

HE AO ITI NOA

# Small World

ISSUE

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## CLIMATE SURVIVOR:

### Fighting climate change in the pacific

He tangata i oraiti i te huarere: Te pakanga ki te hurihanga o te huarere i Te Moana-nui-a-Kiwa

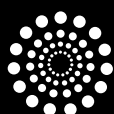


What is climate change?

How does climate change contribute to extinction?

What are people in the Pacific doing to stop their homes from disappearing forever?

Is there anything we can do to make a difference?



global focus  
AOTEAROA



# Surviving climate change *Te ora tonu i roto i te hurihanga o te huarere*

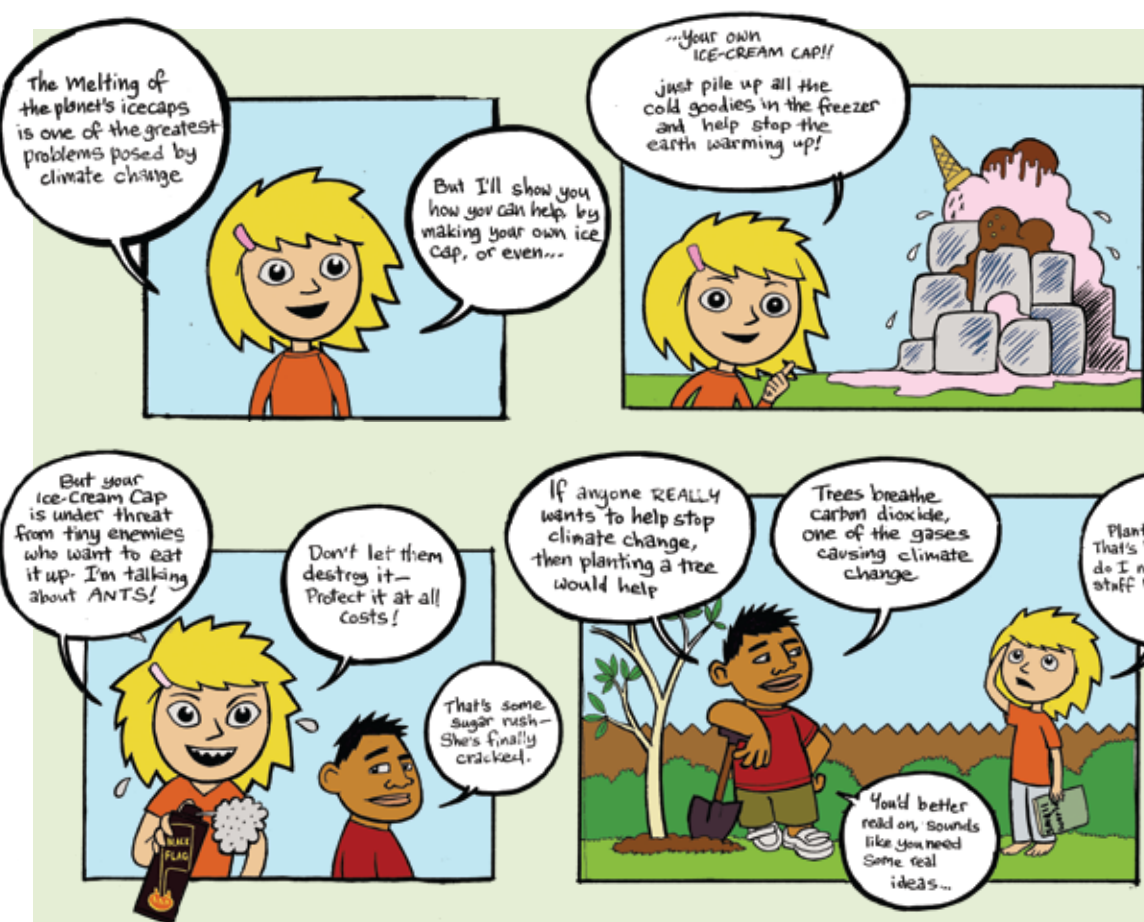
Everyone's talking about climate change. It often seems as though it's happening somewhere else, and doesn't affect us at all.

In actual fact, climate change is causing problems where we live, the Pacific. Some of our Pasifika neighbours, maybe even our family and friends, are facing the threat of being forced to leave their island homes as the earth heats up and sea levels rise.

