



# Kiribati Ocean Outlook

## November to January 2022



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# Summary

- ❖ Normal SST is expected over the Gilbert islands while the Phoenix and Line groups will be experiencing cooler than normal.
- ❖ The upwelling zone is forecasted to lie further south of the Gilbert and the Phoenix groups.
- ❖ The coral bleaching outlook for the Southern Gilbert group will be on watch level while the rest of the islands will experience no thermal stress.
- ❖ The seasonal sea level forecast for all the Kiribati groups will range from -0.03 to 0.1m.
- ❖ The fifth of November is the highest tide of the year with 2.93m.

# Sea Surface Temperature (SST)

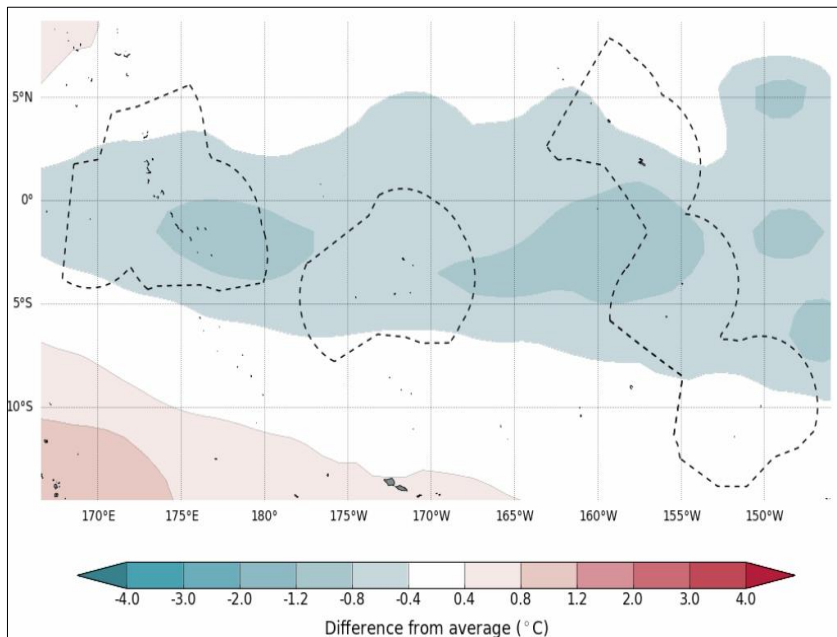


Figure 1. SST for November 2021

The two images show sea surface temperature (SST) variation in the Kiribati region for the month of November to January 2022.

The current state of sea surface temperature is normal and cooler than normal as shown in figure 1.

The cool water over the Gilbert group is expected to shift easterly while the Phoenix and Line groups will remain cooler than average for the next three months Nov-Jan 2022 (Fig 2).

