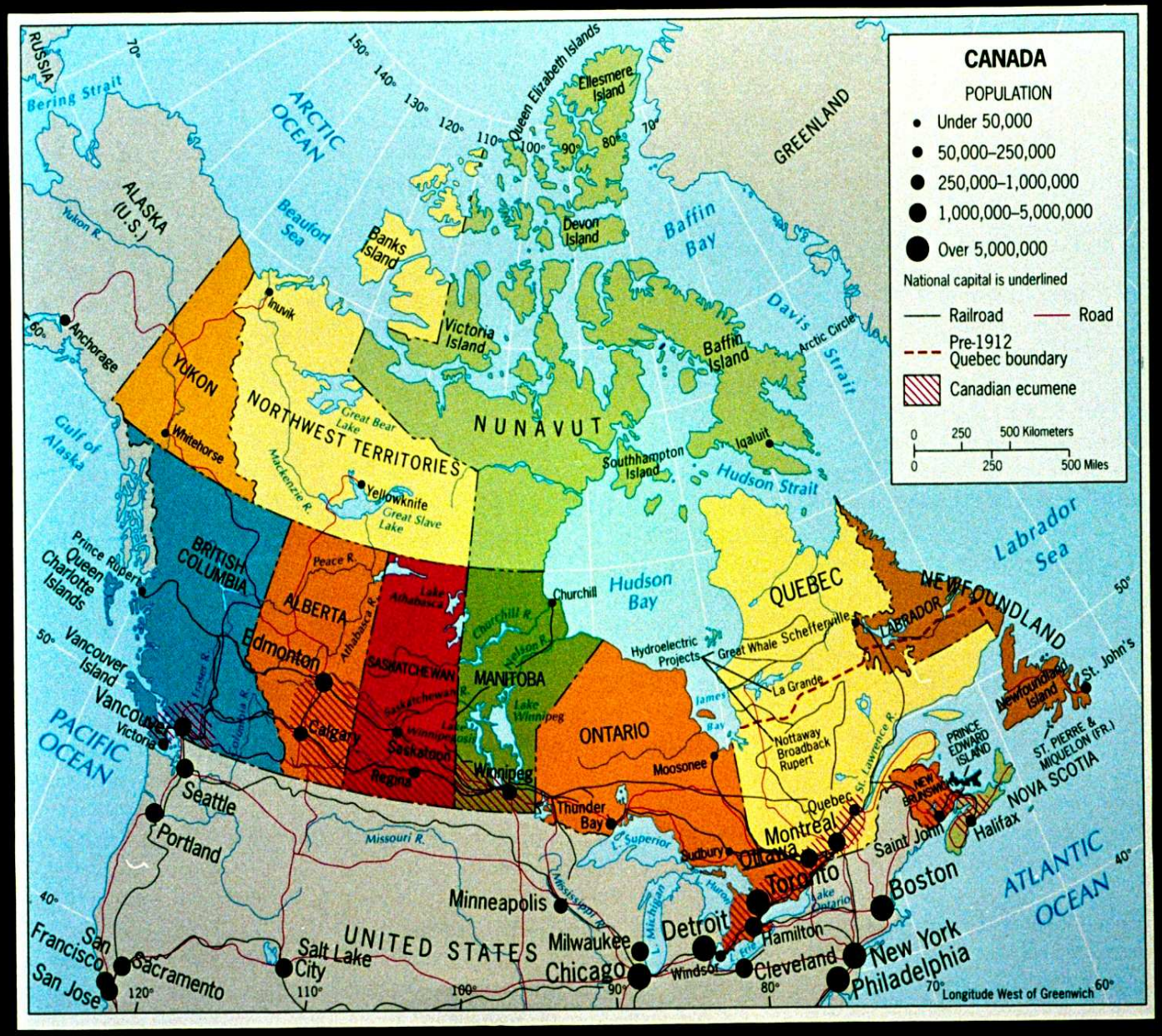
# The Urban B.C.

- Concentrated in the lower Fraser Valley and in southern Vancouver Island
- All centres rapidly growing: 15-25% between 1991-1996
- South-Central B.C.: a string of medium-sized urban centres (50,000 to 150,000)
- Vancouver: the provinces' primate city (almost 2.5 million)
- Southeastern Vancouver Island: Victoria, Nanaimo



# NORTHERN CANADA

- The largest Canadian region – almost 40% of the country's territory: almost 4 million sq. km
- 0.2% of Canada's population
- Population density: about 1 person per 100 sq. km
- Aboriginal population: almost 50%
- The concept of "Nordicity" – winter season dominates
- A resource frontier environment: remote, harsh
- Three territories: Yukon, Northwest territories, Nunavut
- Yukon
    - Area: 483,450 sq. km, most forested
    - Population: 30,600, GDP/capita: $ 35,000
    - Population about 20% native


