KIRIBATI EARLY ACTION RAINFALL WATCH- OCTOBER 2022

Rainfall Status to September 2022:

- Over the last **3- to 24-months**, Very Dry to Seriously Dry conditions existed for most of the Kiribati Islands. Though there are also some islands along the groups with the no alert levels.
- This is due to a **La Niña** event being in place from October 2020 to March 2021 and from November 2021 to August 2022. Kiribati experiences drier than normal conditions during La Niña. The current ENSO status is La Niña and is likely to persist into early 2023.

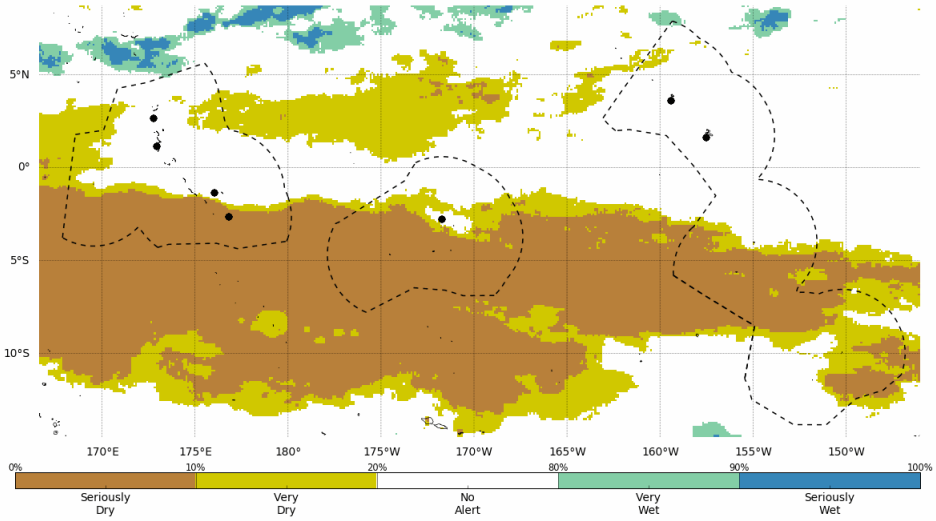
Rainfall Outlook to January 2023:

- The Very Dry conditions are likely to continue.
- For **October 2022,** there is a **very high chance of very dry conditions** for most parts of the Southern Gilbert Islands, the Phoenix Islands, and the Southern Line Islands including Kiritimati in the north. There is a **medium to high chance of very dry conditions** for some islands in the Southern Gilbert and Southern Line including the northernmost Line Island (Teraina).
- For **October to December 2022,** there is a **very high chance of very dry conditions** for the Gilbert Islands and Banaba, Southern Phoenix and Line Islands and also the northernmost Islands in the Line group. There is a **high chance of very dry conditions** for the central Glibert Islands, Kanton (Phoenix) and central Line Island (Jarvis).
- For **November to January 2023,** there is a **very high chance of very dry conditions** for Gilbert group, Southern Phoenix and most of parts of the Line group. Kanton (Phoenix) and Teraina (northernmost island) have a **medium to high chance of very dry condition.**

Rainfall status for the last 3-months, 6-months, 12-months, and 24-months

	3-months July to September 2022	6-months April to September 2022	12-months October 2021 to September 2022	24-months October 2020 to September 2022
Banaba	Very Dry	Seriously Dry	Seriously Dry	Seriously Dry
Gilbert Islands north of equator	No Alert	Seriously Dry	Seriously Dry	Seriously Dry
Southern Gilbert Islands	No Alert to Seriously Dry	Seriously Dry	Seriously Dry	Seriously Dry
Phoenix Islands	Very Dry to Seriously Dry	Seriously Dry	Seriously Dry	Seriously Dry
Line Islands north of the equator	No Alert	No Alert to Seriously Dry	Very Dry to Seriously Dry	Very Dry to Seriously Dry
South Line Islands	Very Dry to Seriously Dry	Very Dry to Seriously Dry	Seriously Dry	No Alert to Seriously Dry

