

### **A FIGHT FOR SURVIVAL:** TACKLING THE CLIMATE CRISIS IS KEY TO SECURITY IN THE BLUE PACIFIC



## Thank you for supporting the Climate Council.

The Climate Council is an independent, crowd-funded organisation providing quality information on climate change to the Australian public. If you'd like to support more reports like this, head to www.climatecouncil.org.au/donate.

Published by the Climate Council of Australia Limited.

ISBN: 978-1-922404-48-0 (print) 978-1-922404-49-7 (digital)

© Climate Council of Australia Ltd 2022.

This work is copyright the Climate Council of Australia Ltd. All material contained in this work is copyright the Climate Council of Australia Ltd except where a third party source is indicated.

Climate Council of Australia Ltd copyright material is licensed under the Creative Commons Attribution 3.0 Australia License. To view a copy of this license visit http://creativecommons.org.au.

You are free to copy, communicate and adapt the Climate Council of Australia Ltd copyright material so long as you attribute the Climate Council of Australia Ltd and the authors in the following manner: A Fight for Survival: Tackling the climate crisis is key to security in the Blue Pacific.

Authors: Dr Wesley Morgan, Dr Annika Dean and Dr Simon Bradshaw.



Cover image: CPL Dustin Anderson/Australian Department of Defence via Getty Images.

The Climate Council acknowledges the Traditional Custodians of the lands on which we live, meet and work. We wish to pay our respects to Elders past, present and emerging and recognise the continuous connection of Aboriginal and Torres Strait Islander people to Country.

This report is printed on 100% recycled paper.



facebook.com/climatecouncil

info@climatecouncil.org.au



twitter.com/climatecouncil



Dr Wesley Morgan Senior Researcher



Dr Annika Dean Senior Researcher



Dr Simon Bradshaw Research Director

climatecouncil.org.au

## Contents

Key findings		ii
		iv
1.	Introduction	1
	About the Pacific Islands Forum	2
	What is on the agenda for the 2022 Pacific Islands Forum?	3
	What is the Blue Pacific?	5
	What is the 2050 Strategy for the Blue Pacific?	5
2.	A hot topic: Security in the Blue Pacific	6
	Recent developments	6
	The Pacific islands are global leaders for climate action	10
3.	A question of survival: The latest science and its implications for the Pacific	
	More destructive tropical cyclones	14
	Sea level rise and coastal flooding	15
	Coral bleaching and degradation of marine ecosystems	17
	More extreme droughts and more intense rain	19
4.	Global action is needed to secure the Blue Pacific	22
5.	New finance for addressing climate impacts and driving global action	
	Driving global action	30
	Supporting a new global finance goal	30
	Ending finance for fossil fuels	31
6.	The way forward	
Re	References	
Image credits		

## Key findings

### 1

Climate change is an existential threat to the Pacific and time is running out. Action to urgently reduce greenhouse gas emissions is crucial to the survival of many communities.

- Without immediate and urgent action from the global community, Pacific island countries face severe and irreversible climate impacts that will wreak havoc for island communities.
- The Pacific is particularly vulnerable to climate impacts, including cyclones of worsening magnitude, sea level rise and coastal flooding, drought and the loss of coral reefs and ecosystems.
- > Warming of 2°C is considered an existential threat to many Pacific island communities.
- The Intergovernmental Panel on Climate Change has clearly stated that to have any reasonable chance of achieving the goals of the Paris Agreement, global emissions must be roughly halved by 2030.
- The latest assessment of all countries' 2030 targets shows a catastrophic shortfall on the scale of action required.
- > The Australian Government must act quickly to move beyond coal and gas and ensure Australia's emissions plummet this decade.

2

#### Australia must go harder and faster to act on the climate crisis to repair the relationship with our Pacific neighbours and address the growing security threat climate change poses for our region.

- Australian security officials are concerned about China's growing influence in the Pacific, especially after China signed a security deal with the Solomon Islands.
- > Pacific island countries remain adamant that climate change is their number one key security concern.
- > Australia has struggled to convince island countries it is serious about security in the region, while it has been slow to take action on the Pacific's key security threat: climate change.
- > To earn the trust of the rest of the region, Australia will need to show Pacific countries that it is serious about climate action, both by cutting emissions at home and working to enable greater global cuts in emissions this decade.



### 3

Australia can and must take decisive action to act on climate change in accordance with what the science demands and in partnership and close consultation with Pacific communities and leaders.

- Australia is the world's third largest fossil fuel exporter and until recently has had some of the weakest emissions reduction targets in the developed world.
- Australia's love affair with coal and gas must end. This means no more new coal and gas developments and a rapid transition to renewable energy.
- The Australian Government's new 2030 emissions reduction target of 43% – soon to be enshrined in legislation – is a good start but must be 'a floor, not a ceiling' as Australia continues to lag behind most other developed countries on targets.
- > Based on its high emissions, economic strength, and vast untapped opportunities for renewable energy, Australia should aim to reduce its emissions to 75% below 2005 levels by 2030.
- Australia must prioritise rejoining the Green
   Climate Fund and announcing new finance
   commitments to help Pacific countries deal with
   the growing impacts of the climate crisis.
- > Australia should aim to scale up its overall climate finance commitment to 12 billion per annum by 2030. This would go a long way to deepening trust and cooperation with the international community on climate change and help catalyse stronger action globally.

### 4

#### Australia wants to co-host a UN Climate Summit with Pacific nations, but must heed Pacific priorities for climate action.

- > The Australian government has committed to cohosting a UN Climate Summit in partnership with Pacific island nations, potentially as soon as COP29 in two-years' time.
- Pacific island countries expect the Australian government to do more to move beyond coal and gas, and to support Pacific communities to deal with climate impacts.
- > If undertaken in a true spirit of collaboration, a Pacific COP would help reassure Pacific countries that Australia is serious about tackling the region's key security threat. It would also strengthen Australia's claim to be the Pacific's security partner of choice.

## Foreword



#### by 'Pacific Elders Voice'

Members of the Pacific Elders Voice are happy to pen the foreword for this critical report from the Climate Council, on climate change and security in the Blue Pacific.

This report is a must-read. This is mainly because the primary security threat to the Pacific islands is climate change. Without urgent global action to cut emissions our countries, especially low-lying atoll states, face the prospect of annihilation due to rising sea levels. All Pacific countries will face severe and irreversible impacts that will wreak havoc in island communities.

Pacific leaders have again and again underlined the gravity of the situation. The 2018 Boe Declaration on Regional Security – issued by Pacific Islands Forum leaders – reaffirmed that "climate change remains the single greatest threat to the livelihoods, security and well-being of the peoples of the Pacific". At the last in-person summit of the Pacific Islands Forum, in Tuvalu in 2019, Pacific leaders issued the Kainaki II Declaration for Urgent Climate Action Now, which emphasised that: "right now, climate change and disasters are impacting all our countries. Our seas are rising, oceans are warming, and extreme events such as cyclones, flooding, drought and king tides are frequently more intense, inflicting damage and destruction on our communities and ecosystems and putting the health of our peoples at risk." At the Tuvalu meeting of the Pacific Islands Forum, young people also issued a Funafuti Declaration on Climate Change which urgently called on "governments, representatives of industry, and individuals to rapidly reduce greenhouse gas pollution".

This new report from the Climate Council provides a timely update on the science of climate impacts in the Pacific. Drawing from the latest scientific assessments, it is a dire warning that some impacts cannot be avoided and the window to avoid catastrophic impacts is closing fast. This report also sets out some actions required from major emitters – including from

Australia – in order to ensure the survival of all Pacific island states. The latest assessments are clear: global emissions must be halved during this decade. There is no room for new coal and gas.

Like many in the region, we welcome a more ambitious climate policy from the newly elected government of Australia, especially the strengthened commitments to cut emissions by 2030 as well as promises of new climate finance to help deal with the climate impacts. These commitments constitute positive progress. However, we will need to see more urgent actions – including accelerated efforts to move beyond coal and gas – to match the security threat we face. New finance should also be made available for unavoidable loss and damage.

We also note the new Australian climate minister Chris Bowen has announced a review of Australia's carbon offset scheme to ensure its integrity. We underscore that any carbon offset scheme must result in real emission reductions, and should not be a substitute for reducing emissions at source. The first step toward meaningful collaboration between Australia and the Pacific would be tangible Australian support for Pacific priorities at COP27 in Egypt in November - including real progress on critical issues such as mitigation, adaptation, climate finance, and loss and damage. We also expect to see material support support for Pacific regional initiatives, such as the Pacific Resilience Facility and the Pacific Islands Climate Change Insurance Facility (PICCIF).

We emphasise that working together in driving global climate action is key to Pacific security. Through determined collective diplomacy, members of the Pacific Islands Forum can shape the global climate discussion we need. We must also press the world's largest polluters – including China and the United States – to make deeper and more consequent cuts to emissions this decade. As this report reminds us, we cannot afford to do anything less. We are in a fight for survival. Our security and our future are at stake. We reiterate the need for **urgent** actions to deal with the climate emergency.

Hina C. Jeine

Hilde Heine, former President of the Republic of the Marshall Islands

Thomas "Tommy" Remengesau, former President of Palau

Anto Tung

Anote Tong, former President of the Republic of Kiribati

Encle Stymmy an

**Enele Sopoaga**, former Prime Minister of Tuvalu

Dame Meg Taylor, former Secretary General of the Pacific Island Forum Secretariat

Roht A Underward

**Robert Underwood,** former Member of U.S. Congress & President of the University of Guam

talistavola

**Kaliopate Tavola**, Ambassador & former Minister, Republic of Fiji

Konai Helu Thaman, former Professor, The University of the South Pacific

The Pacific Elders' Voice is an independent group of Pacific people who have been leaders in the region. Our purpose is to provide guidance and advice that will strengthen Pacific resilience to current and future environmental, security, and human rights threats. We provide constructive policy inputs for current and future challenges and opportunities facing the Pacific.



### 1. Introduction

This year's Pacific Island Forum leaders meeting – the most important annual political meeting for the Pacific region – will be dominated by discussion about security. In recent years growing strategic rivalry between the United States and China has resulted in the Pacific becoming an increasingly contested region. Pacific island states have traditionally been aligned with the West, but this year China has signed a security deal with the Solomon Islands and is seeking a region-wide security arrangement with Pacific island countries. Pacific leaders are adamant that climate change is their greatest security threat. Rising sea levels threaten the very survival of some Pacific nations. Pacific leaders want to see major emitters – including the US, China and Australia – taking action to address the climate crisis.

As chair of the Pacific Islands Forum, Fiji Prime Minister Voreqe Bainimarama, explains: "geopolitical point-scoring means little to anyone whose community is slipping beneath the rising seas". Pacific leaders argue their security will be determined by the actions of major emitters, who need to set stronger emissions reduction targets and back them with policies to drive a rapid transition away from fossil fuels.

This report provides an update on the science regarding climate impacts in the Pacific. It explains that the impacts of a warming planet are already severe for island nations, and without urgent action, will be catastrophic in future. This report clarifies the actions required from major emitters to ensure survival of all Pacific island states.

The window to avoid catastrophic impacts is closing fast. Global emissions must be halved by 2030, which means that wealthy nations like Australia should be planning for deeper emissions cuts this decade.