CANADA
POPULATION
Under 50,000
50,000–250,000
250,000–1,000,000
1,000,000–5,000,000
Over 5,000,000
National capital is underlined
Railroad
Road
Pre-1912 Quebec boundary
Canadian ecumene
0 250 500 Kilometers
0 250 500 Miles
RUSSIA
Bering Strait
ARCTIC OCEAN
Beaufort Sea
Queen Elizabeth Islands
Ellesmere Island
GREENLAND
Baffin Bay
Davis Strait
Arctic Circle
ALASKA (U.S.)
Yukon R.
Banks Island
Devon Island
Inuvik
Victoria Island
Baffin Island
Anchorage
YUKON
Whitehorse
NORTHWEST TERRITORIES
Great Bear Lake
Mackenzie R.
Yellowknife
Great Slave Lake
NUNAVUT
Southhampton Island
Iqaluit
Hudson Strait
Gulf of Alaska
Prince Rupert
Queen Charlotte Islands
BRITISH COLUMBIA
Peace R.
ALBERTA
Edmonton
Athabasca R.
Lake Athabasca
SASKATCHEWAN
Saskatchewan R.
Lake Winnipeg
Calgary
Saskatoon
Regina
Churchill
Churchill R.
Nelson R.
MANITOBA
Winnipeg
Hudson Bay
QUEBEC
Hydroelectric Projects
Great Whale
Schefferville
La Grande
James Bay
Nottaway Broadback Rupert
LABRADOR
NEWFOUNDLAND
Labrador Sea
St. John's
Newfoundland Island
ST. PIERRE & MIQUELON (FR.)
PRINCE EDWARD ISLAND
NEW BRUNSWICK
NOVA SCOTIA
Halifax
Saint John
Quebec
St. Lawrence R.
Montreal
ONTARIO
Moosonee
Thunder Bay
Superior
Sudbury
Ottawa
Toronto
Lake Ontario
Hamilton
Vancouver Island
Vancouver
Victoria
Fraser R.
Columbia R.
PACIFIC OCEAN
Seattle
Portland
Missouri R.
Minneapolis
Mississippi R.
Milwaukee
Chicago
Detroit
L. Michigan
L. Huron
Windsor
Cleveland
Boston
New York
Philadelphia
ATLANTIC OCEAN
UNITED STATES
San Francisco
San Jose
Sacramento
Salt Lake City
Longitude West of Greenwich

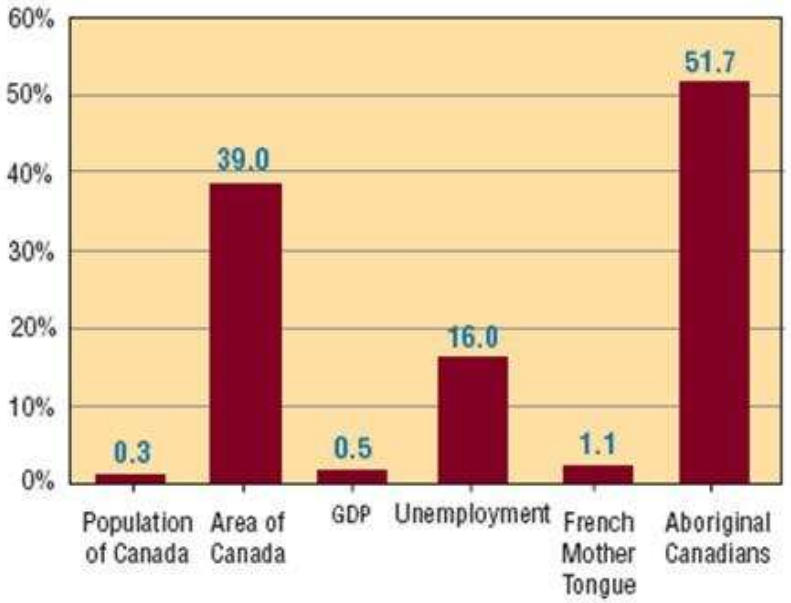



**Figure 10.1 The Territorial North, 2006.** Though the region is the largest in Canada, its population and economy are the smallest. For Aboriginal peoples and French-speaking Canadians residing in the North, the most recent census data are from 2001. At that time, over half of the population was Aboriginal and, by 2006, the figure is probably slightly higher. The Territorial North suffers from high **unemployment** as well as **underemployment**, i.e., when no jobs are available, individuals do not seek employment and hence are not classified as unemployed.
*Note:* The 2001 unemployment figure is based on territorial data. Aboriginal unemployment may be as high as 30 and, when combined with underemployment, perhaps as much as 60 per cent.
*Sources:* Tables 1.1 and 1.7.

