FIJI METEOROLOGICAL SERVICE
Private Mail Bag (NAP0351)
Nadi Airport, Fiji
Ph: +679 6724888,
Fax: +679 6720430
Email: climate@met.gov.fj
Also online at http://www.met.gov.fj

# Fiji Ocean Outlook

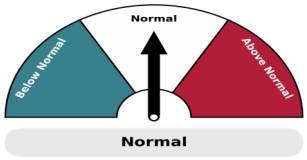
**Volume : 5** **Issue : 11**
Issued: November 20, 2023
Next Issue: December 20, 2023

## In Brief


ENSO Outlook

⇒ Moderate El Niño conditions prevail in the tropical Pacific Ocean.

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



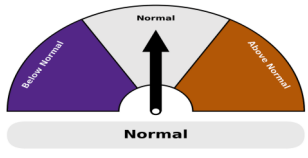

SST Outlook

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


Coral Bleaching

⇒ The average position of the 29°C convergence zone is likely to lie over the Fiji Group during the December 2023 to February 2023 period.

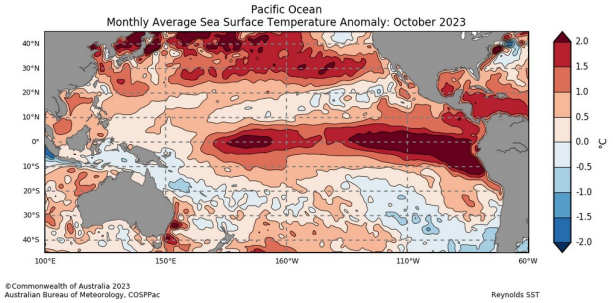
⇒ The 4, 8 and 12 weeks coral bleaching outlook is at *'No Stress'* for majority of the Fiji Waters, with '*Watch*' in place for waters around Rotuma.



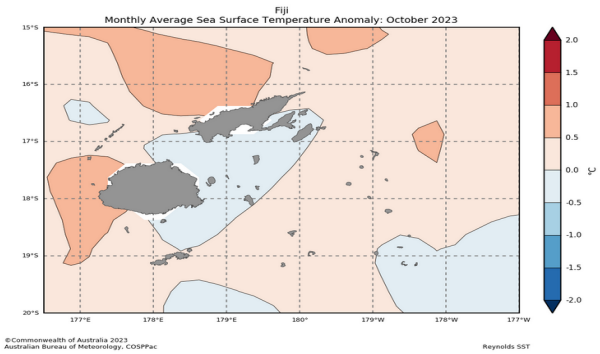

Sea Level Outlook

⇒ Sea level is likely to be *near normal* across most of Fiji's EEZ, while *below normal* sea level is likely for Rotuma during the December 2023 to February 2024 period.

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




Warmer than normal SSTs were observed across the equatorial Pacific Ocean, with near to below normal in the western 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 October, with anomalies of 0.5°C-1.5°C observed across most of the Fiji Waters, while *near normal* SSTs were observed in the water between Viti Levu and Vanua Levu, Beqa, Lomaiviti Group, Taveuni and parts of the southern Lau Group with anomalies of -0.5°C to 0.0° C.

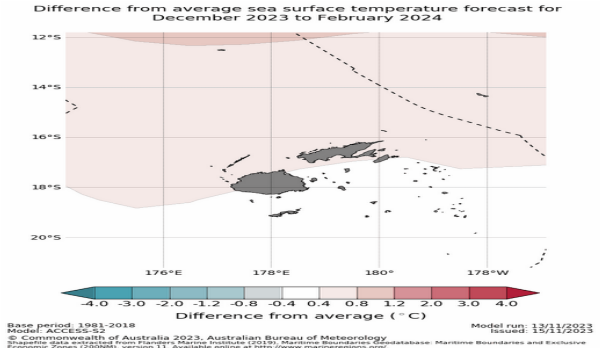
***Possible Applications:***
*Presence of warmer than usual waters in the central and eastern equatorial Pacific indicate persistence of an El Niño event and cool waters indicate La Niña. Monitoring warm patches of ocean gives insight into the potential for cyclone formation, and possible start or finish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

