

## はしがき

本書は、長年にわたり金星堂より出版されてきた著者 David Peaty 氏による *Global Issues* を扱ったエッセイに連なるもので、今回で 5 作目となります。

第 1 作の *Global Challenges* (『人と地球を考える』、1991) 以来、Peaty 氏の目は常に環境問題、人間と自然の共生に向けられてきましたが、本書でも最新の知見が加えられた上で、現在の地球がおかれた危機的状況、そのさまざまな影響に警鐘が鳴らされています。自然からの学びを通じた最新の技術を使って、いかに私たちが地球上の他の生命体と共に生きるべきかという進むべき未来も示されています。また、環境問題と私たちの食生活、歴史、文化遺産との結びつきだけでなく、本書の後半では、環境問題も含めたあらゆる問題に私たちが取り組むときの情報の重要性、それを保障する社会体制の大切さが示されています。

インターネット、SNS が広がる現在、知のあり方は大きく変わってきています。私たちは地球温暖化、持続可能な社会についての情報を簡単に集められる一方、その情報が本当に正しいかどうかを判断する「ネット・リテラシー」が必要な時代に生きているのです。断片的な情報を手に入れることは簡単ですが、一方的な情報だけでなく、多様な情報を集め、その情報の関係性を見抜いて本当の知識とする力が問われている時代なのです。Peaty 氏のテキストは、各 Unit がその話題は異なっても、きちんと読めば、それぞれの問題が結びついていることを示してくれています。私たちの世界ではさまざまなことが結びついているのを、このテキストははっきりと示してくれているのです。そして、それは現在、文系・理系の専門分野の如何を問わず、高校や大学で学ぶということがどういうことなのかも示してくれているでしょう。大切なことは、みなさんがこのテキストを読み、理解した上で、さらに自ら情報を集め、考え、それを多くの人と話し合うことです。

もちろん、本書はこのような内容に加え、英語の力を身につけるためにも十分に配慮されたものとなっています。本文は、ある程度の長さの論理的な英語の文章をいかにきちんと読み解くかという読解力が問われるものとなっています。難しい表現などは巻末に注がありますので参考にしてください。各 Unit にはエクササイズとして、内容の理解、重要な語彙を確認する問題がついていますので、ぜひ自分の理解を確かめてください。このような基本的な理解をした上で、自分の意見を英語で書き表すことを求める問題もつけられていますので、ぜひチャレンジしてみましょう。情報をインプットするだけでなく、アウトプットする力も現在求められています。ぜひ、ディスカッション・テーマなども用いて、クラスメイトや友人と英語で高度な内容の議論を行う訓練もしてみてください。本文の音声データも含めれば、本テキストを用いることで、深いレベルでの英語の4技能を確実に身につけることができるでしょう。

このテキストを用いた学習を通じて、グローバル市民としてみなさんが世界で活躍することを心より願っています。

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## Unit 1

# Goodbye, Maldives

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The Republic of Maldives consists of about 1,190 coral islands, of which 198 are inhabited. When the first settlers arrived there more than 3,000 years ago, they probably never imagined that this beautiful place would one day vanish. The Maldives' highest point is just 2.4 meters above sea level, and the sea level rises a little higher each year. If it continues to rise, the nation will cease to exist. Within one hundred years, and probably sooner, its entire population of 325,000 people will have to find a new place to live. So will the populations of Tuvalu, Kiribati and other small island nations.

Rising sea levels will affect not only small islands but also low-lying coastal regions of much larger countries such as Bangladesh,

where millions of people regularly experience severe flooding. While the victims are primarily residents of poor countries, rich countries will also be affected. It has been predicted that Miami, for example, will be submerged. In Tokyo, about one and a half million people already live below sea level.

Sea levels around the world are rising because of global warming. As the earth's temperature rises, glaciers in Greenland and Antarctica and on high mountain ranges melt, and the water flows into the sea. In addition, as the sea becomes warmer, it expands. If rising sea levels were the only consequence of global warming, we could perhaps cope by moving populations to higher land. However, rising temperatures will also lead to severe shortages of food and fresh water, to widespread outbreaks of malaria and other diseases, and to more frequent extreme weather events such as powerful hurricanes.

While it is important to protect people from the impacts of climate change and to help them adapt, our main priority should be to stop global warming as soon as possible. To do this, we have to address the principal causes of what has come to be known as the greenhouse effect. When fossil fuels like coal, oil and gas are burned to provide energy for industry, transportation, electricity generation, home heating and so on, they emit carbon dioxide and other gases that have, since the Industrial Revolution, been accumulating in the earth's atmosphere, trapping heat and causing global warming. The destruction of forests is another major cause of global warming. Forests absorb carbon dioxide from the air and store it, but when they are cut down, they can no longer function as a store of carbon, and when they are burned, they release it. The massive destruction of the world's forests in recent years has thus contributed greatly to global warming. The

solution to the problem of global warming therefore lies mainly in replacing fossil fuels with cleaner sources of energy and in protecting and restoring forests.

All this has been fairly obvious for at least thirty years, but very little was done about it until 1997, when 141 nations signed the Kyoto Protocol, an agreement that committed them to cutting their greenhouse gas emissions. The U.S., whose emissions then accounted for about a quarter of the global total, declared that it would adopt the Protocol only if major developing countries like China and India also agreed to cut emissions. Those countries refused to do so, arguing that they too had a right to economic development, and that the problem of global warming was caused by the rich industrialized nations. Meanwhile, global emissions continued to grow, and temperatures continued to rise.

