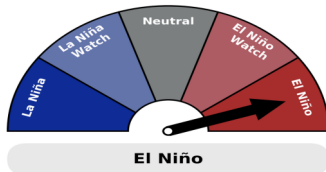
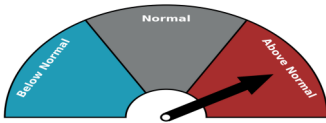


## In Brief



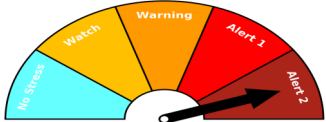
ENSO Outlook

⇒ Moderate El Niño continues in the tropical Pacific Ocean.



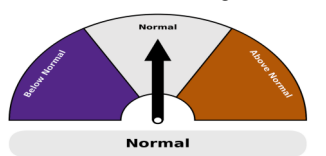
Above Normal  
 SST Outlook

⇒ The current El Niño event have likely passed its peak, with the event likely to continue through the March to May 2024 period.



Alert 2  
 Coral Bleaching

⇒ The average position of the 29°C convergence zone is likely to lie south of the Fiji Group during the February to April 2024 period.



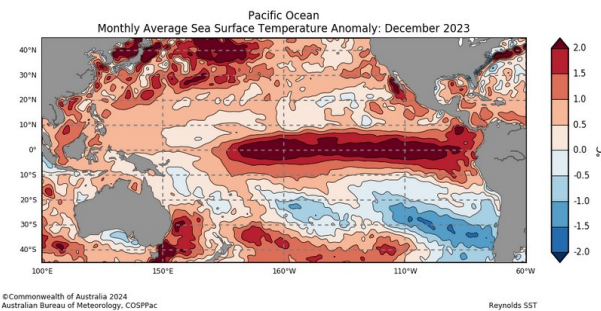
Normal  
 Sea Level Outlook

⇒ The 12 weeks coral bleaching outlook is at 'Alert Level 2' across most of Fiji Waters, with 'Alert Level 1' for southern half of Fiji's EEZ.

⇒ Sea level is likely to be *near normal* across most of Fiji's EEZ, while *below normal* sea level is likely for northern half of Fiji's EEZ during the February to April 2024 period.

⇒ Lautoka Wharf area lowest astronomical tide will be on 11<sup>th</sup> February.

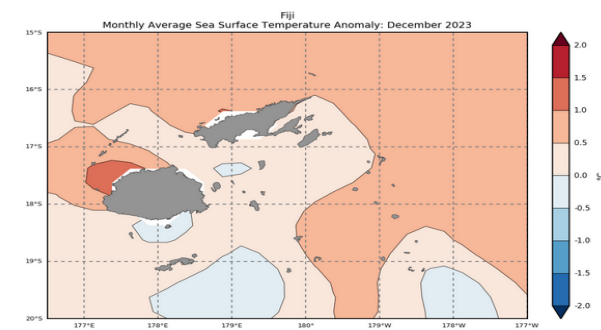
## Pacific Sea Surface Temperatures (SSTs): Recent Observations



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Reynolds SST

Warmer than normal SSTs were observed across the equatorial Pacific Ocean, while near normal anomalies exist in the western Pacific Ocean. The SSTs in the equatorial Pacific Ocean is consistent with an El Niño event.



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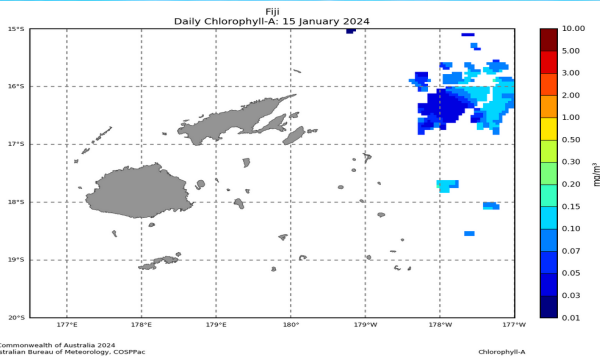
Reynolds SST

SSTs around the Fiji Waters were mostly *above normal* during December, with anomalies of 1.0°C to 1.5°C observed for Viwa and Mamanuca Group, as well as the southern parts of Yasawa Group, parts of southern Lau Group, and waters north of Vanua Levu, with anomalies of 0.5°C to 1.0°C. *Near normal* SSTs were observed for Beqa and parts of Lomaiviti Group, with anomalies of -0.5°C to 0.0°C.

### 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 [http://oceanportal.spc.int/portal/help/about\\_OceanTemperature.pdf](http://oceanportal.spc.int/portal/help/about_OceanTemperature.pdf).

## Chlorophyll Concentration

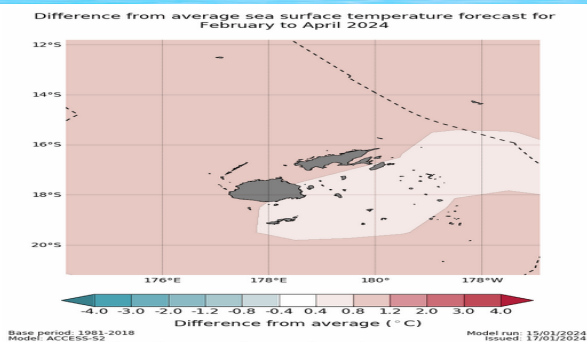


Daily chlorophyll concentration - 15<sup>th</sup> January 2024. Chlorophyll concentration were not observed in the Fiji Waters.