## Chlorophyll Concentration

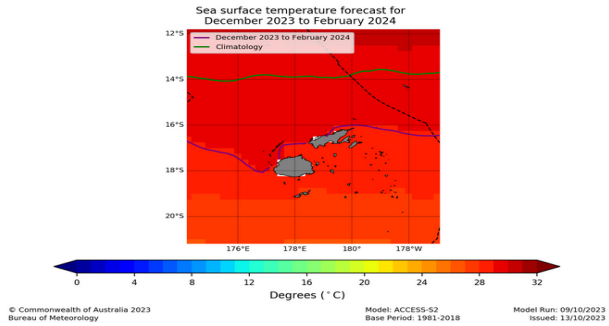
Chlorophyll concentration map is not available due to technical issues.

***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



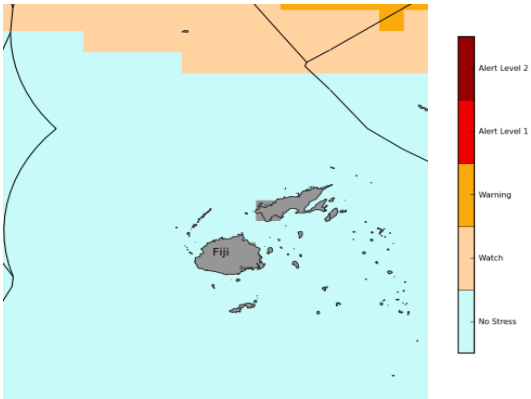

The SSTs in the Fiji Waters are likely to be *near normal* during the December 2023 to February 2024 period.




While the average position of the 29°C convergence zone is usually located far north of Fiji during this time of the year (green line), it is likely to be displaced right over Fiji Group during the December 2023 to February 2024 period (purple line) period.

***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

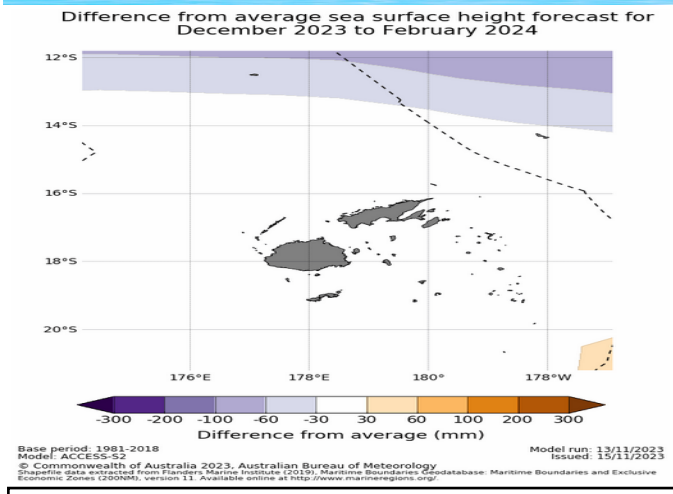



The 4, 8 and 12 weeks coral bleaching outlook is at *'No Stress'* for majority of the Fiji Waters, with '*Watch*' in place for waters around Rotuma.

*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 [http://oceanportal.spc.int/portal/help/about_coralbleaching.pdf](http://oceanportal.spc.int/portal/help/about_coralbleaching.pdf).*

## Sea Level Outlook




*Near normal* sea level is likely across most of Fiji's EEZ during the December 2023 to February 2024 period. *Below normal* sea level is likely for Rotuma during the December 2023 to February 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.*

## Tide Predictions (December 2023 to February 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** |
| 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 |
| 11 Feb | 19:34 | 2.13 | 12 Feb | 02:02 | 0.34m | 10 Feb | 18:31 | 2.39m | 11 Feb | 01:00 | 0.23m |

*All date and time are in Fiji Standard Time.*

## Moon Phases (December 2023 to February 2024)

| New Moon ● | First Quarter ◑ | Full Moon ○ | Last Quarter ◐ |
|---|---|---|---|
| | | | 5th December |
| 13th December | 20th December | 27th December | 4th January |
| 11th January | 18th January | 26th January | 3rd February |
| 10th February | 17th February | 25th February | |

***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.*