They're working hard to fight climate change, but they need the world to help.

This issue of *Small World* will help you to understand what climate change is. It will explore how young people, just like you, are fighting climate change where they live. It will also give you some cool ideas for actions you can take to slow down climate change.

## Action for climate change *He mahi hei whai hei ārai i te hurihanga o te huarere*



### Look out for:

Activities to help you find out more about conflict issues.

Websites for your research.

Key words in blue to help you understand what you're reading.

Action steps so you can make a difference!

*Small World* is a magazine produced for primary schools by Global Focus Aotearoa. Global Focus Aotearoa is a specialist provider of information and education on global and development issues. We provide services to support critical analysis and a deeper understanding of global and development issues.

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# Our climate: A hot topic *Tō tātou huarere: he kaupapa wera*

## What is climate change? *He aha te hurihanga o te huarere?*

You might have heard about climate change on the news, in the newspaper or at school. But what is climate change?

Our atmosphere is full of gases, like carbon dioxide, nitrogen, methane and oxygen. These are called greenhouse gases, and these gases are being made all the time. This has always happened, and having the right amount in our **atmosphere** helps to keep in enough of the sun's heat to warm the earth.

The problem is, too many of these gases are being trapped.

Extra gases are made by things like the transport we use, farms and factories, and the energy we need to make technology work. They are holding in more of the sun's rays than ever before, heating up the planet (global warming). Scientists have found that this build-up of gases is changing our earth's **climate**. This is **climate change**.

Watch a short cartoon about global warming. Visit [www.youtube.com](http://www.youtube.com). Search for 'on top of our planet'.

## What's the problem with warmer weather?

*He aha te raruraru o te huarere mahana kē atu?*

You might think that the earth getting hotter is a great idea - it'll mean more time on the beach, right? Unfortunately, warmer weather can be dangerous for the planet:

- Ice caps can melt, causing sea levels to rise; this can threaten the homes and way of life of people living on our world's coasts;
- Oceans can become too warm for the species living there;
- Animals and plants can die if they can't get used to the change in temperatures.

## Investigation station *Teihana tūhura*

Electricity is an energy that helps us to power the things we rely on at home or at school. Electricity is one thing that leaves carbon dioxide behind, one of the gases trapped in our atmosphere. Using less electricity is one way to make a difference for climate change.

Look around your classroom. List all the things that use energy (anything that needs electricity to work).

1. Guess which items on your list use the most energy every time you turn them on.
2. Use the key.
3. Colour code which items you think use the most energy and which use the least.

**RED | High energy use**  
**ORANGE | Average energy use**  
**GREEN | Low energy use**

## Did you know...? *I mohio rānei koe?*

Scientists are worried that climate change is warming the Japanese waters, creating the perfect breeding ground for giant jellyfish, the Nomura.

Millions of these slimy swimmers are swarming in the Sea of Japan, poisoning tuna and salmon and making life difficult for local fishermen.

Rising temperatures might also be killing other fish that usually live in the waters, leaving more space and food for the Nomura. They are taking over!

Find out more about these giant jellyfish here: <http://tinyurl.com/ygcaufe>.



## Key words *Ngā kupu matua*

<b>Atmosphere</b>	The gases that surround the earth.
<b>Climate</b>	The kind of weather an area has over time. E.g. Sunny, wet or cold.
<b>Climate change</b>	A change in the world's climate due to a build up of some of the gases that surround the earth.

Sources Ngā Rauemi: [www.un.org/en/documents/udhr/index.shtml#a1](http://www.un.org/en/documents/udhr/index.shtml#a1).



# Extinction *Te korehāhā*

Climate change affects more than just our weather and our seas. It also harms living things on the planet, including people. As our planet heats up, ice caps melt and sea levels rise, threatening people's homes, languages, and way of life. Some could disappear forever – that's extinction.

## What have we got to lose? *He aha te hē mā tātou o te whai i tēnei huarahi?*

Have a look at the list below. What do you think could become extinct because of climate change? What do you think might be safe from **extinction**? Tick or circle the things that might be at risk.

