

# Climate Training Kit: Youth Unit

## Let's Learn! Frequently Asked Questions

### 1. Why is climate change happening?

The main reason the climate is changing is because people are adding greenhouse gases to the atmosphere. The most important greenhouse gas is carbon dioxide, which is released when people burn fossil fuels to do everyday activities like driving cars, heating buildings and making electricity. As greenhouse gases build up in the atmosphere, they cause the earth to trap extra heat, making the planet warmer.

### 2. What is the greenhouse effect and how does it affect the climate?

The greenhouse effect is a natural process that helps make the earth warm enough for us to live. It works like this: the earth gets energy from the sun, heats up and then gives off energy in a different form, called infrared radiation. Greenhouse gases in the atmosphere trap some of this energy, warming the atmosphere, so the greenhouse effect is becoming stronger and the earth is getting warmer.

### 3. Is climate change the same as global warming?

No. Global warming refers to an increase in the average temperature near the Earth's surface. Climate change refers to the broader set of changes that go along with global warming, including changes in weather patterns, the oceans, ice and snow, and ecosystems. Most experts now use the term 'climate change' because it gives a more complete picture of the changes that are happening around the world.

### 4. Does the 'ozone hole' have anything to do with climate change?

No. The ozone hole refers to a decrease in the layer of ozone gas found high in the earth's atmosphere, which helps shield the planet from the sun's harmful ultraviolet rays. The ozone layer has become thinner because of chemicals that were once commonly used in products ranging from spray cans to foam furniture cushions. While a thinner ozone layer allows more ultraviolet rays to reach the Earth, increasing the risk of sunburns and skin cancer, it doesn't cause climate change.

### 5. Why is it a problem if the Earth's average temperature gets a little warmer?

Temperature plays an important role in how nature works, and even a small change in average temperature can lead to large changes in regional temperatures and seasons where you live and have a noticeable impact on plants, animals, and other natural processes. For example, just a 1 – 2 degree increase in global

temperature can lead to a much greater risk of wildfires. Some parts of the world are warming a lot more than average, which means the effects are much more dramatic.

**6. How can the Earth be getting warmer is it's colder than usual where I live?**

The average temperature around the world is rising, and 2001-2010 was the warmest decade on record. But that doesn't mean we won't still have occasional cold spells. To see why, it's helpful to understand the difference between weather and climate. 'Weather' refers to day-to-day conditions, such as a rainstorm or today's temperature. In contrast, 'climate' refers to the average weather conditions you would expect to find in a certain place, based on patterns over many years. Day-to-day weather will always have its ups and downs and there will always be a chance of extreme cold events. But as the Earth's climate gets warmer over time, most places will experience more days with record high temperatures and fewer days with record low temperatures.

**7. What is El Nino / La Nina and how does it link to climate change?**

El Nino and La Nina are natural climate patterns that sometimes occur in the Pacific Ocean. During an el Nino episode the water in the Pacific Ocean near the equator gets hotter than usual. And during La Nina episodes, the same water cools. These changes are so big that they affect weather all over the world. Weather depends a lot on ocean temperatures. As the Earth's climate changes, natural changes in the climate such as el Nino and La Nina will also change. We know that the impacts of El Nino and La Nina – extreme rainfall, and drought will likely become more extreme with climate change.

**8. Is there a link between climate change and vector-borne diseases (Dengue / Malaria)?**

Global climate change will affect all living things on this planet. For many species the change in their environment may mean extinction. However, the mosquito may benefit from changes in the climate. While relationships between climate, physical and biological factors that influence disease transmission are complex, we know that at higher temperatures mosquitoes fly faster and further, reproduce more rapidly and bite more frequently.

**9. Does climate change cause forest / bushfire?**

Heat from sun energy alone does not trigger forest / bush fires; they are typically caused by humans or lightning. However, increased hot and dry conditions increase the likelihood of fires burning longer and being more intense.

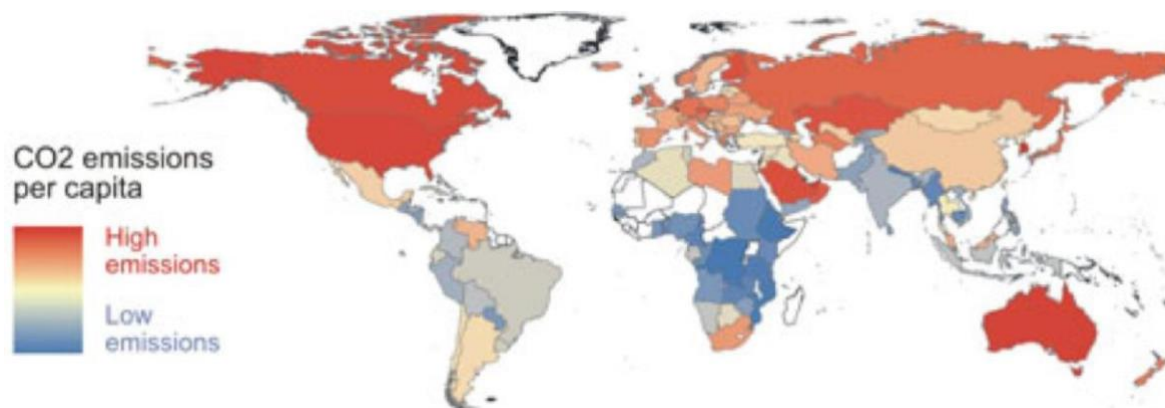
**10. What causes coastal erosion?**

Waves, generated by storms, wind or fast-moving motor craft can cause coastal

erosion, which may take the form of long-term losses of sediment and rocks, or the temporary redistribution of coastal sediments; erosion in one location may result in accretion nearby.

### 11. Can we prevent and reduce climate change?

All countries in the world are contributing to the greenhouse effect, some more than others (see map). To reduce climate change, we should all emit fewer greenhouse gases. However, if we all stopped emitting today, the earth would continue to get warmer for decades because of all the gases that are in the atmosphere now.



Source : <https://skepticalscience.com/graphics.php?g=15>

### 12. What can I do to prevent or reduce climate change?

Though no one can prevent climate change alone, every little change can help. Here are 9 simple actions you can take:

- Reduce, reuse, recycle
- Use less heat and air-conditioning
- Use energy-efficient products
- Drive less and drive smart
- Use less hot water
- Use the off switch on your electrical appliances
- Plant a tree
- Encourage others to conserve energy

### 13. Can we prevent or reduce climate related hazards?

Extreme weather events such as heat waves, heavy rainfall and others are not possible to prevent by the community. However, we can limit the impact by acting! See the Adaptation Cards for youth-led examples.

Note: thanks to A Global Student's Guide to Climate Change: US EPA for some of the answers.