3-month rainfall status to end of September 2022

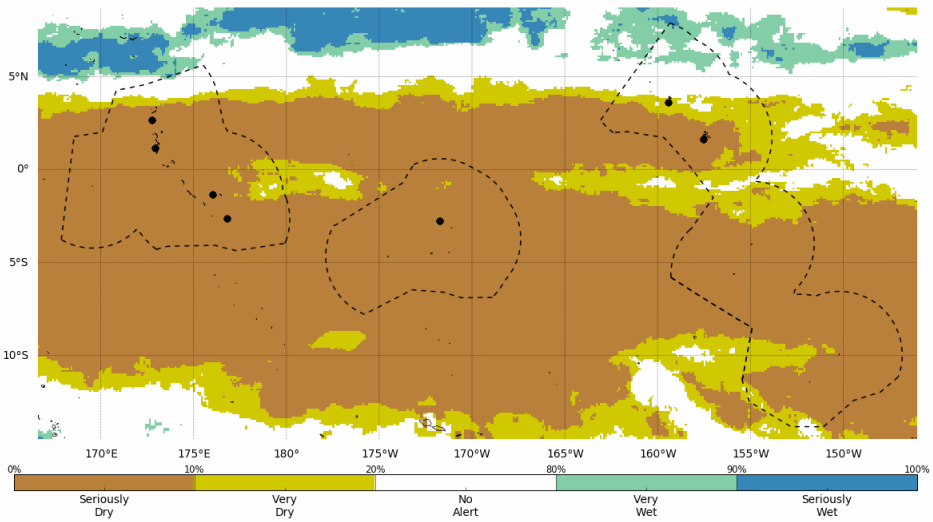


Data source: MSWEP
Method: Percentile

Model Run: 01/09/2022
Base period: 1980-2021

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.marineregions.org/.

6-month rainfall status to end of September 2022

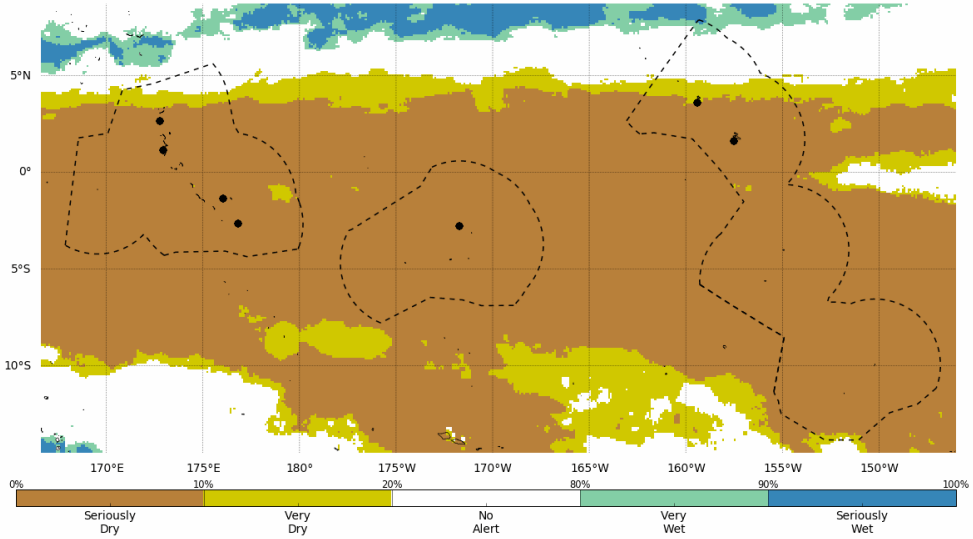


Data source: MSWEP
Method: Percentile

Model Run: 01/09/2022
Base period: 1980-2021

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.marineregions.org/.

