Canadian Geography 1202

Unit 1 – Ecozones

The Boreal Shield (p. 110 – 121)

Location - The Boreal Shield is our largest ecozone. It stretches from northern Alberta to include the entire island of Newfoundland.

Landforms - Bare rock, bogs and marshes, hills. Formed by the movement of glaciers as they swept over the continent.

Water forms - Rivers, lakes, ponds (22% of Canada`s fresh water supplies are in this ecozone).

Climate - Abundant rain and snowfall year-round (700-1000mm). Seasonal temperatures can range on average between +20°C to -20°C, although daily temps can reach much higher or lower on occasion.

Soil - Thin acidic soils; muskeg (wet, marshy, bog). Soil is suitable for tree growth but not for farming on a grand scale.

Vegetation - Dominated by coniferous trees (evergreens like Black spruce, Balsam fir) with some deciduous in the south (birch and poplar). Lichens, shrubs, mosses and berry bushes are common.

Wildlife – moose, caribou, black bear, lynx, coyote, timber wolf, beaver, fox, pine marten, otter, squirrels, snowshoe hare, 100's of species of fish and amphibians like pike, trout, bass, frogs, turtles and garter snakes, 230+ different kinds of birds including owls, hawks, geese, and ducks, as well as thousands of insects like black flies, beetles, dragonflies, and ants that help form the basis of the food chain.

Human Features - Rich in minerals and lumber; main supplier to Ont and Que`s industrial heartland. Towns develop from one primary industry (Eg. Pulp and Paper Mills). Home to only 10% of Canada's population, but it is attractive to outdoor enthusiasts (Camping, hunting, hiking, fishing, etc.). Rivers were once the primary transportation route into central Canada and the fur trade. Still considered home to many of our country's Aboriginal communities. Northern area remains primarily intact, but the southern region has been extensively developed.

Local Threats to the Shield

- Southern region is criss-crossed with oil and gas pipelines.
- Forest resources employ hundreds of thousands of people and is worth $40 billion annually, so forest management is crucial. 97% of the region's forest is licenced for potential logging. However, wood is often harvested through clear-cutting which is the most ecologically damaging method.
- Some rivers have been damaged by mining, hydroelectric development, and logging.
- Insect control, monoculture tree plantings (planting only one or two tree species), control of natural forest fires and acidification of the lakes and soil all affect the natural system.
- Reduction in the number of wildlife in the area due to over harvesting of animals.

- Entire region is criss-crossed with roads, bridges, tracks, highways, logging roads and access roads. Makes for easy access to remote parts, spreads pollution and increases the risk of forest fires. Also allows for easy access to wildlife by hunters and/or limits the free range of animals.
- Most common vehicles used in the north are heavy logging trucks and ATVs.
- The existence of so many roads causes sediment build-up in rivers, changing the hydospheric ecosystems present.

National and Global Threats

- **Nationally** - The boreal forest produces vast amounts of oxygen, filters and purifies water, rebuild soils, holds back flood waters, moderates temperatures and increases the amount of moisture in the air. Without the trees of the north, the southern part of Canada would be much hotter and drier. This would reduce our food production and fresh water supplies.
- **Globally** – the forest soils and wetlands regions soak up vast amounts of carbon dioxide which moderates the effect of global warming. The removal of these trees would result in this phenomenon worsening.

Read Media Watch, "Who Owns This River? p. 115

- Complete questions #1-3, p. 115.
- Complete questions 1 and 4, p. 121.