

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 172

Country: Papua New Guinea

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Oct-2021	Nov-2021	Dec-2021				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2021)				342.6	444.7	382.0	
Nadzab (1973-2021)		18.0	225.4	122.2	188.8	155.5	36/47
Wewak (1956-2021)	235.2	387.8	241.6	121.5	171.2	142.6	59/66
Vanimo (1918-2021)	320.4	287.2	308.6	200.0	292.7	258.6	52/68
Highlands Region							
Goroka (1948-2021)				162.2	255.7	184.0	
New Guinea Islands Region							
Momote (1949-2021)	161.4	186.4	336.0	246.7	330.3	282.8	50/73
Kavieng (1916-2021)	237.2	162.4	348.2	256.3	345.2	313.8	68/95
Southern Region							
Misima (1917-2021)	153.8	108.4		170.4	257.0	220.5	
Port Moresby (1875-2021)	95.5	171.9	144.0	89.9	160.7	129.0	84/131

NB: The X LEPS % score has been categorised as follows:

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

Moderate $5 \leq X < 10$

Good: $10 \leq X < 15$

High: $15 \leq X < 25$

Very High: $25 \leq X < 35$ Exceptional: $X \geq 35$

TABLE 2: Three-month Total Rainfall for October to December 2021

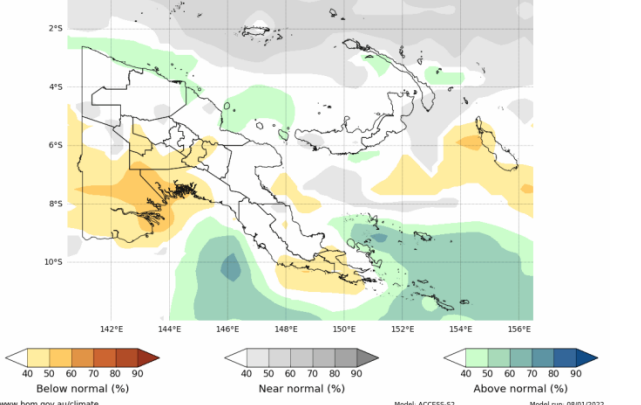
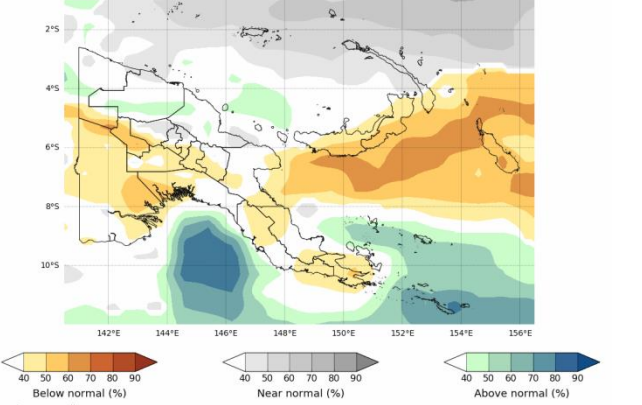
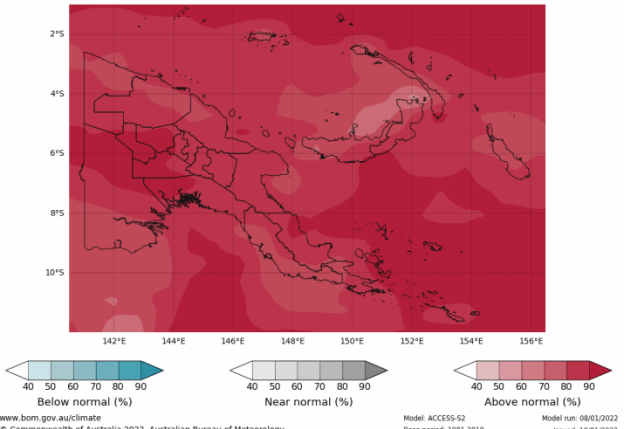
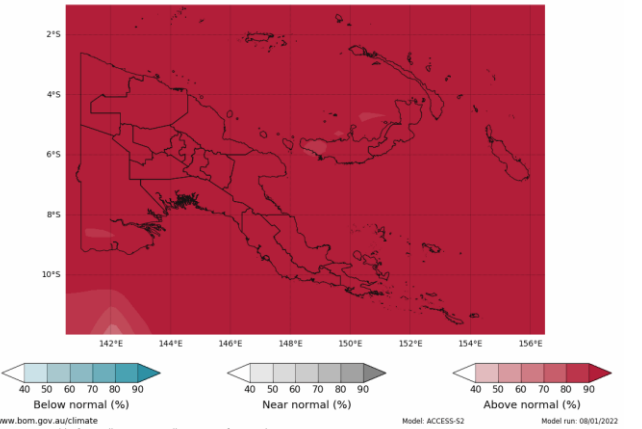
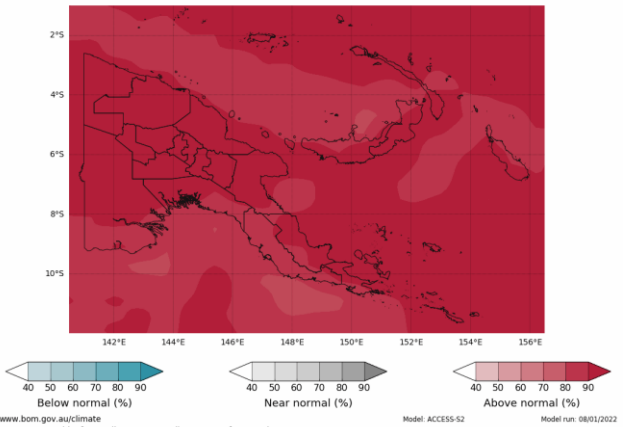
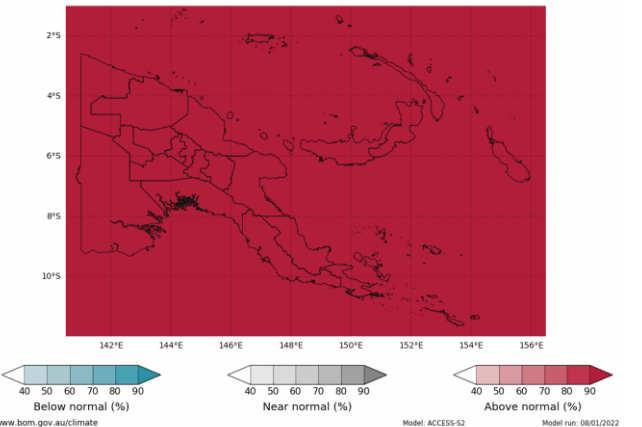
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Momase Region						
Madang (1944-2021)			841.0	1082.6	976.7	
Nadzab (1973-2021)			318.3	393.1	343.4	
Wewak (1894-2021)	864.6	Above normal	539.1	658.5	573.0	61/64
Vanimo (1918-2021)	916.2	Above normal	586.3	727.9	635.1	57/61
Highlands Region						
Goroka (1948-2021)			442.0	605.0	530.2	
New Guinea Islands Region						
Momote (1949-2021)	683.8	Below normal	688.3	865.9	787.1	24/73
Kavieng (1917-2021)	747.8	Normal	713.4	868.0	802.0	40/93
Southern Region						
Misima (1917-2021)			550.5	743.7	631.9	
Port Moresby (1875-2021)	411.4	Above normal	166.0	289.9	202.2	107/117