12-month rainfall status to end of September 2022

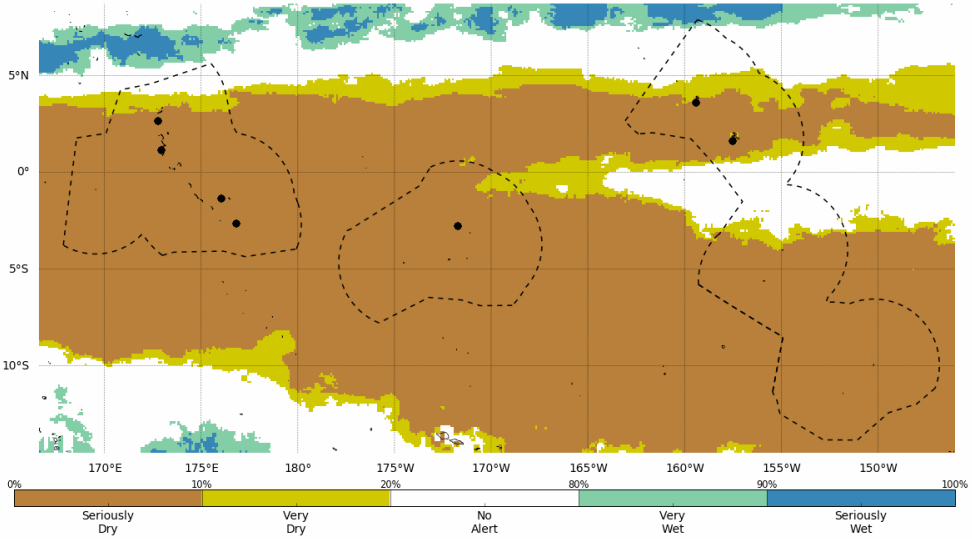


Data source: MSWEP
Method: Percentile

Model Run: 01/09/2022
Base period: 1980-2021

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.marineregions.org/.

24-month rainfall status to end of September 2022



Data source: MSWEP
Method: Percentile

Model Run: 01/09/2022
Base period: 1981-2021

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.marineregions.org/.

Time periods and impacts

3 months is most relevant for rainwater tanks and wells (water quality decreases).

The following health impacts have been experienced in the past: influenza, eye diseases e.g., red eye, diarrhea, water borne diseases.

6 months is most relevant for wells near coastlines which become brackish and slight increase in salinity at the Bonriki water reserve

The following health impacts have been experienced in the past: crop pest outbreak and livestock production decreases.

12 months is most relevant for smaller fruits size, bush fires in coconut trees and toddy production decreases

The following socio-economic impacts have been experienced in the past: fish mortality rate due to increase in seawater salinity

Other monitored indicators:

24 months is most relevant for groundwater supplies and deep-rooted trees e.g., coconuts and breadfruit.

The following socio-economic impacts have been experienced in the past: national water rationing

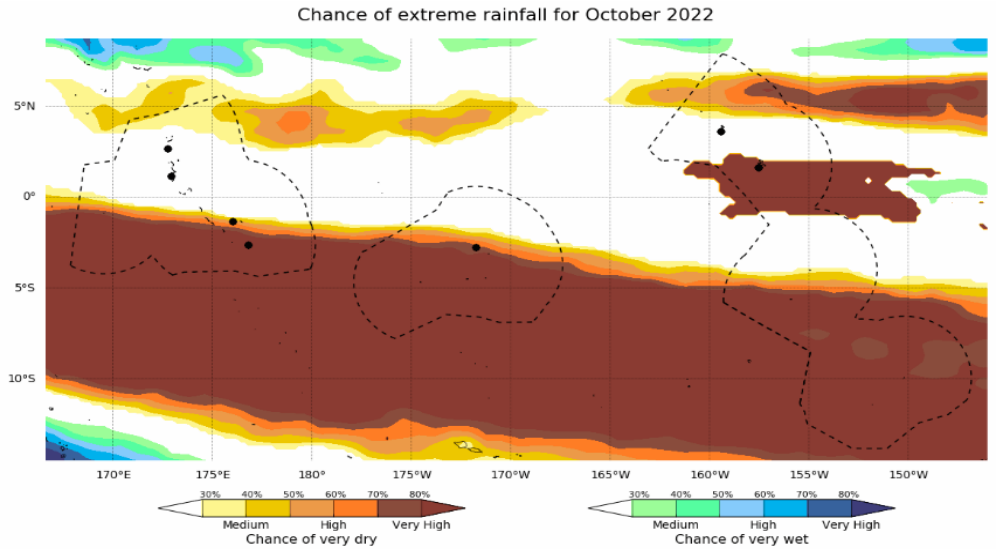
Allow for uncertainty associated with island size, topography, geology and soil type.

