

State of the Climate 2020

South-West Pacific

The State of the Climate in South-West Pacific 2020 is the first of its kind for this region and a milestone multi-agency effort to deliver informed climate analysis and climate change trends.

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Climate Indicators



Temperature

2020 was the second or third warmest year on record in the South-West Pacific region. Depending on the data set, near-surface land and ocean temperatures averaged across the region were about 0.37–0.44 °C above the 1981–2010 average



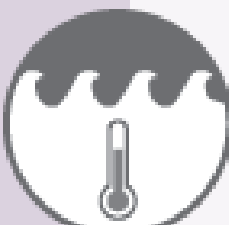
Glacier Mass Balance

The glaciers near Puncak Jaya are remnants of glaciers that have existed for around 5000 years and have been retreating since approximately 1850 CE. Models predict that total ice loss can be expected between 2024 and 2026 should current retreat rates continue.



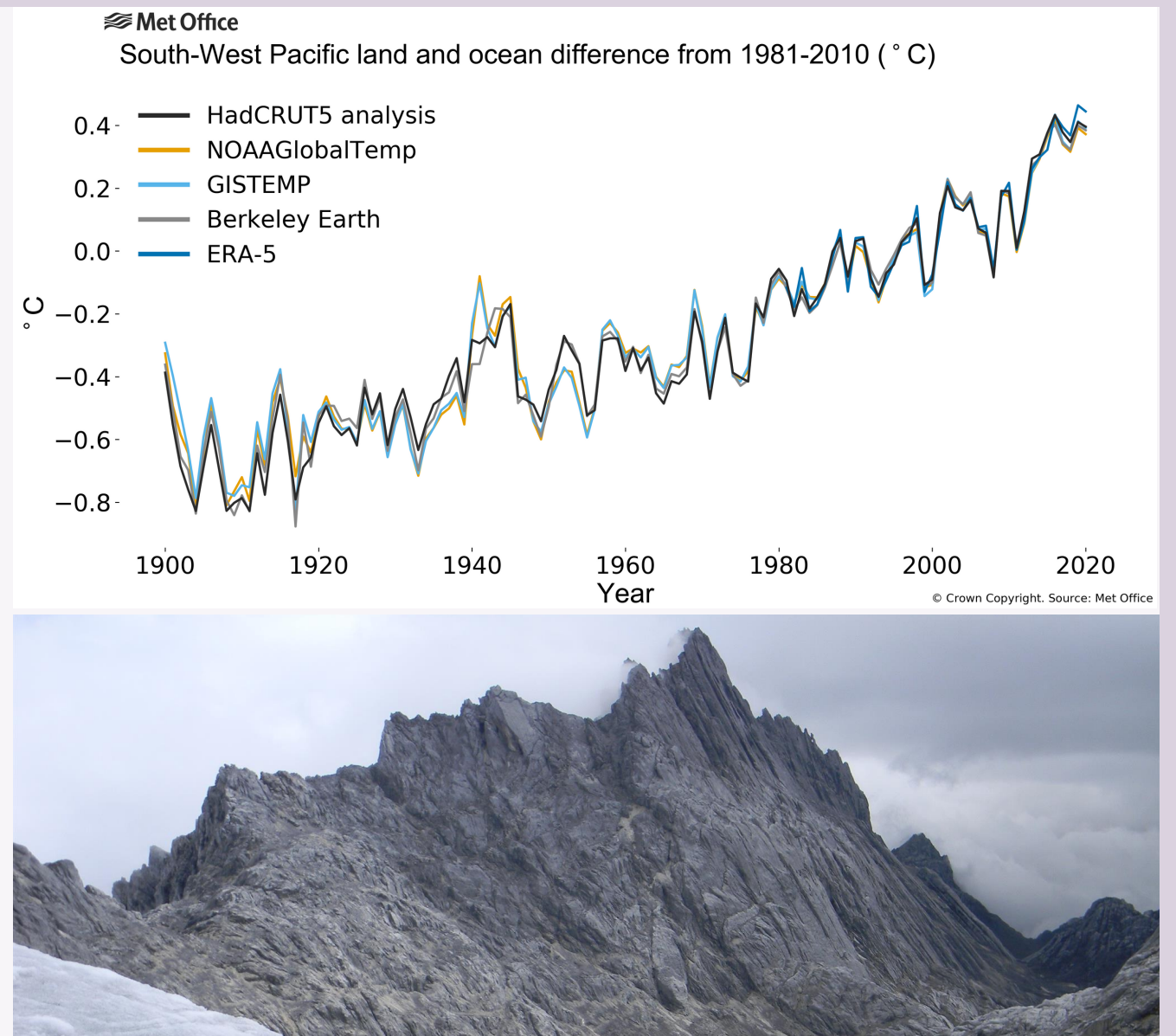
Sea Level Rise

In the North Indian Ocean and in the western part of the tropical Pacific Ocean, the rates of sea-level rise are substantially higher than the global mean, with significant implications for Small Island Developing States (SIDS).



Sea Surface Temperature & Ocean Heat Content

The ocean area of the region shows overall warming from 1982–2020, particularly in the Tasman Sea, the Indian and Pacific Ocean, and in the west of the Timor Sea where rates of warming are three times faster than the global rate.



Extreme Events



TROPICAL CYCLONES

Tropical Cyclones Harold and Yasa and Typhoon Goni led to extensive damage in the Solomon Islands, Vanuatu, Fiji, Vanuatu Tonga and the Philippines. Typhoon Goni (Rolly) had one of the most intense landfalls of any tropical cyclone on record.



PRECIPITATION

It was a relatively wet year over many parts of Indonesia, extending south-east into parts of Papua New Guinea, the Solomon Islands, Vanuatu, Fiji, Tonga and Samoa. Pekoa, Vanuatu and Pago Pago, American Samoa both had their wettest years on record.



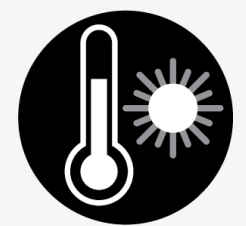
FLOODS

Flooding affected the far south of New Zealand in early February. A total of 509 mm fell on 3 February in Milford Sound, while the inland town of Lauder had its wettest day on record causing numerous evacuations.