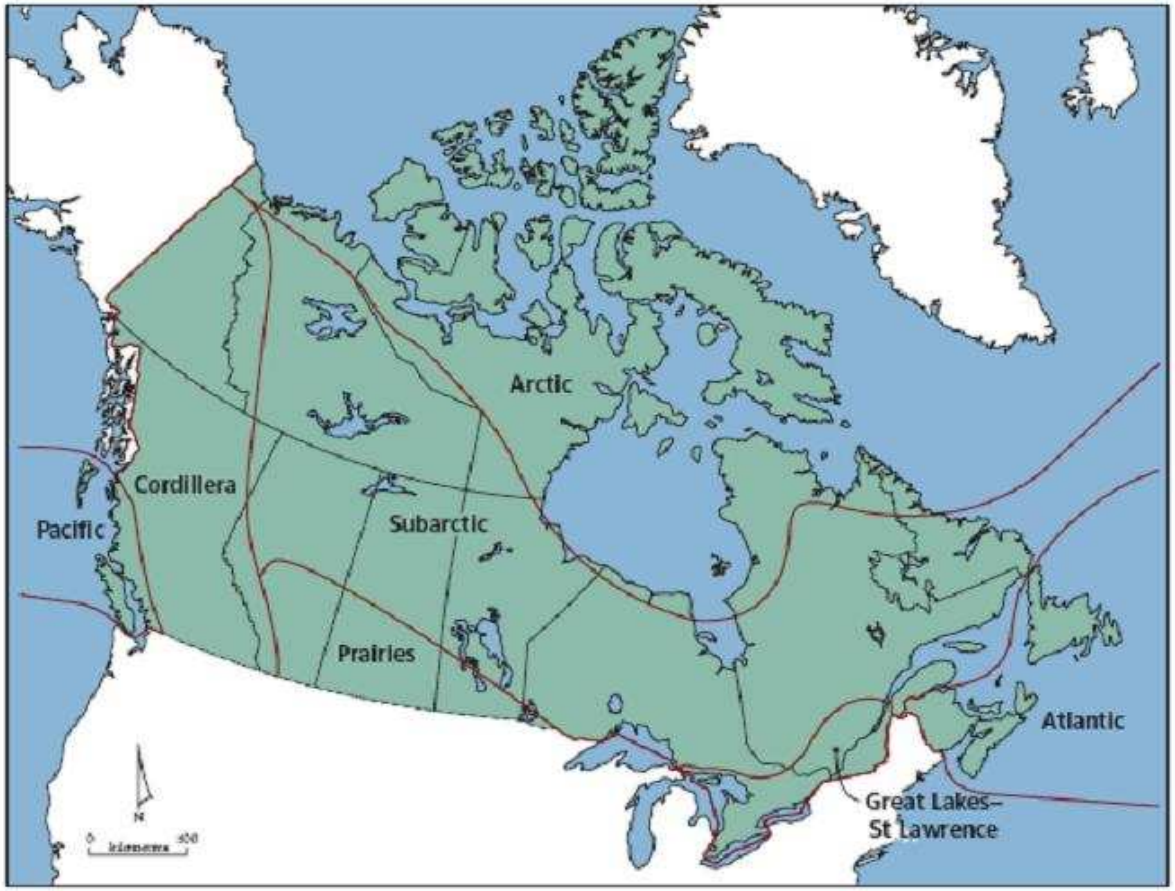
# Figure 10.1
# The Territorial North

- Northwest Territories
  - Area: 1,425,000 sq. km
  - Population: 14,600, GDP/capita: $ 37,000
  - 48% of the population native

- Nunavut
  - Established 1999
  - Area: almost 2,000,000 sq. km – over 20% of Canadian territory
  - Population: almost 30,000
  - Over 80% of population aboriginal, mainly Inuit

# Characteristics of Climate

- Relatively uniform
- Regional differences due to latitude, distance from open water, topography and air masses
- Winter a dominant season: generally long and very cold
- Very brief shoulder seasons (break-up, freeze-up)
- Permafrost ubiquitous, largely continuous
- Five general climatic regions
    1. Mountain
    2. The Boreal Interior
    3. Central Arctic
    4. Eastern Arctic
    5. High Arctic

