

# Kiribati Ocean Outlook

## December to February 2022



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# Summary

- ❖ Neutral 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 remain further south of the Gilbert and Phoenix groups.
- ❖ The coral bleaching outlook- all the Kiribati groups will experience no thermal stress.
- ❖ The seasonal sea level forecast for all the Kiribati groups will range from -0.1 to 0.03m.
- ❖ The next extreme spring tide is expected to start from the 3<sup>rd</sup> of December 2021 with height of 2.85m at 0342pm.

# Sea Surface Temperature (SST)

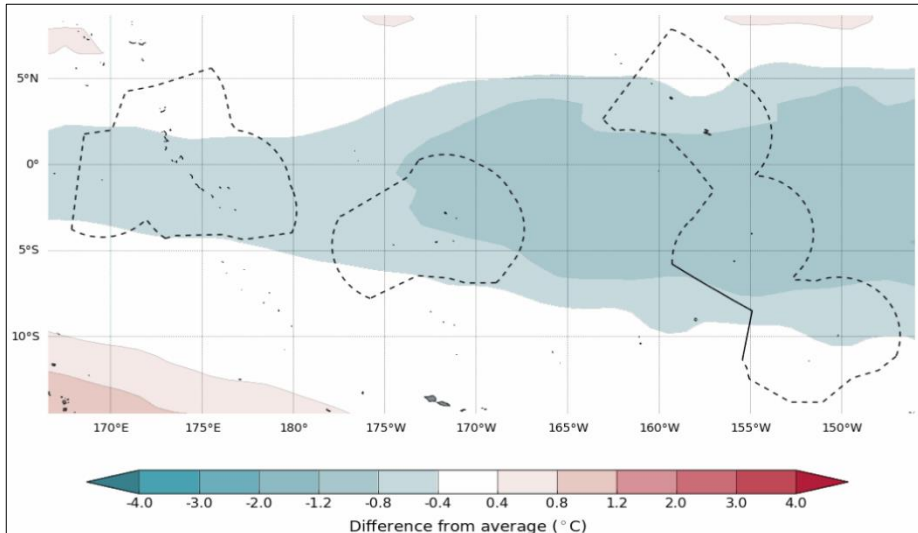


Figure 1. SST for December 2021

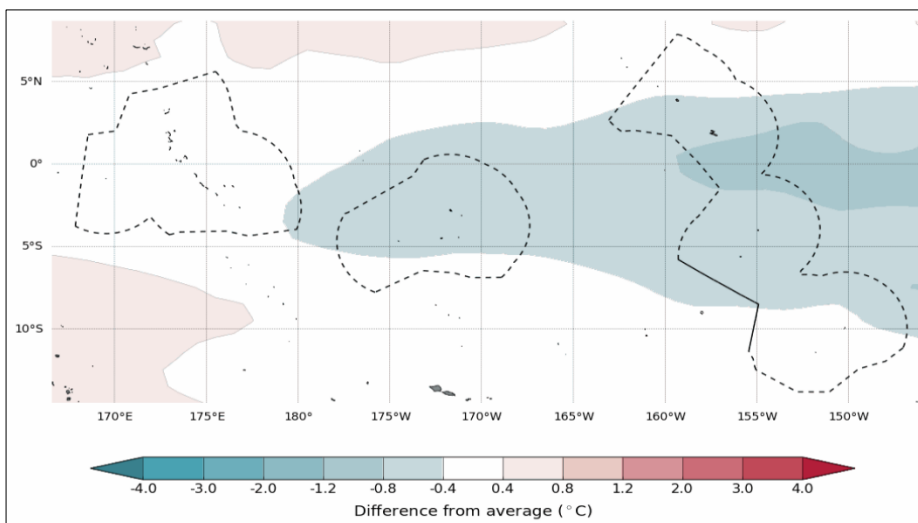


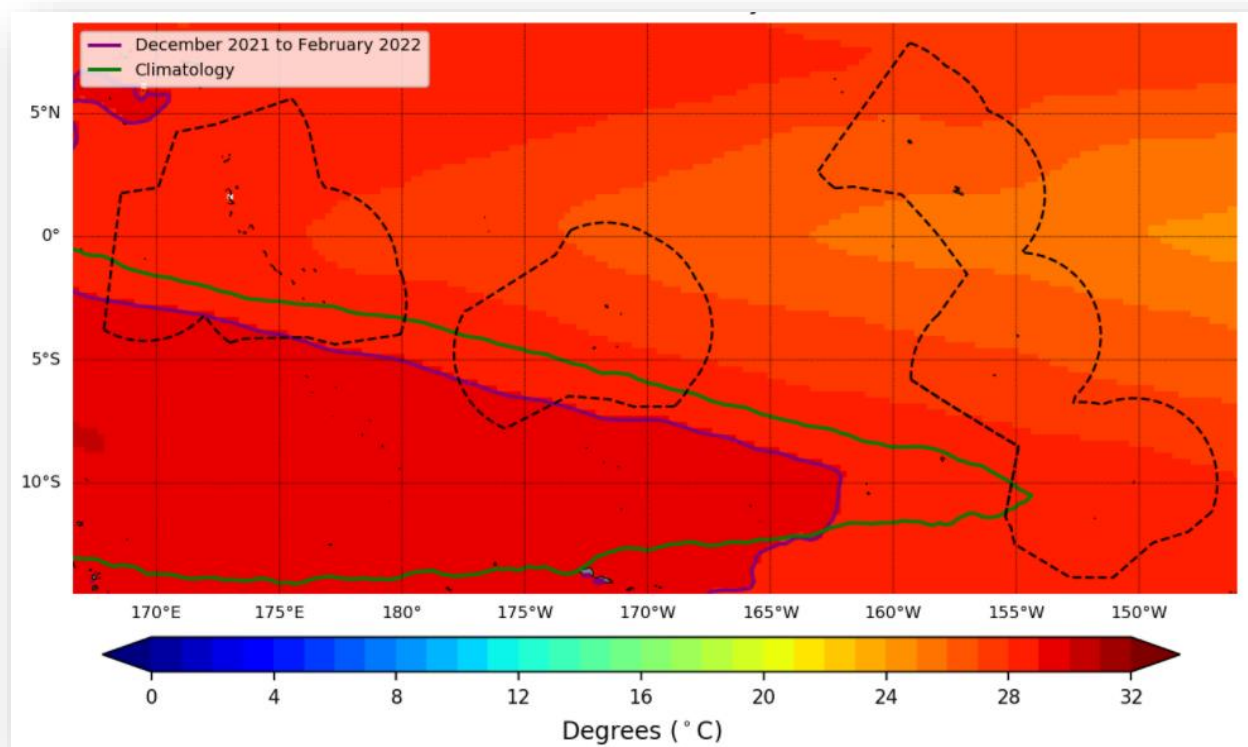
Figure 2. SST for February 2022

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

