

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 182

Country: Tuvalu

Part 1: Recent climate

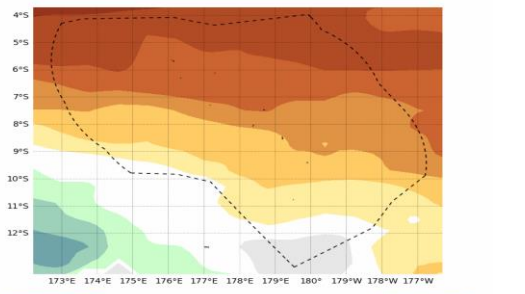
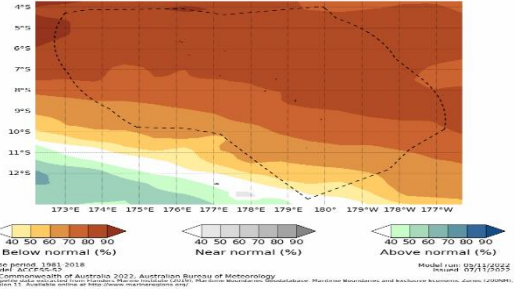
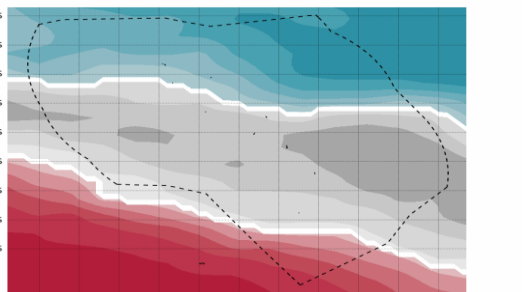
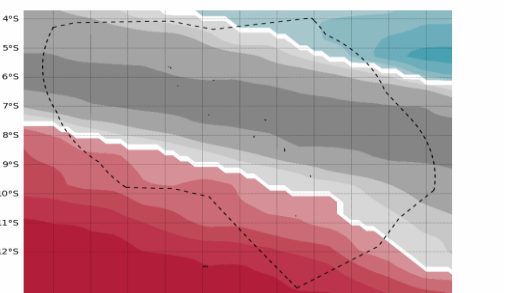
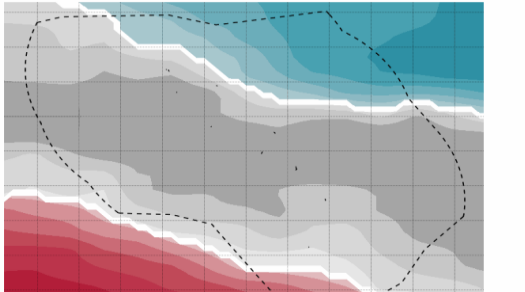
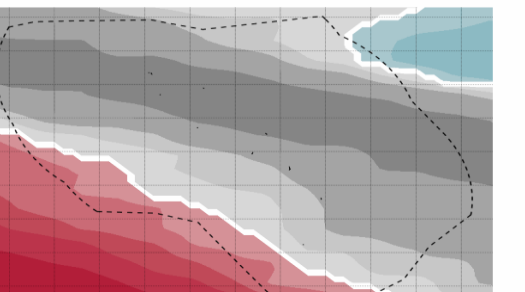
TABLE 1: Monthly Rainfall

Station (include data period)	Aug-2022	Sep-2022	Oct-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
	Nanumea (1941-2022)	159.7	99.6	18.9	91.4	190.5	
Nui (1946-2022)	31.8	167.8	38.3	141.9	209.3	179.0	4/77
Funafuti (1933-2022)	76.0	113.2	109.9	204.2	292.2	260.4	6/90
Niulakita (1953-2022)	229.6	99.4	236.1	204.2	308.2	258.0	32/70