**Figure 1 (previous page)**: Pacific civil society networks, including the Pacific Climate Warriors and Pacific Islands Climate Action Network, are backing a campaign led by Vanuatu to have the International Court of Justice (ICJ) – the world's highest court – issue an Advisory Opinion on the climate crisis. See Box 5 on page 32.

Australia's newly elected government has pledged a more ambitious 2030 emissions reduction target that brings Australia closer to the international consensus. While Australia will cut emissions by 43%, most other developed countries have promised to cut emissions by at least half by 2030. Australia's new government has also pledged to work with Pacific island countries by cohosting a UN climate summit – potentially as soon as 2024.

To earn the trust of the rest of the region, Australia will need to show Pacific countries that it is serious about climate action. In the past Australia has refused to back island states in global climate negotiations and has even tried to water down climate statements from the Pacific Islands Forum. While Australia's new climate policies have been welcomed by Pacific leaders, more immediate urgent action will be required, including accelerated efforts to move beyond coal and gas, and new financial commitments to help Pacific island countries adapt to climate impacts and address unavoidable loss and damage.

Finally, the countries of the Pacific Islands Forum can secure the future of the Pacific if they work together to drive global efforts to cut emissions this decade. This is central to the long-term security of Pacific nations. Working together to tackle the climate crisis would help reassure Pacific leaders that Australia is serious about tackling the region's key security threat, and would contribute to fulfiling Australia's intention to remain the region's security partner of choice.

### ABOUT THE PACIFIC ISLANDS FORUM

The Pacific Islands Forum (PIF) - organised around an annual meeting between island leaders and their counterparts from Australia and New Zealand - is the Pacific's premier political forum. It is the key decision-making body for regional cooperation and collective diplomacy. The Pacific Islands Forum was established in 1971, with its first meeting held in Wellington, New Zealand. The annual meeting brings together Pacific leaders to discuss a wide range of shared challenges, such as security, trade, and economic development. The Forum has 18 members, including Australia, New Zealand, fourteen independent Pacific island states and two French territories (New Caledonia and French Polynesia).

The annual Forum leaders meeting is usually followed by a Post-Forum Dialogue, which involves partner countries including the United States, China, India, Japan, The European Union, the United Kingdom and France.

This year however, the Dialogue Partners' meeting will be held at a later date. This is the first in-person Pacific Islands Forum in three years, and leaders want space – without major powers jostling for influence – to develop shared approaches to a rapidly evolving geostrategic environment.

To earn the trust of the rest of the region, Australia will need to show Pacific countries that it is serious about climate action.

### WHAT IS ON THE AGENDA FOR THE 2022 PACIFIC ISLANDS FORUM?

Discussions at this year's Pacific Islands Forum will be focussed on regional security and climate change. Leaders will discuss growing geostrategic competition in the region, including a new security deal agreed between Solomon Islands and China in April 2022.

A centrepiece for this year's meeting will be the launch of a new '2050 Strategy for the Blue Pacific', which is intended to set out a vision for deepening regional cooperation over coming decades (see further details below).

Pacific leaders are also expected to discuss the architecture of the Pacific Islands Forum itself. Over the past year, the future of the Forum has been clouded by an internal rift as Micronesian countries threatened to withdraw from the regional body due to concerns about regional leadership. Leaders will be asked to endorse an agreement that has been negotiated with Micronesian countries to avoid splitting the Forum. The deal would see the Forum secretary general position rotated between Pacific sub-regions, and the establishment of a new Pacific Islands Forum sub-regional office.

Finally, leaders are expected to discuss Vanuatu's push to get the International Court of Justice to issue an advisory opinion on climate change (see Box 5, page 32).

# LOCATING THE BLUE PACIFIC

The Blue Pacific is a vast maritime region, home to large ocean states who share unique cultural connections to the sea. Pacific nations have sovereign rights across much of the Pacific Ocean through Exclusive Economic Zones established under the UN Law of the Sea. Members of the Pacific Islands Forum have agreed to work together as one Blue Pacific region. At the 2022 Pacific Islands Forum, to be held in Fiji on July 11-14, they will launch a new 2050 Strategy for the Blue Pacific.



### WHAT IS THE BLUE PACIFIC?

Pacific island leaders have developed a shared narrative for their maritime region, which they have labelled 'the Blue Pacific'. Island countries are often portrayed as small, isolated and vulnerable. However - drawing on cultural and economic connections with the ocean - Pacific countries have asserted a contemporary identity as 'large ocean states' with sovereign rights across a large part of the Earth. Drawing on pre-colonial relationships across the ocean, Pacific leaders have committed to working together as a 'maritime continent'. Through the Pacific Islands Forum, island leaders have endorsed "a long-term foreign policy commitment to act as one Blue Continent" (Pacific Islands Forum 2017).

The 'Blue Pacific' is a vast maritime region comprising 14 independent island nation states, Australia, New Zealand, and a number of non-independent territories. As one of the most culturally and linguistically diverse regions on earth, the Blue Pacific is home to hundreds of societies, spread across thousands of islands, in a vast expanse of ocean (see Figure 2).

### WHAT IS THE 2050 STRATEGY FOR THE BLUE PACIFIC?

The launch of the 2050 Strategy for the Blue Pacific is a key focus for this year's Pacific Islands Forum. The new Strategy sets out shared, long-term, approaches to critical challenges such as climate change, security and sustainable development. The 2050 Strategy has been developed through extensive, region-wide, consultations with Pacific governments, civil society, private sector groups, academia and technical organisations. The development of the 2050 Strategy has been led by the governments of Fiji and Vanuatu.

The 'Blue Pacific' is a vast maritime region comprised of 'large ocean states', Australia and New Zealand. 2.

## A hot topic: Security in the Blue Pacific

Regional security will be a key focus for the 2022 Pacific Islands Forum. This is because the Pacific Ocean has become a region of geostrategic competition for the first time in decades. A more powerful China is investing, for the first time, in an ocean-going navy and is seeking new security arrangements with Pacific island countries. In response, the United States and its allies in the region - particularly Australia, New Zealand and Japan – have also stepped up their engagement with Pacific countries. Australian security officials are especially concerned that Beijing could use infrastructure loans to secure a Chinese naval base in the region. Australia has sought to cement itself as a security partner of choice and to integrate Pacific nations more closely into Australia's economic and security institutions.

#### **RECENT DEVELOPMENTS**

The Solomon Islands signed a security deal with China in April 2022. The text of the deal is confidential, but if it is anything like a draft that was leaked online it contains ambiguous provisions that allow for Chinese military presence and for ship resupply (ABC 2022a). The deal has changed the dynamic of a region that has been traditionally aligned with the West. Australia's new foreign minister Penny Wong has described it as: "the biggest foreign policy failure in the Pacific since the Second World War" (The Guardian 2022a). Solomon Islands leaders have said they have no intention of allowing a Chinese base or an ongoing security presence in the country. Yet, concerns remain about the deal, and it is likely to be a point of discussion for leaders at the Pacific Islands Forum.

Amidst the geostrategic competition between superpowers, Pacific island countries remain adamant that climate change is their number one security concern. Island leaders argue growing military tension between the US and China "does little to address the real threat to the region caused by climate change" (Pacific Elders Voice 2022a; 2022b). In June this year, Fiji's defence minister Inia Seruiratu told a regional security dialogue: "machine guns, fighter jets, grey ships and green battalions are not our primary security concern. Waves are crashing at our doorsteps, winds are battering our homes, we are being assaulted by this enemy from many angles" (PINA 2022).

In 2019, Fiji's military commander Rear Admiral Viliame Naupoto told the same security dialogue: "I believe there are three major powers in competition in our region... there is the United States... there is China [and] the third competitor is climate change. Of the three, climate change is winning and climate change exerts the most influence on countries in our part of the world" (Morgan 2021).

At the 2018 Pacific Islands Forum, leaders issued a regional security declaration reaffirming that "climate change remains the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific" (Pacific Islands Forum 2018).

As far back as 2004, Tuvalu's then ambassador to the United Nations, Enele Sopoaga, called for climate change to be added to the agenda of the UN Security Council (UN 2004). In 2007, during the first UN Security Council debate on climate change, Pacific Islands Forum countries argued the impacts of a warming planet for island nations were "no less serious than those faced by nations and peoples threatened by guns and bombs" (UN 2007). In 2009, Pacific island countries sponsored the first UN General Assembly resolution on climate and security (Manoa 2021). Today, Nauru co-chairs a UN grouping of countries - including major powers like the US and the UK - concerned with the threat climate change poses to peace and security.

In May this year, China's foreign minister Wang Yi toured the Pacific hoping to secure a sweeping new regional security treaty with island governments. The proposal was politely rejected, at least for now. When he met with Pacific counterparts in Suva, minister Wang Yi was told there was no consensus and the proposal would need further discussion. Samoan prime minister Fiamē Naomi Mata'afa also suggested that regional security arrangements should be discussed first by leaders of the Pacific Islands Forum - as the key body for regional cooperation in the Pacific. This would likely see the proposed deal shelved permanently, as a number of Forum members - including Australia, New Zealand and Pacific island nations that recognise Taiwan instead of China - would oppose the security pact.

While he toured the region, minister Wang Yi was told by island leaders they wanted to see China, the world's largest emitter, do more to tackle climate change. Fijian Prime Minister Vorege Bainimarama, who is also chair of the Pacific Islands Forum, explained: "geopolitical point-scoring means little to anyone whose community is slipping beneath the rising seas" (The Guardian 2022b). In a pointed message, he said the Pacific "needs genuine partners, not superpowers that are superfocussed on power" (ABC 2022b). Secretary General of the Pacific Islands Forum, Henry Puna, also explained to minister Wang Yi directly that climate change is the key security threat facing island nations and called on China to do more to cut emissions faster (Pacific Islands Forum 2022)

Pacific island countries remain adamant that climate change is their number one security concern.



Figure 3: Penny Wong visited the Pacific Islands Forum in her first week as Foreign Minister, announcing Australia would stand "shoulder to shoulder with our Pacific family" to address the climate crisis.

Many Pacific island countries see China as a key development partner. However a growing number of Australians are concerned about China's influence in the region. Recent polling from the Lowy Institute found 88% of Australians are 'very' or 'somewhat' concerned about China opening a military base in the Pacific, and 82% of Australians favour providing aid to prevent China from increasing its influence in the Pacific (Lowy 2022). However Australians are also concerned about the security implications of climate change: 62% see climate change as a "critical threat", and 75% are in favour of providing aid to Pacific island states for climate change action.

Australia's new foreign minister Penny Wong says Pacific security should be dealt with by countries of the Pacific Islands Forum. In June she told media: "Pacific security should be provided by the Pacific family... we do have concerns about the security of the Pacific being engaged in by nations outside of that Pacific family" – clearly a reference to proposed security arrangements with China (Wong 2022a). Australia is the world's third largest fossil fuel exporter – after Russia and Saudi Arabia – and until recently has had some of the weakest emissions reduction targets in the developed world.

In a speech to the Pacific Islands Forum Secretariat in May, Penny Wong acknowledged that "under past governments – Australia has neglected its responsibility to act on climate change... ignoring the calls of our Pacific family to act" (Sheridan 2022). But she told island leaders the new Australian government has heard the Pacific and will stand "shoulder to shoulder with our Pacific family" to address the climate crisis.

