

Homework: Unit 7: Lesson 1

Reading 1

READING PASSAGE

You should spend about 20 minutes on **Questions 1–13**, which are based on the Reading Passage below.

The Great Barrier Reef



The Great Barrier Reef was one of Australia's first World Heritage Areas and is the world's largest World Heritage Area. The Great Barrier Reef was inscribed on the World Heritage List in 1981 and was one of 15 World Heritage places included in the National Heritage List on 21 May 2007. The Great Barrier Reef is the world's largest World Heritage property extending over 2,000 kilometres and covering 348,000 km² on the north-east continental shelf of Australia. Larger than Italy, it is one of the best known marine protected areas. The Great Barrier Reef's diversity reflects the maturity of the ecosystem which has evolved over many thousands of years. It is the world's most extensive coral reef and has some of the richest biological diversity found anywhere. The Great Barrier Reef contains extensive areas of seagrass, mangrove, sandy and muddy seabed communities, inter-reefal areas, deep oceanic waters and island communities. Contrary to popular belief, the Great Barrier Reef is not a continuous barrier, but a broken maze of around 2,900 individual reefs, of which 760 are fringing reefs along the mainland or around islands.

Some have coral cays. The reefs range in size from less than one hectare to over 1,000 km², and in shape from flat platform reefs to elongated ribbon reefs.

The Great Barrier Reef provides habitat for many diverse forms of marine life. There are an estimated 1,500 species of fish and over 360 species of hard, reef-building corals. More than 4,000 mollusc species and over 1,500 species of sponges have been identified.

Other well-represented animal groups include anemones, marine worms, crustaceans and echinoderms.

The extensive seagrass beds are an important feeding ground for the dugong, a mammal species internationally listed as vulnerable. The reef also supports a variety of fleshy algae that are heavily grazed by turtles, fish, sea urchins and molluscs.

The reef contains nesting grounds of world significance for the endangered loggerhead turtle, and for green, hawksbill and flatback turtles, which are all listed as vulnerable. It is also a breeding area for humpback whales that come from the Antarctic to give birth in the warm waters.

The islands and cays support around 215 bird species, many of which have breeding colonies there. Reef herons, osprey, pelicans, frigate birds, sea eagles and shearwaters are among the seabirds that have been recorded.

The Great Barrier Reef is also of cultural importance, containing many archaeological sites of Aboriginal or Torres Strait Islander origin, including fish traps, middens, rock quarries, story sites and rock art. Some notable examples occur on Lizard and Hinchinbrook Islands, and on Stanley, Cliff and Clack Islands where there are spectacular galleries of rock paintings. There are over 30 historic shipwrecks in the area, and on the islands are ruins, operating lighthouses and other sites that are of cultural and historical significance.

About 99.3 per cent of the World Heritage property is within the Great Barrier Reef Marine Park, with the remainder in Queensland waters and islands. Because of its status, many people think the entire Great Barrier Reef is a marine sanctuary or national park, and therefore protected equally throughout. However, the Great Barrier Reef Marine Park is a multiple-use area in which a wide range of activities and uses are allowed, including extractive industries.

This has been achieved using a comprehensive, multiple-use zoning system. Impacts and conflicts are minimized by providing high levels of protection for specific areas. A variety of other activities are allowed to continue in a managed way in certain zones

(such as shipping, dredging, research, commercial fishing and recreational fishing). A new Zoning Plan for the entire Marine Park came into effect on 1 July 2004. The proportion of the Marine Park protected by no-take zones was increased from less than five per cent to over 33 per cent, and now protects representative examples of each of the 70 broad habitat types across the entire Marine Park. Two authorities are now responsible

for the Great Barrier Reef: the Queensland Government and the Australian Government. The majority of the World Heritage property is still relatively pristine when compared with coral reef ecosystems elsewhere in the world. Guided by the principle of balancing conservation and sustainable use, the regulatory framework significantly enhances the resilience of the Great Barrier Reef.

The Australian and Queensland Governments have a cooperative and integrated approach to managing the Great Barrier Reef. The Great Barrier Reef Marine Park Authority (GBRMPA) is the Australian Government agency responsible for overall management, and the Queensland Government, particularly the Queensland Environmental Protection Agency, provides day-to-day management of the marine park for the Authority.

Questions 1–6

Complete the summary below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

The Great Barrier Reef, one of Australia's first sites to become a World Heritage area, is situated on the 1 off the north-eastern coast of Australia. The 2 of the reef is a result of the evolution of the 3 over a very long time. Being the biggest 4 of its kind, the reef is, from the 5 point of view, very varied. This vast area consists of disconnected reefs of different lengths and provides a habitat for a wide range of 6 from fish to coral and sponges and other creatures.

Questions 7–10

Do the following statements agree with the information given in the Reading Passage?

Write:

- TRUE** if the statement agrees with the information
FALSE if the statement contradicts the information
NOT GIVEN if there is no information on this

- 7 The reef provides food for turtles.
8 No other World Heritage area contains as many culturally significant sites as the Great Barrier Reef.
9 There are plans to renovate some of the ruins on the islands.
10 All industrial activity is forbidden in the Great Barrier Reef Marine Park.

Questions 11–13

Answer the questions below.

Choose **NO MORE THAN THREE WORDS** from the passage for each answer.

- 11 What are kept low as a result of the high degree of protection for specific places?
12 What has a major impact on the Great Barrier Reef's capacity to flourish?
13 What is the Great Barrier Reef Marine Park Authority accountable for in respect of the reef?