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

Monthly	Seasonal
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for February 2022</p>  <p>www.bom.gov.au/climate © Commonwealth of Australia 2022, Australian Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base period: 1981-2018 Model run: 08/01/2022 Issued: 10/01/2022</p>	<p>Tercile rainfall probabilities for February to April 2022</p>  <p>www.bom.gov.au/climate © Commonwealth of Australia 2022, Australian Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base period: 1981-2018 Model run: 08/01/2022 Issued: 10/01/2022</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for February 2022</p>  <p>www.bom.gov.au/climate © Commonwealth of Australia 2022, Australian Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base period: 1981-2018 Model run: 08/01/2022 Issued: 10/01/2022</p>	<p>Tercile maximum temperature probabilities for February to April 2022</p>  <p>www.bom.gov.au/climate © Commonwealth of Australia 2022, Australian Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base period: 1981-2018 Model run: 08/01/2022 Issued: 10/01/2022</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for February 2022</p>  <p>www.bom.gov.au/climate © Commonwealth of Australia 2022, Australian Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base period: 1981-2018 Model run: 08/01/2022 Issued: 10/01/2022</p>	<p>Tercile minimum temperature probabilities for February to April 2022</p>  <p>www.bom.gov.au/climate © Commonwealth of Australia 2022, Australian Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base period: 1981-2018 Model run: 08/01/2022 Issued: 10/01/2022</p>

