Recreation: Where Will We Play?

What do you think of when you hear the words “Great Lakes region”? Many people think of beautiful shorelines, shipping and cities such as Cleveland and Chicago. Another thought that comes to the minds of many people is recreation: boating, fishing, swimming, skiing, snowmobiling, hiking, camping, hunting, and birding.

The economy of the Great Lakes region depends heavily on travel and tourism; therefore, any factor that affects recreation in the area could potentially affect the economy there. If global warming occurs, the Great Lakes region will undergo longer summers and shorter winters. Water temperatures are expected to increase up to 5°C, the amount of snow would decrease, and lake levels would drop (up to 3 meters). The impacts of these changes could shape the future of recreation in the Great Lakes. The health of the recreation industry, in turn, affects the region in other ways, including:

- **Economic Growth.** Tourist dollars create jobs and bring in new businesses.
- **Amenities.** Hotels are not just for tourists. They bring in conferences and meetings.
- **Social Impacts.** Tourism brings diversity, in people and ideas, to an area. Also, popular tourist areas often encourage second homes — thus helping the local economy.
- **Preservation.** Well-planned and organized tourism can aid in the preservation of local historic and natural attractions.

The above-listed effects are positive ones. Tourism, however, can also have negative effects:

- **Change.** Tourism brings in new people and demands. If the changes take place too quickly and development gets out of control, an area can quickly become a “tourist trap.”
- **Environmental Degradation.** Like any development activity, tourism can lead to pollution and destruction of local ecosystems.
- **Crowding.** Congestion and destruction to the infrastructure can result from increased human density and activity.

This set of activities considers present recreational activities in the region and how they might be affected by climate change.
Activity A: How might global warming affect recreation around the Great Lakes?

Earth System Understandings
This activity focuses on ESU #1 (aesthetics and value), #2 (stewardship), #4 (interactions) and #7 (careers and hobbies). Refer to the introduction of this book for a full description of each understanding.

Scenario Reference
#8, What could happen to Great Lakes recreation?

Objectives
Students who have completed this activity should be able to:
- Discuss the implications of global warming for recreation in the Great Lakes region.
- Identify and debate possible ways that recreation managers can deal with the global warming challenge.

Materials
- Before beginning this activity, collect recreation and travel information from your Department of Natural Resources, automobile clubs, visitor bureaus and travel agents. A list of potential sources appears at the end of this activity.
- Transparent copies of the outline maps of the individual Great Lakes (two identical ones per team)

Answers
2. Answers will vary by lake. For each popular activity, students should be able to tell if it depends on geography (some special natural feature), demographics (close to population centers or popular with all ages), economics (not too expensive for anyone to enjoy, or not too expensive to develop) and environmental quality (good, clean places for the activity). Those less popular may be too expensive, too far away, infrequently available, or other variation of the conditions.

Procedure
Prelab: Have students read the recreation scenario #8 before they begin the activity. Make transparencies of the provided Great Lakes outline map for the lake nearest you, or for all lakes (see #1 below).

1. Divide the class into groups for study of the nearest Great Lake and its recreation facilities. Alternatively, assign each group of students a different Great Lake and allow time for comparison.

2. Review maps and travel brochures from your Great Lake. What seem to be the three most popular recreation activities in the region? How do they depend on the four conditions above? How do other (less popular) activities differ on these conditions?
3. If global warming occurs, the temperature of the region’s lakes is expected to rise and water levels are expected to fall. Of the species of fish currently in your lake, which ones would most likely be affected? If they live in Lake Ontario, could they migrate and escape the problems? Where would they need to go? If they lived in Lake Superior, could they migrate? Where would they go? In what ways would a change in your local fish species affect the fishing industry?

4. What other Great Lakes recreation activities would be likely to decline or move to another part of the region? Which ones would expand?

5. On one transparency, students in a group should indicate the location of major recreation areas and businesses as they exist today. Construct a key so that all groups use similar symbols to stand for recreation types. For example, use a snowflake to designate a ski area. On a second transparency, groups indicate the location and types of recreation as they project they will exist 50 years from now.

6. For one of the recreation types, list the types of jobs within the industry and supported by it. Ask participants in the recreation if your list is complete, and add other jobs they suggest. Then determine if those jobs are flexible enough to change if climate changes. How much demographic and social change would you expect if the recreation type changes?

