



NAURU METEOROLOGICAL & HYDROLOGICAL SERVICES



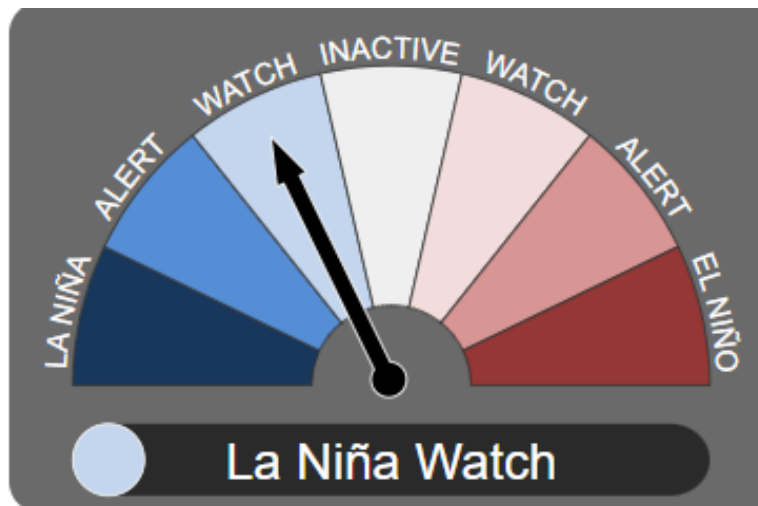
The Early Action Rainfall Watch provides sector managers with a brief summary of recent rainfall patterns, particularly drought and the rainfall outlook for the coming months.

Issue Date: 10/12/2024

ENSO OUTLOOK

Current El Nino - Southern Oscillation Status

ENSO



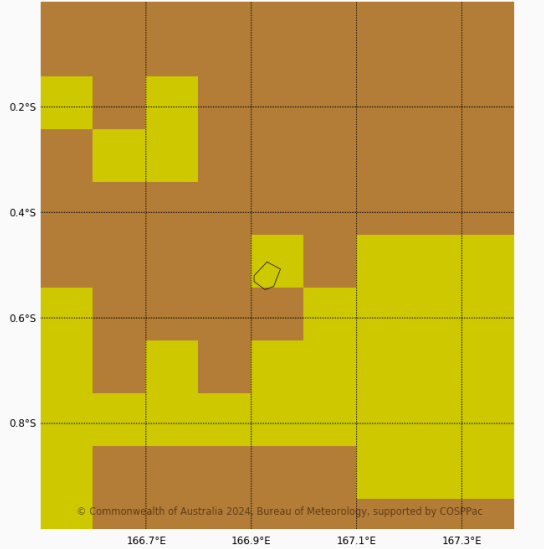
The ENSO outlook is at La Nina Watch

The ENSO Outlook is currently at 'La Niña Watch', meaning there are some signs that a La Niña might form in the Pacific Ocean later in 2024. A La Niña Watch does not guarantee that a La Niña will develop. Climate models suggest that SSTs in the central tropical Pacific are likely to continue to cool over the coming months.

