

Media Briefing

Cyclone Yasa & Climate Change

Summary

Cyclone Yasa is a **Category 4** cyclone which made landfall in Fiji on Thursday evening local time. It has been described as life-threatening.

- Authorities have also warned all Fijians to expect "flash flooding of low lying areas, phenomenal seas, damaging heavy swells, and storm surges" on Thursday and Friday.
- Fiji's National Disaster Management Office (NDMO) has said some 600,000 people lie directly in the cyclone's path, based on tracking estimates from Tuesday night.

Cyclones and La Niña

The Australia Pacific region is currently experiencing a La Niña event, a particular phase of the ENSO climate cycle.¹ La Niña occurs when equatorial trade winds become stronger and changing ocean surface currents draws cooler deep water up from below. This results in a cooling of the central and eastern tropical Pacific Ocean.²

- During La Niña, there are typically more tropical cyclones in the Australia / Pacific region, with twice as many making landfall than during El Niño. This means an increased likelihood of major damage and flooding related to strong winds, high seas and heavy rains from tropical cyclones.³
- As global warming increases due to extensive fossil fuel burning, **frequent and more severe** El Niño and La Niña events (ENSO) are likely to impact Australia and the Pacific region.⁴

Cyclones and climate change

Climate change is making cyclones more intense, leading to devastation across the Pacific.⁵ This takes place through a number of key mechanisms:

Temperature and storm strength. Cyclones are fueled by available heat. Warmer seas can make cyclones more powerful⁶, by making more potential energy available to them; this increases their 'power ceiling' or speed limit. Higher sea-surface temperatures mean that cyclone wind speeds can increase.⁷

¹ [Bureau of Meteorology \(BoM\), 2016.](#)

² [Bureau of Meteorology \(BoM\), 2016.](#)

³ [Bureau of Meteorology \(BoM\), 2016.](#)

⁴ [Climate System Science, 2018.](#)

⁵ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

⁶ [Coumou & Rahmstorf, 2012.](#)

⁷ [Walsh et al, 2015.](#)

More intense rainfall. The planet’s atmosphere is warming as a result of carbon emissions. A warmer atmosphere can hold more water⁸, driving extreme rainfall during cyclones, which increases the threat of flooding. Scientists have directly linked⁹ the increase in atmospheric moisture with human-caused climate change.

Increased storm surges. Climate change causes sea levels to rise, and can increase the size of storms and storm wind speeds.¹⁰ Global sea levels have already increased about 23 cm as a result of human carbon emissions.¹¹

Rapid intensification. Cyclone Yasa experienced a phenomenon known as ‘rapid intensification’, by which tropical cyclones gain strength in a short period of time. According to multiple studies, climate change is increasing the proportion of tropical cyclones that experience this phenomenon.¹²

Heating oceans have resulted in more intense tropical cyclones, whose devastating damage affects low-lying communities most severely.

Key examples include **Cyclone Pam** in March 2015, which affected around half of Vanuatu’s population and destroyed 95 per cent of crops in affected areas; **Cyclone Winston** in February 2016, the strongest cyclone to make landfall in the southern hemisphere, which caused \$470 million worth of damage to Fiji, or around 10 per cent of that nation’s GDP; and **Cyclone Harold** in April 2020, which devastated Solomon Islands, Vanuatu, Fiji and Tonga.¹³

We are grateful to the Pacific Islands Climate Action Network (PICAN) for the analysis in this section.

Climate change and the Pacific

The environmental impacts of burning **coal, oil, and gas** are well documented. They include more intense extreme weather events, such as droughts, bushfires and cyclones, rising sea levels, ocean acidification, biodiversity loss, more extreme heat, and the resulting damage to the natural and built systems required to sustain human life on our planet.¹⁴

The Pacific region is already facing some of the most severe climate impacts anywhere on earth.

