



# Recover Me!

## Summary

Students will work collaboratively to research a species at risk recovery effort and produce a compelling proposal with a budget report requesting funding from a charitable company or foundation to continue these efforts.

## Activity Information

**Level:** Grades 7 and 10 (sec. I and III)

**Subjects:** Interactions Within Ecosystems, Sustainability of Ecosystems, Science, Geography, Economics, Business

**Estimated Duration:** One 60-minute class period for discussion, one period for research and to compile findings, and one period for presentations. Homework to complete group work and research.

**Materials:** handout/instruction sheet.

## Learning Outcomes

### Interactions Within Ecosystems

Select and integrate information from various print and electronic sources or from several parts of the same source (e.g., compile information from a variety of books, magazines, pamphlets, Web sites, and from conversations with experts on the role of microorganisms in food preservation).

Identify and evaluate potential applications of findings (e.g., determine the maximum allowable number of visitors in a sensitive area such as an ecological reserve or park).

### Sustainability of Ecosystems

Explain how a paradigm shift can change scientific world views (e.g., give examples such as the shift from a world view centred on humans to one focused on inter-relationships among all species, or the shift to the acknowledgement that

all biotic and abiotic factors on Earth are inter-related). Analyze the impact of external factors on an ecosystem.

## Teacher Background

Wildlife isn't just birds and mammals. The term also includes reptiles, amphibians, fish, insects, trees, shrubs and a host of other organisms. As of the Fall of 2003, 441 species have been assigned one of five categories of risk by COSEWIC. The categories are: extinct, extirpated, endangered, threatened and special concern (see page 3).

Governments and many non-government partners are involved in recovery planning for a number of these species. Other conservation groups are working to protect habitats so that species that are not presently threatened stay that way. It is important to recognize that loss prevention is far less costly, and far less complicated, than recovery – we can only use our best educated guesses when it comes to replicating the complexity of nature. Because there are so many species at risk and each is unique, there are a variety of recovery teams and conservation efforts underway to help protect them.

Efforts to conserve wildlife include some of the following science-based activities:

- monitoring and data management – monitoring the health and vigour of wildlife species;
- prevention – preventing losses of biodiversity through landscape and watershed planning;
- assessment – implementing national and provincial environmental assessment processes;
- protection – working with landowners to encourage stewardship and identify and map the habitat of endangered and threatened species;
- recovery – implementing recovery strategies to help species, while improving scientific knowledge;
- public involvement – improving public involvement about species at risk; and
- education programs for youth – creating stewardship action programs to get student volunteers involved.

In an effort to conserve species at risk, there are numerous recovery efforts taking place throughout Canada. For example, the Newfoundland marten, a recognized subspecies of the marten that is native to the island of Newfoundland, has declined both in numbers and distribution since the early 1900s as a result of over-trapping and habitat loss due to logging and fire. Currently, it is listed as endangered in Canada with the last remaining populations located primarily in the southwestern part of the province.

Today, trapping for marten is closed, and a 2100 square kilometre wildlife reserve in southwest Newfoundland has been set aside to protect the largest remaining population. Scientists hope this reserve and others like it will serve as source

---

areas, and that the marten will disperse to reoccupy previous territory.

In 2002, a marten recovery team endorsed a number of projects that will help identify current and potential habitat and determine the potential effects of any proposed forest harvesting operations, in turn protecting and conserving the marten population.

Many partners are involved in this recovery activity. Corner Brook Pulp and Paper Ltd. (CBPP), a division of Kruger Inc., manages more than two million hectares of forest land on the island of Newfoundland. It is committed to maintaining a healthy and diverse forest ecosystem, and has funded a two-year research study to investigate the impact of forestry operations on the Newfoundland marten and continues to support long-term research on the pine marten. Logging activity has ceased in the Little Grand Lake area and CBPP supports the establishment of a reserve in the area to act as a refuge for Newfoundland marten.

Another excellent example of research and support for a species at risk involves the Vancouver Island marmot. Like Corner Brook Pulp and Paper in the east, Timber West and Weyerhaeuser, along with a host of other organizations, are pitching in with people, research, support and time to help implement the recovery plan for the marmot, raise necessary funds, and carry out associated business and public awareness activities. [www.marmots.org/](http://www.marmots.org/)

As we learn more about the importance of biodiversity and the relationships between different types of species, more

efforts like the marten recovery project can be implemented to protect, conserve and encourage the recovery of species at risk.

There are a number of Web sites that cite recovery efforts across Canada. Here are some that you may want to recommend to students for their research.

[www.wildernesscommittee.mb.ca/species.htm](http://www.wildernesscommittee.mb.ca/species.htm)

[www.wildspace.ec.gc.ca/sar-e.html](http://www.wildspace.ec.gc.ca/sar-e.html)

[www.recovery.gc.ca](http://www.recovery.gc.ca)

[www.ontarioparks.com/english/sar.html](http://www.ontarioparks.com/english/sar.html) (includes a list of key links to agencies and organizations involved in species at risk recovery efforts)

## Procedure

### 1

**Begin a class discussion about species at risk.**

Q: What are species at risk? Can you identify any that might be local to your region?