WILDFIRES

The unprecedented 2019-2020 wildfire season in eastern Australia led to heavy loss of life and property and severe smoke pollution, with direct fire impacts, and contamination of rivers by ash and debris, also leading to major losses of wildlife.



MARINE HEAT WAVES

In February, high temperatures affected the entire Great Barrier Reef region of Australia. Widespread coral bleaching was reported, the third mass bleaching event in the past five years.

Impacts

FOOD SECURITY & SOCIOECONOMIC DEVELOPMENT

In 2020, extreme weather events led to large disruptions across various sectors, including agricultural, with significant consequences for approximately 2.7 million people who were estimated to have been undernourished in the region in 2020. In Vanuatu, Cyclone Harold damaged between 22-66% of crops and caused approximately VT 19.6 billion or US\$ 177 million of damage to the agriculture sector.

In Fiji, Tropical Cyclone Yasa affected an area of predominantly subsistence agriculture, damaging approximately 83% of total cropland.

DISPLACEMENT

Climate and weather events had major and diverse impacts on population movements and on the vulnerability of people on the move in the region throughout 2020.

The Philippines was the most affected country recording 4.4 million new displacements. Vanuatu was also hard-hit, particularly relative to its population size, with Cyclone Harold triggering 80,000 new displacements -- nearly a quarter of the population.



Climate Policy

Countries in the Pacific are making substantial progress in achieving Sustainable Development Goal 13 on climate action. However, the region needs to accelerate progress towards achieving target 13.1 (strengthen resilience and adaptive capacity) and reverse current trends with a view to achieving other targets related to resilience to disasters (target 1.5 and target 11.5). Building resilience to extreme climate events is foundational for achieving the 2030 Agenda for Sustainable Development. This requires a better understanding of specific risks affecting particular regions and countries, and increased capacity to address them.