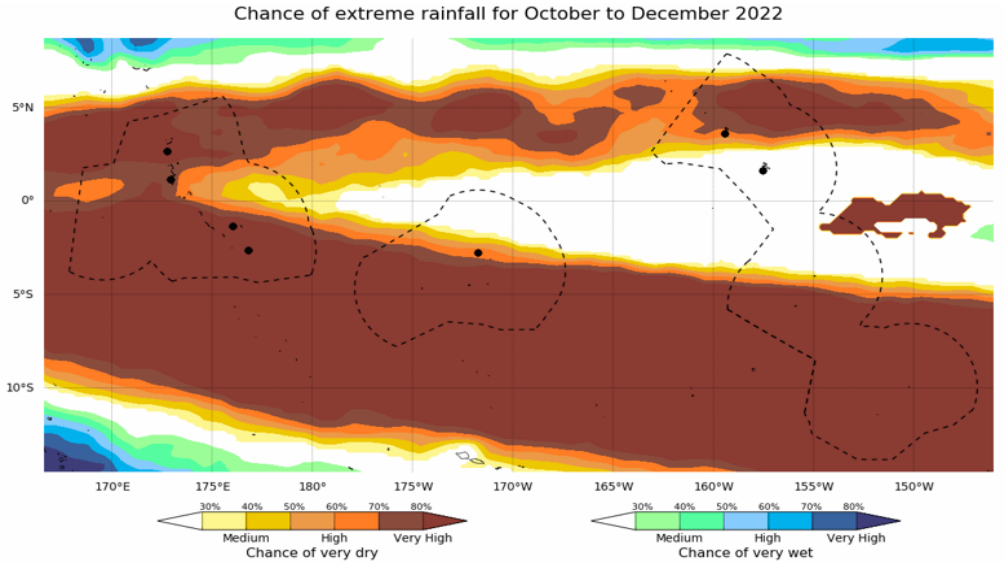
Information on the Maps

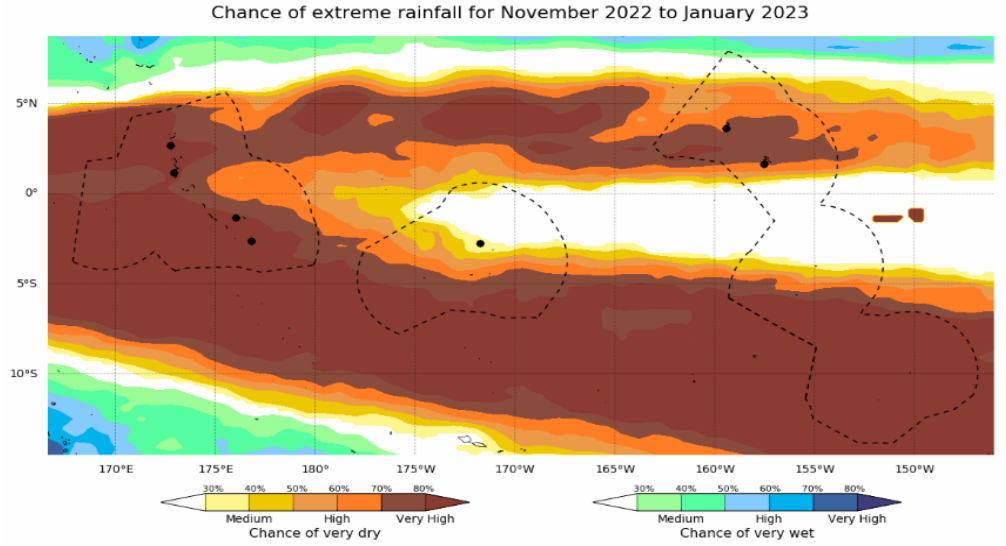
Rainfall Monitoring maps

Kiribati's rainfall status is assessed using the MSWEP dataset available via http://www.gloh2o.org/mswep/. MSWEP is a global precipitation dataset at 0.1° resolution, available from 1979 that combines data from rain gauges, satellite observations and reanalysis. The data is processed and presented in Percentile Index form by the Australian and New Zealand DFAT Climate and Ocean Support Program in the Pacific. 'No Alert' is assigned where rainfall was between the 20th and 80th percentile for the period in question.