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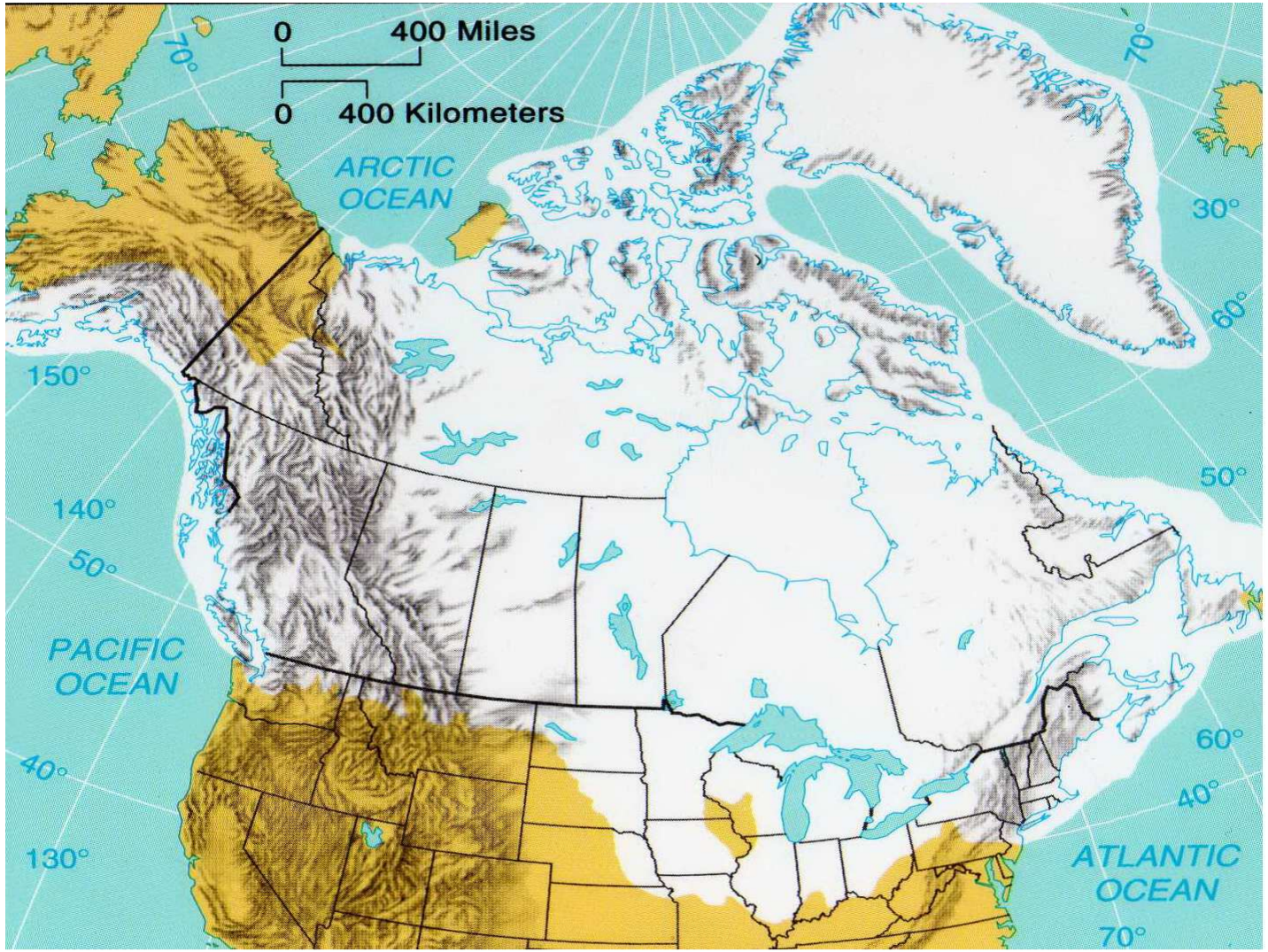
# Figure 2.6 Climactic zones of Canada


0 400 Miles
0 400 Kilometers
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
70°
70°
30°
60°
50°
60°
40°
70°
150°
140°
50°
40°
130°