While the U.S. government blamed China and India for the continued increase in emissions, environmentalists identified a different culprit. In their view, the real reason why the U.S. rejected the Protocol was because of opposition from the politically influential fossil fuel industry, which spent a lot of money trying to convince people that global warming was a hoax. In the end, they failed, but their effort to protect profits at the earth's expense delayed meaningful action for several decades.

Eventually, in December 2015, representatives of 196 nations signed an agreement to limit the rise in global temperatures to a maximum of two degrees Celsius compared to pre-industrial levels, and to aim at an ideal target of 1.5 degrees. Although this was celebrated as a major achievement, there are no guarantees that the goal will be met. Success depends on one country in particular. China, which now accounts for a quarter of global greenhouse gas emissions, relies on coal for about 70 percent of its



energy requirements. It is cheap, abundant and very reliable. Unfortunately, it is also the dirtiest of the fossil fuels, accounting for around 44 percent of global carbon emissions. If the number of coal-fired power stations in China continues to increase, the international effort to limit further global warming will probably fail.

The Chinese government is well aware of this, and is now investing heavily in renewable energy. The country plans to get about half of its electricity from renewable sources and nuclear power by 2020. It is already the world's biggest producer of electricity from solar energy, wind and hydroelectric power, and has tidal, biomass and geothermal projects underway. This is not just because of global warming concerns; northern China, including Beijing, suffers from terrible air pollution, and coal-fired power stations are the biggest cause.

According to some researchers, if we continue to burn fossil fuels at the current rate, we may exceed the two-degree threshold within 15 years. What will happen after that remains unclear. It may depend on processes referred to as positive feedbacks that are



not yet well understood. For example, large amounts of methane, a powerful greenhouse gas, are locked up in the frozen tundra in Siberia. As temperatures rise, the tundra thaws, releasing the methane into the atmosphere, which then causes further warming and thus more methane emissions. Another feedback occurs when ice and snow melt. Less solar radiation is reflected, which adds to global warming, thus causing more ice to melt. Feedback processes like these could greatly increase the pace and scale of global warming. 5

For the people of the Maldives and other small island nations, no international agreement can save their homeland. One might hope that the countries most responsible for rising sea levels would at least offer them a new home. But there can be no new home for any of us if we allow our planet to be ruined just because we were unwilling to pay more for cleaner energy. And we would not deserve one. 10 15

## COMPREHENSION CHECK

**A** *Are the following statements true (T) or false (F), according to the text, or is there not enough information (N) to decide?*

1. Rising sea levels will affect poor countries more than rich countries. \_\_\_\_\_
2. It is impossible to solve the problem of global warming, so we should instead focus on helping people to adapt to it. \_\_\_\_\_
3. China and India were unwilling to reduce their own emissions because they needed economic development. \_\_\_\_\_
4. The Chinese government is making efforts to reduce its dependence on fossil fuels. \_\_\_\_\_
5. Because of various positive feedback processes, we have a better chance of limiting global warming to a two-degree rise. \_\_\_\_\_
6. The people of the Maldives will be able to find a new place to live. \_\_\_\_\_

**B** *Now write your answers to the following questions.*

1. How will global warming affect people living in Kiribati?  
\_\_\_\_\_
2. What other problems will occur as a result of global warming?  
\_\_\_\_\_
3. What are the two main ways to stop global warming?  
\_\_\_\_\_
4. According to environmentalists, why did the U.S. not adopt the Kyoto Protocol?  
\_\_\_\_\_



5. Why is China's energy policy so important for the success of the international effort to stop global warming?  
\_\_\_\_\_
6. What benefit could China get from reducing its dependence on coal-fired power stations?  
\_\_\_\_\_

## VOCABULARY CHECK

*Fill each gap with a suitable word or phrase from the text.*

1. Nobody lives on the smaller islands, but that big one is \_\_\_\_\_.
2. I have friends living in several different \_\_\_\_\_ of India.
3. This town often suffers from \_\_\_\_\_ after heavy rain.
4. Many people think the Maldives Islands are sinking, but in fact they are being \_\_\_\_\_ by the sea.
5. We turn on our air conditioner when the \_\_\_\_\_ reaches 30 degrees.
6. Some species of birds \_\_\_\_\_ to climate change by moving further north.
7. The U.S. \_\_\_\_\_ to adopt the Kyoto Protocol unless China and India agreed to cut their emissions too.
8. A salesman tried to \_\_\_\_\_ me that I needed a car, but I told him I cannot drive, and do not want to.

9. Sunshine is \_\_\_\_\_ in southern Spain, but there is not much in Denmark.
10. I made a snowman, but I expect it will \_\_\_\_\_ in the hot sunshine.

## DISCUSSION

***Prepare your answers to the following questions and then discuss them with your classmates.***

1. Should Japan welcome immigrants from countries whose homeland is submerged by rising sea levels? Why or why not?
2. Which do you think is more important, to stop global warming or to adapt to it? Why?
3. Do you think developing countries should give up economic development in order to reduce global warming?
4. Some people believe the companies that prevented action to stop global warming should be forced to compensate poor people who are suffering from the effects. What do you think?