STATUS SUMMARY

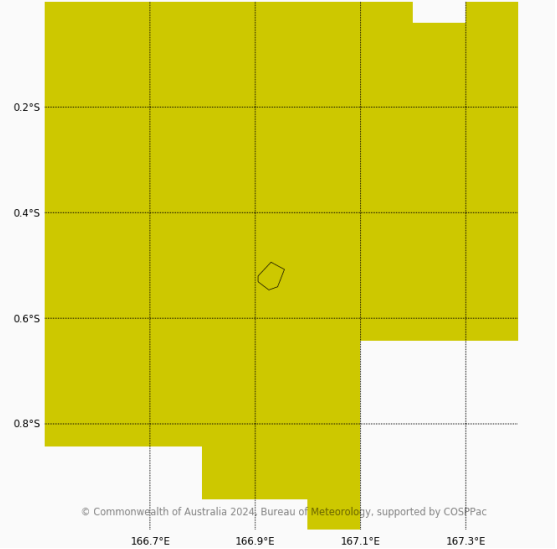
Rainfall status for November 2024

Data source: MSWEP Method: Percentile
Base period: 1980-2021 Issued: 07/12/2024



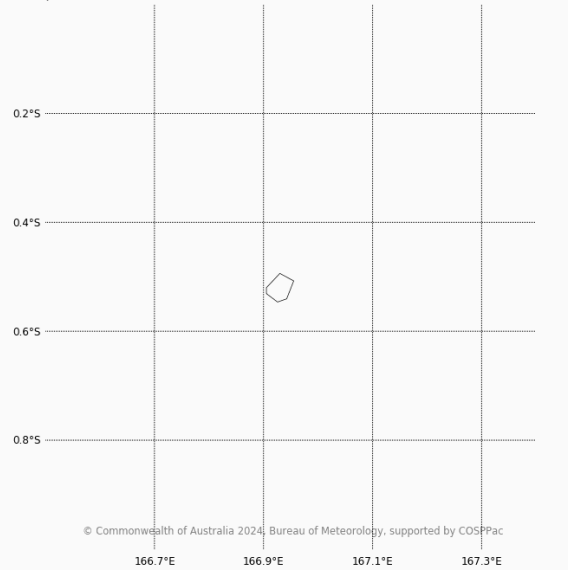
3-month rainfall status to end of November 2024

Data source: MSWEP Method: Percentile
Base period: 1980-2021 Issued: 07/12/2024



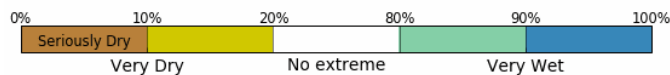
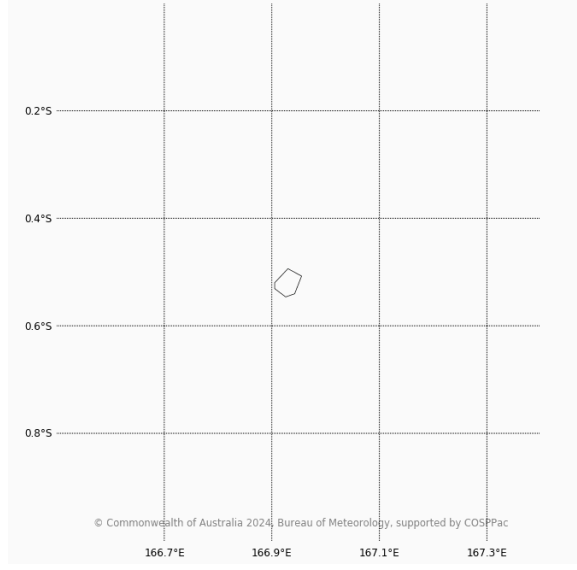
6-month rainfall status to end of November 2024