PLANT SPECIES      TECHNOLOGY (computers, cars, etc.)      ISLANDS SURROUNDED BY THE OCEAN  
ANIMAL SPECIES      PEOPLE'S CULTURES      LANGUAGES

## Use your brain power *Whakamahi te kaha o tō hinengaro*

Extinction could have many consequences (problems). Choose one thing from the list above that you think could become extinct because of climate change. Create your own consequences chart. What problems could this extinction cause?

- Talk it over with your class or group.  
What problems could this sort of extinction cause people and the planet?
- What can people do to stop this extinction from happening?



## Did you know...? *I mohio rānei koe?*

Climate change has happened throughout history, but never so quickly as it's happening today! Some even think dinosaurs might have died in a time of climate change. But now there are more people in the world, using more of its resources, and leaving more and more carbon dioxide and other gases in our air. This means that our weather is changing so fast, our earth can't adapt.

**History spot** *He kōrero nō nehe*

It's not the first time the earth's weather has led to the extinction of a **culture**. Some scientists believe that the Mayan **civilisation**, found in North and Central America, disappeared over a thousand years ago after a terrible drought (a period of no rain) caused by climate change. And today, although there are people who have Mayan ancestors, most of the Mayan culture is gone forever!



The ruins of a Mayan Pyramid found in Yucatan, Mexico. Image source: Keith Binns, www.istockphotos.com.

## Key words *Ngā kupu matua*

<b>Civilisation</b>	A society that is quite advanced.
<b>Culture</b>	The behaviour, habits and traditions of a country or group of people.
<b>Extinction, extinct</b>	When something no longer exists.

Sources Ngā Rauemi: [http://news.nationalgeographic.com/news/2001/02/0227\\_climate4.html](http://news.nationalgeographic.com/news/2001/02/0227_climate4.html).

## Think about it *Āta whakaarotia*

How might our way of life be threatened if temperatures rise? Whose homes are most at risk if sea levels rise? What might happen to people's homes?

# Global action - Eye on the Pacific

*Ngā mahi huri noa i te ao – He Mātai atu ki te Moana-nui-a-Kiwa*

## What's climate change got to do with us?

*Hei aha te hurihanga o te huarere ki a mātou?*

You might think that in Aotearoa New Zealand, climate change doesn't affect us. In fact, climate change is an issue that affects the whole world. This means that it does affect us.

In the next 30 or 40 years our warming planet will mean higher sea levels. This threatens all living things on Aotearoa NZ's coasts. Climate change can also mean more droughts and floods. It could even mean less available **freshwater**.

Luckily, people are taking action. Our government has promised to let less carbon into our atmosphere, and to do it by 2020. If we do, we'll make a huge difference to climate change. Community groups like 350 have formed all over the world, including Aotearoa NZ.

They are working to get people to do something about climate change, before it's too late.

Want to know more about 350? Visit [www.350.org.nz](http://www.350.org.nz). Find out how you can help reduce your **carbon footprint**. Visit [www.sustainability.govt.nz/energy](http://www.sustainability.govt.nz/energy).



Members of the 350 campaign, Frocks on Bikes, cycling instead of driving to stop climate change.

Image source: 350 Aotearoa, [www.creativecommons.org](http://www.creativecommons.org).



## Taking action in Rotuma *Te huri ki te mahi i Rotuma*

On the tiny **volcanic** island of Rotuma, north of Fiji, it isn't the government who is fighting climate change, it's young people just like you.

These young people have a passion for their home, and they are working hard to give their communities a safer environment. They teach other locals ways to cope with climate change and to understand how it is affecting their island. And that's not all: they also organise clean-ups of their coastlines and even try to protect their culture from extinction. They are doing their bit to protect their corner of the planet.

## Key words *Ngā kupu matua*

<b>Carbon footprint</b>	How much carbon each person makes.
<b>Freshwater</b>	Water that does not contain any salt (such as the water in lakes, rivers or streams).
<b>Volcanic</b>	Land formed by volcanoes erupting.

Sources Ngā Rauemi: <http://alofatuvalu.tv>; [www.independent.co.uk/environment/climate-change/sos-pacific-islanders-battle-to-save-what-is-left-of-their-country-from-rising-seas-457395.html](http://www.independent.co.uk/environment/climate-change/sos-pacific-islanders-battle-to-save-what-is-left-of-their-country-from-rising-seas-457395.html); <http://rotuma.net>.