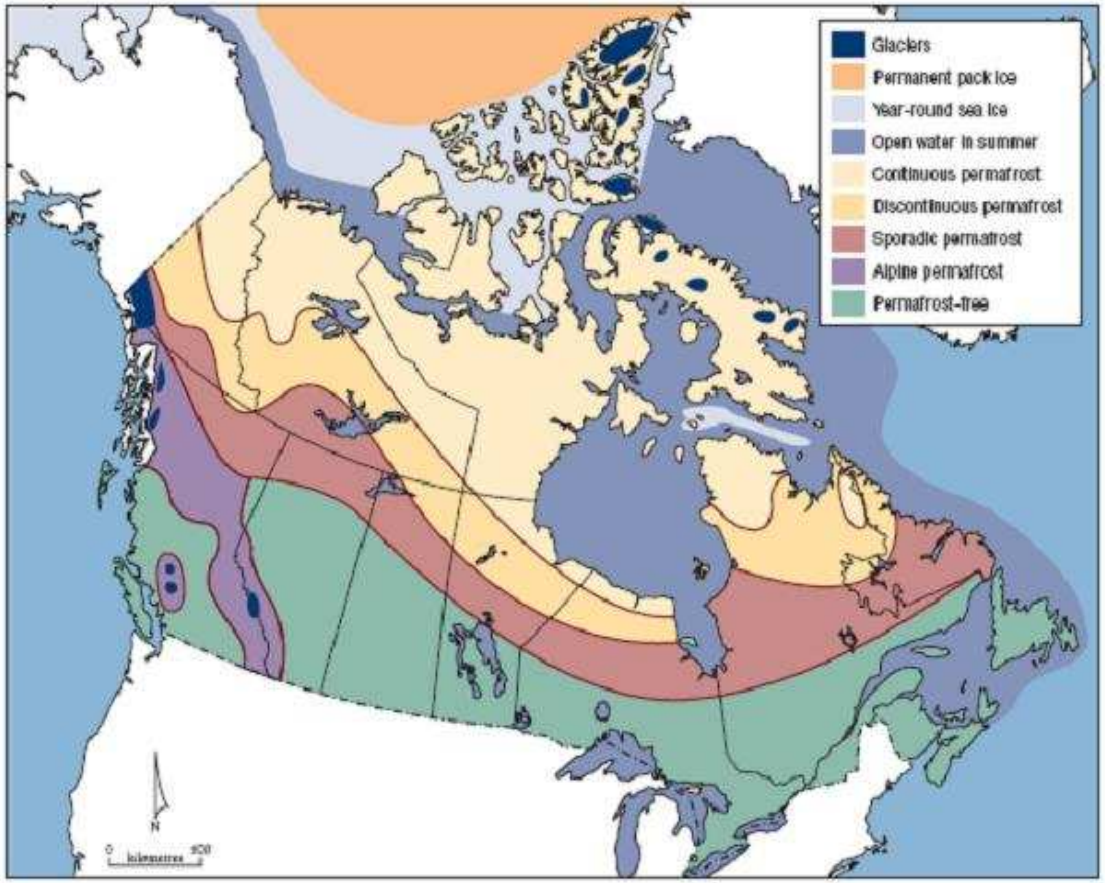


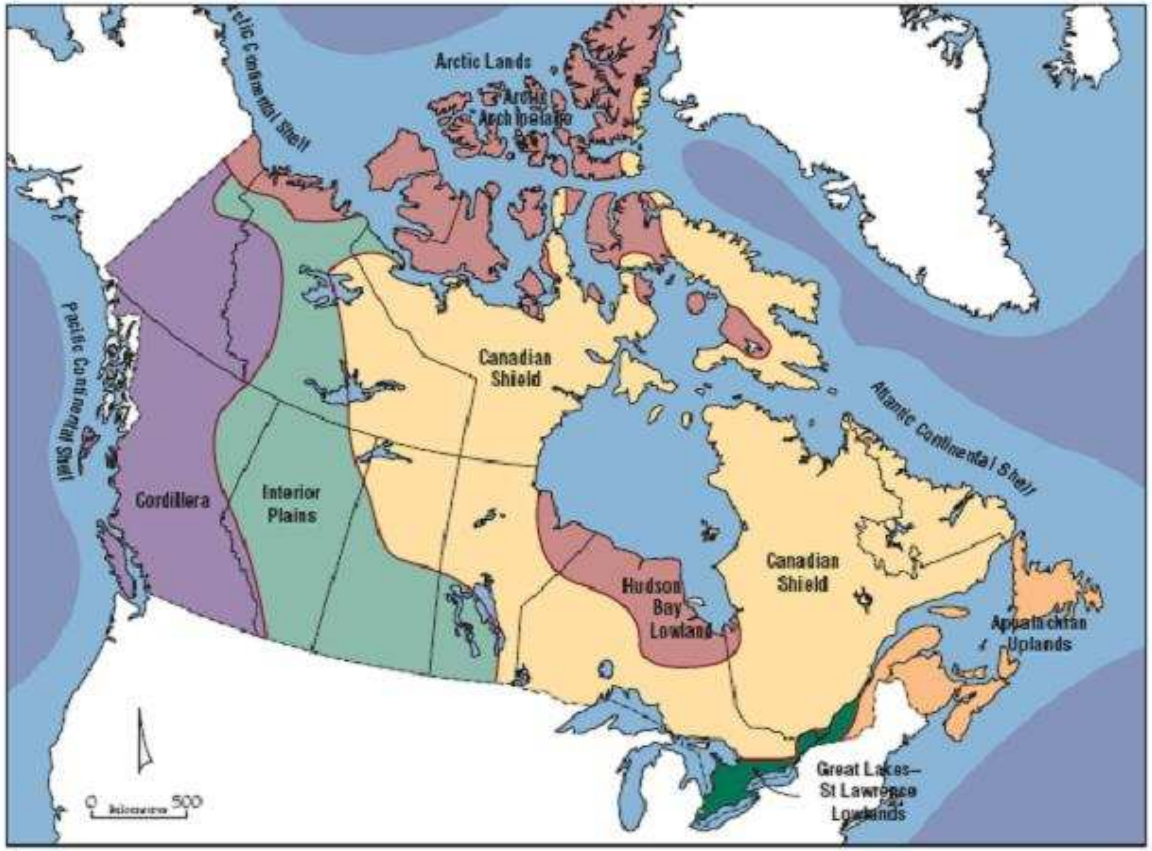

**Figure 2.9 Permafrost zones.** Canada's cold environment is demonstrated by the permanently frozen ground that extends over two-thirds of the country. Sea ice varies in thickness and duration. The most durable and thickest ice is found in the permanent ice pack. In the area of open water in summer, sea ice disappears first in the Great Lakes and in the offshore waters of Atlantic Canada, and last in the Arctic Ocean. In September 2007, satellite imagery indicated that the extent of open water in the Arctic Ocean was greater than in previous decades. (Further resources: Student website, National Atlas section, Map 10. Website instructions are found on p. xx.)

# Figure 2.9 Permafrost zones

# Topography

- Five topographic regions

    1. Canadian Shield: Nunavut mainland, Baffin Island
    2. Northern Platform Lowlands: Mackenzie Valley, central Arctic islands