The current state of sea surface temperature (Fig 1) is cooler than normal ranging from -1.2 to -0.4 degrees for all the Kiribati region except for the Northern parts of Gilbert islands which is near normal.

The Gilbert group is expected to be near normal while the Phoenix and Line groups will experience cooler than normal for the next three months Dec-Feb 2022 (Fig 2). Cooler waters can also contribute to less rainfall within that period.

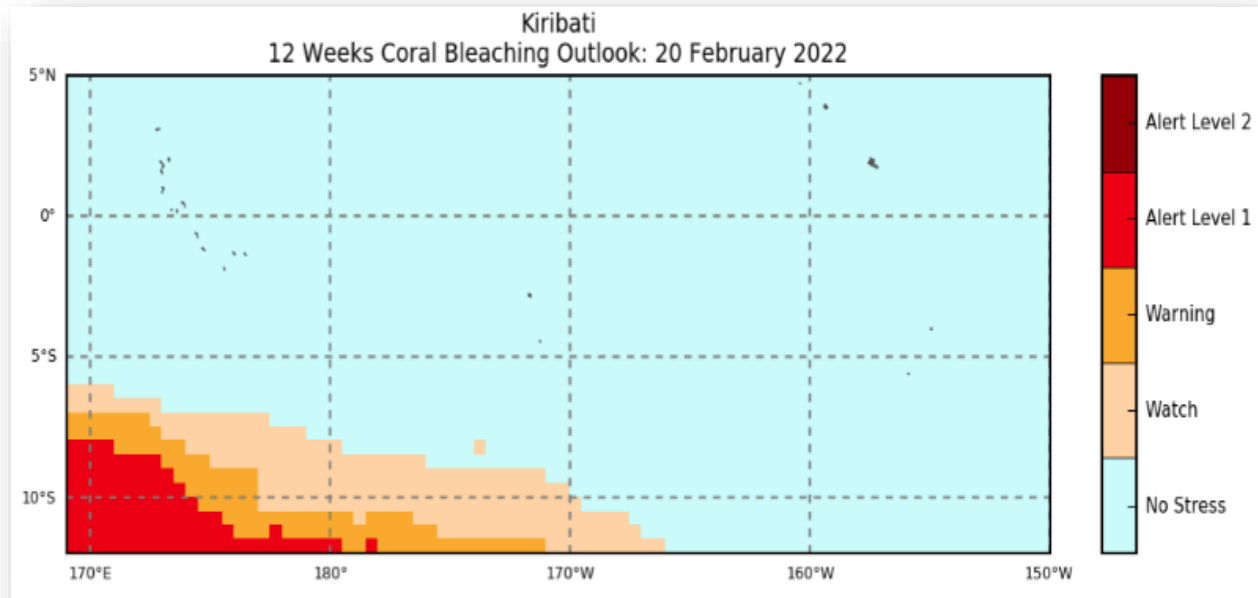
# Upwelling zone based on Sea Surface Temperature



The image above shows the location of the upwelling zone (purple line) expected for the month of December to February 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 and Phoenix groups. Therefore, the area is expected to have abundant of migratory fishes which could be an interest in fishing vessels.