## Fighting back in Tuvalu

*Te whakahoki i te pakanga ki Tuvalu*

'...my home island will sink under the water, and there will be no place for me to live.'  
*Vaimaila Teitala, 12, Tuvalu.*

Rising sea levels affect people and their homes. This is very true for the people of Tuvalu. The nine islands they call home are being swallowed by the sea and might be under water in 50 years.



Image source: mrlin, [www.creativecommons.org](http://www.creativecommons.org). Funafuti Atoll, Tuvalu.

So Tuvaluans are trying to stop carbon heating our planet by walking or cycling instead of driving cars. Locals try to turn off lights and electric appliances when they aren't using them. They even use gas for cooking – they make it themselves out of pig poo!

It's a start. But Tuvaluans aren't causing the bigger problem of climate change, so what they really need is for people around the world to make changes. If we all make less carbon, we can fight climate change and stop sea levels from rising even more. If we do nothing, then Tuvaluans will have to leave their homes. Tuvalu could vanish underwater.

'[Large countries] don't take notice of us because we're too small, and they want to keep their factories and cars.'  
*Manuao Taloka, 13, Tuvalu.*



# Local action

Hei Mahi | Tō Rohe

## Guardianship Kaitiakitanga

For some Māori people, the practice of **Kaitiakitanga** or guardianship, is a way to ensure the planet's natural resources are protected from both human impact and the planet's natural processes. This isn't just to protect our earth from climate change, but to look after all of our resources.

An example of Kaitiakitanga from our environment is the use of geothermal activity in the popular tourist city of Rotorua. Some years ago, a few of the large geysers seemed to be spouting out shorter fountains than usual. Some people thought this was due to overuse from home owners, who had **geothermal** heating. A lot of families then had their hot water pipes shut off by the city council. The council hoped shutting off the pipes would re-direct energy to the geysers.

However, nature had a different idea and new hot springs began popping up in unexpected places, some of them causing damage to shops, parks and people's homes.

The city council was not prepared for the unpredictable nature of our natural resources.

It is still not proven either, that the **geysers** were smaller because of human over-use or different patterns in the environment. Either way, Kaitiakitanga needed to be practiced, through the careful use of our natural resources.

Everyday practices of Kaitiakitanga when out and about:

- At the beach, it's great to look around the rock pools and shore line at all the interesting rocks, shells and creatures. Make sure you leave them where you found them, as that shell could be another creature's home.

- During walks in the forest, keep to the tracks, as you might disturb animal or bird homes off the beaten track. Like the beach, leave any rocks or fallen branches where you found them.

- At the playground, put any rubbish you see or bring in a bin. It's best not to take any food into the playground area. Report any broken glass or sharp objects around the playground to an adult.



NAME: Becky Stewart

AGE: 10 yrs old  
SCHOOL: Room 2,  
Tawhai School,  
Stokes Valley.

What she used	How many times
Fridge	6
Hot water	3
CD player	1
Computer	3
TV	1
Video game (tv based)	1
Light	1
Cooker	1

## Cool it! Whakamātaotia!

From the time we all wake up in the morning, until the time we go to sleep, we are using energy that can leave carbon dioxide and other gases behind. When these build up in our air, they cause climate change.

Take a look at how Becky uses energy in her day...

- Do you think that Becky might leave a lot of carbon dioxide behind, or a little?
- How do you think Becky could change or improve her energy use?
- What is similar about how Becky uses energy with how you use it?
- What is different about how she uses it?

## Key words Ngā kupu matua

<b>Geothermal</b>	Something that is made from the heat that comes from inside our earth.
<b>Geysers</b>	A spring that throws a jet of hot water or steam into the air.
<b>Kaitiakitanga</b>	Guardianship.

# What do you think?

He aha ōu whakaaro?

## Young people in the Pacific talk climate change

*Ka kōrero te rangatahi i te Moana-nui-a-Kiwa mō te hurihanga o te huarere*

NAME: Lia Koroī AGE: 16

HOMELAND: Fiji

**Have you, or people from your community been affected by problems like rising sea levels or changing weather?**

There has been a rise in sea levels...many villages near coastal areas fear that the rise in sea level will affect their living, since they depend mostly on the sea for food, etc... Many families have to relocate to other areas in order to be safe before it's too late.

Another issue is the increase in weather temperature. Fiji has always had hot weather but this has ... increased... it has affected crops and vegetables grown and when being sold the prices of these goods has gone up...