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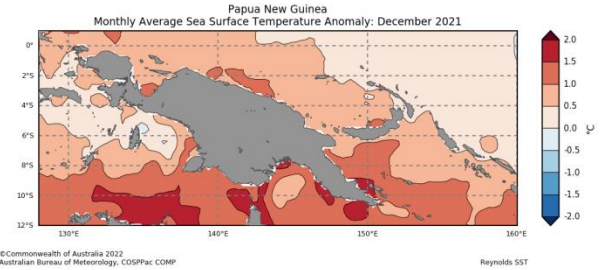
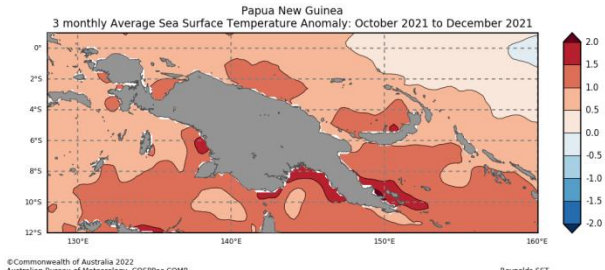
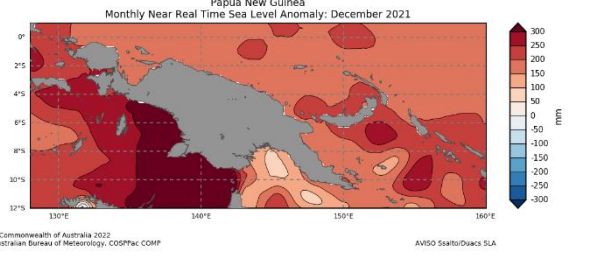
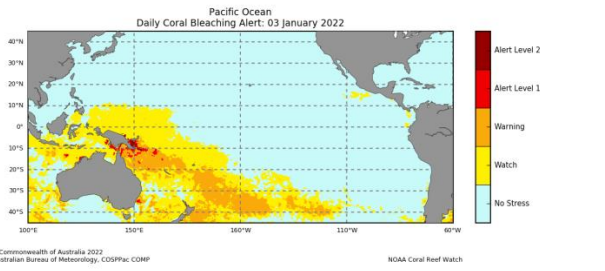
Good: $10 \leq X < 15$

High: $15 \leq X < 25$

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Part 2: Recent Ocean summary statement

Monthly: December 2021

Monthly: December	Last three months: October to December 2021:
<p>Sea Surface Temperature (Image 1):</p>  <p>Papua New Guinea Monthly Average Sea Surface Temperature Anomaly: December 2021</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p>  <p>Papua New Guinea 3 monthly Average Sea Surface Temperature Anomaly: October 2021 to December 2021</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>
<p>Sea level (Image 2):</p>  <p>Papua New Guinea Monthly Near Real Time Sea Level Anomaly: December 2021</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>AVISO SeaWiFS SLA</p>	
<p>Daily coral bleaching alert (Image 3):</p>  <p>Pacific Ocean Daily Coral Bleaching Alert: 03 January 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>	

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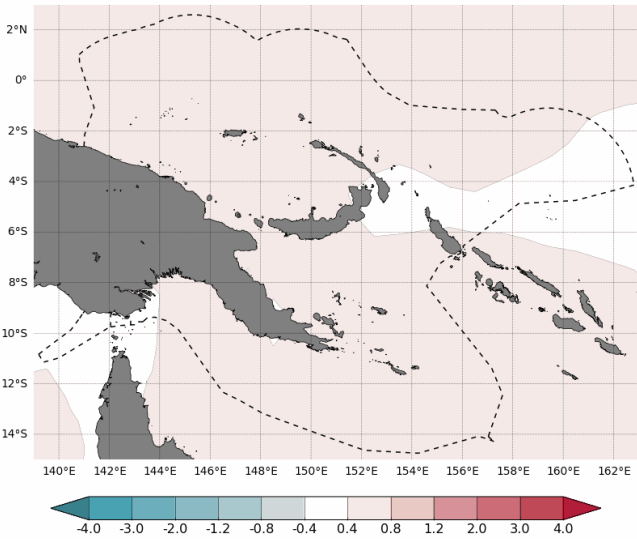
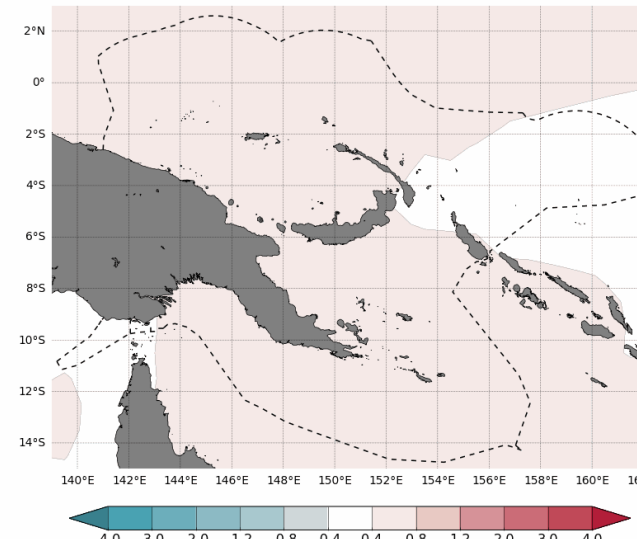
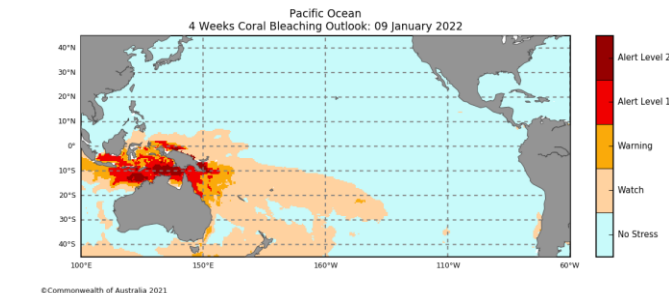
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Part 2i. Monthly and Seasonal Outlooks for February and February to April 2022

