

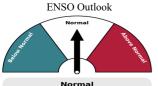
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### In Brief



Moderate El Niño conditions prevail in the tropical Pacific Ocean.

The current El Niño is expected to gradually strengthen through to the December 2023 to February 2024 period.



⇒ Near normal sea surface temperatures (SSTs) are likely in the Fiji Waters during November 2023 to January 2024.

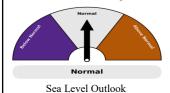


Coral Bleaching

⇒ The average position of the 29°C fisheries convergence zone is likely to be displaced south of its normal position, close to Fiji's EEZ, during the November 2023 to January 2024 period.

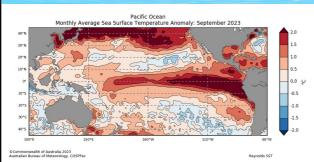
 $\Rightarrow$ 

The 4, 8 and 12 weeks coral bleaching outlook is at 'No Stress' across Fiji Waters.

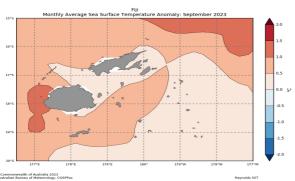


Sea level is likely to be *near normal* across Fiji Waters during the November 2023 to January 2024 period.

### Pacific Sea Surface Temperatures (SSTs): Recent Observations



Warmer than normal SSTs were observed across the equatorial Pacific Ocean. The SSTs in the equatorial Pacific Ocean is consistent with an El Niño event.

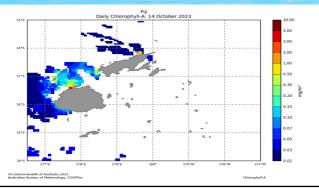


SSTs around the Fiji Waters were mostly warmer than normal during September, with anomalies of 0.5°C-1.5°C observed across most of the Fiji Waters.

Possible Applications:

Presence of warmer than usual waters in the central and eastern equatorial Pacific indicate persistence of an El Niño event and cool waters indicate La Niña. Monitoring warm patches of ocean gives insight into the potential for cyclone formation, and possible start or finish of the cyclone season. For further information on ocean temperature refer to <a href="http://oceanportal.spc.int/portal/help/about\_OceanTemperature.pdf">http://oceanportal.spc.int/portal/help/about\_OceanTemperature.pdf</a>.

## **Chlorophyll Concentration**

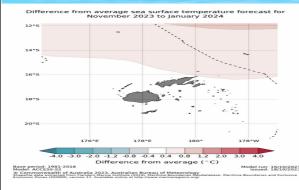


Daily chlorophyll concentration - 14<sup>th</sup> October 2023. High concentration of chlorophyll were observed along the northern coast of Viti Levu and Vanua Levu.

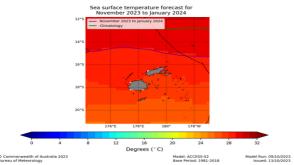
Possible Applications:

Chlorophyll concentration can be of great interest to fishermen targeting smaller pelagic (open sea) fish. High concentration of chlorophyll can also provide indication of potential hazardous conditions near the coast from reef fish diseases, such as ciguatera, harmful algal blooms, and outbreak of Crown of Thorns starfish, which is a coral eating pest. For further information on chlorophyll concentration refer to <a href="http://oceanportal.spc.int/portal/help/about chlorophyll.pdf">http://oceanportal.spc.int/portal/help/about chlorophyll.pdf</a>.

# Sea Surface Temperature (SST) Outlook



The SSTs in the Fiji Waters are likely to be *near normal* during the November 2023 to January 2024 period. Slightly *above normal* SSTs are likely around Rotuma.

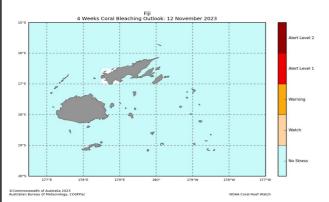


Average position of the 29°C convergence zone is likely to be displaced south of its normal position, close to Fiji's EEZ, during the November 2023 to January 2024 period (purple line).

#### Possible Applications:

The movement of the convergence zone has an influence on relative abundance of tuna in the Pacific Ocean. The 29°C isotherm around the western Pacific warm pool forms a good proxy for the convergence zone, and can therefore be used to track the gravity center of Skipjack tuna fishing activity. For further information on seasonal sea surface temperature forecast refer to <a href="http://oceanportal.spc.int/portal/help/about\_POAMA\_SST.pdf">http://oceanportal.spc.int/portal/help/about\_POAMA\_SST.pdf</a>.

# **Coral Bleaching Outlook**



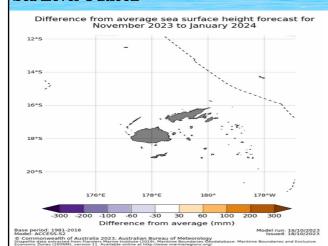
The 4, 8 and 12 weeks coral bleaching outlook is at 'No Stress' across the Fiji Waters.

Caption: The image is for 4 weeks outlook.

#### Possible Applications:

Once a potential bleaching event is detected, a management plan should be implemented to reduce the impacts of bleaching. For further information on coral bleaching refer to <a href="http://oceanportal.spc.int/portal/help/about\_coralbleaching.pdf">http://oceanportal.spc.int/portal/help/about\_coralbleaching.pdf</a>.

### Sea Level Outlook



*Near normal* sea level is likely across the Fiji Waters during November 2023 to January 2024.

#### Possible Applications:

Stakeholders can use forecasts of extreme sea level to make decisions about the protection of communities and infrastructure against coastal inundation. For further information on sea level refer to <a href="http://oceanportal.spc.int/portal/help/about\_POAMA\_Sea\_Level.pdf">http://oceanportal.spc.int/portal/help/about\_POAMA\_Sea\_Level.pdf</a>.

## Tide Predictions (November 2023 to January 2024)

Suva Tidal Gauge						Lautoka Tidal Gauge					
Monthly Highest Tide			Monthly Lowest Tide			Monthly Highest Tide			Monthly Lowest Tide		
Date	Time	Height	Date	Time	Height	Date	Time	Height	Date	Time	Height
26 Nov	17:26	2.04m	28 Nov	00:50	0.42m	24 Nov	18:07	2.30m	26 Nov	01:30	0.31m
14 Dec	19:16	1.98m	16 Dec	02:45	0.42m	14 Dec	18:59	2.21m	15 Dec	01:35	0.37m
13 Jan	19:52	2.08m	14 Jan	02:26	0.37m	13 Jan	19:38	2.32m	13 Jan	01:21	0.29m

All date and time are in Fiji Standard Time.

### Moon Phases (November 2023 to January 2024)

New Moon	First Quarter <b>①</b>	Full Moon O	Last Quarter 🛮 🕕	
			5 <sup>th</sup> November	
13 <sup>th</sup> November	20 <sup>th</sup> November	27 <sup>th</sup> November	5 <sup>th</sup> December	
13 <sup>th</sup> December	20 <sup>th</sup> December	27 <sup>th</sup> December	4 <sup>th</sup> January	
11 <sup>th</sup> January	18 <sup>th</sup> January	26 <sup>th</sup> January		

**Disclaimer:** While Fiji Meteorological Service takes all measures to provide accurate information and data, it does not guarantee 100% accuracy of the information presented in this outlook. The Department should be sought for expert advice, clarifications and additional information as and when necessary. The user assumes all risk resulting directly or indirectly from the use of this outlook.