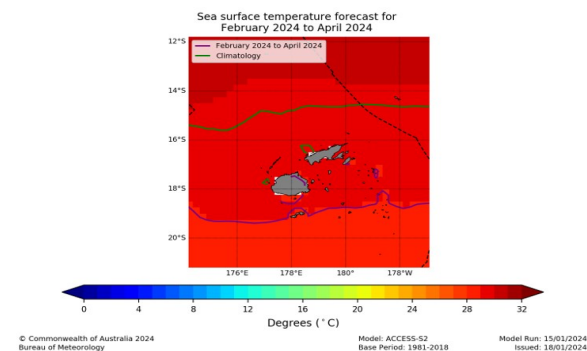
### Possible Applications:

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 [http://oceanportal.spc.int/portal/help/about\\_chlorophyll.pdf](http://oceanportal.spc.int/portal/help/about_chlorophyll.pdf).

## Sea Surface Temperature (SST) Outlook



Above normal SSTs are likely across most of Fiji Waters during the February to April 2024 period.

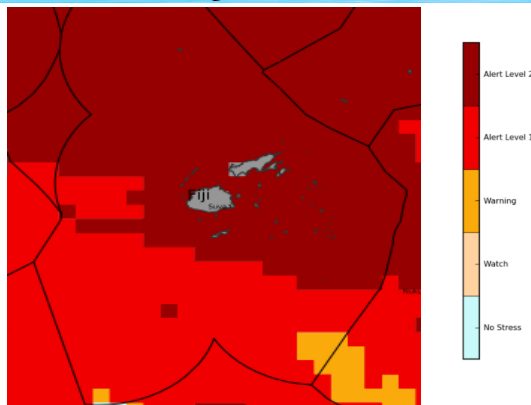


While the average position of the 29°C convergence zone is usually located north of Fiji during this time of the year (green line), it is likely to be displaced south of the Fiji Group during February to April 2024 period (purple line).

### 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 [http://oceanportal.spc.int/portal/help/about\\_POAMA\\_SST.pdf](http://oceanportal.spc.int/portal/help/about_POAMA_SST.pdf).

## Coral Bleaching Outlook



The 4 weeks coral bleaching outlook is at 'Warning' across most of Fiji Waters, with 'Alert Level 1' for waters north of Vanua Levu and 'Alert Level 2' for water around Rotuma.

The 8 weeks coral bleaching outlook is at 'Alert Level 1' across most of Fiji Waters, with 'Alert Level 2' for northern half of Fiji's EEZ.

The 12 weeks coral bleaching outlook is at 'Alert Level 2' across most of Fiji Waters, with 'Alert Level 1' for southern half of Fiji's EEZ.

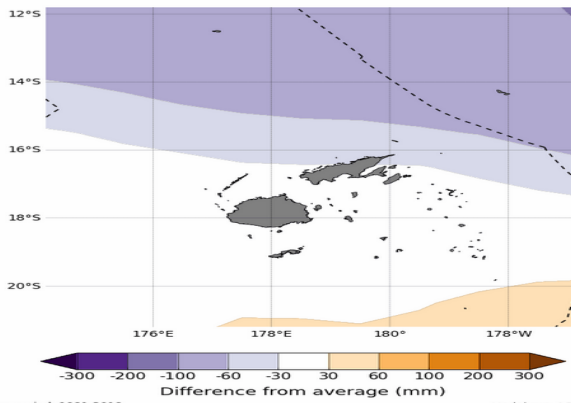
Caption: The image is for 12 weeks outlook.

### 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 [http://oceanportal.spc.int/portal/help/about\\_coralbleaching.pdf](http://oceanportal.spc.int/portal/help/about_coralbleaching.pdf).

## Sea Level Outlook

Difference from average sea surface height forecast for February to April 2024



Base period: 1981-2018  
Model: ACC-ESS-52  
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Geospatial data extracted from Fiji's Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.maritimerregions.org/>  
Model run: 15/01/2024 15:00

Near normal sea level is likely across most of Fiji's EEZ during the February to April 2024 period. Below normal sea level is likely for northern half of Fiji's EEZ during February to April 2024 period.

### 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 [http://oceanportal.spc.int/portal/help/about\\_POAMA\\_Sea\\_Level.pdf](http://oceanportal.spc.int/portal/help/about_POAMA_Sea_Level.pdf).

## Tide Predictions (February to April 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
11 Feb	19:34	2.13m	12 Feb	02:02	0.34m	10 Feb	18:31	2.39m	11 Feb	01:00	0.23m
12 Mar	07:49	2.12m	11 Mar	00:49	0.36m	10 Mar	18:13	2.39m	11 Mar	00:33	0.25m
10 Apr	07:22	2.12m	10 Apr	13:46	0.37m	9 Apr	06:16	2.36m	9 Apr	12:35	0.31m

All date and time are in Fiji Standard Time.

### Note:

The lowest astronomical tide of the year at Lautoka Wharf will be on 11<sup>th</sup> February. The Lowest tide at Lautoka Wharf will be around 1.00 am and the tide height is predicted to be 0.23m.

## Moon Phases (February to April 2024)

New Moon ●	First Quarter ☾	Full Moon ○	Last Quarter ☽
			3 <sup>rd</sup> February
10 <sup>th</sup> February	17 <sup>th</sup> February	25 <sup>th</sup> February	4 <sup>th</sup> March
10 <sup>th</sup> March	17 <sup>th</sup> March	25 <sup>th</sup> March	2 <sup>nd</sup> April
9 <sup>th</sup> April	16 <sup>th</sup> April	24 <sup>th</sup> April	

**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.