

Ecosystem Benefits

Real World Ecosystems
Learner Worksheet
Grade Level: 5-8



Name:

After reading the Ecosystem Benefits Backgrounder, answer the following questions.

Part A Questions:

1. Name four important services provided to humans by ecosystems:

2. In November 2004, illegal logging and deforestation in mountainous valleys in the Philippines caused highly destructive mudslides that killed hundreds of people and left thousands homeless. Explain how logging contributed to the mudslides.

3. What is a “living machine” and how is it similar to a wetland?

4. What are the benefits of having many trees in cities?

5. How do ecosystems help humans produce their food?

6. Describe the effect that the boreal forest ecosystem has on the climate of Fort McMurray.

Part B: Investigative Questions

Your educator may ask you to share your answers to these questions with the class. Be prepared to use your transparency as part of your presentation.

- Use your map and transparency to help you identify any communities that are located on your selected river, or any of its tributaries. List them in the table below. Do not include those communities that appear to be “landlocked”, or situated away from any river or lake. Check the Internet or the Atlas of Alberta for information about these communities, and fill in the table below:**

Town	Population	Major Industries

2. Based on the information in the table, roughly how many people depend on this watershed for their water supply? (Add up the populations of all the listed communities)

3. What are the major sources of water for this river system? To answer this question, you may need to consult more detailed maps. They should show whether your river system's major tributaries come from the Rockies and are fed by glaciers, or simply drain broad areas of forests or prairies.

4. What hydroelectric or storage dams exist on your river system? List as many as you can identify on your map or from other sources. How do these structures affect the flow of water downstream?

5. Which of the following statements best describes your watershed?

Pristine: The watershed drains an area that is mostly undisturbed wilderness. Very few people live within the watershed, and only in small communities.

Lightly developed: The majority of the watershed remains wilderness, but there are active industries such as forestry and oil and gas operating there. There are a few towns along the rivers within this watershed.

Moderately developed: There are one or two cities and several major towns along the major river and its tributaries. More than half of the watershed has been developed with farming and other industries, but the headwaters of the river system are well protected.

Heavily developed: Many towns and cities are located along the major river and its tributaries. Almost all of the rural area has been developed for farming or other industries/ Very few of the headwaters are protected.

6. Given what you know about human impacts within your selected watershed, what would you recommend to ensure that the water supply remains clean and continues to flow reliably?