Australia's new prime minister Anthony Albanese says Australia "will act in recognition that climate change is the main economic and security challenge for the island countries of the Pacific". Just days after coming to office in May, Mr Albanese said Australia would "take ambitious action on climate change and increase our support to partners in the region as they work to address it, including with new finance" (ABC 2022c). Australia has struggled to convince island countries it is serious about security in the region, while it has been slow to take action on the Pacific's key security threat: climate change.

The new Australian government's strengthened commitments have been welcomed by island leaders. Samoa's prime minister Fiamē Naomi Mata'afa explained: "With the new Australian government, the policy shift brings them closer into alignment with the Pacific's advocacy for climate change ... We feel that this will strengthen the Pacific's position on climate change" (AFR 2022).

The new Australian government has also said it wants to co-host a UN climate summit with Pacific countries. This will no doubt be discussed when leaders meet at the Pacific Islands Forum in Suva. Co-hosting a UN climate summit would be a big deal. The annual Conference of Parties to the United Nations Framework Convention on Climate Change is a huge gathering of thousands of

diplomats and civil society representatives from the world over. Hosting a COP in partnership with Pacific nations - potentially as soon as COP29 in two years' time - would send a message to the world that Australia is working with Pacific countries to drive global climate action. To work together successfully however, Australia will need to do more to support Pacific priorities in the global climate negotiations, including with regard to climate finance, addressing loss and damage, and accelerating the shift away from fossil fuels (see Box 6). If undertaken in a true spirit of collaboration, and meaningful partnership, co-hosting a UN climate summit would help reassure Pacific states that Australia is serious about tackling the region's key security threat, and would strengthen Australia's place as the region's security partner of choice.

If undertaken in a true spirit of collaboration, hosting a COP in partnership with the Pacific would reassure the region that Australia is serious about tackling the climate crisis.

### THE PACIFIC ISLANDS ARE GLOBAL LEADERS FOR CLIMATE ACTION

Pacific islands are at the frontline of climate change, but the Pacific is not merely a poster-child for the impacts of a warming planet. Through determined diplomacy, Pacific island states have shaped global efforts to tackle the climate crisis (Carter 2020).

Pacific leaders' agitation for climate action dates back to the late 1980s, when a scientific consensus on the problem emerged. Island leaders quickly realised the serious implications of global warming and sea-level rise. Some Pacific nations – such as Kiribati, Tuvalu and the Marshall Islands – are predominantly low-lying atolls, rising just metres above the waves. At the 1991 Pacific Islands Forum, leaders declared "the cultural, economic and physical survival of Pacific nations is at great risk" (Pacific Islands Forum 1991). Pacific countries developed collective strategies to press the international community to take action. At the UN climate talks they formed a diplomatic alliance with island nations in the Caribbean and the Indian Ocean, which swelled to more than 40 countries. The first draft of the 1997 Kyoto Protocol – which required wealthy nations to reduce greenhouse gas emissions – was put forward by Nauru on behalf of this Alliance of Small Island States (Moses 2013).

Pacific island countries were also crucial in negotiating a successor to the Kyoto Protocol in Paris in 2015. The Marshall Islands played

Figure 4: Tony de Brum walks into the plenary in Paris, with US Climate Envoy Todd Stern, as part of the High Ambition Coalition that helped bring about a strong Paris Agreement.



an important role, by stitching together a coalition of countries that spanned traditional negotiating blocs in the UN climate talks. The 'High Ambition Coalition' formed and led by then Marshall Islands foreign minister, the late Tony de Brum, grew to more than 100 countries – including the European Union and the United States. It was this coalition that secured the terms of the *Paris Agreement* (Morgan 2021).

Tuvalu also played a key role in Paris. Then Tuvalu prime minister Enele Sopoaga was a key architect of the *Paris Agreement*. As chair of the Alliance of Small Island States (AOSIS) he negotiated directly with the United States' Secretary of State John Kerry to ensure the *Paris Agreement* recognised the need to address loss and damage associated with the adverse impacts of climate change (Ferguson 2021).

Pacific leadership on climate has not gone unnoticed. Then-US president Barack Obama told Pacific leaders in Hawaii in 2016: "we could not have gotten a *Paris Agreement* without the incredible efforts and hard work of island nations" (White House 2016).

Australia tends to assume it is the regional leader in the Pacific. On the issue of climate change, however, the tables are turned. While Pacific island countries have been global leaders on climate action, Australia has – until very recently – been isolated from the international consensus.

Pacific leadership has been acknowledged by Australia's new foreign minister Penny Wong. In May 2022, during her first week as foreign minister, Wong gave a speech at the Pacific Islands Forum Secretariat in Suva, where she explained: "Nothing is more central to the security and economies of the Pacific. I understand that climate change is not an abstract threat, but an existential one... You've been saying this for a long time. Pacific leaders were saying this to me when I was Climate Minister over a decade ago. You've been crystal clear and consistent. You've led the global debate" (Wong 2022b).

Through determined diplomacy, Pacific island states have shaped global efforts to tackle the climate crisis. Figure 5: Comparing greenhouse gas emissions among Pacific Island Forum members.



Data: World Resources Institute, climatewatchdata.org CAIT, all greenhouse gases, excluding LULUCF.

3.

## A question of survival: The latest science and its implications for the Pacific

The impacts of climate change in the Pacific are already severe. Pacific island countries and territories are being increasingly affected by rising temperatures, more intense tropical cyclones, sea level rise and storm surges, droughts and changing rainfall patterns, coral bleaching, and a rise in invasive species (IPCC 2022a). These impacts reflect the diversity of the region and are influenced by factors such as geographic location and the type of island, with the region consisting variously of low-lying atolls, mountainous volcanic islands and raised limestone islands.

**Figure 6**: Kalisi holds her son Tuvosa, 3, in the remnants of her house in Ra province, Fiji, after category 5 Tropical Cyclone Winston – the strongest tropical cyclone recorded in the Southern Hemisphere – struck in February 2016. A warming ocean provides more energy for tropical cyclones.





Pacific island countries have been struck by several severe category 5 cyclones in the past 10 years, which have caused loss of life and destroyed infrastructure, settlements, crops and livestock (see Box 1).

### BOX 1: EXAMPLES OF SEVERE CATEGORY 5 TROPICAL CYCLONES IMPACTING PACIFIC ISLAND COUNTRIES IN THE PAST DECADE

 Tropical Cyclone Pam (2015) – the second strongest cyclone recorded in the South Pacific Ocean in terms of sustained winds – caused US\$56m in damages to the agriculture sector in Vanuatu, equivalent to more than 64 percent of Gross Domestic Product (GDP) (IPCC 2022a).

Damaging waves from Tropical Cyclone Pam caused widespread flooding as far away as Tuvalu, Kiribati and Wallis and Futuna, destroying infrastructure and sources of food and water. The economic impacts from Tropical Cyclone Pam in Tuvalu were equal to 25% of Tuvalu's projected GDP in 2015 (Katea 2016). In Kiribati, large waves washed through a maternity ward on the capital island of South Tarawa, leaving it in disarray.

 Tropical Cyclone Winston (2016) was amongst the strongest cyclones to make landfall globally, and the strongest recorded in the southern hemisphere. It had sustained wind speeds of 280 km/hour, with wind gusts exceeding 300 km/hour. Damages from Tropical Cyclone Winston in Fiji exceeded 20 percent of GDP (IPCC 2022a).

- > Tropical Cyclone Gita (2018) was the most intense tropical cyclone to impact Tonga since reliable records began. Tropical Cyclone Gita affected around 80 percent of Tonga's population, destroying houses and infrastructure – including the Tongan Parliament building – and resulted in damages equivalent to around 38 percent of GDP (ADB 2018; Government of Tonga 2018).
- > Tropical Cyclone Harold (2020) ripped through Vanuatu, Fiji, the Solomon Islands and Tonga. Later the same year Tropical Cyclone Yasa destroyed crops, houses, infrastructure and livelihoods in Fiji. Losses were estimated at around US\$250m – around six percent of GDP (RNZ 2021).



**Figure 7**: Tonga's Parliament Building, which was more than 100 years old, was flattened by Tropical Cyclone Gita, which hit Tonga on 12 February 2018 as a category 5 system. Climate change is contributing to more destructive tropical cyclones in the Pacific.

Research suggests that there has been an increase in the number of intense tropical cyclones in the South Pacific region (Walsh et al. 2016; Kuleshov et al. 2020; CSIRO, BoM & SPREP 2015; Holland & Bruyère 2014). The future influence of climate change on tropical cyclones in the Pacific will vary across the region, but projections broadly indicate that the intensity will increase in terms of both winds speeds and rainfall, and that the frequency will either decline slightly or remain unchanged (CSIRO, BoM & SPREP 2015). Other aspects of cyclone behaviour may change including the length of the cyclone season and the spatial range. Overall, heavier rainfall, stronger wind speeds and storm surges riding on higher seas will result in more damaging impacts from tropical cyclones that make landfall.

Climate change is increasing the destructive power of tropical cyclones.

### SEA LEVEL RISE AND

Sea level rise is a huge threat to the Pacific. The global mean sea level rose by around 20 centimetres between 1901 and 2018 (IPCC 2021). The rate of sea level rise has been accelerating since the 1990s, with almost half (8cm) of the rise in global average sea levels occurring since 1993 (IPCC 2021). The rate of sea level rise varies depending on the region. In the Pacific there is also considerable shortterm variability in the rate of sea level rise, influenced by drivers including the Pacific Decadal Oscillation (PDO) and the El Niño Southern Oscillation (ENSO).

Sea level rise poses the most acute threat to the low-lying atoll countries in the Pacific – Kiribati, Tuvalu and the Marshall Islands – as almost all their islands have their highest point at or below five meters above sea level.

Sea level rise also poses a major threat to low-lying coastal areas of larger and more elevated island countries. Around half of the population of the Pacific region is located within 10km of the coast, and around half of the infrastructure in the Pacific region is located within 500 meters of the coastline (IPCC 2022a).

Sea level rise in the Pacific is contributing to more frequent and damaging storm surges and coastal flooding. These extreme sea level events are generally caused by the compound effects of tropical cyclones or tropical depressions, high tides or high water levels associated with the ENSO – all against the backdrop of higher sea levels due to climate change.

#### BOX 2: EXAMPLES OF EXTREME SEA LEVEL EVENTS OVER THE LAST DECADE CAUSING SEVERE FLOODING

- In 2014, a combination of high tides and large swells flooded low-lying atolls in the Marshall Islands, displacing an estimated 1,000 people and prompting the President to declare a State of Emergency (ABC 2014).
- In 2021, a combination of high tides and La Niña raised sea levels around 15 to 20 cm in parts of the western tropical Pacific. This is the same amount of additional sea level rise projected to occur by around 2050 regardless how much global emissions are reduced (The Conversation 2021). The event caused widespread damage to buildings and food crops in the Federated States of Micronesia,

Marshall Islands, Papua New Guinea and Solomon Islands – illustrating what can be expected to occur on a more or less permanent basis by 2050.

 In June 2022 a low pressure system to the south of Fiji coincided with high tides causing extensive flooding and damaging homes. Fiji has been one of the first nations to develop a national framework to guide the relocation of communities that are vulnerable to sea level rise. The villages of Korolevu and Vunidogoloa

 on the island of Vanua Levu – have already
 been relocated under this plan (Government of Fiji 2018).