7. Pretend that your group represents a consulting organization, hired to suggest to a panel of Great Lakes recreation managers ways that they can prepare and adjust for global warming. What businesses would you recommend to expand their operations? Which ones would you advise to either relocate or change their focus? What are your predictions overall for the health of the recreation industry in the Great Lakes region?

3. Answers will vary by lake. Typically, fish requiring cold water to live in, or shallow waters to spawn, may be affected by loss of those habitats. To escape temperature problems in the lakes, fish could go to colder waters, but in Lake Ontario they can’t go upstream because of Niagara Falls. They can’t go far downstream because the waters eventually become brackish (salty) in the St. Lawrence River. They would have to go up rivers, but waters there would be low. In Lake Superior, upstream means up the rivers, and downstream would not solve the problems. In all cases the fishing industry could lose valuable species from the lakes where they were accustomed. If the fishers could not shift to new species because of customer preference or different types of gear needed, they would go out of business. To find temperature preferences of fish, consult the Activity “How will global warming affect Great Lakes Fish” in this book. Natural history guides and experienced anglers would also be useful resources.

4. Decline or a move could be predicted for the cold weather / cold water recreation forms — skiing, ice fishing, ice boating and the like. Expansion of warm weather / warm water recreation is in order: water sports, camping, etc., although new access to water would have to be developed at its lowered levels. Students will have other ideas based on their own experiences. Many answers are acceptable.

5. Be sure students include state, provincial and national parks, resorts, amusement parks, and a wide range of other recreation forms.

6. For example, sport fishing supports manufacture of fishing gear, sales of the gear, sales of auxiliary equipment like tackle boxes and personal flotation devices, bait production and sales, boat sales and service, gasoline sales, food and beverages for fishing trips, motels and campgrounds staffing and maintenance, charter boat booking, captain services, fish cleaning, etc. Some of these jobs are flexible because they serve others besides fishers (check the flexible ones!). There could be significant changes in lakeside communities that serve the sport fishing public. Students should be able to imagine many differences.
Teacher's Note

Students should think broadly about what constitutes outdoor recreation. Remember to include the following types, and add local pursuits as well:

- boating
- swimming
- camping
- gardening
- water skiing
- snow skiing
- ice fishing
- bungi jumping
- parasailing
- team games (baseball, hockey etc.)
- indiv. games (goal, tennis, etc.)
- birdlife & birdwatching
- racing (cars, horses, etc.)
- landscape painting
- sky or water diving
- fishing
- hiking
- biking
- hunting
- jogging
- running
- sightseeing
- nature crafts
- jet skiing

Review Questions

1. In general, what types of recreation are likely to be affected by global climate change? Will effects be positive or negative?

2. Recommend ways the recreation industry could prepare to accommodate or adapt to the changing climate.

Extensions

Activity B will give students an idea of the decision making process that will face the recreation industry as it prepares for the future.
SOURCES OF RECREATION INFORMATION

Illinois
Department of Energy and Natural Resources
325 W. Adams St., Rm. 300
Springfield, IL 62704-1892

Indiana
Department of Natural Resources
402 W. Washington St., Rm. C256
Indianapolis, IN 46204-2212

Michigan
Department of Natural Resources
Box 30028
Lansing, MI 48909

Minnesota
Department of Natural Resources
500 Lafayette Rd.
St. Paul, MN 55155-4001

New York
Department of Environmental Conservation
50 Wolf Rd.
Albany, NY 12233

Pennsylvania
Department of Environmental Resources
Public Liaison Office
PO Box 2063
Harrisburg, PA 17120

Ohio
Department of Natural Resources
Fountain Square
Columbus, OH 43224

Wisconsin
Department of Natural Resources
PO Box 7921
Madison, WI 53707

Ontario
Ministry of Natural Resources
Toronto, Canada M7A 1W3

OTHER REFERENCES


Activity B: Should we develop winter or summer recreation?

Climate change, if it occurs, will very likely shape the Great Lakes environment in such a way as to impact the recreation industry. Increased temperatures could result in increased rainfall, but also an increase in evaporation rates that would result in a net loss of water in the region. Water levels would lower, with several important implications for the region’s recreation industry:

- Adjacent marshes and swamps in the region could dry up if lake levels drop, affecting bird and fish breeding sites. Recreational activities associated with wetlands, such as hunting, fishing and birdwatching would suffer.
- Receding water levels could potentially move shorelines, affecting hiking trails, campsites and other areas whose uses are enhanced by proximity to the water.
- Boating would suffer if water levels are lowered. Channels would have to be dredged to allow boats access to docks.
- Concentrations of pollutants would increase if water volumes decrease. Water quality would then become a greater concern.

