

# Chapter

# 4

This chapter looks at the global effects of climate change.

By the end of this chapter, you should be able to:

- ✓ give examples of some of the ways that changes in the climate can affect countries.

## Climate change – its effects

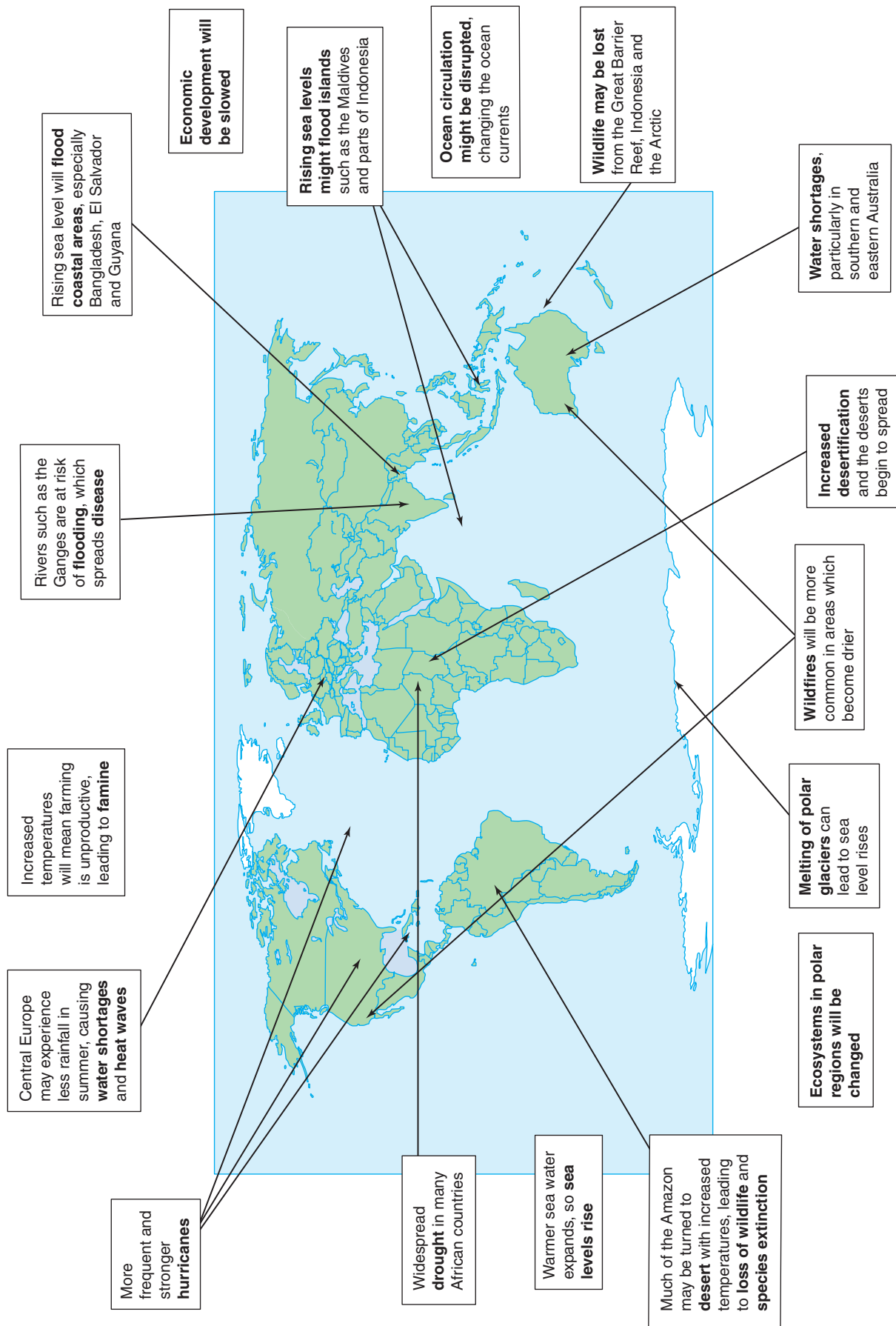
### Climate change and global warming

**Global warming** refers to the fact that the world has warmed by nearly 1 °C in the last 100 years. Most scientists believe it will rise by at least 2 °C in the next 100 years. Different regions are warming at different rates.

**Climate change** refers to the fact that it is not just the temperature which is changing; the amount of rainfall is also changing, leading to droughts and floods, and so is wind speed, leading to stronger storms. Different regions of the world are affected in different ways.

### Effects of global climate change

Many effects of climate change are already happening around the world, including floods, severe storms, droughts and food shortages. Tropical latitudes are particularly affected and most of these areas are in developing countries. Scientists predict these effects will become more severe over time. Many of these are shown in Figure 4.1.



**Figure 4.1**  
Present and predicted future effects of climate change



## Biodiversity loss

Scientists predict that the biggest cause of species extinction this century is likely to be as a result of climate change. Increased temperatures in vulnerable areas such as the Amazon rainforest and northern tundra regions will result in wildlife loss and even some species becoming extinct. Almost one quarter of the planet's mammals and one in eight bird species are likely to be threatened with extinction in the next 25 years.

## More extreme weather events

Extreme weather events are becoming more frequent. Some regions are experiencing larger, more destructive storms, increased coastal and river flooding, greater numbers of flash floods and landslides, and longer monsoon rains. Conversely, drier regions are experiencing longer, hotter periods without rainfall, with an increased risk of wildfires.

## Droughts

The seven hottest years on record have all occurred from 2014. Water shortages already affect an estimated third of the world's population with climate change set to make things much worse, particularly in poorer tropical regions. India and many African countries are likely to be among the hardest hit, as increasingly frequent weather extremes such as droughts will lead to poor harvests and a shortage of food.

## Food poverty

Extreme weather events, combined with soil erosion and desertification all cause poorer harvests and a global increase in food poverty. Food poverty is when people are unable to buy or grow enough food to be healthy. It is thought that almost half of the world's population is already in food poverty. For example, in sub-Saharan Africa, increased temperatures and drought are causing farmlands to dry out, leading to crop failures and a shortage of grass and water for farm animals. Food poverty can lead to hunger, malnutrition and even famine.

## Activity



Write a report on the global effects of climate change.

- Begin by briefly describing how the climate is changing and how it will change in the future.
- Then, describe and explain what you think are the **three** biggest impacts of climate change to the planet.
- Try and expand on the points made in Figure 4.1. For example, if an area suffers from a severe drought, you can go on to say that crops and animals will die, there will not be enough water, people will have to move away, cities will grow in size, etc.
- Make sure you mention specific regions and countries and try and find out more details about them.
- Include diagrams and maps in your report.

**Now complete the  
'I can do' boxes  
for this chapter.**