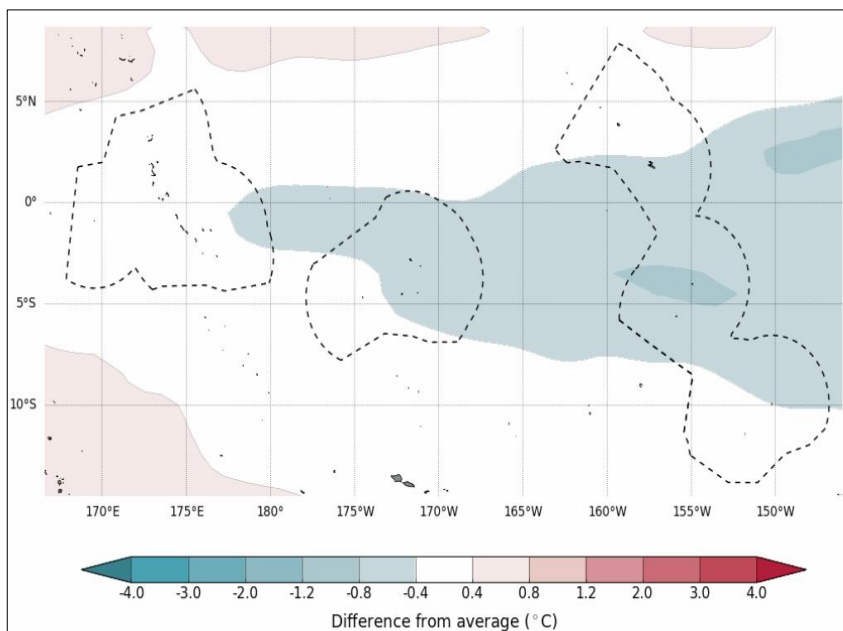
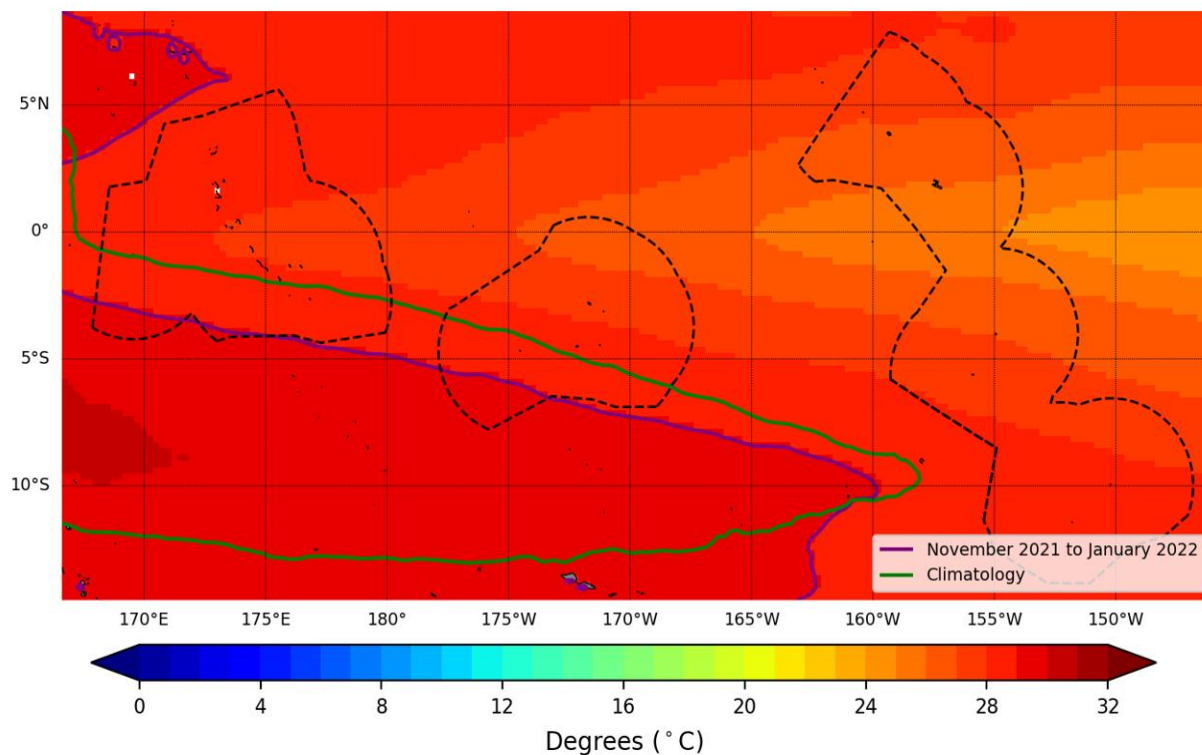


Figure 2. SST for January 2022

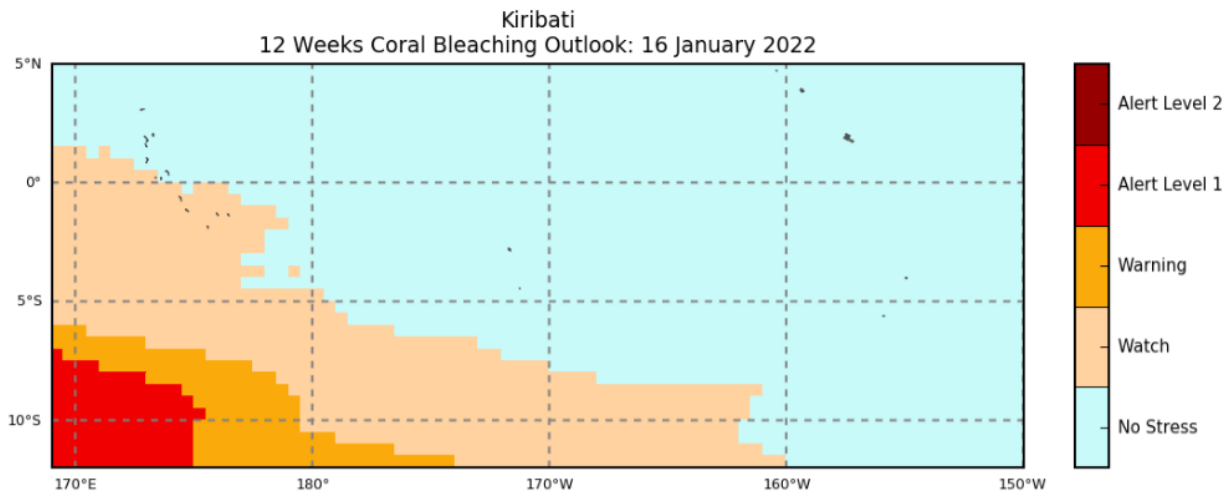
# Upwelling zone based on Sea Surface Temperature



The image above shows the location of the upwelling zone (purple line) expected for the month of November to January 2022 based on sea surface temperature (SST) condition. The upwelling zone known to be a zone rich in nutrient and might be favorable to migratory fishes such as Tuna (need to verify with MFMRD).