    3. Sverdrup Basin: islands of the High Arctic
    4. Arctic Coastal Plain: western islands, coastal Yukon
    5. Northwestern Cordillera: St. Elias Mountains, highest in Canada

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# Figure 2.1 Physiographic regions and continental shelves in Canada

# Historical Geography

- Before the Europeans: hunting and fishing tribal societies
- 7 Indian and 7 Inuit groups
- Initial European contact: 16th century
- Consequences: major depopulation – from 500,000 (1500s) to 100,000 (mid-1800s)
- Search for the Northwest Passage – Frobisher, Hudson, Perry, Franklin, Amundsen
- Until the 1800s: fur trade the main economic activity (Hudson Bay Company)
- The 1800s: whalers and missionaries

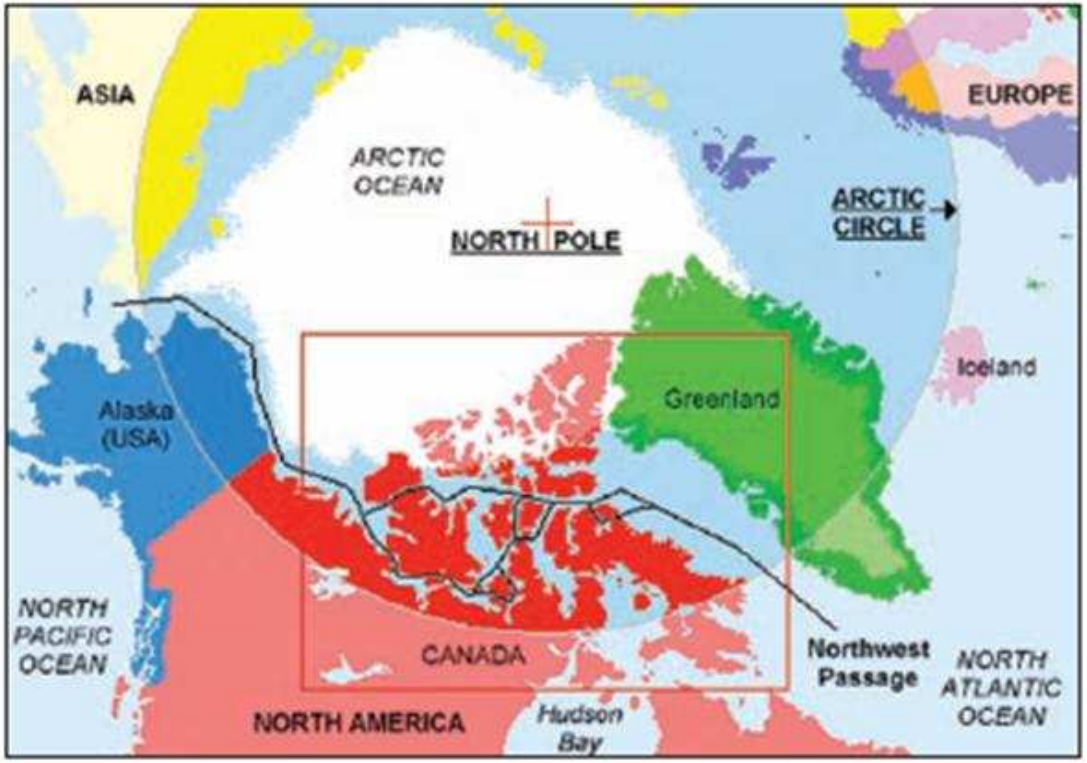


**Figure 10.3 The Circumpolar North and Northwest Passage**
*Source:* Athropolis Productions Limited, at: <www.athropolis.com/map9.htm>.

