

Boreal Species at Risk - Student Introduction

Boreal Forest Species at Risk

In the field of forestry, forest managers must assess multiple components that affect the environment when they are making management plans. In the planning phases they must consider factors such as water, soil, wildlife, traditional uses, resource extraction, fire risks, and reforestation. For example, a forester has to determine where and when to put a creek crossing in so that it doesn't affect a Species at Risk or impact the water resources.

Biodiversity is the variety of life in a given area. Everything we need for a good quality of life is provided by the natural world; we are inherently connected to it. Species at Risk are the most vulnerable components of biodiversity, and face complex challenges. It takes time and effort to address complicated issues such as these. It is a job that no one government, business or agency can implement and solve on their own. Challenges facing biodiversity and natural resources require cooperation, innovation and a sincere desire to reach out, understand and work with one another to find common ground.

(Environment and Sustainable Resource Development, www.esrd.alberta.ca)

What is the Boreal Forest? The Boreal Forest is circumpolar. It circles the northern portion of the globe and is found across Canada, Alaska, Scandinavia and Russia.

Mainly covered with cold-hardy pine, spruce, larch, poplar, fir and birch forests, the boreal zone also contains lakes, rivers and wetlands. It features naturally treeless areas as well, including alpine areas on mountains, heathlands in areas near the coasts and grasslands in drier areas.

(Natural Resources Canada, www.nrcan.gc.ca)



What is a Species at Risk? A species at risk is a wildlife species that may disappear from the environment if nothing is done to save it. It is an extirpated, endangered, threatened species or a species of special concern.

Classifications for Species at Risk:

- **Extinct:** a wildlife species that no longer exists.
- **Extirpated:** a wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the world.
- **Endangered:** a wildlife species that is facing imminent extirpation or extinction.
- **Threatened:** a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its decline.
- **Species of Special Concern:** a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Who decides what wildlife species are classified?

The federal and provincial government have different processes to determine if a species is classified.

Federal Government Process:

1. **COSEWIC** (Committee on the Status of Endangered Wildlife in Canada) is a committee of experts that assesses and designates which wildlife species are in some danger of disappearing from Canada. After they have conducted a species assessment they make a recommendation to the government for a species listing.

The government will determine the classification of a species and it will be protected and managed under the Species at Risk Act (SARA).

2. The Species at Risk Act (SARA)

The SARA is a key federal government commitment to prevent wildlife species from becoming extinct and secure the necessary actions for their recovery. It provides for the legal protection of wildlife species and the conservation of their biological diversity.

The SARA Process:

1. **Monitoring** - Monitoring starts with an inventory of wildlife species to get an idea of the population status and trend, its ecological function, and a way of tracking information. As a result, the Minister publishes the report on the general status of wildlife species, every 5 years.
2. **Status Report** - The species assessment process is conducted by COSEWIC. Based on the status report, they use a committee of experts to conduct a species assessment and assign the status of a wildlife species believed to be at some degree of risk nationally.
3. **Response Statement** - In response to an assessment and status designation, the Minister issues a response statement. This document reflects the jurisdictional commitment to action and acts as a start to the national recovery process.
4. **Recovery Strategy** - A recovery strategy outlines what is scientifically required for the successful recovery of a species at risk. This includes an identification of its critical habitat and what needs should be addressed. An action plan then identifies the various projects and activities with associated timelines.
5. **Evaluation** - Evaluation programs are carried out against the goals and objectives of the recovery strategy and action plan, where they are most effective. As a result, the Minister must produce an annual report on the administration and implementation of the Act.

Monitoring, assessment, response, recovery, and evaluation are ongoing processes that are taken to improve the species status and ecosystem.



Provincial Government Process:

The Province of Alberta has its own process to identify and manage species at risk in the province.

To help understand the stability of Alberta's wild species and the level of monitoring and protection they may need, each species is assigned a status. The approach is science-based, systematic and allows the incorporation of social and economic values. It is collaborative and supported by the provincial Wildlife Act. Alberta is represented on COSEWIC for assessing and classifying the national status of species.

(Alberta Environment and Sustainable Resource Development, www.aesrd.gc.ca)

Alberta's Strategy for Species at Risk:

1. **General Status Assessment:** Rank the relative security (General Status) of all wild species to prioritize risk assessment, data collection and conservation initiatives.
2. **Detailed Status Assessment:** Assess and document the risk of becoming endangered for those species having a general status that suggests serious concern regarding current or future population viability.
3. **Wildlife Act Listing:** Formally designate species that are Endangered or Threatened, as well as Species of Special Concern.
4. **Recovery Planning:** Develop Alberta Recovery Plans for all Threatened and Endangered species.

5. **Preventing Species from Becoming at Risk:** Develop management plans for Species of Special Concern, to prevent them from becoming Endangered or Threatened.
6. **Implementing Recovery and Management Actions:** Coordinate and facilitate the implementing of recovery plans and management plans, with actions being carried out by government, non-government organizations and private individuals.



Why does a wildlife species population diminish?

There are many limiting factors that affect a species ability to reproduce, grow and maintain their populations.

- Disease
- Predator/ prey relationships
- Impacts of weather conditions
- Accidental deaths
- Food shortage
- Environmental pollution
- Habitat loss and degradation
- Hunting, trapping and gathering
- Road and access risks
- Travel and migration risks

The protection and conservation of wildlife species are addressed at both a national and provincial level. Protecting and maintaining suitable habitat is critical in maintaining long-term wildlife health and viability. Wildlife health is an important indicator of the health of Alberta's environment.

Things to think about:

- How do we balance the conservation of the environment while still encouraging jobs and development?
- If we chose to create a no development wildlife zone what are the impacts socially (human welfare) and economically (community prosperity) to making these management decisions?
- What are the benefits and costs of these decisions?
- What is the impact to society and the environment if a species no longer exists?
- At what cost should we try to conserve a wildlife species?
- What are some of the issues that forest managers must consider when planning their harvesting and reforestation actions?
- Do some species have greater importance (socially and in the environment) and therefore we should manage for them first in our landscape and forest planning?

Student Assignment

Your mission is to research and present information on a current Species at Risk in the Boreal Forest. You must present your findings to the class in a 3-5 minute presentation.

Be creative, you can choose to do a verbal presentation, poster, slide show or a video.

Optional: We have chosen 6 Species at Risk that showcase the boreal region and various limiting factors. A one page summary is provided for each species to get you started. The species are Little Brown Bat, Canada Warbler, Woodland Caribou, Northern Leopard Frog, Wolverine and the Arctic Grayling.

Minimum topics to be covered for each case study:

1. Species name
2. Provincial and National Status
3. Physical description of the species
4. Range or habitat
5. Factors affecting their status
6. Consequence of their disappearance
7. Current research being done and any interesting findings
8. What is being done to help your species population?
9. Other interesting facts

Images and maps should be included in the presentation.

Directory of Internet Research Resources

Note: Be conscious of the internet sites that you are using for your research and project information. Try to choose reputable organization websites or research websites. It is always a good idea to list the resources that you have used to locate your information for further reference and justification.

- Committee on the Status of Endangered Wildlife in Canada - www.cosewic.gc.ca
- Alberta Environment and Sustainable Resource Development – www.esrd.alberta.ca/fish-wildlife/species-at-risk
- Species at Risk Public Registry - www.sararegistry.gc.ca
- Hinterland Who's Who - www.hww.ca