Based on the image above, the upwelling zone (purple line) is projected to lie further south of the Gilbert the Phoenix groups. Therefore, the area is expected to have abundant of migratory fishes which could be an interest of fishing vessels.

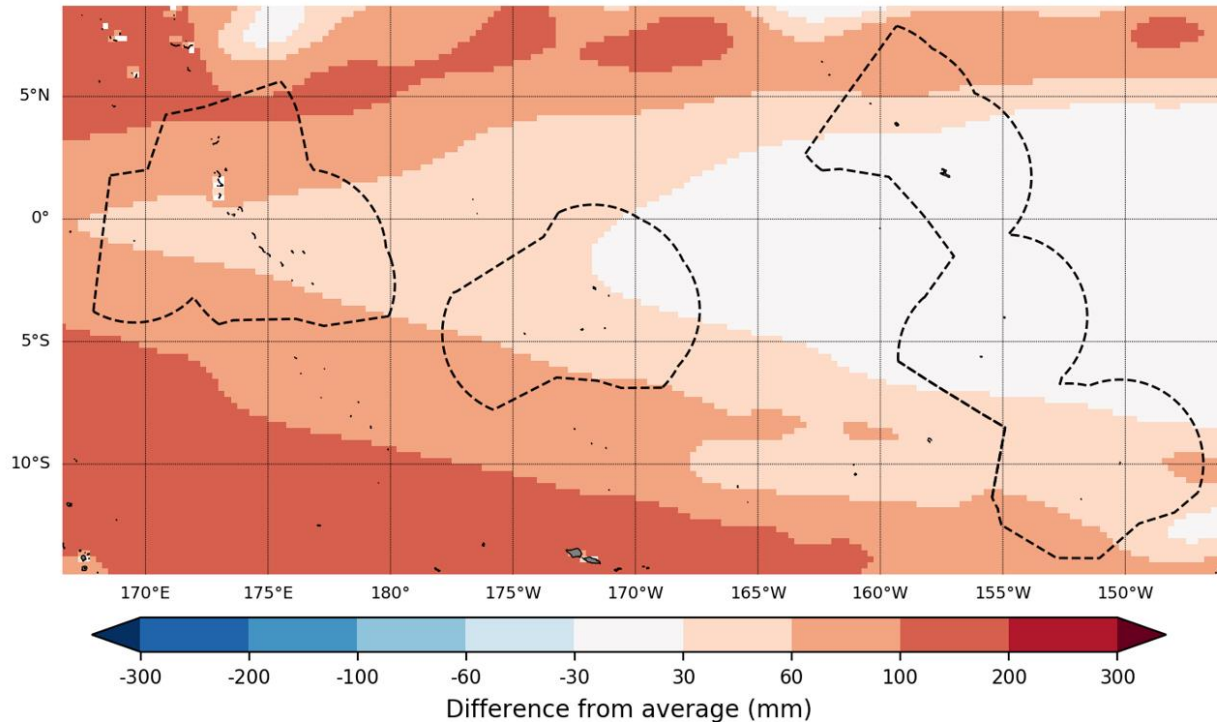
# Coral Bleaching



Warm SSTs is expected to affect the Southern Islands in the Gilbert group while the Phoenix and Line groups will experience no thermal stress for the coming three months (Nov-Jan 2022).

**Note:** This forecast is based only on the Sea surface temperature, thus verification from MFMRD on coral conditions is required. Local environmental conditions can also contribute towards the bleaching process.

# Seasonal Sea Level Forecast



The outlook across Kiribati for November to January 2022 shows a significant temperature difference of -0.03 to 0.1m. This additional sea level anomaly needs to be considered when using the tide calendars by adding it onto the high/low tide levels.

# Extreme Spring Tide Prediction

MONTH	DATE	TIME	HEIGHT (M)	MOON PHASE
November	4 <sup>th</sup>	1702	2.88	New Moon
	5 <sup>th</sup>	1639	2.93	
	6 <sup>th</sup>	1702	2.91	
	7 <sup>th</sup>	1759	2.81	
December	3 <sup>rd</sup>	1542	2.85	
	4 <sup>th</sup>	1624	2.91	
	5 <sup>th</sup>	1708	2.89	
	6 <sup>th</sup>	1754	2.82	

The above table shows the extreme spring tide for November, and December but the highest tide of the year falls on the fifth of November 2021 (highlighted). These highest tides can cause damages and inundation if associated with gusty and strong winds. Therefore, those who live along the coastal areas are encouraged to take precautionary measures to minimize possible threats.