Figure 8: Wave spilling over a seawall on South Tarawa, Kiribati. Sea level rise is contributing to more frequent and severe coastal flooding events in the Pacific.



One of the most significant impacts of sea level rise on low-lying atolls and coastal areas is on freshwater resources. Groundwater is the main source of freshwater for the people living in Kiribati, Tuvalu and the Marshall Islands and on some of the outer islands of countries such as Fiji and Vanuatu, as these places have no rivers and limited water catchments. Sea level rise threatens this water supply due to salinity intrusion from below or inundation from above. Salinisation of groundwater and increasing soil salinity also have significant implications for food production.

Studies have shown that wells are already becoming more saline. For example, in the Chuuk State of the Federated States of Micronesia, well water has increased in salinity since the 1980s (Shigetani 2009). The salinity of wells in low-lying coastal areas of Tonga has also increased due to saltwater intrusion (Government of Tonga 2012). In Kiribati, the thickness of the freshwater lens could shrink by as much as 38 percent by 2050 due to a combination of rainfall declines and sea level rise (The World Bank 2000). This would have disastrous consequences in a country where sufficient freshwater supply is already a challenge.

A 5-10 cm additional sea level rise – expected for around 2030–2050 – will double coastal flooding frequency in much of the tropical Pacific, while tropical cyclones will remain the main driver of (rarer) flooding in the southern tropical Pacific. Under a high emissions scenario, some Pacific atoll islands would likely experience wave-driven flooding over their entire surface every year from the 2060s (IPCC 2022a).

#### CORAL BLEACHING AND DEGRADATION OF MARINE ECOSYSTEMS

Pacific island countries are highly vulnerable to the impacts of climate change on ocean ecosystems, due to their close proximity and connection with the ocean and their reliance on it for resources. Changes in ocean temperature, pH, dissolved oxygen, sea level rise and storms and waves are already affecting marine ecosystems and leading to the widespread loss of marine habitats such as coral reefs, seagrass beds and mangroves – and subsequent declines in important fish species that depend on these habitats and are crucial for food security of island communities.

Over the past decade there have been several episodes of severe coral bleaching, and a marked decline in the abundance of corals in many Pacific island countries. Coral bleaching during the 2015-16 El Niño was the most damaging on record worldwide, causing mass bleaching of giant clams and corals and loss of habitat for fish (Dutra et al. 2018; Johnson et al. 2018). High sea surface temperatures associated with this El Niño event resulted in mass fish mortality on the Coral Coast of Fiji and in Vanuatu, presumably due to high water temperatures and reduced oxygen levels (Johnson et al. 2018).

Climate change is also projected to alter the distribution of fish stocks in the Pacific, with potentially serious consequences for economic development and food security for countries who derive a large proportion of their national income and government revenue from fishing license fees.

Sea level rise is leading to loss of land and contamination of scarce freshwater resources.



Figure 9: Funafuti, Tuvalu. Sea level rise poses enormous challenges for the atoll nations of Tuvalu, Kiribati and the Marshall Islands.

Countries reliant on fishing revenue include the Cook Islands, the Federated States of Micronesia, Kiribati, the Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands, Tokelau and Tuvalu. Research has shown that in the waters of these ten countries, three tuna species could decline by an average of 13 percent by 2050 under a high emissions scenario. This would result in an annual loss of fishing access fees of an average of US\$90 million, and an average reduction in government revenue of 13 percent (Bell et al. 2021). Reducing emissions in line with the Paris Agreement would help to sustain tuna populations within the waters of Pacific island countries, including sustaining the many benefits that tuna provides (Bell et al. 2021).

At a global temperature rise of 1.5°C, reefbuilding corals are projected to decline by 70 to 90 percent, with loss of 99 percent of corals under warming of 2°C or more (Schleussner et al. 2016). The escalating impacts of climate change upon ocean ecosystems are a grave threat to livelihoods and food security in Pacific island countries.

### MORE EXTREME DROUGHTS AND MORE INTENSE RAIN

Rainfall in the Pacific region is highly variable, influenced by climate drivers such as the El Niño Southern Oscillation (ENSO) the main driver of year-to-year variability and the Interdecadal Pacific Oscillation (IPO) and Pacific Decadal Oscillation (PDO), which are the main drivers of multi decadal rainfall variability. The different phases of ENSO can bring droughts and floods to different parts of the Pacific. During El Niño, countries in the central Pacific such as Kiribati. Nauru and Tuvalu experience above normal rainfall, increasing the risk of flooding, whilst countries in the south-western Pacific experience below normal rainfall, increasing the risk of drought. This includes the countries of Fiji, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, the southern Cook Islands, Tonga and Vanuatu. During La Niña, the opposite occurs. Climate change will exacerbate the rainfall variations that ENSO already brings, with significant impacts for Pacific communities.

Both droughts and flooding events have had significant impacts in Pacific island countries. Recent droughts - most notably during the 2015-16 El Niño event – caused widespread loss of crops, food shortages and famine in countries such as Vanuatu and Papua New Guinea. In Vanuatu, the drought followed closely on the heels of Tropical Cyclone Pam, which destroyed vegetation across Vanuatu. Lack of foliage worsened the impacts of the drought on soils and crops (Iese et al. 2020). Almost all yam and taro crops across Vanuatu died, forcing around 30 percent of the population to rely on food aid (Savage et al. 2021). Food shortages were particularly severe in the southern part of Vanuatu, especially Tanna Island (Iese et al. 2020).

In Papua New Guinea, the same El Niño event caused one of the worst droughts in recent history, causing food shortages for almost half a million people due to destroyed crops. As a result of the water shortages many schools, businesses and health clinics were also forced to close (Iese et al. 2020).

Droughts pose a particularly large threat to the low-lying atoll countries that rely on fragile freshwater lenses as the main source of potable water. In June 2022, the Government of Kiribati declared a nationwide State of Disaster in response to a prolonged drought causing high salinity levels in water sources in key monitoring wells, and resulting in lack of sufficient drinking water, particularly on the capital island of South Tarawa.

Climate change is projected to increase average rainfall over the equatorial Pacific, as well as increasing the frequency and intensity of extreme rainfall events (CSIRO, BoM & SPREP 2015). Overall, this implies a decreased risk of drought in many countries (Iese et al. 2021). However, recent research also shows that the variability of ENSO is increasing in response to climate change, and that both El Niño and La Niña events are expected to increase in frequency and intensity as a result of climate change (Cai et al. 2021). This would enhance the variations that ENSO brings, simultaneously bringing more severe and frequent droughts and more severe and frequent floods. In particular, research suggests that the frequency of extreme El Niño events may almost double from one every 20 years during the 20<sup>th</sup> century, to one every 11 years under warming of 1.5°C (Cai et al. 2021; Wang et al. 2017).

### **BOX 3: CLIMATE CHANGE IMPACTS ON HUMAN SECURITY**

Climate change has repeatedly been described by Pacific island countries as the key security threat to the region. The impacts that are being experienced now in Pacific island countries and territories affect many aspects of human security. These include:

- > Food and water security: Climate change is already affecting many aspects of food security in the region, and this will continue to worsen. Severe droughts, intense cyclones, devastating floods, and the creeping impacts of loss of land, inundation and salinisation of freshwater sources from sea level rise will reduce crop yields and total production of food, increasing risks of water and food insecurity (Iese et al. 2016). Climate change will also reduce habitats for important fish species, which are relied upon for food security. More frequent disasters will affect food distribution systems, and economic damages from extreme weather and climate change will affect the ability to purchase and import foods from the household to the national level
- > Economic security: Climate change threatens the economic security of Pacific island countries due to more frequent and intense extreme weather events, shortening recovery intervals between events. At the same time, climate change will affect the main sources of income of many Pacific island countries, including the productivity of agriculture and fisheries, and the tourism industry.
- > Political security and personal security: Even if global temperatures are limited to 1.5°C, the habitability of many Pacific island countries will be reduced by a number of key converging risks and impacts. These include loss of marine and terrestrial biodiversity and ecosystem services, destruction of infrastructure and settlements, reduced food and water security, degradation of health and wellbeing, and declining economic

security and livelihoods (IPCC 2022a). More frequent and severe inundation events associated with extreme sea levels may make many atolls uninhabitable within a few decades (Storlazzi 2018). Ultimately, this raises a number of questions about political security, including what happens to the statehood of countries that lose their territory? Where do the populations of these countries go?

Community and cultural security: Beyond the impacts to physical aspects of security, climate change can have a profound effect upon a community's culture, traditions and identity. If a community is forcibly displaced due to climate change, it may lose a connection to its land and sea that has been built over centuries or millennia, and which is an intractable part of its culture and identity as well as its primary source of food and economic security (Oxfam 2017). Families are more likely to become separated and the social fabric of a community disrupted.

The issue of displacement in the context of climate change is understandably confronting. The first responsibility of major emitters like Australia is to do everything possible to minimise forced displacement by rapidly reducing greenhouse emissions and scaling up support for climate change adaptation and resilience building. If a community ultimately has no choice but to move, it is vital they have access to appropriate support and avenues through which to secure their future.

Health and wellbeing: Pacific island communities face disproportionate risks to their health and wellbeing due to climate change (IPCC 2022a). Climate change will increase the risk of deaths and injuries from extreme weather events including more intense cyclones, extreme downpours, and floods. Health risks persist long after these events have passed, in particular through the increased spread of waterborne diseases.

#### **BOX 3: CONTINUED**

The impacts of climate change, including increases in the frequency and/or severity of extreme weather events, can mean less access to locally grown foods and greater dependence on imported food, increasing rates of malnutrition (FAO 2018). Evidence is also emerging of the mental health impacts of climate change upon people in the Pacific (IPCC 2022a).

The latest science strongly affirms what Pacific island countries and communities have long known: that climate change is the single greatest threat to their future. The myriad impacts – already severe – will increase with every increment of further warming and the options for adapting to these changes will rapidly diminish.

The scale and pace of global emissions reductions this decade will profoundly impact the security of the Blue Pacific. There is an overwhelming scientific imperative for Australia to hasten its transition beyond fossil fuels and, in collaboration with the Pacific, to help catalyse stronger action globally. Every fraction of a degree of avoided warming, and every action in pursuit of limiting warming to 1.5°C, will be measured in fewer losses and a more secure future. The latest science strongly affirms what Pacific island countries and communities have long known: that climate change is the single greatest threat to their future. 4.

## Global action is needed to secure the Blue Pacific

Under the Paris Agreement, countries committed to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above preindustrial levels, recognising that this would significantly reduce the risks and impacts of climate change" (UNFCCC 2015). The inclusion of the 1.5°C goal was the result of many years of staunch advocacy and skilful diplomacy by Pacific island countries and other climate vulnerable nations. This push was strongly vindicated by the Special Report on Global Warming 1.5°C from the Intergovernmental Panel on Climate Change (IPCC 2018), which revealed a striking difference in the impacts associated with 1.5°C and 2°C.

For a reasonable chance of achieving the goals of the *Paris Agreement*, global emissions must be roughly halved by 2030 (IPCC 2018, 2021). The world must reach net zero emissions by around mid-century and significant quantities of greenhouse gas emissions will need to be removed from the atmosphere during the latter part of the century and beyond. Action at this scale and pace is technically achievable, albeit extremely challenging (IPCC 2022b). Success depends on ensuring that emissions are reduced as much as possible during the 2020s (Climate Council 2021a).