# Figure 10.3
# The Circumpolar North and Northwest Passage

- The NW Mounted Police (1890s) – a significant impact on the natives
- After the Confederation – initially a British colonial region
- The Klondike Gold Rush (late 1890s): large influx of people
- Yukon: a Territory in 1898
- Relatively stagnant until World War II: essentially a frontier society
- World War II: a significant surge in economic activity
- The Cold War: a “Buffer Zone”
- The 1960s: a fundamental transformation into a “natural resource frontier’
- A marked increase in population and size of settlements since then
- Native populations dominate in many regions (Nunavut)
- Still resembles a less developed region

# Settlement Patterns

- Five basic types of northern settlements

    1. Regional administrative centres – the largest (Whitehorse, Yellowknife, Iqaluit)
    2. Mining settlements: camps or small towns (Mayo, Faro, Baker Lake)
    3. Military bases: e.g. Churchill, Alert
    4. Isolated technical settlements: e.g. Eureka, Isachsen
    5. Outpost service settlements: small, mostly native

**Figure 10.5 Major urban centres in the Territorial North.** The major cities are the territorial capitals, Whitehorse, Yellowknife, and Iqaluit. Numerous smaller settlements have populations under 1,000. Alert is a military base.

# Figure 10.5
## Major urban centres in the Territorial North

# Economy of the North

- Heavily dependent on primary industries
- Secondary sector insignificant
- Employment: 15% primary, 83% in services
- Outside dependency: large transfer payments from the Federal government
- Large migratory workforce from southern Canada