Monthly: February	Seasonal: February to April
Monthly sea surface temperature (Image 5): Difference from average sea surface temperature forecast for February 2022  Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile 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/ Model run: 03/01/2022 Issued: 05/01/2022	Seasonal sea surface temperature (Image 6): Difference from average sea surface temperature forecast for February to April 2022  Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile 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/ Model run: 03/01/2022 Issued: 05/01/2022
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
4-week Coral Bleaching (Image 9):  © Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP NOAA Coral Reef Watch	

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Summary Statement

Monthly and last three months: December 2021/October to December statement (Highly significant changes)

Monthly: December 2021 statement

Above normal rainfall was received across the country while normal rainfall was recorded at Port Moresby.

Rainfall data is not available for Madang, Goroka and Misima.

Last three months: October to December Statement

Rainfall for the last three months was above normal at Wewak, Vanimo and Port Moresby, normal at Kavieng, and below normal at Momote.. Wewak received its fourth , Vanimo fifth and Port Moresby eleventh wettest October to December on record.

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

Monthly /Seasonal rainfall and temperature Outlook statements (Highly significant changes)

Monthly rainfall outlook statements

The outlook for PNG for February offers little guidance except for Western, parts of Highlands and Milne Bay are likely to be below normal and the Islands of Milne Bay to be likely above normal.

Seasonal rainfall statements

Rainfall outlooks for PNG for February to April 2022 offers little guidance except for Western, parts of Highlands and Southern Region , New Britain and Bougainville are likely to be below normal and outer Islands of Milne Bay to be likely above normal.

Monthly and Seasonal Temperature statements

The maximum and minimum temperature outlook for PNG for February and February to April is very likely to be above normal.

Part 2: Recent Ocean summary statement

Monthly and last three months: December/October to December 2021 (Highly significant changes)

Sea surface temperature statement

Most of PNG experienced above-average SST in the month of December. Significant warm SSTs were experienced on the western and southern side of Milne Bay and Central. The highest SSTs were greater than 1.5 degrees above average, located off the coast of Gulf, Central and Milne Bay.

Sea level statement

Most of PNG experienced higher than normal sea level conditions reaching a maximum of 300mm in the South.

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Daily bleaching alert statement

PNG has a 'warning to alert level 2' coral bleaching alert status for much of the region.

Last three months sea surface temperature

Warmer than average SSTs were experienced in PNG ranging from 0.5 to 1.5 degrees above average.

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

Ocean Variable statement *(Highly significant changes)*

Monthly sea surface temperature statement

The outlook for PNG shows a significant temperature difference of 0.4 degrees for February.

Seasonal sea surface temperature statement

The outlook for PNG shows a significant temperature difference of 0.4 degrees for February to April 2022.

4-week coral bleaching

The outlook for PNG shows a 'warning to alert level 2' coral bleaching alert status for much of the region.

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

Product	Date: December 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	Nil				
EAR Watch	Nil				
Monthly Climate Briefing					
Ocean Outlook					
Climate data request	1.	Kumul Petroluem Holdings, UN Office of Project Services and PNG Chemical Engineering Consultancy Ltd	6	5	1
Total			6	5	1

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