Rainfall Outlooks October 2022, October to December and November to January 2023







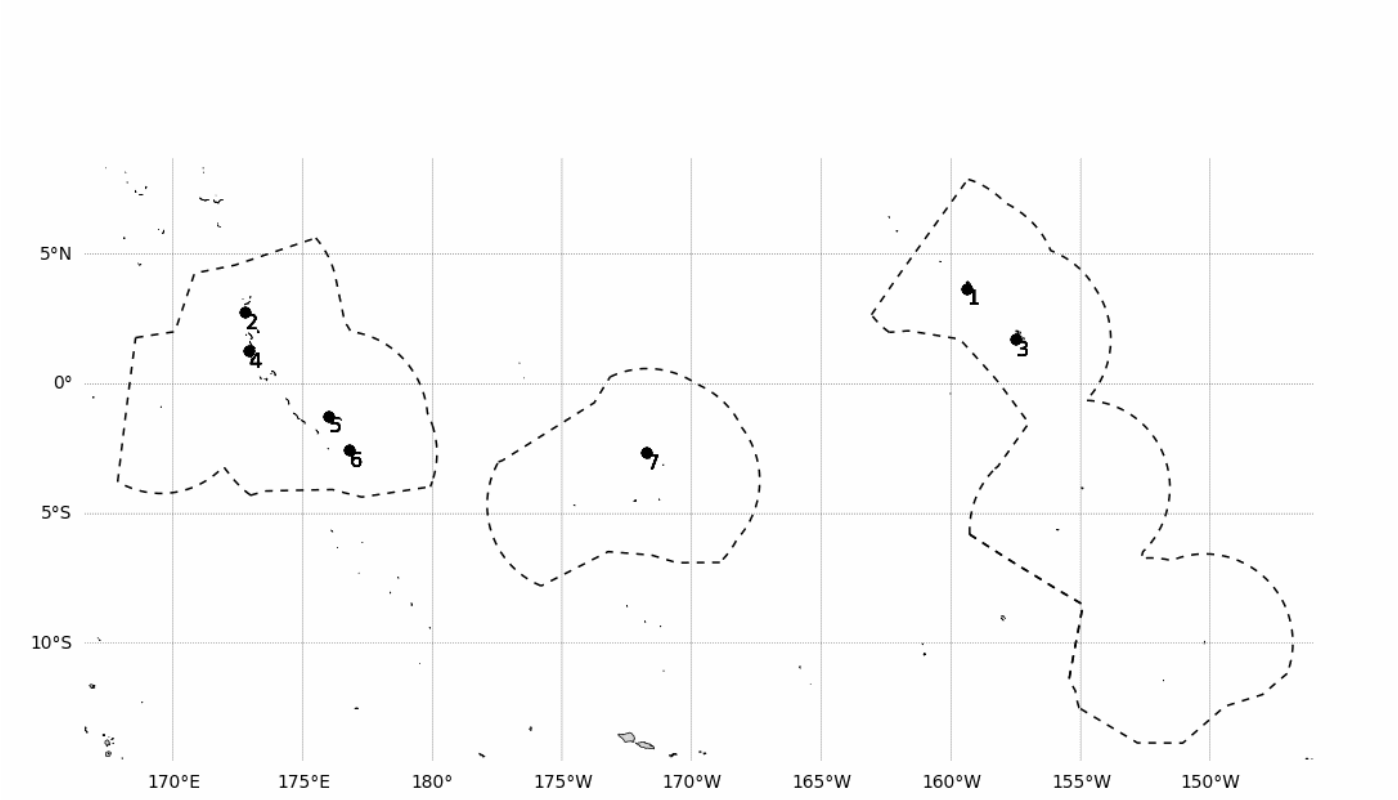
Information on the Maps

Forecast for Extreme Rainfall maps

The chance of extremes outlook maps presents the likelihood of very wet or very dry conditions. They are displayed by the chance that the outlook will result in rainfall in the top or bottom 20% of historical observations for the selected outlook period. Where there is white shading, it is less likely there will be either very wet or very dry conditions, rainfall is likely to be close to normal in this case. A very high chance of very dry (very wet) conditions is associated with the highest likelihood of rainfall being in the lowest (highest) 20% on record. A medium chance of very dry (very wet) conditions is associated with a lower but reasonable chance of rainfall being in the lowest (highest) 20% on record.

The outlooks have been produced using the Australian Bureau of Meteorology ACCESS-S2 model http://www.bom.gov.au/climate/ahead/about/model/access.shtml.

Kiribati Reference Map



Tabuaeran 1. ,Butaritari 2. ,Kiritimati 3. ,Tarawa 4. ,Beru 5. ,Arorae 6. ,Kanton 7.