For a reasonable chance of achieving the goals of the *Paris Agreement*, global emissions must be roughly halved by 2030. There remains a catastrophic shortfall between current commitments and what's required. Taken together, countries' current 2030 targets would see around a 14% rise in emissions by 2030.

The three years since the last in-person meeting of Pacific Island Forum leaders in 2019 have seen a significant step up in global commitments to climate action. At time of publication, 83 countries representing 74% of global emissions have committed to achieving net zero emissions by around mid-century (WRI 2022).<sup>1</sup> By the time of the UN Climate Change Conference in Glasgow in November 2021 (COP26), almost all developed countries had committed to significantly strengthening their emissions reduction targets for 2030.

COP26 saw a number of further deals reached, including a commitment by more than 100 countries to reduce emissions of methane – a highly potent greenhouse gas – by 30% by 2030.<sup>2</sup>

However, these commitments still fall alarmingly short of the scale and pace of action required to achieve the goals of the *Paris Agreement* and to secure the future of the Pacific. The latest assessment of all countries' 2030 targets shows that when combined they would lead to around a 14% increase in global emissions by 2030 – a catastrophic shortfall on the required halving of emissions by that date (UNFCCC 2021a).<sup>3</sup> Moreover, many countries have not put in place the policies and actions required to achieve their targets and remain off track.

In aggregate, current 2030 targets from around the world have us on a path to around 2.4°C of warming. If all announced net zero commitments and targets under discussion are fully funded and implemented, warming could theoretically be limited to 1.8°C by 2100, with peak warming of 1.9°C. However, there are some questions over the credibility of many of these long-term targets, in that many countries have not set 2030 actions and targets that align with them (Climate Action Tracker 2021).

At COP26 countries reached consensus on the Glasgow Climate Pact, which is designed to rapidly accelerate progress under the *Paris Agreement*. Under this new pact, and in recognition of the large remaining gap between existing commitments and what the science demands, countries are requested to "revisit and strengthen their 2030 targets in their nationally determined contributions as necessary to align with the *Paris Agreement* temperature goal by the end of 2022" (UNFCCC 2021b). This means countries must bring stronger 2030 targets to COP27 in Egypt in November this year.

<sup>1</sup> This tally is according to the World Resource Institute (WRI) and includes only those countries that have communicated a net zero target. It includes China's commitment to net zero emissions by 2070. A tally maintained by the Energy and Climate Intelligence Unit (zerotracker.net) places the number at 134, which includes countries that are currently considering a net zero target.

At time of publication, Australia was yet to join the Global Methane Pledge and a number of other deals reached in Glasgow.

<sup>3</sup> This update of the 'NDC Synthesis Report' was published on 4 November 2021, at which point most countries had submitted their updated Nationally Determined Contributions (NDCs) to the Paris Agreement ahead of COP26.

Events since COP26, including rising global instability and an extraordinary run of extreme weather disasters – including extreme heat across much of the northern hemisphere and devastating floods in India, Bangladesh, China, South Africa and Australia – have brought the perils of fossil fuel dependence into even sharper focus. In launching the latest report from the Intergovernmental Panel on Climate Change, UN Secretary General Antonio Guterres stated that "investing in new fossil fuels infrastructure is moral and economic madness" (UN 2022).

The security of the Pacific, and indeed the entire world, depends on a dramatic step up in the pace of emissions reduction *this decade* and a rapid acceleration in the transition from fossil fuels to renewable energy.



Figure 10: Solar farm under construction in Kidston, Queensland. Protecting the security of the Pacific will require global emissions to be at least halved by 2030. This demands a rapid acceleration in the transition from fossil fuels to renewable energy.

#### **BOX 4: CONSIDERING AUSTRALIA'S NEW CLIMATE POLICIES**

In June 2022, the new Australian Government formally updated Australia's National Determined Contribution to the *Paris Agreement* (NDC), increasing Australia's emissions reduction target for 2030 from 26-28% below 2005 levels to 43%. In an accompanying letter, the Government stated that it aspires to exceed this target (Australian Government 2022). In other words, it should be regarded as a floor, not a ceiling.

The Government has committed to a robust set of policies and actions through which to achieve its new 2030 emissions target, backed by rigorous economic modelling, including a AU\$20bn investment to modernise and extend Australia's energy grid, energy efficiency programs, and substantially increasing the share of renewable energy in Australia (Climate Council 2022a).

While a significant leap forward from the policies and actions of the previous Morrison, Turnbull and Abbott Governments, Australia's current target does not yet align with its responsibility under the *Paris Agreement* to help hold warming to well below 2°C and pursue efforts to limit to 1.5°C, and still leaves Australia trailing most other developed countries (Climate Council 2021b). The Group of 7 (G7), representing the world's largest developed economies, has collectively committed to reduce its emissions by more than 50% below 2005 levels by 2030 (G7 2021).

In 2021, the Climate Council assessed that to play its part in achieving the goals of the *Paris Agreement*, taking into account Australia's status as a wealthy nation with almost unrivalled potential for renewable energy, Australia should reduce its emissions by 75% below 2005 levels by 2030 (Climate Council 2021a). An assessment by Climate Analytics found the target of cutting emissions by 43% by 2030 does not match the goals of the *Paris Agreement*. Australia's new target is consistent with 2°C of warming, but not with the *Paris Agreement* goal of limiting warming to well below 2°C and pursuing efforts to limit warming to 1.5°C (Climate Analytics 2022a).

Warming of 2°C is considered an existential threat to many Pacific island communities. It would also see, among other things, the near total loss of the Great Barrier Reef and other tropical coral reefs.

The Climate Council believes that swift and bold action by the new Australian Government will enable it to quickly get on a path to steep emissions reductions this decade. The greater affordability and reliability of energy that will result from this transition, along with new jobs in clean industries, can create further momentum and public support, enabling Australia to strengthen its target in line with what the science demands and the international community expects.

While Australia is primed to accelerate the transition of its own energy system, the new Australian Government's support for expanding Australia's fossil fuel exports is deeply concerning. Analysis of polling data shows that support for stronger action on climate change was a significant influence on voter behaviour during the 2022 Australian Federal Election (Climate Council 2022b). Nonetheless, a week after winning the election the Albanese Government confirmed its support for developing the vast Scarborough gas field off the coast of Western Australia.

#### **BOX 4: CONTINUED**

Australia is the world's largest exporter of Liquified Natural Gas (LNG) and the new Australian Government currently has no plans for a managed phase out of gas production. The International Energy Agency has shown there is no place for investment in new fossil fuel supply. Its modelled pathway to net zero emissions by 2050 assumes the development of no new oil and gas fields (IEA 2021). Recent analysis by Climate Analytics, based on the 2018 Special Report on 1.5°C from the Intergovernmental Panel on Climate Change, concluded that to meet the goals of the *Paris Agreement*, unabated gas-fired power generation needs to be effectively phased out by 2045 in all regions of the world (Climate Analytics 2022b).

Pacific island countries have, for many years, drawn attention to Australia's coal exports. Attention is now shifting to Australia's gas industry. The latest science shows that developing new gas fields and coal mines is inconsistent with securing the future of the Pacific. Existing and under-construction oil and gas fields and coal mines are already sufficient to warm the world beyond 1.5°C (Trout 2022). The Australian government funds programs in the Pacific that are intended to store carbon, including by protecting forests and coastal ecosystems. 'Blue Carbon' projects for example focus on the protection of seagrasses and mangroves. However these projects cannot substitute the more important reduction of emissions at the source by reducing the use of fossil fuels. Australia has also proposed an Indo-Pacific Carbon Offset Scheme (IPCOS) that could develop a regional market for carbon offsets, and has signed early agreements with Fiji and Papua New Guinea to participate. However, questions have been raised about how much Australia's own domestic carbon offset scheme contributes to real or new emissions cuts, and the new Australian government has announced a review of its own scheme (Murphy and Morton 2022). Carbon offset markets are also no substitute for real, measurable, emissions reduction at the source.

The new Australian Government is yet to make a new commitment to international climate finance – support to developing countries with responding to climate change – or take a clear position on the provision of additional financial support to address loss and damage from climate change. These issues are explored in detail in the next chapter of this report.



**Figure 11**: A liquified natural gas (LNG) tanker departing Darwin for Japan. While taking many steps to accelerate the transition of Australia's own energy system, the new Australian Government continues to support Australia's enormous fossil fuel export industry. This includes support for developing the vast Scarborough gas field off the coast of Western Australia.

5.

## New finance for addressing climate impacts and driving global action

Global cooperation on climate change depends on the world's wealthier countries providing sufficient support to developing countries with building clean economies, adapting to the impacts of climate change, and overcoming loss and damage. Advanced economies like Australia have both the economic capability to assist and a clear responsibility to do so, having accumulated considerable wealth through fossil fuels and carrying the majority of historic responsibility for climate change.

Progress on climate finance – a cornerstone of the *Paris Agreement* – has been a consistent priority of Pacific island countries. Pacific leaders want to ensure funds are accessible to the most vulnerable countries and communities of the region.

Australia's total annual contribution of climate finance saw little increase through the 2010s, remaining at around AU\$200m a year, including a commitment made in Paris in 2015 to provide AU\$1bn over five years. This was increased for the 2021-2025 period, initially to AU\$1.5bn (or an average of AU\$300m a year) including \$500m specifically for the Pacific (Climate Council 2021b). The commitment was then further increased in Glasgow to AU\$2bn (or an average of \$400m a year) including \$700m specifically for the Pacific (DFAT). This record on climate finance should be regarded as mixed. On the positive side, Australia has focussed a significant share of its funding towards assisting Pacific island countries and communities with adapting to worsening extreme weather and other impacts of climate change. All support has, appropriately, been in the form of grants rather than loans (Climate Council 2021b). On the other hand, Australia's overall contributions have fallen well short of what can be considered a reasonable share from Australia towards global climate finance goals (Oxfam Australia et al. 2021).

For the most part Australia's contributions have been taken from an already diminished aid budget rather than constituting new and additional support, beyond existing commitments of development assistance (Oxfam Australia et al. 2021). Australia's credibility also took a hit through the Morrison Government's decision to withdraw from the Green Climate Fund – the largest dedicated climate fund and key element of the global climate finance system. Australia had played important leadership roles with the Green Climate Fund up until that point, in particular working to ensure it was better equipped to meet the needs of the Pacific (Climate Council 2021b).

A scaled-up Australian commitment to international climate finance would go a long way to deepening trust and cooperation with the Pacific on climate change and help catalyse stronger action globally. It should be accompanied by re-engagement with the Green Climate Fund, and by Australia supporting the region's longstanding finance-related priorities in negotiations under the UN Framework Convention on Climate Change and *Paris Agreement*, including finance to address loss and damage from climate change. Such moves should be regarded as vital investments in the security of our region.

A scaled-up commitment to international climate change will deepen cooperation with the Pacific and catalyse stronger action globally.
### As a first step, Australia can heed repeated calls from the Pacific to resume contributions to the Green Climate Fund.

### SUPPORTING VULNERABLE COMMUNITIES IN OUR REGION

Australia can take immediate steps to increase support to vulnerable communities throughout the Pacific, in line with clearly established priorities of Pacific island countries and communities. As a first step, Australia can heed repeated calls to resume contributions to the Green Climate Fund - an important source of support for both resilience building and renewable energy projects in the region (AP4D 2022). Reengagement with the Green Climate Fund will enable Australia to resume its efforts to ensure the Green Climate Fund delivers for the Pacific, recognizing the continued challenges that small and under-resourced governments and institutions face in accessing much needed support.