Data source: MSWEP Method: Percentile
Base period: 1980-2021 Issued: 07/12/2024



12-month rainfall status to end of November 2024

Data source: MSWEP Method: Percentile
Base period: 1980-2021 Issued: 07/12/2024



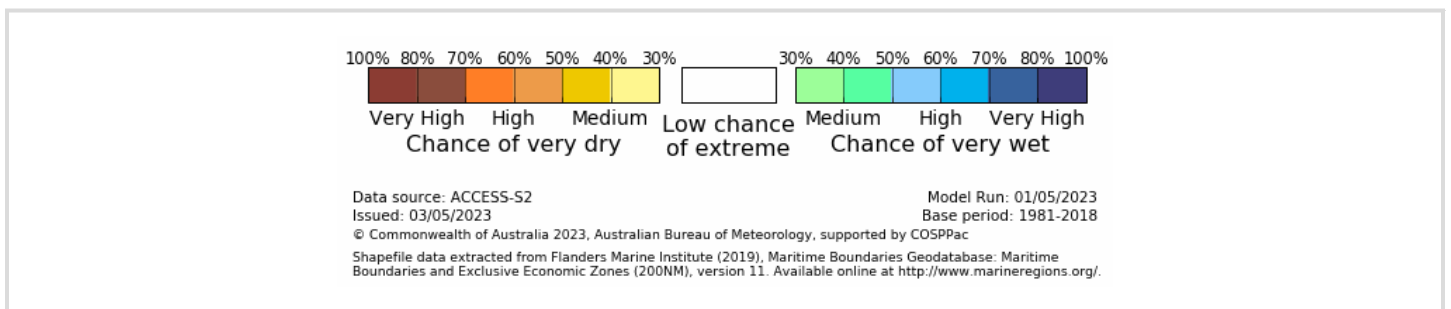
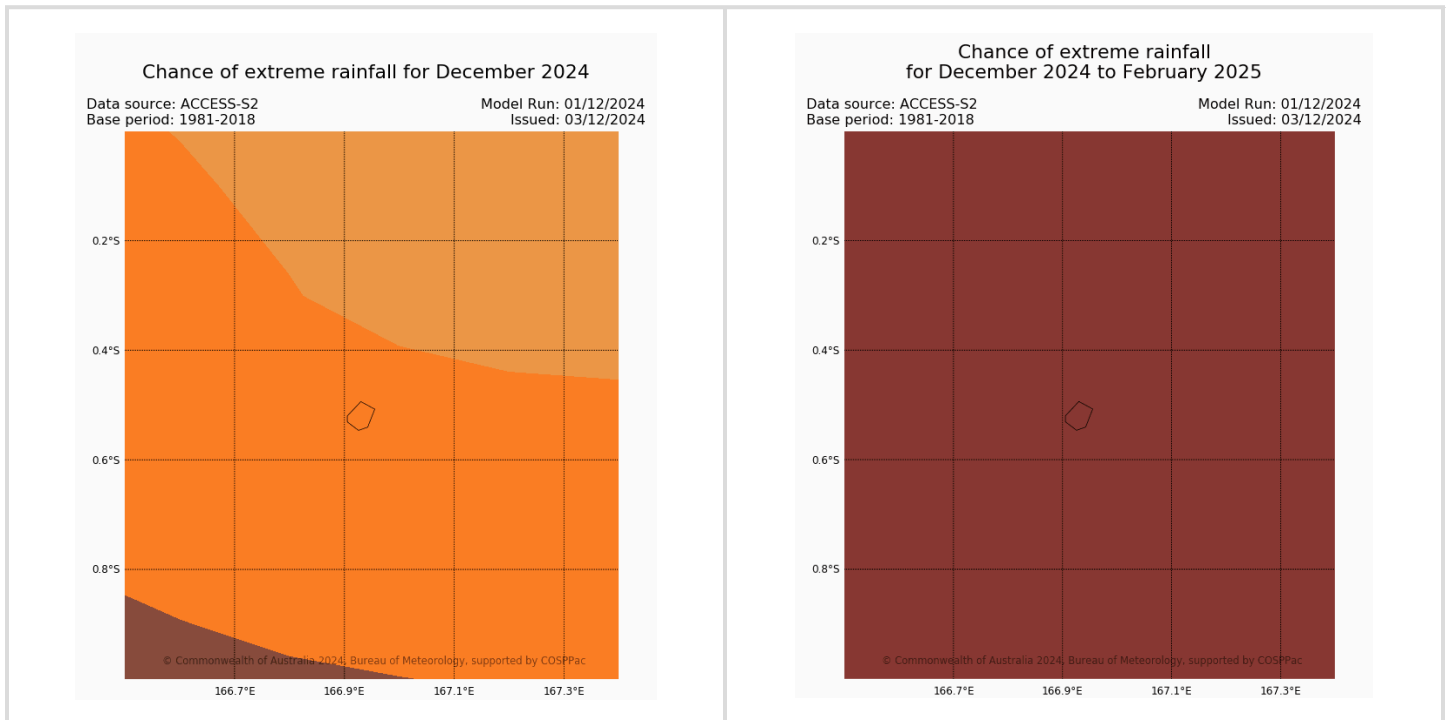
Data source: MSWEP Model Run: 01/04/2023
Method: Percentile Base period: 1980-2021
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Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marinerregions.org/>.

During the past **6 & 12 month time-scale**, **no extreme** weather events occurred during those months, **average** rainfall was recorded.

However, on the past **1 & 3 months** Nauru experienced **very dry conditions**, below **average** rainfall was recorded during those months.

The maps above shows the past weather conditions from this month.

OUTLOOK SUMMARY



For this month of **December**, **high chance of very dry conditions** is expected for Nauru. we'll be expecting **below normal** rainfall for this month.

Then on the next **3month** outlook from **December 2024 to February 2025**, probability for **very dry situations** increases from **high** to **very high**.

The maps above shows chance of extreme rainfall for this month and the next 3 month outlook.

This in combination with the past status conditions suggests that the chances of La-Nina for the Republic is increasing. ENSO status still on La-Nina (WATCH). However, comparing the past status maps and the outlook maps, indicates that La-Nina may form in the coming months.

