

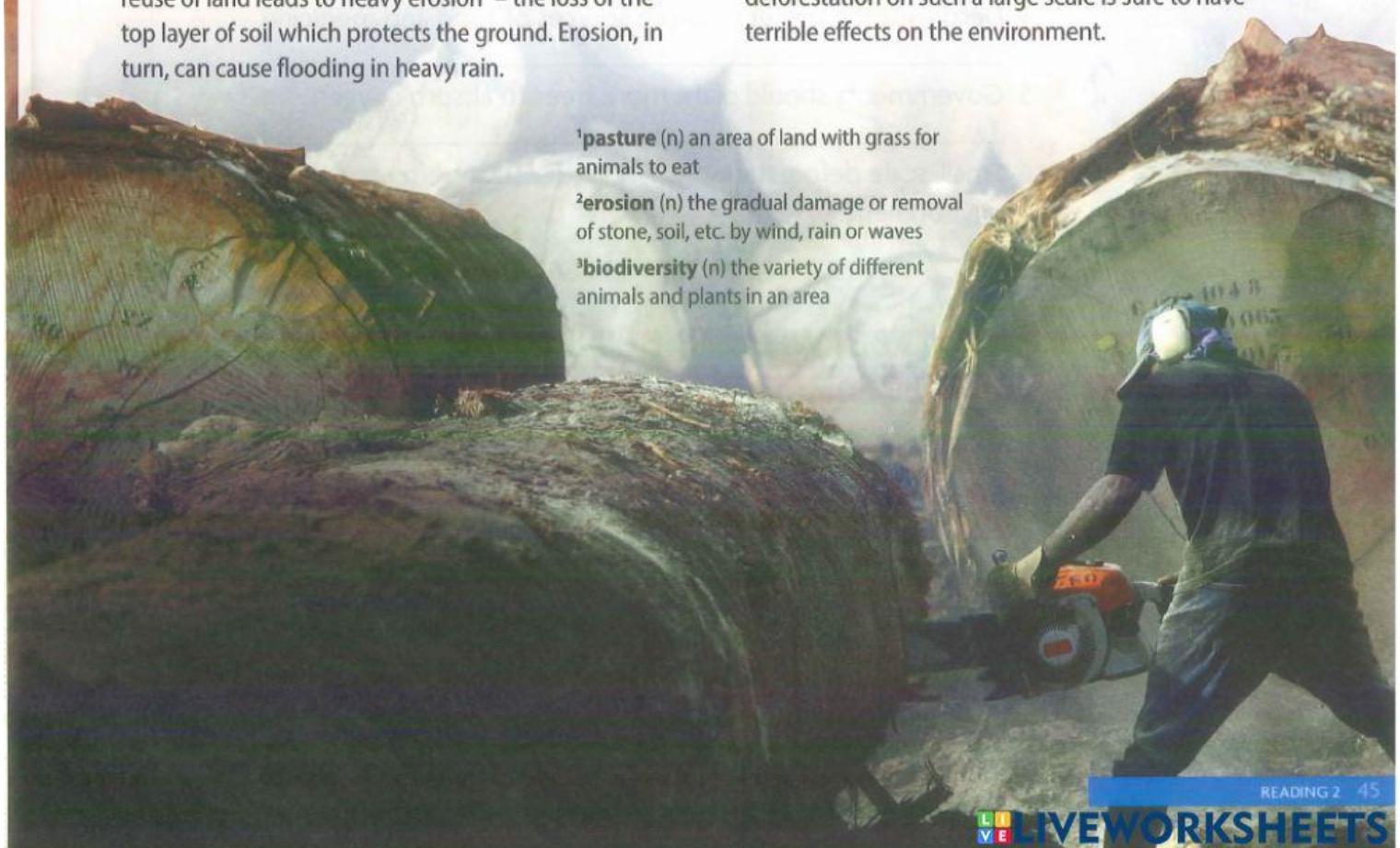
THE CAUSES AND EFFECTS OF DEFORESTATION

- 1 Forests, which cover almost one-third of the surface of the Earth, produce oxygen and provide homes to plants, animals and humans. These days, many of the world's great forests are threatened by **deforestation** – the process of removing trees from large areas of land. The **destruction** of forests occurs for several reasons; trees are used as fuel or for **construction**, and cleared land is used as pasture¹ for animals or fields for planting food. The main harmful **effects** of deforestation are climate change and damage to animal habitats.
- 2 The main causes of deforestation are commercial **farming** by big business and farming by local people. Huge commercial farms have taken over large areas of forest in many countries. In Indonesia, for example, industrial **logging** is carried out to clear huge areas for the production of palm oil, while in Brazil, large areas of the Amazon **rainforest** are cleared to grow soy and vegetable oil. In contrast, local farmers may cut down and burn trees to clear an area just big enough to graze cattle or grow crops. However, after two or three years, the land can no longer be used, so the farmer moves to another piece of land. Normally, it takes around ten years for cleared land to recover, but in populated areas the land is never allowed to recover. This constant reuse of land leads to heavy erosion² – the loss of the top layer of soil which protects the ground. Erosion, in turn, can cause flooding in heavy rain.
- 3 One serious effect of deforestation is climate change. Normally tropical rainforests help control the Earth's temperature by **absorbing** carbon dioxide. As an example, the vast rainforest of the Amazon covers an area around 25 times the size of the UK and absorbs an estimated 1.36 billion tonnes of carbon dioxide annually. However, in areas where deforestation has taken place, the carbon dioxide goes into the atmosphere and traps heat in a process called the *greenhouse effect*. The result is global warming. Increasing global temperatures result in less rain. This causes the rainforests to dry out and leads to fires – which cause more emissions of carbon dioxide. In this way, the rainforests actually contribute to global warming instead of helping to solve it.
- 4 Forest destruction also has an effect on biodiversity³. Deforestation causes the loss of habitats and damage to land where plants and animal species live, leading to the extinction of many species. A decrease in biodiversity threatens entire ecosystems and destroys future sources of food and medicine.
- 5 In conclusion, damage to the world's forests is leading to changes in the natural environment and causing global warming. Looking to the future, governments should act to plant more trees which will absorb carbon dioxide and protect forests from illegal logging. Otherwise, deforestation on such a large scale is sure to have terrible effects on the environment.

¹**pasture** (n) an area of land with grass for animals to eat

²**erosion** (n) the gradual damage or removal of stone, soil, etc. by wind, rain or waves

³**biodiversity** (n) the variety of different animals and plants in an area



WHILE READING

3 Read the essay and complete the summary using the words in the box.

animals crops decade deforestation effects
environment erosion habitats protected warming