Australia should ensure its bilateral support for climate action in Pacific island countries is driven by local needs and priorities, focusses on the most vulnerable countries and communities, and promotes gender justice, human rights and social inclusion.

While scaled-up support for climate change adaptation and resilience building is essential, decades of global failure to move beyond fossil fuels and reduce global emissions in line with scientific warnings mean that many communities in the Pacific are already facing permanent loss and damage due to climate change. Pacific island countries have been at the leading edge of international advocacy for stronger action to address loss and damage, including the creation of Loss and Damage Finance Facility under the United Nations Framework Convention on Climate Change, which would help pay for loss and damage caused by climate change. Being an effective ally to the Pacific on climate action and justice will require Australia to support the development of a Loss and Damage Finance Facility.

> Being an effective ally to the Pacific on climate action and justice will require Australia to support the development of a Loss and Damage Finance Facility.

### **DRIVING GLOBAL ACTION**

Developed countries agreed back in 2009 to mobilise US\$100bn a year by 2020 to support developing countries to tackle the climate crisis. In Paris in 2015 they agreed to maintain that annual contribution until 2025, at which point a new global climate finance goal will come into play.

Approaches to determining Australia's 'fair share' of the US\$100 billion goal have concluded that Australia should contribute around 2-3% of the total, taking into account factors including Australia's relative wealth and historical emissions (see, for example Jotzo et al. 2011). Australia's current commitment, which is to provide on average AU\$400m a year, constitutes a mere 0.3% of US\$100bn. While accepting that some portion of the US\$100bn is to come from private finance, Australia's contribution falls massively short, regardless of which approach is used to determine our fair share (Bos et al. 2021).

For Australia to reach a place of global leadership on climate change it must begin significantly increasing its overall contribution to climate finance. In 2021 a consortium of Australian aid, development and environmental groups concluded that when based on up-to-date assessment of the actual level of global need, as opposed to mere fulfilment of the longstanding US\$100bn goal, Australia should scale up its contribution of climate finance to AU\$12bn a year by 2030 (Oxfam Australia et al. 2021).

#### SUPPORTING A NEW GLOBAL FINANCE GOAL

The international community will soon need to agree on a new global climate finance goal to take effect in 2025, when the current goal of providing US\$100bn a year expires. This is likely to be one of the most challenging aspects of upcoming international negotiations.

Australia can help ensure a new goal is truly responsive to the needs of vulnerable countries, including in the Pacific, by:

- supporting a specific allocation of finance to address loss and damage
- supporting clear definitions of climate finance including what constitutes 'new and additional'; and
- > supporting an approach that ensures contributions are based on science and on a countries' responsibility and capability to support global action.

#### ENDING FINANCE FOR FOSSIL FUELS

Avoiding catastrophic warming requires a dramatic acceleration in the global shift from fossil fuels to renewable energy. In addition to scaling up international funding for climate solutions, responding to the global crisis demands an end to all public financing of fossil fuels.

At COP26, 39 countries and development agencies including the US, UK, Canada, France and New Zealand agreed to end public funding for coal, oil and gas projects overseas and to "prioritise our support fully towards the clean energy transition" (UK COP26 Presidency). A similar commitment from Australia, including ruling out funding for fossil fuels through Australia's export credit agency – Export Finance Australia – would help demonstrate to Pacific island countries that Australia is serious about helping drive the global energy transition.

Responding to the global climate crisis demands an end to all public financing of fossil fuels.

### **BOX 5: VANUATU TAKING CLIMATE TO THE INTERNATIONAL COURT OF JUSTICE**

Vanuatu is leading a global campaign at the United Nations to have climate harm recognised in international law. Specifically, Vanuatu is seeking to get the International Court of Justice (ICJ) – the world's highest court – to issue an Advisory Opinion on the climate crisis. If the campaign succeeds, it could have huge implications for climate litigation, and could shape the ways that domestic and international courts address issues relating to climate change.

For the matter to be referred to the ICJ, Vanuatu requires support from a majority of countries at this year's UN General Assembly. Vanuatu needs to secure at least 97 votes. The campaign is gaining momentum, and has already won the backing of countries in Africa and the Caribbean. Vanuatu's special envoy on climate change, Odo Tevi, says he is confident of getting a majority to vote in favour when the UN considers the question in September. Vanuatu is hoping that other members of the Pacific Islands Forum – including Australia and New Zealand – will back the campaign. The Vanuatu government will be organising a side-event alongside the Pacific Islands Forum to explain the ICJ campaign.

Vanuatu has engaged a Pacific law firm, Blue Ocean Law, to represent them. The legal strategy is supported by lawyers from the UK, the US, France, Canada, India, Switzerland and Fiji. The campaign also has the backing of more than 1,500 civil society groups from the global Climate Action Network. In June a group of civil society organisations from the Pacific and from Australia together urged Australian Prime Minister Anthony Albanese to support Vanuatu's campaign.



Figure 12: Vanuatu is leading a global campaign to take climate change to the world's highest court.

# 6. The way forward

Working together to drive global efforts to reduce emissions is key to security in the Pacific. The very survival of Pacific island nations is at stake. In the past, Australia has refused to back the positions of island states in global climate negotiations and has even tried to water down Pacific Islands Forum statements on climate. To earn the trust of the rest of the region, Australia will need to show Pacific countries that it is serious about climate action, both by cutting emissions at home and pressing other major emitters to cut emissions this decade.

To earn the trust of the region, Australia will need to show Pacific countries it is serious about climate action. Australia's new government has announced a more ambitious climate policy than its predecessor, which brings Australia into closer alignment with Pacific island countries. Prime minister Albanese has written to the UN with a strengthened target to cut emissions by 2030 that he says will be enshrined in legislation. He says he aspires to "even greater emission reductions in the coming decade" (Albanese and Bowen 2022). This target should represent the *floor* for Australia's climate ambition, especially given Australia's 2030 target still lags behind most other developed countries.

Australia's new government wants to cohost a UN climate summit with Pacific island countries, potentially as soon as 2024. Prime minister Albanese will discuss this proposal with Pacific island leaders in Suva. This is likely to be a continuing conversation over coming months. Pacific leaders have welcomed Australia's strengthened climate policy, but there is no doubt they want to see more ambition. To work together on climate, Australia will need to support Pacific positions and priorities (see Box 6). Pacific island countries will expect the Australian government to do more to move beyond coal and gas. As chair of the Pacific Islands Forum, Fijian Prime Minister Vorege Bainimarama argues: "there's no room for new fossil fuel projects on the way to a secure future for the Pacific" (Bainimarama 2022). Island leaders will also look for more support to help Pacific communities to deal with climate impacts. If the Australian government listens carefully, and takes meaningful action, it will strengthen its claim to be the Pacific's security partner of choice.

### **BOX 6: PACIFIC POSITIONS AND PRIORITIES**

For decades Pacific island states have issued regional political statements that make it clear what they want from the international community on climate change. These statements have also guided Pacific participation in UN climate negotiations. Shared positions have been developed through processes of consultation around key meetings like the Pacific Islands Forum.

Pacific island leaders want the world's major emitters, including the United States, China and Australia, to:

### Recognise climate change is a key threat to security

"We reaffirm that climate change remains the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific" (Pacific Islands Forum 2018).

"We, the Leaders of the Pacific Islands Forum, call for the United Nations Secretary General to urgently appoint a Special Adviser on climate change and security and the United Nations Security Council to appoint a special rapporteur to produce a regular review of global, regional and national security threats caused by climate change, in recognition that climate change is the single greatest threat to the Blue Pacific region as reaffirmed in the Boe Declaration on Regional Security and is a growing global security threat" (Pacific Islands Forum 2019).

### Pursue efforts to limit warming to 1.5°C above pre-industrial levels

*"We, the Leaders of the Pacific Islands Forum, call for all parties to the Paris Agreement to meet or exceed their Nationally Determined Contributions (NDCs) in order to pursue* 

global efforts to limit global warming to 1.5°C above pre-industrial levels, recognising that this is critical to the security of our Blue Pacific" (Pacific Islands Forum 2019).

### Cut emissions at a pace that reflects the science

"We are of the conviction that the shared prosperity and security of our Blue Pacific can only safely exist if the international community pursues efforts to limit global warming to 1.5°C above pre-industrial levels, as set out in the Paris Agreement. The science is non-negotiable. Urgent action by the international community to reduce greenhouse gas emissions is critical to keep us on the 1.5°C pathway" (Pacific Islands Forum 2019).

#### End support for fossil fuels

"We call on the OECD countries to quickly phase out their use of coal by 2030 and all other countries to phase out their use of coal by 2040. There must be no expansion of existing coal mines or the creation of new coal mines" (Pacific Small Islands Developing States 2018).

"We recognize the urgent responsibility and moral obligation of fossil fuel producers to lead in putting an end to fossil fuel development and to manage the decline of existing production and the need to ensure the phase out of coal power to achieve the Paris climate goals" (Pacific Islands Development Forum 2019).

#### **BOX 6: CONTINUED**

### Support adaptation and provide finance to address climate impacts

"We call on parties to the UNFCCC to ensure there is sufficient finances in support of the Green Climate Fund and to support its replenishment and ensure the rapid deployment of funds to support both mitigation and adaptation efforts" (Pacific Islands Development Forum 2019).

#### Address irreversible loss and damage

"We call on all countries to ensure that efforts to avert, minimise and address loss and damage are key elements of the financial support needed to meet climate change and development challenges in the Pacific region" (Pacific Islands Forum 2019).



Figure 13: Enele Sopoaga, former Prime Minister of Tuvalu and Chair of the Pacific Islands Forum in 2019, speaking at the opening of the Pacific Islands Forum in Funafuti, Tuvalu. At this meeting, leaders issued the Kainaki II Declaration for Urgent Climate Action Now - the strongest statement on climate action agreed to by all members of the Pacific Islands Forum to date, despite insistence by the former Australian Prime Minister Scott Morrison that various elements be weakened.

Listening carefully, and taking meaningful action to address climate change, would strengthen Australia's claim to be the Pacific's security partner of choice.