Reading 2

9.1

Climate change



- 1 How much do you know about global warming?
Do this quiz with a partner.

1 What has been the average global temperature change over the last 100 years?

A +0.6 °C B +1 °C C +3 °C

2 By how much has the sea level risen in the last 100 years?

A 0-5 cm B 5-10 cm C 10-20 cm

3 Which of the following is NOT an effect of global warming?

- A a growth in population
- B increased risk of flooding
- C a change to animal habitats

4 When will we be experiencing the effects of global warming?

- A not for another 50 to 100 years
- B we may be experiencing them already
- C never

Reading

- 2 Read through the article opposite quickly to find out which of the following people does NOT think global warming is a big problem.

Jonathan Overpeck

Jay Malcolm

Ronald Stouffer

Marianne Douglas

- 3 Look at headings 1-5 below. Which is the best heading for each paragraph A-E?

- 1 The effect of global warming on plant and animal life
- 2 Uncertainty among experts about the effects of global warming
- 3 Global warming: the position now and predictions for the future
- 4 The countries affected by a rise in sea level due to global warming
- 5 The debate about the causes of global warming

Test spot

There are two types of summary task in the Reading Modules. In one you need to find the answers in the text (and your answers must be actual words from the text). In the other you are given a box of answers to choose from. The summary may be on the whole text or just a section of it, and the answers may or may not be in text order but usually are.

Read the summary through first before trying to complete it. Don't try to complete the summary without reading the relevant parts of the text again carefully. Think carefully about the type of word that is missing – noun, verb, adjective, etc. ... TF 5

- 4 As you complete this summary, remember that your answers must be words taken from the article.

Complete the summary below.

Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.

The 1 temperature of the Earth has risen over the last hundred years. One effect is a reduction in the 2 in tropical oceans. An increase in carbon dioxide reduces the amount of 3 escaping from the atmosphere. As a result, animals are moving to different 4

In the USA, research has been undertaken into the effect on sea levels if an 5 melted. This would destroy many heavily 6 places, especially in the worst-case scenario of a rise of 7 metres. The conclusion reached is that there is a need for people to reduce their use of 8 and change to different 9

A disaster in the making

A

Most scientists agree that global warming presents the greatest threat to the environment. There is little doubt that the Earth is getting warmer. In the last century the average temperature rose about 0.6 degrees C around the world. From the melting of the ice cap on Mt Kilimanjaro, Africa's tallest peak, to the loss of coral reefs as oceans become warmer, the effects of global warming are often clear. Many experts warn that global warming will cause sea levels to rise dramatically. In the past 100 years the oceans have risen 10 to 20 cms – but that's nothing compared to what would happen if, for example, Greenland's massive ice sheet were to melt. 'The consequences would be catastrophic,' says Jonathan Overpeck, Director of the Institute for the Study of Planet Earth at the University of Arizona. 'Even with a small sea level rise, we're going to destroy a number of nations and cultures that have existed for thousands of years.' Overpeck and his colleagues have used computer models to create a series of maps that show the places most at risk of flooding.



B

Just as the evidence is clear that temperatures have risen in the last century, it's also well established that carbon dioxide in the Earth's atmosphere has increased about 30 percent, allowing the atmosphere to trap too much heat. However, the exact link, if any, between the increase in carbon dioxide emissions and the higher temperatures is still being disputed. Most scientists believe that humans, by burning fossil fuels such as coal and petroleum, are largely to blame for the increase in carbon dioxide. But some scientists also point to natural causes, such as volcanic activity. 'Many uncertainties surround global warming,' says Ronald Stouffer at the US National Oceanic and Atmospheric Administration's Geophysical Fluid Dynamics Laboratory. 'How much of it would still occur if humans were not changing the climate in any way?'

C

The current rate of warming is faster than ever before, however, which suggests it probably is not a natural occurrence. And a large number of scientists believe the rise in temperatures will, in fact, speed up. The UN Group on Climate Change reported in 2001 that the average temperature is likely to increase by between 1.4 and 5.8 degrees C by the year 2100. The climate change is likely to impact on ecosystems, agriculture and the spread of disease. 'Global warming is a serious threat to animal and plant life,' says Jay Malcolm, a forestry professor at the University of Toronto. 'As climates warm, more southerly species will begin appearing further north ... species will find themselves in habitats where they don't belong. For example glaciers and sea ice in both the northern and southern hemispheres are already melting at a rapid pace, placing animals like polar bears at risk.'

D

A recent study suggested that Greenland's ice sheet will begin to melt if the temperature there rises by three degrees C. That is something many scientists think is likely to happen in another hundred years. The complete melting of the Greenland ice cap would raise sea levels by seven metres. Even a partial melting would cause a one-metre rise. Such a rise would have a devastating impact on low-lying islands, such as the Maldives, which would be entirely submerged. Densely populated areas like the Nile Delta and parts of Bangladesh would become uninhabitable, affecting hundreds of millions of people. A one-metre sea-level rise would flood the eastern seaboard of the USA.

E

Other scientists emphasise that such doomsday scenarios may be hundreds of years in the future. 'You can't say with any certainty that sea-level rises are going to have a huge impact on society,' says Stouffer. 'Who knows what the planet will look like 5000 years from now?' Most climate scientists, however, agree that global warming is a threat that has gone unchecked for too long. 'Is society aware of the seriousness of climate warming? I don't think so,' says Marianne Douglas, professor of geology at the University of Toronto. 'Otherwise we'd all be leading our lives differently. We'd see a society that used alternative sources of energy, with less dependency on fossil fuels.'