The essay discusses the human causes of ⁽¹⁾_____ and the ⁽²⁾_____ on the environment. Trees are removed for grazing of ⁽³⁾_____ and growing ⁽⁴⁾_____ like soy and palm oil. Farmers traditionally leave the land for a ⁽⁵⁾_____ before reusing it, but if the land is constantly reused, it results in ⁽⁶⁾_____ of the soil. Deforestation allows CO₂ to escape into the atmosphere and contributes to global ⁽⁷⁾_____. It also affects biodiversity because it leads to the loss of ⁽⁸⁾_____. Governments should make sure forests are ⁽⁹⁾_____ from logging. Otherwise, deforestation will have terrible consequences for the ⁽¹⁰⁾_____.

4 Read the essay again and correct the factual mistakes in the sentences.

1 In Indonesia, trees are cut down to make way for olive oil plantations.

2 Farmers can graze animals on their land for ten years.

3 The rainforests of the Amazon cover an area 2.5 times the size of the UK.

4 Deforestation protects future sources of food and medicine.

5 Governments should plant more trees to absorb oxygen.

6 Small-scale deforestation will have disastrous effects on the environment.

READING BETWEEN THE LINES

5 Work with a partner. Answer the questions.

1 What does the writer mean by the phrases *industrial logging* and *commercial farming*?

2 What will probably happen if the Amazon rainforest disappears?

3 Why does deforestation reduce future sources of food and medicine?

DISCUSSION

6 Work with a partner. Use ideas from Reading 1 and Reading 2 to answer the following questions.

- 1 As the world's climate changes, which places will have too much water? Which places will become drier? Give examples.
- 2 How do both the melting of the glaciers and deforestation cause the extinction of species?

SYNTHESIZING



LANGUAGE DEVELOPMENT

ACADEMIC VOCABULARY

1 Replace the underlined words in the sentences with the academic words in the box.

annual (adj) areas (n) challenge (n) consequences (n)
contributes to (phr v) issue (n) predict (v) trend (n)

- 1 The most serious problem which threatens the environment is climate change. _____
- 2 Experts think that there will not be enough fresh water in the future. _____
- 3 Pollution and climate change are the results of human activity. _____
- 4 Fortunately, we are seeing a pattern where people recycle more and use less packaging. _____
- 5 In some places, the glaciers have melted or even disappeared as a result of higher temperatures. _____
- 6 The yearly rate of species loss in the rainforest is nearly 50,000 – that's 135 plant, animal and insect species each day! _____
- 7 The biggest test we face is to protect the planet. _____
- 8 Human activity causes climate change. _____



ENVIRONMENT COLLOCATIONS

2 Match the words in each box to make collocations about the environment. Sometimes more than one collocation is possible.

carbon climate
environmental greenhouse
natural power tropical

change dioxide gas
group plant rainforest
resource

3 Complete the sentences with the correct form of the collocations from Exercise 2.

- 1 In my town, about 70% of the electricity comes from a _____ which uses coal for energy.
- 2 Carbon dioxide and methane are examples of _____.
- 3 Almost all scientists these days agree that _____ is happening and is a serious threat to our planet.
- 4 Trees absorb _____ and give off oxygen.
- 5 All over the world, _____ are working to educate people about the dangers of deforestation and habitat destruction.
- 6 Fresh water is the most precious _____ on Earth.
- 7 Thousands of unique plants, animals, birds and insects live in the _____ of South America and Southeast Asia.