Q: What are the different categories of risk for species?

A: Extinct, extirpated, endangered, threatened, special concern

Q: What are some reasons why species are at risk?

A: Agriculture, forestry and urban development has resulted in loss of habitat, invasive species, poaching, over-harvesting, etc.

Q: Why are some species at risk, while others are even more abundant now than they were a 100 years ago? (e.g., the white-tailed deer)

Q: What kind of activities could be carried out to help protect and conserve species at risk?

A: Policy and legislation to protect habitat, citizen action and stewardship, work by non-government conservation organizations, education.

Q: Who pays for all this work?

A: Private funding organizations, volunteers, government, donors (corporate, government and private)

### 2

**Continue the discussion about who might be funding these recovery efforts.** Federal and provincial/territorial agencies are leading these efforts with support from groups such as the Canadian Model Forest

Network, private forest companies, philanthropic organizations, non-government organizations, including Canadian Nature Federation, Ducks Unlimited Canada, World Wildlife Fund, Canadian Parks and Wilderness Society, etc.

Work with students to generate a list of things that potential funders may wish to consider when they decide whether or not to financially support the recovery efforts of a species at risk. Record student suggestions on the board or flip chart. These might include:

Q: What is the estimated amount of money required to pursue research and recovery?

Q: What are the potential marketing opportunities for funding agencies?

---

Q: What is the potential for success in recovery efforts, and what are the measures of success?

Q: Can Government initiatives lever matching funds (i.e., are companies or other organizations also providing funding)?

**3** **Divide your class into groups of three or four students.** Explain that their challenge is to select an individual species at risk, research its current recovery efforts, assess its status, and prepare a report that presents a rationale for continued funding support for these efforts. (You may prefer to have them write a cover letter that requests funding.)

The students' research project should include the following information:

- Name of species – English and Latin
- Brief natural history of species – provide some general information about where and how the species survives and thrives
- Species at risk status prior to recovery effort
- Recovery efforts – who is leading the effort? what does it include?
- Why the species is/was at risk
- Has the species received help from international organizations (such as the World Wildlife Fund, United Nations, etc.)
- Results of the recovery effort – successful? Why or why not?
- Why they believe the species should be recovered
- Suggestions to improve recovery effort.

**Note:** Students can use these topic items as individual research themes in their reports and for their presentations. Each student in the group can carry out individual research on two or three of these sub-themes. They can then work together to put all the information into a single group report.

**4** **When the students have completed their research and group report,** they should prepare a 10-minute presentation to the rest of the class that reports their findings and requests additional funding support for recovery efforts of their species at risk. The presentation should include graphs, photos, statistics, budgets, timelines, etc. that can be used to support their request for funding.

**5** **Explain to the students that the class will represent the potential funding organization.** They will be able to fund only three proposals, and they will need to determine which are the selected priority proposals. During the presentations, have the class ask questions and then use the criteria generated in Step 2 as guidelines to determine their top three proposals in order of priority.

**6** **When all the presentations have been delivered,** students can then pick their top three proposals. They should allocate three points for the most important proposal (that also has the most likelihood of success), two points for the second choice, and one point for the third choice. This will determine which three presentations have provided the most convincing information and have identified the greatest need for conservation activities and research for the species at risk.

### **Extensions**

Using the best proposal, have the class provide additional suggestions for using the new funding to develop an improved recovery effort. Students may consider how to enhance existing habitat, how to increase habitat, how to reduce habitat destruction, etc. Actions may include education and communications efforts to engage youth, landowners, and the general public in the program.



# Recover Me! Instruction Sheet

---

**Your group is responsible for researching a species at risk in Canada that is currently undergoing, or that has undergone, a recovery effort to improve its “at risk” standing.**

**Your research must cover:**

- Name of species
- Brief natural history of species
- Species at risk status prior to recovery effort
- Why is it/was it at risk?
- Nature of recovery effort – who is leading it and what is involved?
- Why they believe the species should be recovered?
- Results of recovery effort – was it successful or not? Why or why not?
- Suggestions to improve recovery effort
- Is the species receiving help from international organizations (such as the World Wildlife Fund, United Nations, etc.)?

**You will be responsible for compiling a report detailing the above information that you can use as a proposal to seek funding for further research on the species at risk.**

Make sure you provide a rational argument for saving the species, including why it is important and why Canada should participate in ongoing research.

**Your report should include graphics, statistics, pictures, budgets, timelines and other data.**

Suggested Web sites that could provide information regarding conservation and recovery efforts include:

[www.Campsite24.ca](http://www.Campsite24.ca)

[www.ontarioparks.com/english/sar.html](http://www.ontarioparks.com/english/sar.html)

*(includes a list of key links to agencies and organizations involved in species at risk recovery efforts)*

[www.recovery.gc.ca](http://www.recovery.gc.ca)

[www.wildernesscommittee.mb.ca/species.htm](http://www.wildernesscommittee.mb.ca/species.htm)

[www.wildspace.ec.gc.ca/sar-e.html](http://www.wildspace.ec.gc.ca/sar-e.html)