# References

ABC (2014) Tidal flooding in Marshall Islands has caused widespread damage. 4 March 2014. <u>https://www.abc.net.au/news/2014-03-04/marshall-islands-tidal-waves/5298646</u>

ABC (2022a) Leaked documents suggest plans for Chinese military presence in Solomon Islands. By Andrew Greene, Stephen Dziedzic and Evan Wasuka 24 March 2022. <u>https:// www.abc.net.au/news/2022-03-24/draft-leak-chinese-</u> military-base-solomon-islands/100937632

ABC (2022b) China to continue pushing for Pacific island nations to sign regional trade and security agreement. By Stephen Dziedzic, 31 May 2022. <u>https://www.abc.net.au/</u> news/2022-05-31/china-pushing-pacific-island-nationsregional-agreement/101112074

ABC (2022c) Anthony Albanese pledges climate commitments while meeting with Quad leaders in Tokyo. By Stephen Dziedzic 24 May 2022. <u>https://www.abc.net.</u> au/news/2022-05-24/anthony-albanese-joe-biden-quadmeeting-tokyo/101094698

ADB (Asian Development Bank) (2018) Cyclone Gita Recovery Project: Report and Recommendation of the President. Summary Assessment of Damages and Needs: Energy Sector. https://www.adb.org/projects/documents/ ton-52129-001-rrp

AFR (Australian Financial Review) (2022) *China "overreached" in pushing for Pacific pact*. By Andrew Tillet, 2 June 2022. <u>https://www.afr.com/politics/federal/chinaoverreached-in-pushing-for-pacific-pact-20220602-p5aqig</u>

Albanese A, Bowen C (2022) Letter to Ms Patricia Espinosa, Executive Secretary, United Nations Framework Convention on Climate Change (UNFCCC) conveying Australia's enhanced Nationally Determined Contribution under the Paris Agreement. June 16, 2022. <u>https://unfccc.int/sites/</u> default/files/NDC/2022-06/NDC%202022%20Update%20 Letter%20to%20UNFCCC.pdf

AP4D (Asia-Pacific Development, Diplomacy and Defence Dialogue) (2022) What does it look like for Australia to be an effective climate ally with the Pacific? <u>https://www.asiapacific4d.com/shared-future/pacific/an-effective-climate-ally</u>

Australian Government (2022) Australia's Nationally Determined Contribution. https://unfccc.int/NDCREG

Bell J D, Senina I, Adams T et al. (2021) Pathways to sustaining tuna-dependent Pacific Island economies during climate change. *Nature Sustainability* 4: 900–910 <u>https://doi.org/10.1038/s41893-021-00745-z</u>

Bos J, Gonzalez L, Thwaites J (2021) Are countries providing enough to the \$100 billion climate finance goal? https:// www.wri.org/insights/developed-countries-contributionsclimate-finance-goal

Cai W, Santoso A, Collins M et al. (2021) Changing El Niño-Southern Oscillation in a warming climate. *Nature Reviews Earth and Environment* 2, 628–644. https://doi.org/10.1038/ s43017-021-00199-z Carter G (2020) 'Pacific Island States and 30 years of Global Climate Negotiations', in Carola Klock, Paul Castro, Florian Weiler, Lau Blaxekjar (eds.) *Coalitions in the Climate Change Negotiations* (Routledge 2020).

Climate Action Tracker (2021) *The CAT Thermometer* https://climateactiontracker.org/global/cat-thermometer/

Climate Analytics (2022a) *How much warming would the party climate positions lead to?* <u>https://climateanalytics.org/latest/how-much-warming-would-the-party-climate-positions-lead-to-analysis/</u>

Climate Analytics (2022b) *Fossil Gas: A bridge to nowhere.* https://climateanalytics.org/publications/2022/fossil-gasa-bridge-to-nowhere/

Climate Council (2021a) Aim High, Go Fast: Why emissions need to plummet this decade. <u>https://www.climatecouncil.org.au/resources/net-zero-emissions-plummet-decade/</u>

Climate Council (2021b) From Paris to Glasgow: A world on the move. <u>https://www.climatecouncil.org.au/resources/</u> paris-glasgow-world-move/

Climate Council (2022a) Where do Australia's major parties stand on climate action? <u>https://www.climatecouncil.org.</u> au/resources/australias-major-parties-climate-actionpolicy-2022/

Climate Council (2022b) The 2022 Climate Election: Unpacking how climate concerned Australians voted. https://www.climatecouncil.org.au/wp-content/ uploads/2022/05/2022-Election-Analysis-\_V3.pdf

CSIRO, BoM & SPREP (2015) Climate in the Pacific: A regional summary of new science and management tools. Pacific-Australia Climate Change Science and Adaptation Planning Program Summary Report.

DFAT (Department of Foreign Affairs and Trade) Supporting the Indo-Pacific to tackle climate change. <u>https://www.dfat.</u> gov.au/international-relations/themes/climate-change/ supporting-indo-pacific-tackle-climate-change

Dutra L X C, Haywood M D E, Singh S, Piovano S, Ferreira M, Johnson J E, Veitayaki J, Kininmonth S, Morris C W (2018) Impacts of Climate Change on Corals Relevant to the Pacific Islands. *Pacific Marine Climate Change Report Card: Science Review*, 132-158. <u>https://www.researchgate.net/</u> <u>publication/326129270\_Impacts\_of\_Climate\_Change\_on\_</u> <u>Corals\_Relevant\_to\_the\_Pacific\_Islands</u>

FAO (Food and Agricultural Organisation of the United Nations) (2018) The State of Food Security and Nutrition in the World: Building climate resilience for food security and nutrition. <u>https://www.fao.org/3/I9553EN/i9553en.pdf</u>

Ferguson B (2021) 'Climate change is destroying my country. The nations causing it must help.' *New York Times*. June 23, 2021 <u>https://www.nytimes.com/2021/06/23/magazine/climate-change-impact-bahamas.html</u>

G7 (2021) Carbis Bay G7 Summit Communiqué. <u>https://</u> www.whitehouse.gov/briefing-room/statementsreleases/2021/06/13/carbis-bay-g7-summit-communique/ Government of Fiji (2013) *Fiji post-disaster needs* assessment: *Tropical Cyclone Evan*, 17 Dec 2012. <u>https://</u> www.gfdrr.org/sites/default/files/publication/Fiji\_Cyclone\_ <u>Evan\_2012.pdf</u>

Government of Fiji (2018) Planned Relocation Guidelines: A framework to undertake climate change related relocation. https://cop23.com.fj/wp-content/uploads/2018/12/CC-PRG-BOOKLET-22-1.pdf

Government of Samoa (2013) Samoa post-disaster needs assessment Cyclone Evan 2012. http://www.gfdrr.org/sites/gfdrr/files/SAMOA\_PDNA\_Cyclone\_Evan\_2012.pdf.

Government of Tonga (2012) Second National Communication. In response to its obligations under the United Nations Framework Convention on Climate Change. Ministry of Environment and Climate Change, Nuku'alofa, Tonga. https://unfccc.int/sites/default/files/resource/ tonnc2.pdf

Government of Tonga (2018) *Post disaster rapid assessment. Tropical Cyclone Gita, 12 Feb 2018*. <u>https://reliefweb.int/</u> <u>sites/reliefweb.int/files/resources/tonga-pdna-tc-gita-2018</u>. <u>pdf</u>

Holland G, Bruyère C L (2014) Recent intense hurricane response to global climate change. *Climate Dynamics* 42: 617-627. <u>https://doi.org/10.1007/s00382-013-1713-0</u>

IEA (International Energy Agency) (2021) *Net Zero by 2050:* A roadmap for the global energy sector. <u>https://www.iea.org/reports/net-zero-by-2050</u>

Iese V, Halavatau S, N'Yeurt A D R, Wairiu M, Holland E, Dean A, Veisa F, Patolo S, Havea R, Bosenaqali S and Navunicagi O (2020) Chapter 9: Agriculture Under a Changing Climate in *Climate Change and Impacts in the Pacific*, L. Kumar (ed.), Springer Nature: Switzerland.

Iese V, Kiem A S, Mariner A, Malsale P, Tofaeono T, Kirono D G C, Round V, Heady C, Tigona R, Veisa F, Posanau K, Aiono F, Haruhiru A, Daphne A, Vainikolo V, Iona N (2021) Historical and future drought impacts in the Pacific islands and atolls. *Climatic Change* 166. <u>https://doi.org/10.1007/s10584-021-03112-1</u>

IPCC (Intergovernmental Panel on Climate Change) (2018) Special Report on Global Warming of 1.5°C. <u>https://www. ipcc.ch/sr15/</u>

IPCC (Intergovernmental Panel on Climate Change) (2021) Climate Change 2021: The Physical Science Basis (The Working Group I contribution to the Sixth Assessment Report). https://www.ipcc.ch/report/sixth-assessmentreport-working-group-i/

IPCC (Intergovernmental Panel on Climate Change) (2022a) Climate Change 2022: Impacts, Adaptation and Vulnerability (The Working Group II contribution to the Sixth Assessment Report.) https://www.ipcc.ch/report/sixth-assessmentreport-working-group-ii/

IPCC (Intergovernmental Panel on Climate Change) (2022b) Climate Change 2022: Mitigation of Climate Change (The Working Group III contribution to the Sixth Assessment Report). <u>https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/</u> Johnson J E, Bertram I, Chin A, Moore B R, Pratchett M, Welch D J, Williams A (2018) Impacts of Climate Change on Fish and Shellfish Relevant to the Pacific Islands, and the Coastal Fisheries they Support. Pacific Marine Climate Change Report Card: Science Review, 74-98. https://www. researchgate.net/publication/325710936\_Effects\_of\_ Climate\_Change\_on\_Fish\_and\_Shellfish\_Relevant\_to\_ Pacific\_Islands\_and\_the\_Coastal\_Fisheries\_they\_Support

Jotzo F, Pickering J, Wood P J (2011) Fulfilling Australia's international climate finance commitments: Which sources of financing are promising and how much could they raise? https://apo.org.au/node/27693

Katea T (2016) *Tuvalu Progress Report. 16th RAV Tropical Cyclone Committee meeting.* Honiara, Solomon Islands. 29 Aug – 2 Sept 2016. <u>https://www.wmo.int/pages/prog/www/</u> tcp/documents/RAV\_TCC-16\_Tuvalu\_ProgressReport.pdf

Kuleshov Y, Gregory P, Watkins A B, Fawcett R J B (2020) Tropical cyclone early warnings for the regions of the Southern Hemisphere: Strengthening resilience to tropical cyclones in small island developing states and least developed countries. *Natural Hazards*, 104(2), 1295-1313. <u>Https://www.doi:10.1007/s11069-020-04214-2</u>

Lowy Institute (2022) Lowy Institute Poll 2022: Understanding Australian Attitudes to the World. <u>https://</u>poll.lowyinstitute.org/report/2022

Manoa F (2021) The Pacific Small Island Developing States (PSIDS) early advocacy on climate and security at the United Nations. *Griffith Asia Insights*, 27 May 2021. <u>https://blogs.griffith.edu.au/asiainsights/the-pacific-small-island-developing-states-psids-early-advocacy-on-climate-and-security-at-the-united-nations/</u>

Morgan W (2021) Ripple Effect: How climate inaction jeopardises our Pacific standing. *Australian Foreign Affairs*. Issue 12, July 2021. <u>https://www.australianforeignaffairs.</u> <u>com/essay/2021/07/feeling-the-heat</u>

Moses M (2013) The role and influence of the Alliance of Small Island States in UN climate change negotiations. Public Lecture, Crawford School of Public Policy, Australian National University. 19 February 2013.

Murphy K, Morton A (2022) 'Chris Bowen to announce review of carbon credits system after expert labelled it a "fraud". *The Guardian*. June 29, 2022 <u>https://www. theguardian.com/australia-news/2022/jun/29/chrisbowen-to-announce-review-of-carbon-credits-systemafter-expert-labelled-it-a</u>

Oxfam (2017) Uprooted by Climate Change: Responding to the growing risk of displacement. <u>https://www-cdn.oxfam.</u> org/s3fs-public/file\_attachments/bp-uprooted-climatechange-displacement-021117-en.pdf

Oxfam Australia, ActionAid Australia, Climate Council, The Australia Institute, Edmund Rice Centre, Greenpeace, Climate Action Network Australia (2021) Fairer Futures: Financing Global Climate Solutions. https://www.oxfam. org.au/wp-content/uploads/2021/10/OXF063-Climate-Finance-Report-WEB.pdf

Pacific Elders Voice (2022a) Statement on Climate Security. 29 April 2022.