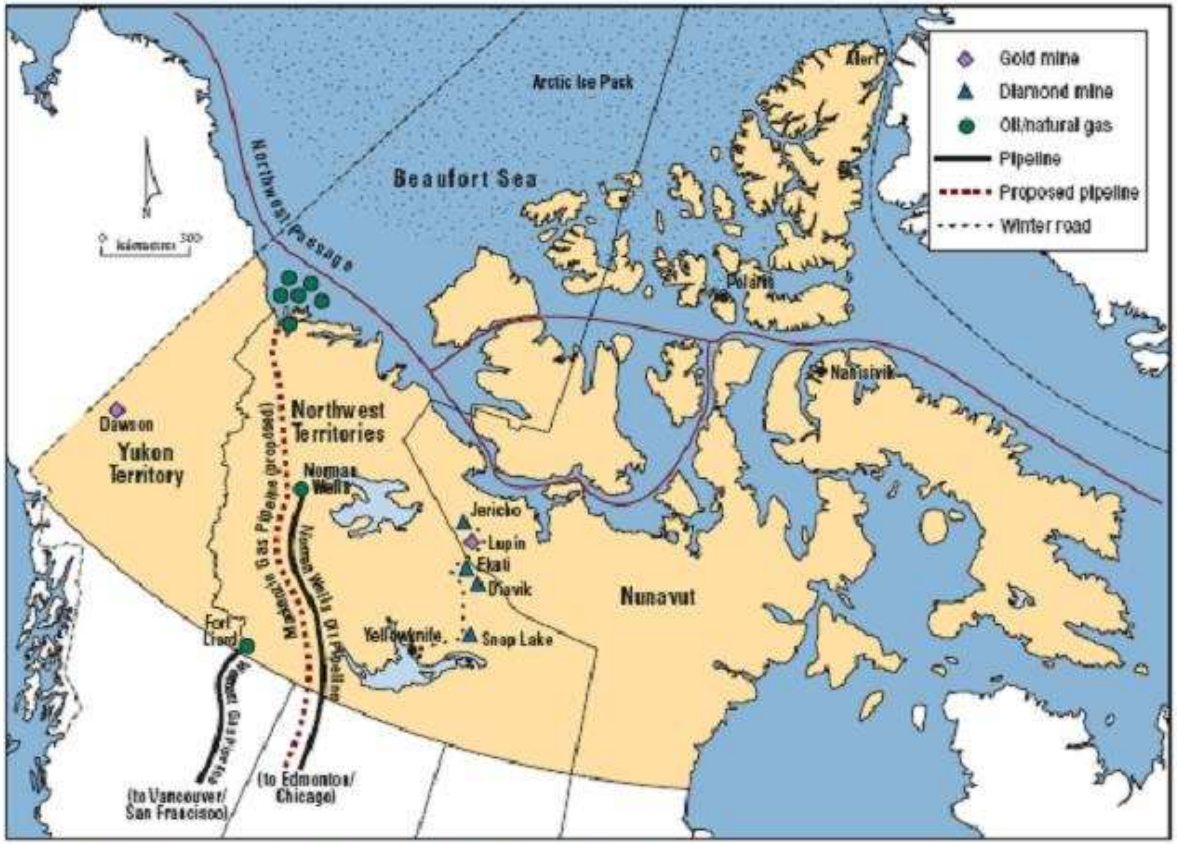


**Figure 10.7 Resource development in the Territorial North.** The mineral wealth of the Territorial North lies mainly in the Northwest Territories. Diamonds, gold, natural gas, and oil drive this territory's resource economy. In contrast, the resource economies of Yukon and Nunavut are much smaller (Further resources: Student website, National Atlas section, Map 29. Website instructions are found on p. xx.)

# Figure 10.7
# Resource development in the Territorial North

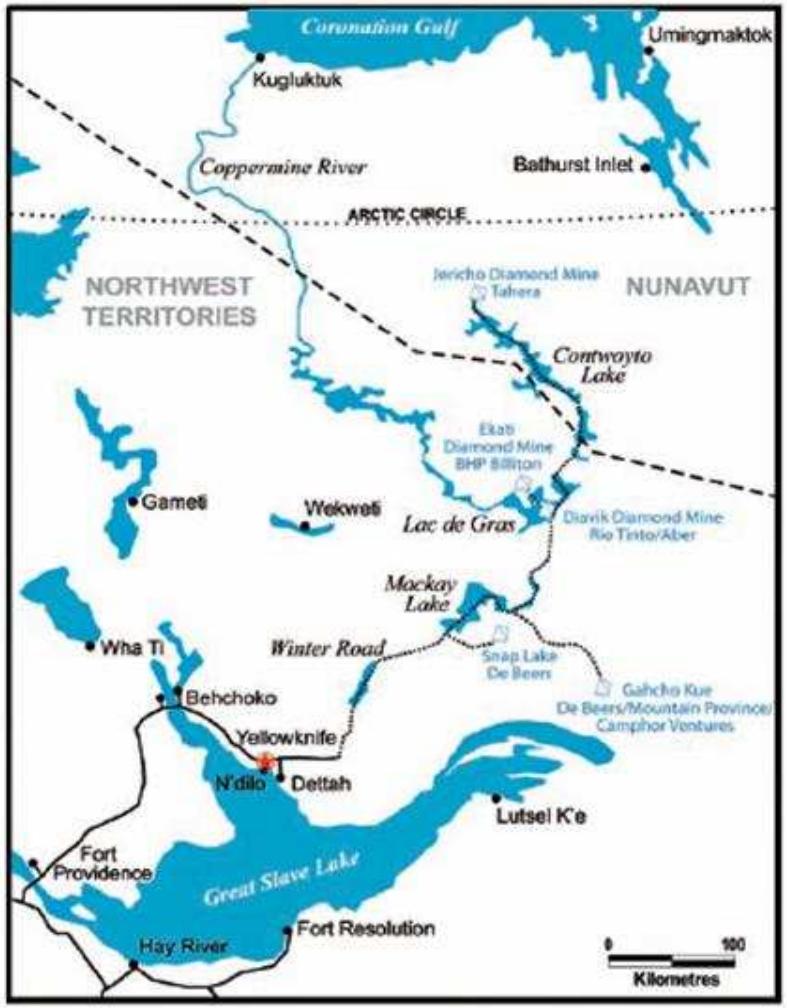


**Figure 10.8 Diamond and gold mines in the Territorial North.** While gold mining has declined, diamonds are now the leading non-renewable resource by value in the Territorial North. The producing mines are Ekati, Diavik, and Jericho. Snap Lake should be operating by 2008; Gahcho is some years from production.
*Source:* Canadian Arctic Diamonds, at: <www.canadianarcticdiamond.com/03_history/Map.html>. Image courtesy Diavik Diamond Mines, Inc.

# Figure 10.8

## Diamond and gold Mines in the Territorial North

- The “fly-in” drawbacks
- Resources: extensive, both non-renewable and renewable

- Megaprojects
    1. Mackenzie Valley Pipeline
    2. Norman Wells oil & gas developments
    3. NWT diamond mine project

- Main economic drawbacks and obstacles
    - Largely related to a harsh environment and remoteness
    - “Boom and Bust Cycle”: fluctuations in world commodity prices