TABLE 2: Three-month Total Rainfall for August to October 2022

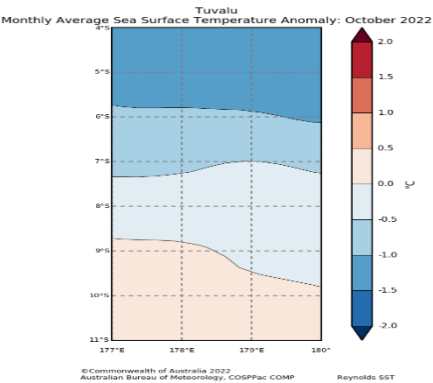
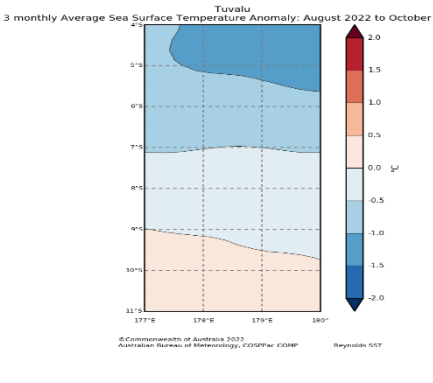
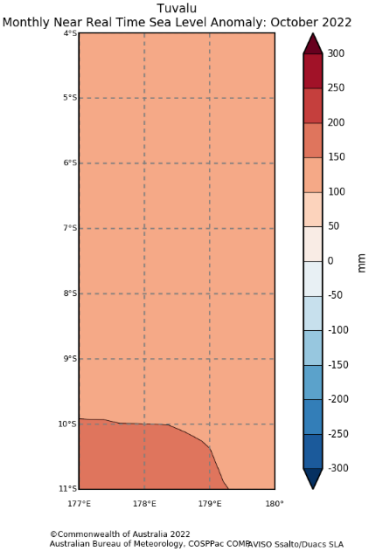
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Nanumea (1941-2022)	278.2	Below normal	337.1	608.0	481.8	18/81
Nui (1946-2022)	237.9	Below normal	485.5	695.9	566.7	6/77
Funafuti (1933-2022)	299.1	Below normal	612.3	799.3	680.4	4/90
Niulakita (1953-2022)	565.1	Below normal	579.3	829.1	688.3	22/70

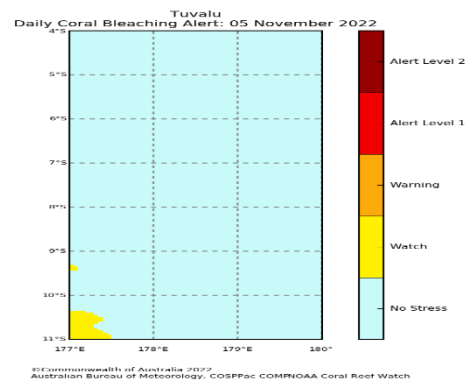
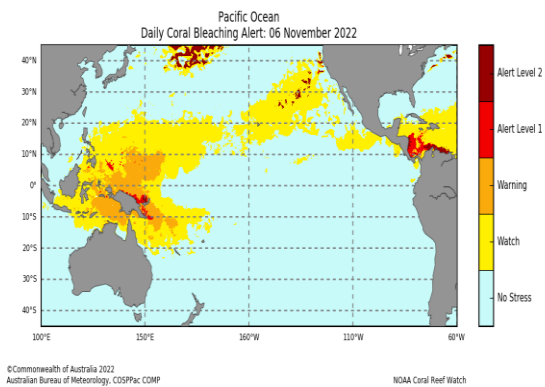
Part 1i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Monthly: December	Seasonal: December to January
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for December 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>	<p>Tercile rainfall probabilities for December 2022 to February 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for December 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>	<p>Tercile maximum temperature probabilities for December 2022 to February 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for December 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>	<p>Tercile minimum temperature probabilities for December 2022 to February 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>