Pacific Elders Voice (2022b) Statement on Pacific Security. 10 March 2022.

Pacific Elders Voice (2022c) Statement on IPCC AR6 WG2 Report on 'Impacts, Adaptation and Vulnerability'. 10 March 2022.

Pacific Islands Forum (2022) *Remarks: Secretary General Puna at bilateral with China State Councillor, Foreign Minister H.E. Wang Yi.* <u>https://www.forumsec.</u> org/2022/05/29/remarks-sg-puna-at-bilateral-with-chinastate-councillor-foreign-minister-wang-yi/

Pacific Islands Forum (2019) Kainaki II Declaration for Urgent Climate Change Action Now. Pacific Islands Forum Secretariat, Suva. <u>https://www.forumsec.org/wpcontent/uploads/2019/08/50th-Pacific-Islands-Forum-Communique.pdf</u>

Pacific Islands Forum (2018) Boe Declaration on Regional Security. Pacific Islands Forum Secretariat, Suva.

https://www.forumsec.org/2018/09/05/boe-declarationon-regional-security/

Pacific Islands Forum (2017) Forty Eighth Pacific Islands Forum: Forum Communique. 5-8 September, 2017. Pacific Islands Forum Secretariat, Suva. <u>https://www. forumsec.org/wp-content/uploads/2018/02/Final\_48-PIF-Communique\_2017\_14Sep17.pdf</u>

Pacific Islands Forum (1991) South Pacific Forum Communique. Pacific Islands Forum Secretariat, Suva.

Pacific Islands Development Forum (PIDF) (2019) Nadi Bay Declaration on the Climate Change Crisis in the Pacific. https://cop23.com.fj/nadi-bay-declaration-on-the-climatechange-crisis-in-the-pacific/#:~:text=Recall%20the%20 Suva%20Declaration%20on\_3.

Pacific Small Island Developing States (PSIDS) (2018) Pacific SIDS Statement in support of IPCC Special Report on 1.5°C. https://cop23.com.fj/pacific-small-island-developing-states-appeal-universal-support-ipcc-special-report/

PINA (Pacific Islands News Service) (2022) *Climate change a bigger threat than war, Fiji tells security summit.* By Pita Ligaiula, 13 June 2022. <u>https://pina.com.fj/2022/06/13/climate-change-a-bigger-threat-than-war-fiji-tells-security-summit/</u>

Power S B, Delage F P D, Chung C T Y, Ye H, Murphy B F (2017) Humans have already increased the risk of major disruptions to Pacific rainfall. *Nature Communications* 8:14368. https://doi.org/10.1038/ncomms14368

RNZ (2021) Cyclone Yasa damage to Fiji worth nearly US 250 Million. 16 February 2021. https://www.rnz.co.nz/ international/pacific-news/436485/cyclone-yasa-damageto-fiji-worth-nearly-us250m

Savage A, Bambrick H, Gallegos D (2021) Climate extremes constrain agency and long-term health: A qualitative case study in a Pacific Small Island Developing States. *Weather and Climate Extremes* 31. <u>https://doi.org/10.1016/j.</u> <u>wace.2020.100293</u>

Schleussner C-F, Lissner T K, Fischer E M, Wohland J, Perrette M, Golly A, Rogelj J, Childers K, Schewe J, Frieler K, Mengel M, Hare W, Schaeffer M (2016) Differential climate impacts for policy relevant limits to global warming: the case of 1.5°C and 2°C. *Earth System Dynamics*, 7(2): 327-351. <u>https://doi.org/10.5194/esd-7-327-2016</u> Shigetani M (2009) Federated States of Micronesia: Preliminary Damage Assessment (PDA) High Tide Event, Dec 7–12, 2008. <u>https://www.preventionweb.net/</u> files/27083\_fsmpdareporttofsmgovernment.pdf

Storlazzi C D, Gingerich S B, Dongeren A P V, Cheriton O M, Swarzenski P W, Quataert E, Voss C I, Field D W, Annamalai H, Piniak G A, McCall R. (2018) Most atolls will be uninhabitable by the mid-21st century because of sea-level rise exacerbating wave-driven flooding. *Science Advances* 4 (4). DOI: 10.1126/sciadv.aap9741

The Australian (2022) Albanese takes the fight to Beijing in the Pacific. By Greg Sheridan, 28 May 2022. <u>https://www.theaustralian.com.au/inquirer/labors-rapid-response-is-a-good-start/news-story/cbe6b0a7be2f4794e127cff341afd5b8</u>

The Conversation (2021) La Niña just raised sea levels in the western Pacific by up to 20cm. This height will be normal by 2050. By Shayne McGregor, 16 December 2021. <u>https://theconversation.com/la-nina-just-raised-sea-levels-in-the-western-pacific-by-up-to-20cm-this-height-will-be-normal-by-2050-173504</u>

The Guardian (2022a) Australia to stand with Pacific islands on climate crisis and "respect" region, Penny Wong says. By Daniel Hurst, 23 May 2022. <u>https://www.theguardian. com/australia-news/2022/may/23/australia-to-stand-withpacific-islands-on-climate-crisis-and-respect-regionpenny-wong-says</u>

The Guardian (2022b) The rejection of China's deal shows the Pacific will not be used as a geopolitical pawn. By Henry Ivaruture, 2 June 2022. <u>https://www.theguardian.com/</u> world/2022/jun/02/the-rejection-of-chinas-deal-showsthe-pacific-will-not-be-a-geopolitical-pawn?ref=upstract. com&curator=upstract.com

The World Bank (2000) *Cities, seas, and storms: Managing change in Pacific Island economies.* Adapting to climate change, vol IV. World Bank, Washington. <u>https://documents.worldbank.org/pt/publication/documents-reports/documentdetail/532221468288338891/adapting-to-climate-change</u>

Trout K, Muttitt G, Lafleur D, Van de Graaf T, Mendelevitch R, Mei L, Meinshausen M (2022) *Existing fossil fuel* extraction would warm the world beyond 1.5°C. https://iopscience.iop.org/article/10.1088/1748-9326/ac6228

UK COP26 Presidency (2021) Statement on international public support for the clean energy transition. <u>https://ukcop26.org/statement-on-international-public-support-for-the-clean-energy-transition/</u>

UN (United Nations) (2022) Secretary-General warns of climate emergency, calling intergovernmental panel's report 'a file of shame', while saying leaders 'are lying', fuelling flames. https://www.un.org/press/en/2022/sgsm21228.doc. htm

UN (United Nations) (2007) Security Council holds firstever debate on impact of climate change on peace, security, hearing over 50 speakers. 17 April 2007, UN Department of Public Information, New York. <u>https://www.un.org/press/</u> en/2007/sc9000.doc.htm

UN (United Nations) (2004) United Nations General Assembly official records, 59<sup>th</sup> Session: 28<sup>th</sup> plenary meeting. 13 October 2004, New York. <u>https://digitallibrary.un.org/</u> record/533192?ln=en UNFCCC (United Nations Framework Convention on Climate Change) (2015) *Paris Agreement*.<u>https://unfccc.int/</u> <u>sites/default/files/english\_paris\_agreement.pdf</u>

UNFCCC (United Nations Framework Convention on Climate Change) (2021a) *Message to Parties and Observers: Nationally determined contribution synthesis report*.<u>https://</u> unfccc.int/sites/default/files/resource/message\_to\_parties\_ and\_observers\_on\_ndc\_numbers.pdf

UNFCCC (United Nations Framework Convention on Climate Change) (2021b) *Glasgow Climate Pact*. <u>https://unfccc.int/sites/default/files/resource/cop26\_auv\_2f\_cover\_decision.pdf</u>

Walsh K J E, McBride J L, Klotzbach P J, Balachandran S, Camargo S J, Holland G, Knutson T R, Kossin J P, Lee T, Sobel A, Masato S (2016) Tropical Cyclones and Climate Change. *WIREs Climate Change*, 7:65–89. <u>https://doi.org/10.1002/wcc.371</u>

Wang G, Cai W, Gan B et al. Continued increase of extreme El Niño frequency long after 1.5°C warming stabilization. *Nature Climate Change* 7, 568–572 (2017). <u>https://doi.org/10.1038/nclimate3351</u>

White House (2022) Statement by Australia, Japan, New Zealand, the United Kingdom and the United States on the Establishment of the Partners in the Blue Pacific (PBP). 24 June 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/24/statement-by-australia-japan-new-zealand-the-united-kingdom-and-the-united-states-on-the-establishment-of-the-partners-in-the-blue-pacific-pbp/

White House (2016) Remarks by the President to Leaders from the Pacific Island Conference of Leaders and the International Union for the Conservation of Nature World Conservation Congress. 1 September 2016. https://obamawhitehouse.archives.gov/the-pressoffice/2016/09/01/remarks-president-leaders-pacificisland-conference-leaders-and

Wong P (2022a) Radio New Zealand National with Kim Hill. Transcript of radio interview with Australian foreign minister Penny Wong. 16 June 2022. <u>https://www.</u> foreignminister.gov.au/minister/penny-wong/transcript/ radio-new-zealand-national-kim-hill#:~:text=Minister%20 for%20Foreign%20Affairs%3A%20Look%2C%20we%20 do%20have%20a%20clear,outside%20of%20that%20Pacific%20family.

Wong P (2022b) A new era in Australian engagement in the Pacific: Speech to the Pacific Islands Forum Secretariat. 26 May 2022. https://www.foreignminister.gov.au/minister/ penny-wong/speech/speech-pacific-islands-forumsecretariat

WRI (World Resources Institute) Net-Zero Tracker. <u>https://www.climatewatchdata.org/net-zero-tracker</u>

## Image credits

Cover image: CPL Dustin Anderson/Australian Department of Defence via Getty Images.

Page vi - Figure 1: Fenton Lutunatabua / 350.org Pacific Climate Warriors.

Page 8 - Figure 3: Pita Simpson via Getty Images.

Page 10 - Figure 4: © Earth News Bulletin / International Institute for Sustainable Development.

Page 13 - Figure 6: © UNICEF/UN012448/Sokhin.

Page 14 - Figure 7: TVNZ via AAP.

Page 16 - Figure 8: Annika Dean.

Page 18 - Figure 9: Simon Bradshaw, 2019.

Page 14 - Figure 10: Genex.

Page 26 - Figure 11: Geoff Whalan.

Page 32 - Figure 12: Nicky Kuautonga / 350.org Pacific Climate Warriors.

Page 35 - Figure 13: AAP Image/Mick Tsikas.

## The Climate Council is an independent, crowd-funded organisation providing quality information on climate change to the Australian public.

The Climate Council acknowledges the Traditional Custodians of the lands on which we live, meet and work. We wish to pay our respects to Elders past, present and emerging and recognise the continuous connection of Aboriginal and Torres Strait Islander peoples to Country.

### **CLIMATE COUNCIL**

- facebook.com/climatecouncil
- 灯 twitter.com/climatecouncil
- info@climatecouncil.org.au
- \_\_\_\_ climatecouncil.org.au

The Climate Council is a not-for-profit organisation. We rely upon donations from the public. We really appreciate your contributions.



climatecouncil.org.au/donate