- Over **9.2 million people** have been affected by extreme climate events in the Pacific over the past 70 years.
- Climate impacts have led to around **10,000 reported deaths** and damages of around **US\$3.2 billion** in the Pacific.¹⁵
- Tropical cyclones have been the major cause of this loss and damage.¹⁶

⁸ [Trenberth, 2011.](#)

⁹ [Santer et al, 2007.](#)

¹⁰ [Walsh et al, 2015.](#)

¹¹ [NASA Goddard Space Flight Centre, 2020.](#)

¹² [Kang & Elsner, 2019.](#)

¹³ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

¹⁴ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

¹⁵ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

¹⁶ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

Global heating of **1.5 or 2 degrees** would be catastrophic for Pacific Island Countries. As predominantly low-lying geographies, PICs are especially vulnerable to even small rises in sea levels.¹⁷

- People in the Pacific are living the reality of the climate emergency every day, with **sea-level rise, increasing king tides, and storm surges** already causing severe damage. Slow onset impacts include warming oceans, ocean acidification, and salinisation.¹⁸
- Despite being forced to bear the brunt of the harm caused by global heating, **Pacific Island Countries (PICs)** are among the nations of the world **least responsible** for creating the climate crisis. The highest 15 emitting nations together produce 73.51 per cent of annual global emissions, while Pacific Island Countries (14) produce just 0.141 per cent.

Calls for leadership from Pacific nations

15 Pacific leaders, including former prime ministers and presidents recently condemned Australia's emissions reduction target as "one of the weakest amongst wealthy nations".¹⁹ Leaders of Pacific nations have been calling for more ambitious and decisive leadership from high-emitting countries like Australia for many years. Below are some notable examples.

"I refuse to let Fijians and our Pacific Island sisters and brothers be some sacrificial canary for coal-burning countries and high-emitting companies." *Fijian Prime Minister Frank Bainimarama - Dec 12, 2020*²⁰

"We Pacific nations owe it to our people and to humanity as a whole to raise our voices more to demand that major emitters and wealthy countries step up their climate actions and commitments. Without this, we will lose our homes, our way of life, our well-being and our livelihoods. It is past time to get serious." *Fijian Prime Minister Frank Bainimarama - Dec 11, 2020.*

"As the Pacific (and indeed the world) hurtles closer to climate catastrophe, I ask Prime Minister Morrison if he is now willing to listen to his Pacific family and take steps to help protect all of us: Australians and Pacific islanders. This will take courage but courage and leadership are what's needed here," - *Anote Tong, Former President of Kiribati - Dec 1, 2020.*²¹

"Climate change is the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific. Australia has officially acknowledged this time and again, yet it has refused to take the necessary steps to reduce its emissions to limit global warming to 1.5 degrees, in line with the goal of the Paris Agreement." - *Former Tuvalu Prime Minister Enele Sopoaga, 2020*

Spokespeople available:

Joseph Moeono-Kolio is Greenpeace's Head of Pacific, and is also a climate negotiator for Samoa at global climate summits, such as the upcoming COP26 in Glasgow. He can speak about the impacts of

¹⁷ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

¹⁸ [Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

¹⁹ [SBS, December 1 2020 "Pacific leaders condemn Australia's climate targets in open letter"](#)

²⁰ [SBS, December 12 2020 "Fiji's PM refuses to let the Pacific be the 'sacrificial canary for coal-burning countries'"](#)

²¹ [Tong, 2020.](#)

climate change in the Pacific, Pacific leadership on climate action, as well as the impacts of climate change being felt on a cultural and spiritual level in the Pacific Islands.

Dr Nikola Čašule is Greenpeace Australia Pacific's Head of Research and Investigations, who recently authored Greenpeace's landmark report [Te Mana o Te Moana: The State of the Climate in the Pacific in 2020](#). He can speak about Australia's current climate commitments and track record, climate policy, national and global commitments to lower emissions, and climate impacts in the Pacific - including what the Pacific can expect at current climate projections.

Shiva Gounden is Greenpeace Australia Pacific's activist coordinator. Born in Fiji, he has experienced multiple cyclones personally, and has worked in international aid cleaning up the aftermath of Cyclone Winston. He can speak about the physical and emotional damage caused by supercharged cyclones, what communities are likely to expect in the aftermath of Cyclone Yasa, and his experience living in Australia at present while struggling to connect with family and friends at home in Fiji.

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Further Reading:

[Te Mana o Te Moana: The State of Climate in the Pacific 2020: Greenpeace](#)

[Pacific Leaders' Open Letter to Prime Minister Scott Morrison](#)