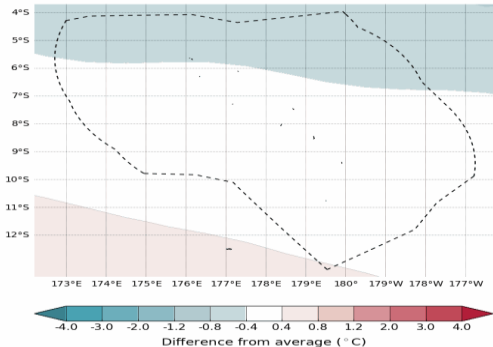
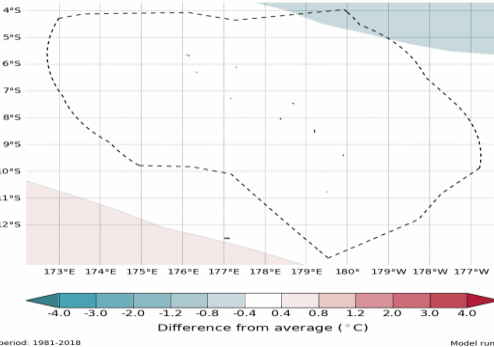
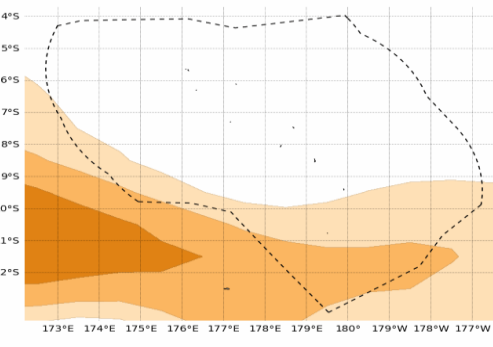
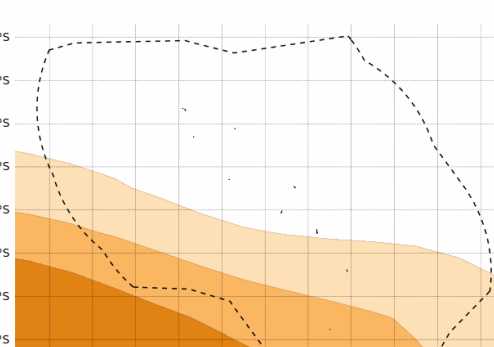
Part 2: Recent Ocean Observation

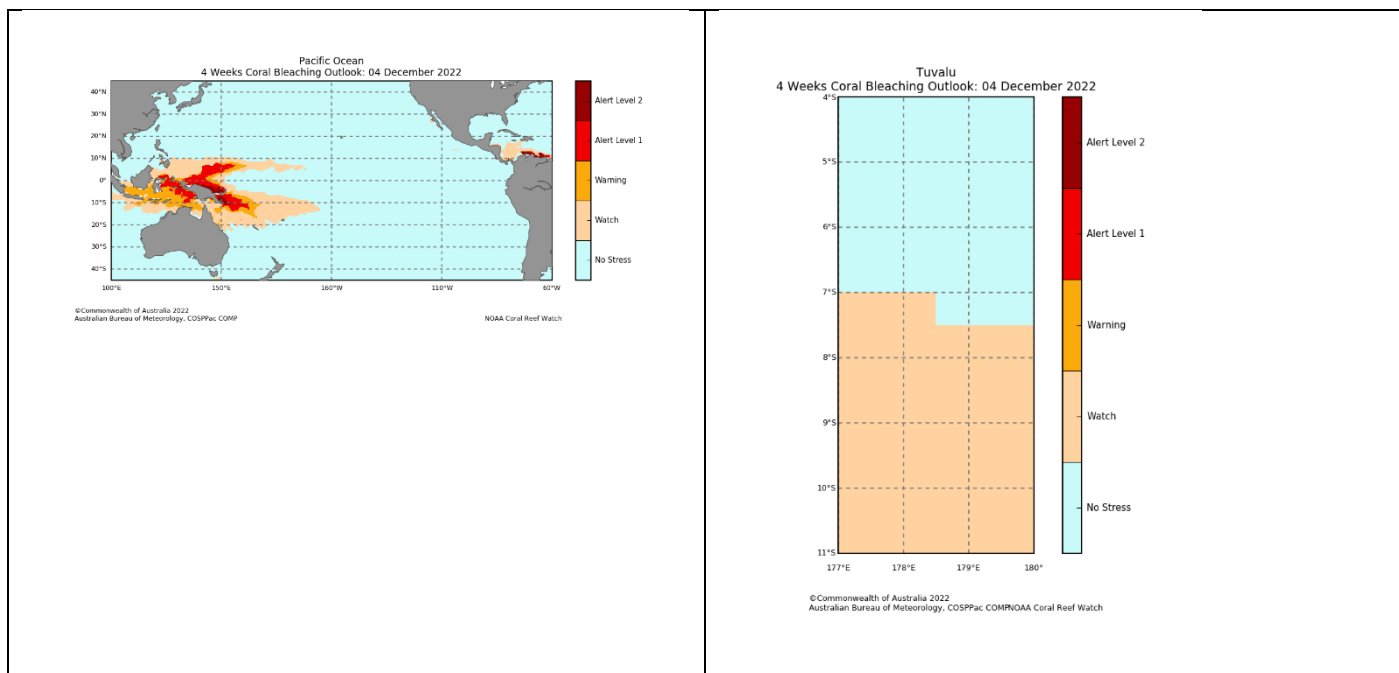
Monthly/Three months: October 2022 and August to October 2022