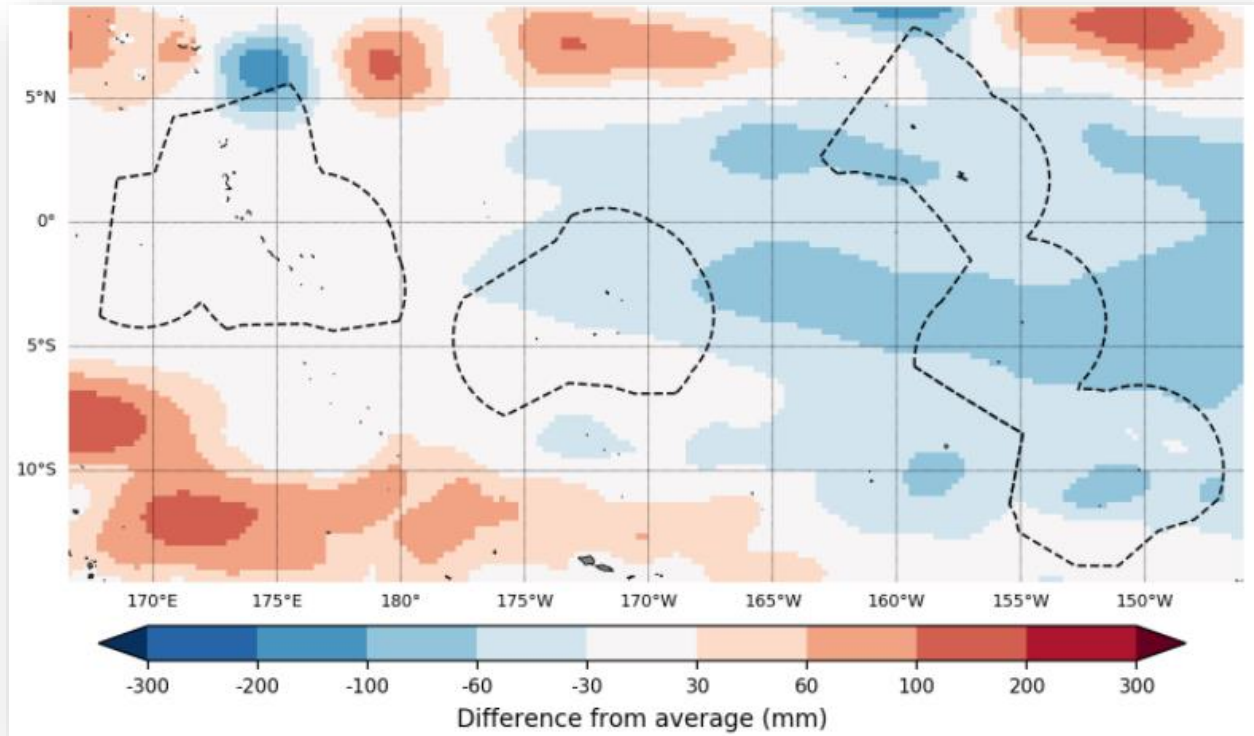
# Coral Bleaching



The coral bleaching outlook for the Kiribati region will experience **no thermal stress** for December to February 2022. Therefore, it is a good time for leisure activities such as swimming, diving, or surfing in the Kiribati waters.

**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



A **decrease in sea level** is expected over the Line and Northern Phoenix groups. Gilbert group and Southern parts of the Phoenix group sea level favor normal height. This forecast is based on the sea surface temperature.

# Extreme Spring Tide Prediction

MONTH	DATE	TIME	HEIGHT (M)	MOON PHASE
December	3 <sup>rd</sup>	1542	2.85	New Moon
	4 <sup>th</sup>	1624	2.91	
	5 <sup>th</sup>	1708	2.89	
	6 <sup>th</sup>	1754	2.82	
January	2 <sup>nd</sup>	1620	2.85	
	3 <sup>rd</sup>	1706	2.88	
	4 <sup>th</sup>	1751	2.85	
	31 <sup>st</sup>	1620	2.81	
February	1 <sup>st</sup>	1702	2.88	
	2 <sup>nd</sup>	1742	2.88	
	3 <sup>rd</sup>	1817	2.81	

The above table shows the extreme spring tide for December – February 2022.

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.