IMPACTS TABLE

After the specified period of below or above average rainfall, the following primary agricultural and hydrological variables and secondary socio-economic and health variables may to be impacted. Note the periods are estimates only. Allow for uncertainty associated with island size, topography, geology and soil type. Contact the relevant sector offices for further information on impacts.

VERY DRY TO SERIOUSLY DRY CONDITIONS (La Nina)

SECTOR	1 - month period most relevant for	3 - month period most relevant for	6 - month period most relevant for	12 - month period most relevant for
WATER	Small water tanks (5000ml), small creeks and streams (if present) Increased water demands	Small wells, Small streams (if present) Desalination plant unable to meet water demand	Boreholes, deeper wells, large water tanks.	Large water sources (e.g., rivers, artisan wells if present) Groundwater depletion
AGRICULTURE AND FOOD SECURITY	Shallow rooted crops (e.g., chillies, cherry tomatoes and eggplants)	Deeper rooted crops (e.g., bananas and guavas)	Small trees (including fruit trees e.g., breadfruit, pawpaw and sugarcane)	Large trees (including fruit trees e.g., coconut and breadfruit). Lime trees native trees Soil quality
HEALTH		Diarrhoea outbreak, asthma, skin rash.	Diarrhoea outbreak, asthma, skin rash.	Heat stroke, dehydration and conjunctivitis.
FISHERIES			Reduced tuna catches	
SOCIO-ECONOMIC			School closure	Increase household expenses on food.

VERY WET CONDITIONS (El Nino)

SECTOR	1 - month period most relevant for	3 - month period most relevant for	6 - month period most relevant for	12 - month period most relevant for
AGRICULTURE AND FOOD SECURITY	Reduced mangoes	Increased pig diseases due to poor shelter Soil quality (if shading nets poorly located)	Soil erosion Pandanus fruit rotting	
HEALTH	Increased incidences of dengue and gout	Increased incidences of dengue, flu, pneumonia and gout	Increased incidences of dengue, flu, pneumonia and gout	Increased incidences of dengue, flu, pneumonia and gout
FISHERIES	Increased tuna catches	coral bleaching		
SOCIO-ECONOMIC	Frequent road flooding Roof leaking Disrupts communication (increased cloud coverage) Wet laundry Mental health (stuck indoors)	Frequent flooding Disrupts phosphate mining Frequent electricity outage Increases and frequent shipping and flight delays (affect food supplies) School closures	Frequent flooding Disrupts phosphate mining Frequent electricity outage Increases and frequent shipping and flight delays (affect food supplies) School closures	Frequent flooding Disrupts phosphate mining Frequent electricity outage Increases and frequent shipping and flight delays (affect food supplies) School closures

RAINFALL MONITORING STATUS

The **rainfall status** maps are based on rainfall values from the MSWEP dataset which are then converted to the percentile index. The percentile index calculates the ranking of rainfall observed for a period against corresponding periods in the historical records for a particular timescale. MSWEP is a global precipitation product that combine rain gauges, satellite and ERA-5 reanalysis data and is provided at a 0.1° resolution. **Seriously dry** is defined as **Meteorological drought** assessed by rainfall

data only. It corresponds to rainfall for that period being in the bottom 10% of the historical record. **NO EXTREME** indicates that rainfall is within that middle 60% of historical observations for the respective timescale. In other words, rainfall that is **not extreme**. The 3 - 6 and 12 month timescale are more accurate representations of drought while the 1 - month timescale can be used to provide an indication of recent **dry (or wet)** spell conditions.

RAINFALL OUTLOOK

The **chance of extreme rainfall** maps are based on the likelihood of **very wet** or **very dry conditions**. This is equivalent to the chance that rainfall for that forecast period will be in the top or bottom 20% of historical observations for that selected period. The darker the shading, the more likely these extreme scenarios are. The white shading refers to a **low chance of extreme** which means the most likely scenario for that outlook period is for rainfall to be near **average** or **slightly below average** or **slightly above average** (not very wet nor very dry). The outlooks have been produced using the <http://www.bom.gov.au/climate/ahead/about/model/access.shtml>.

CONTACT FOR MORE INFO

Email us at nauru.met16@gmail.com for any concerns or suggestions

or contact the NMHS Director Mr. Graymea Ika at graymeaika1510@gmail.com (+674 558 8898)