<p><u>Monthly: October</u></p>	<p><u>Last three months: August to October 2022:</u></p>
<p>Sea Surface Temperature (Image 1):</p>	<p>Sea Surface Temperature (Image 4):</p>
	
<p>Sea level (Image 2):</p>	
	
<p>Daily coral bleaching alert (Image 3):</p>	



Part 2i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Monthly: December	Seasonal: December to February
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for December 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapeline data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM). version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>	<p>Difference from average sea surface temperature forecast for December 2022 to February 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapeline data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM). version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for December 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapeline data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM). version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 05/11/2022 Issued: 07/11/2022</p>	<p>Difference from average sea surface height forecast for December 2022 to February 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapeline data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM). version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 12/11/2022 Issued: 14/11/2022</p>
4-week Coral Bleaching (Image 9):	



Summary Statement

Monthly and last three months: October 2022/August to October 2022 statement

October: Below normal rainfall was observed at Nanumea, Nui and Funafuti, while Niulakita observed normal rainfall.

August to October: Below normal rainfall was observed across the whole country.

Part 1i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Monthly /Seasonal rainfall and temperature Outlook statements

Rainfall across the country in December and from December to February is likely to very likely to be below normal, especially over the northern islands.

Monthly maximum and minimum temperatures: December temperatures are likely to be near-normal, apart from maximum temperatures at Nanumea which are likely to be below normal.

Seasonal maximum and minimum temperatures: Averaged over December to February, temperatures are likely to be near-normal, except for maximum temperatures at Niulakita which are likely to be above normal.

Part 2: Recent Ocean summary statement

Monthly and last three months: October/August to October 2022

The sea surface temperature for October and August to October, reveals below normal SSTs for the northern parts of Tuvalu with SSTs up to -1.5 degrees (below normal). While the remaining parts of Tuvalu experienced near normal temperatures.

Sea level anomaly for October is mostly 100 to 150 mm above average.

Coral bleaching reveals watch states for the southern part of Tuvalu.

Part 2i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Ocean Variable statement

The monthly and seasonal outlook for December and December to February, predicts below normal is likely for Nanumea, while other parts predicts near normal.

The sea level anomaly forecasts for December and December to February reveals near normal conditions, with portions of Tuvalu forecasted to experience above normal sea level anomalies of outmost 60 to 100 mm.

Coral bleaching alert likely to remain at WATCH in the south.

TABLE 3: Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Product	Date: October 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		MET Staffs	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule members			
EAR Watch		MET Staffs	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule members			
Monthly Climate Briefing		MET Staffs	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule members			
Ocean Outlook		MET Staffs	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule members			
Climate data request					

Total			
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