

# Impacts of climate change

Scientists have developed a range of models to help them determine some of the ways the climate might change and the potential impacts of those changes.



In recent years, we have started to see some of these impacts already.

Around the globe, we have already seen the following:

- **Melting glaciers and sea ice** – Sea ice in both the Arctic and Antarctic are frequently at record lows.
- **Earlier flowering and ripening dates** – Research suggests that hotter weather is already affecting the quality and availability of many foods.
- **Coral bleaching** – Elevated sea temperatures are the primary cause of mass coral bleaching events. A recent bleaching event in the Great Barrier Reef has seen 93% of the reef affected.
- **Migration of plants and animals towards the poles** – Plants and animals are already migrating towards the poles to escape hotter weather closer to the equator.
- **More frequent and intense bushfires** - Around the world we are seeing catastrophic bushfires occur more frequently, and this will continue with a changing climate.
- **More frequent and extreme weather events** - In Australia in recent years, we've experienced frequent severe flooding events all around the country. With climate change we can expect to continue experiencing these types of events.

Other impacts we might see include the following:

- **Global temperatures will continue to rise** – However, temperatures will not rise evenly across the globe; some places will experience more warming than others.
- **Changes to agricultural production** – In some places, growing seasons could be extended as much as two or three months, while in others, hotter and drier conditions will limit the growing season. Food supplies are expected to be negatively impacted in some areas.
- **Changes in precipitation** – Some places can expect more, and some can expect less.
- **Changes to ecosystems** – Global warming causes land and ocean life to migrate away from areas that have become too warm and towards areas that previously were too cool. We can also expect extinctions of some existing species that will have nowhere to migrate.

- **Increase in the number and severity of heatwaves** – This is predicted to affect human health, agricultural production, and the health of ecosystems, plants and animals.
- **Increase in disease** – Warmer temperatures may also lead to increased diseases via water and food.
- **Sea level rise** – Sea levels are expected to rise approximately 2.3 metres for each degree Celsius temperature rise.

You are not alone if you find this difficult to read; this is genuinely scary stuff. That's why it's important to take some time to look after yourself when absorbing information like this: take a break and have a friendly chat with someone, watch something silly or give your pet a cuddle. And then remind yourself that it's not up to you and you alone to fix this problem. People all over the world are already working hard to meet the challenges of climate change and to limit its impacts on people, the environment and the future. And then think about the things you can do - we can all do something!

## Climate Change Actions

Climate change is definitely daunting. It's hard to imagine that the actions of one person can make a difference. But as we know, there is always something that we can do. If you're not sure how to do it on your own, find a friend to try out some of these ideas with you:

- **Learn more** - Read or watch more about climate change and the work that people all around the world are doing to address it.
- **Be inspired** - Working in isolation can be incredibly hard; we need to be inspired by what other people are doing so we know what success and failure look like and what steps to take on the way. Is there someone you know who's making a difference in the climate change space? Reach out to them and ask them for advice, or follow their tips and tricks. Knowing you're not working alone is a great motivator.
- **Consider your transport** - Leave the car at home and walk, cycle and use public transport where possible to reduce your CO2 emissions.
- **Plant it** - Plants and healthy soils help fight climate change by absorbing CO2. Look after your soils and your plants, and where you can grow more plants!
- **Do you really need it?** - Think carefully about all your purchases, and where possible, choose the greenest option.

- **Cut your energy use** - Make simple changes in your energy use, such as turning lights off, replacing light bulbs with new energy-efficient bulbs, and unplugging electronic devices when not in use. Wear a jumper instead of increasing the heat in winter, and in summer, only use the air conditioner when the fan isn't cutting it. Switch to renewable energy - Switching to energy produced by renewable resources is the simplest and most effective way to avoid producing carbon emissions. We acknowledge that this isn't going to be an easy one to do when you don't pay the energy bills and are not responsible for choosing an energy provider, but it's an important one to know about in the future. In the meantime, try gently encouraging your family to make the switch.
- **Rethink, refuse, reduce, reuse, repair and recycle** - Cut the waste, save on resources and eliminate unnecessary emissions. This might include everything from clothes to electronics to gadgets to furniture.
- **Embrace veggies** - We're not suggesting you give up the meat entirely, but why not try a day or two a week of meat-free meals and see how you like it? Why? Producing veggies creates far fewer emissions than a meaty diet.
- **Don't waste it** - While we're on the subject of food, try not to waste food. When you waste food, you're also wasting all the resources consumed and emissions produced that were required to make that food.
- **Spend it wisely** - One of the best things any of us can do is to support the people who are doing good work. This includes thinking about what we buy and who we buy from. Take a few moments to research whether the retailer you are looking to buy from is taking their environmental responsibilities seriously and if they're not, spend your money with someone who is.
- **Get involved** – Send a letter to a politician or join a group like AYCC (Australian Youth
- **Climate Coalition** – <https://www.aycc.org.au/>).

