

Reading

Environmental Impacts of Logging

A

From shipping crates to paper bags, the logging industry supplies the raw materials for an array of products. However, this is not without untold harm to the environment. The damage includes habitat loss, pollution, and climate change, with the effects spanning the globe from the rain forests of Central Africa, Southeast Asia, and South America to the northern forests of Canada and Scandinavia. The effects of logging extend beyond just the felling of a swath of trees. Nutrients, water, and shelter for plants, animals, and microorganisms throughout the ecosystem are also lost; many life forms—both terrestrial and aquatic—are becoming endangered as forests vanish.

B

Trees protect the soil beneath them; thus, tree loss can affect soil integrity. For example, the rain forest floor, home to myriad plant life as well as insects, worms, reptiles and amphibians, and small mammals, relies on a dense canopy of branches and leaves to keep it healthy and intact. The canopy prevents surface runoff by intercepting heavy rainfall so that water can drip down slowly onto the porous earth. Tree roots also stabilize the soil and help prevent erosion. In return, a healthy soil encourages root development and microbial activity, which contribute to tree growth and well-being. A major factor in logging-related soil damage comes from road building, with trucks and other heavy equipment compressing the spongy soil, creating furrows where water collects, and disrupting the underground water flow. Eventually, the topsoil wears away, leaving behind an infertile layer of rocks and hard clay.

C

Logging can also damage aquatic habitats. Vegetation along rivers and stream banks helps maintain a steady water flow by blocking the entry of soil and other residue, and tree shade inhibits the growth of algae. Removing trees obliterates these benefits. When eroding soil flows into waterways, the organic matter within it consumes more oxygen, which can lead to oxygen depletion in the water, killing fish and other aquatic wildlife.

D

Trees provide a natural defense against air pollution. They remove carbon dioxide from the atmosphere while they emit oxygen, and their leaves filter pollutants from the air. Cutting down trees keeps pollutants

airborne, where they can mix with water vapor¹ and form acid rain. Water quality in nearby streams and rivers also deteriorates as tree loss contributes to increased sedimentation.

E

In a healthy forest ecosystem, trees draw moisture from the soil and release it into the atmosphere while they provide shade to lessen evaporation. Thus, deforestation impacts rainfall patterns, leading to flooding as well as drought and forest fires. Deforestation is responsible for about one-fifth of carbon dioxide emissions worldwide, making it a major contributor to climate change—in particular, global warming. In the Amazon basin alone, deforestation is responsible for millions of tons of carbon dioxide being released into the atmosphere annually. Some logging companies burn large tracts of forest just to facilitate access to one area—a practice² that discharges even more carbon dioxide.

F

Forests, especially the tropical rain forests, are a vital natural resource with extensive biodiversity and irreplaceable wildlife habitats. More responsible logging practices would help ensure that they are protected for future generations.

Answer the questions about **Environmental Impacts of Logging**.

Questions 1–4

The reading passage contains six paragraphs, **A–F**.
Which paragraphs discuss the following information?
Write the correct letter, **A–F**.

_____ 1. The impact of logging on the weather _____

_____ 2. How trees inhibit soil erosion _____

_____ 3. How deforestation contributes to air pollution _____

_____ 4. The impact of erosion on fish _____

¹BrE: vapour

²BrE: practice n., practise v.

Questions 5–8

Complete the summary using words from the list below.

The logging industry **5**..... trees to get the wood that is used to make many products. This practice has **6**..... effects on the environment. The natural **7**..... of many terrestrial and aquatic animals are damaged. Trees protect the environment in many ways. They are an effective **8**..... against both air pollution and soil erosion.

aquatic
arrays

defense
fells

habitats
intercepts

myriad
vegetation

My Words

Write the words that are new to you. Look them up in the dictionary and write their definitions.

Words

Definitions

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

noun	defense	The shade from trees provides a defense against the drying effects of the sun.
noun	defender	Defenders of the environment work to protect plants and animals from damage caused by logging.
verb	defend	Fish cannot defend themselves from the effects of water pollution.

noun	environment	The environment needs to be protected from the effects of logging.
adjective	environmental	Logging causes a great deal of environmental damage.
adverb	environmentally	It is important to develop more environmentally friendly logging practices

noun	erosion	Soil erosion leads to the pollution of streams and rivers.
verb	erode	When soil erodes, there are no nutrients left to help plants grow.

noun	extent	The extent of environmental damage caused by logging is frightening.
verb	extend	The Amazon rain forest extends from Brazil into neighboring countries.
adjective	extensive	The Amazon rain forest is the most extensive rain forest in the world.
adverb	extensively	Rain forests around the world have been extensively logged.

ESSENTIAL WORDS FOR THE IELTS

noun	pollution	Deforestation contributes to the effects of both air and water pollution.
noun	pollutant	Factories add pollutants to the air and water.
verb	pollute	Eroding soil pollutes water.

noun	stability	The stability of the natural environment depends on the interaction of many factors.
verb	stabilize	We need to stabilize the damage caused by logging before it gets worse.
adjective	stable	If the banks of the river continue to erode, they will no longer be stable.

Word Family Practice

Choose the correct word family member from the list below to complete each blank.

Modern industry has caused damage to our natural **1**..... in many ways. The air and water are filled with **2**..... . One result of this is acid rain, which has caused **3**..... damage to vegetation in many areas. When large amounts of vegetation die off, the environment loses **4**..... . If there are no plants to hold the soil, it starts to **5**..... . This leads to myriad problems, including water pollution and habitat loss. **6**..... of wildlife work hard to prevent further damage to natural areas.

- | | | |
|----------------|---------------|-----------------|
| 1. environment | environmental | environmentally |
| 2. pollution | pollutants | pollutes |
| 3. extent | extend | extensive |
| 4. stability | stabilizes | stable |
| 5. erosion | erode | eroded |
| 6. Defenses | Defenders | Defends |

Word Skill

Prefix *de-*

The prefix *de-* can mean "remove."

Read the sentences. Write a definition for each underlined word.

1. When we deforest an area, many animals lose their habitat.

deforest: _____

2. Some people prefer to deseed fruit before eating it.

deseed: _____

3. I had to deice the windshield before I could drive.

deice: _____

Listening

CD 1
Track
2

Listen to the lecture. Choose the correct letter, **A**, **B**, or **C**.

- Trees provide a habitat for
 - birds only.
 - a myriad of animals.
 - aquatic animals.
- _____ are a source of nutrients for birds.
 - Insects
 - Roots
 - Leaves
- Trees provide aquatic animals with a defense from
 - coolness.
 - rain.
 - heat.
- _____ inhibit soil erosion.
 - Branches
 - Roots
 - Trunks