Flooding after heavy rains in Nadi, Viti Levu, Fiji. If climate change continues, flooding could happen more often globally, not just in Pacific nations like Fiji.

**How do you think the world can help to fight climate change?**

I would like to see the world help climate change by... reducing the emission of carbon dioxide gases as this has a major effect on our world. I would also like to see that the family works together in helping fight climate change.

**What do you think is the best way for people to solve conflict?**

Countries could find a way to work things out instead of fighting. If a bully was taking your lunch money you should tell a teacher. You could tell a parent or care-giver if you have any problems.

## So, what do you think?

Nā reira he aha ōu whakaaro?

You've heard what Lia has to say about climate change. What do you think? How do you think the world can work to fight climate change?

Survey your classmates. What actions do they think the world needs to take to make a difference?



## Did you know...?

I mohio rānei koe?



Climate change can threaten the languages we speak! If people have to leave their homes forever, sometimes they aren't able to continue to speak their own languages. Many languages could be lost. In fact, of the nearly 7,000 languages in the world, almost half of these are endangered, many because of climate change!

Don't worry though, keeping them safe is possible. If you or your family speak a language other than English – keep it up! Speaking languages is the best way to keep them alive.

"hola"

"talofa"

"kia ora"

"saalem"

## Our right to a safe environment!

We all have the right to life, to freedom and to safety! It says so right here, in the **Universal Declaration of Human Rights**.

Climate change puts our safety and the safety of the planet in danger!



## Key words Ngā kupu matua

**Universal Declaration of Human Rights**








Adopted by the United Nations (UN), it contains 30 statements on your rights. They include the right to food, education, clothing and housing and to a safe environment.

# Taking positive action *Te mahi pai*



Everyone can make a difference to climate change, no matter where they are in the world. Reducing how much energy we use means less carbon dioxide choking our air. This is good for the whole planet.

Here are some other ways you can help:

-  Only use equipment (including lighting, heating and computers) when your classroom is being used. If no one is in there, turn it off!
-  Work with your class to set goals for saving energy. Put them up in your classroom where everyone can see them.
-  Travel to school by 'Walking School Bus'. Each 'bus' walks to school with at least one adult 'driver' picking up children and walking them to school. Save energy and get fit too. It's easy (and fun)!
-  Make one person responsible for switching off equipment before weekends and holidays.
-  Plant more trees in your school grounds. Trees breathe carbon dioxide in, and make oxygen for living things – like us! You can find out about groups planting near you by visiting: <http://www.tfsnz.org.nz>.
-  Email the climate change team at the Ministry for the Environment and find out what you can do to reduce your school's carbon footprint: [info@mfe.govt.nz](mailto:info@mfe.govt.nz).
-  Take part in Earth hour! On Saturday 27 March 2010 at 8.30pm, WWF wants a billion people around the world to switch off their lights for one hour – all to make a difference for climate change. Get your family to join in and switch off! [www.earthhour.org.nz](http://www.earthhour.org.nz)



**'We'll stand up and 'Take our planet back', you and me.'**

*Will.i.am, the Black Eyed Peas.  
From Take our planet back.*

Will.i.am image sourced from:  
NicoGenin, [www.creativecommons.org](http://www.creativecommons.org)

## Websites *Te Ipurangi*

### Tiki the penguin – hot earth

A site that is fun and informative. Click on 'climate change' to learn more, watch videos or take action. Just visit <http://tiki.oneworld.net>.

### Time for Kids

This website has heaps of information about global warming and other hot topics. Search for 'specials global warming' at [www.timeforkids.com](http://www.timeforkids.com).



### Climate Change – Kid's Site

This site will help you understand what climate change is, how scientists learn more about its effects, and action we can take to make a difference. Check out [www.epa.gov/climatechange/kids](http://www.epa.gov/climatechange/kids).

### Global Warming – Kid's page

There's a lot you can learn about global warming. To help, this page provides answers to six key questions about global warming, how it occurs, and how you can help to stop the process. Search for 'global warming kids page' at [www.pewclimate.org](http://www.pewclimate.org).

### KidsRgreen

A website encouraging you to take action for a sustainable planet. Activities, games and green challenges will keep you switched on and help you make a difference. Find out more at [www.kidsrgreen.org](http://www.kidsrgreen.org).

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