Resource managers need to anticipate possible changes in the travel industry. However, facts, not theory, are needed before potentially expensive changes are made. If global change accompanied by longer summers occurs, larger numbers of people may vacation in the region. Along with economic benefits, they would bring with them problems such as in increased potential for impact to the region’s ecology. Planning needs to be done now to both accommodate them and moderate their impacts.

Earth Systems Understandings

This activity focuses on ESU #1 (aesthetics and value), #2 (stewardship), #4 (interactions) and #7 (careers and hobbies). Refer to the introduction of this book for a full description of each understanding.

Scenario Reference

#8. What could happen to Great Lakes recreation?

Materials

- role-playing name cards and descriptions for each participant
- props optional for role play
- background information and resource materials for use in preparing presentation.

Objectives

When students complete this activity, they should be able to:

- Realize that an environmental issue can be viewed from more than one perspective.
- Evaluate potential changes in recreational opportunities in the region.
- Describe the possible influence of global warming on the economy.
PROCEDURE

This role-playing activity demonstrates differing views about global climate change and the effect on recreation in the Georgian Bay area. Some people claim that global warming will occur, causing the climate in the Bay area to change, therefore influencing recreation. Others disagree with this viewpoint and argue that global warming will not occur and therefore not affect the climate and recreation in the region.

1. Establish the situation: the Georgian Bay Development Company is at a crossroads in light of the possibility of global warming. As it considers the future, the Board of Directors will decide whether to build a summer or a winter resort. Provide students with background information about the values of the recreation industry and the potential changes expected with global warming. (See Scenario and Introduction to "Where will we play?")

2. Distribute role-playing name cards and descriptions to every student. An odd number of students should be chosen as Board members. There should be an equal number of students designated for both points of view. The remainder should have roles which could choose either point of view (community members). The names suggested can be altered to match the gender of the role players assigned.
3. Have students form groups according to their point of view to plan the strategy for their presentation. Allow time for students to find information and props to prepare for their roles.

4. Arrange the classroom to represent a meeting room at the Georgian Bay Development Company.

5. On the day of the meeting, students role play their positions and make presentations to the Board of Directors. After the presentations, the Board of Directors makes a decision based on the information presented, and states the rationale for its decision.

6. Following the decision, have a class discussion to summarize the issues that emerged during the presentations and the implications of the Board’s decision.

### Sample Role Play Descriptions:

| Board of Directors | Pat O’Million, CEO  
| Char Mann, Chairman of the Board  
| Dennis Wexler, Company President |

| Summer Resort Supporters | Bill Par, local golf pro  
| Shawn Snorkel, owner of scuba diving business  
| Jo Fisher, owner of fishing equipment manufacturing company  
| Mark Airmass, meteorologist who believes global warming is in progress |

| Winter Resort Supporters | Tony Toboggan, winter sports enthusiast  
| Adrienne Rink, professional skater and owner of ice rink  
| Chris Breezy, meteorologist who debunks global warming ideas  
| Frances Towrope, owns controlling interest in ski equipment company |

| Other Community Members | Sandy Realtor, local real estate agent  
| Reggie Racer, owns new & used car sales company  
| Terry Woodwork, owns a large construction company  
| Cam Tabletop, owns local restaurant |
**Review Questions**

1. It has been said that global climate change will have both winners and losers. Discuss how recreation facilities and surrounding communities might view the changes from other perspectives.

2. Would you vote to build a winter or summer resort in the Georgian Bay area? Make a list of important factors to consider, and rank them from most to least important.

**Evaluation**

As members of the tourism industry, develop promotional materials for recreational opportunities in the Georgian Bay region as they might appear in the year 2055.

**Extensions**

1. Repeat the role play, but choose a different Board of Directors and exchange students' roles so that they have to argue from the opposite point of view.

2. Investigate the influence of global climate change on the climate, and physical and ecological characteristics of Georgian Bay. Determine if and how the shoreline would be altered and how existing recreation opportunities in the Georgian Bay might be impacted. Debate, with another meeting, where to build a summer resort in the Bay region and what types of recreation should be included at this resort.

3. List recreational opportunities in your local community and determine what impact global climate change could have on these.

**References**


