Cook Islands Meteorological Service

Early Action Rainfall Watch

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

Issued: 09/06/2021

Current El Niño-Southern Oscillation (ENSO) status: The Australian Bureau of Meteorology's ENSO Outlook is **Inactive**.

Status summary:
Penrhyn is in "Meteorological Drought" for all timescales after a dry May. In contrast, Rarotonga had a Very Wet May with no alert at the three, six and 12-month timescales.

Outlook summary:
For **June**, a "High Chance Dry" alert is in place for Pukapuka, Penrhyn and Rakahanga in the northern Cook Islands. In the southern Cook Islands, a "High Chance Wet" alert is in place for Rarotonga and Mangaia, a "Low Chance Wet" alert is in place for Aitutaki and no alert is in place for Mauke, Mitiaro, Atiu and Manuae.

For **June to August 2021**, "High Chance Dry" alerts are in place for all northern Cook Islands sites (Penrhyn, Rakahanga and Pukapuka). For the southern Cook Islands, a "Medium Chance Wet" alert is in place for Rarotonga, Aitutaki, Manuae and Mangaia, while remaining sites (Mauke, Mitiaro and Atiu) have a "Low Chance Wet" alert. See table/maps below for additional information. See status table below for potential impacts.

Rainfall status at the end of May 2021, Outlook to August 2021

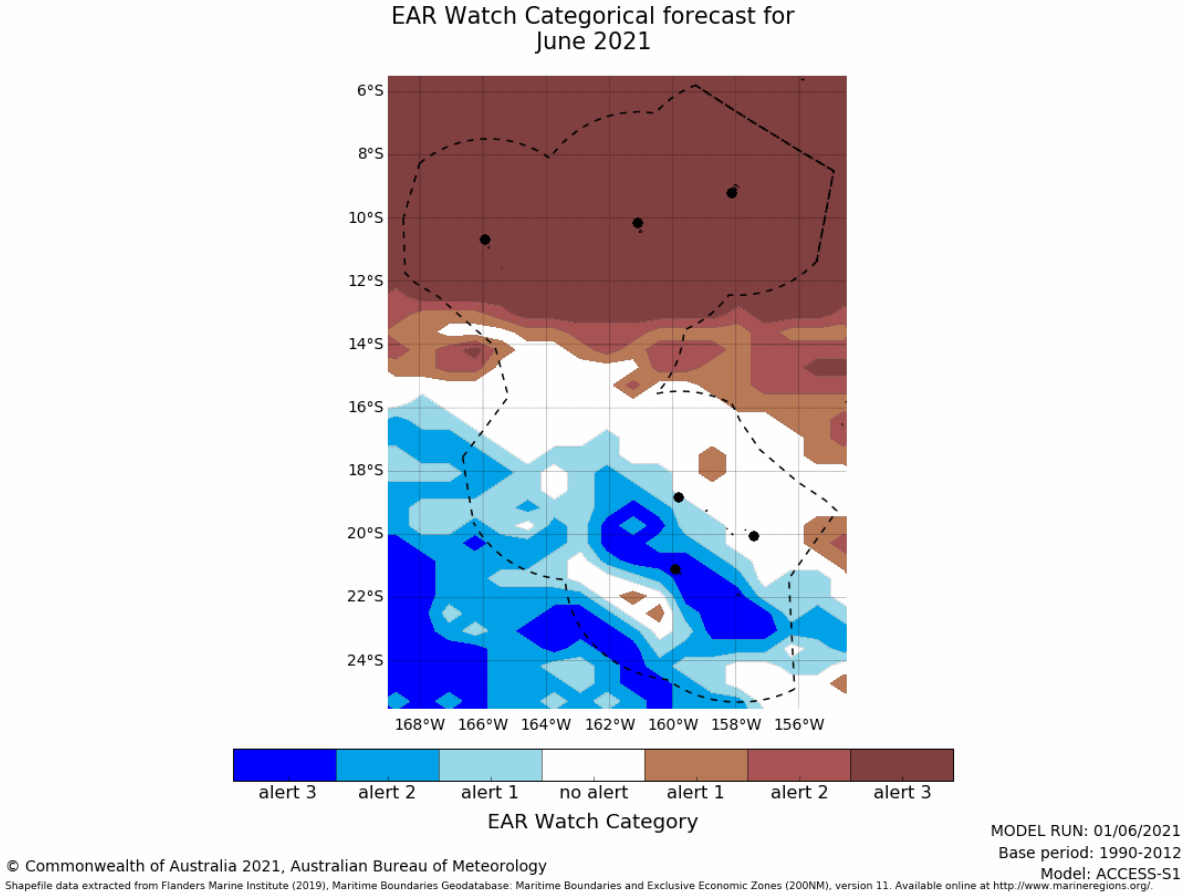
Northern Cook Islands							
	Rainfall Status					Rainfall Outlook	
	Past 12 months	Past 6 months	Past 3 months	Past month		Next month Jun. 2021	Next 3 months to Aug. 2021
Penrhyn							
Rakahanga							
Pukapuka							

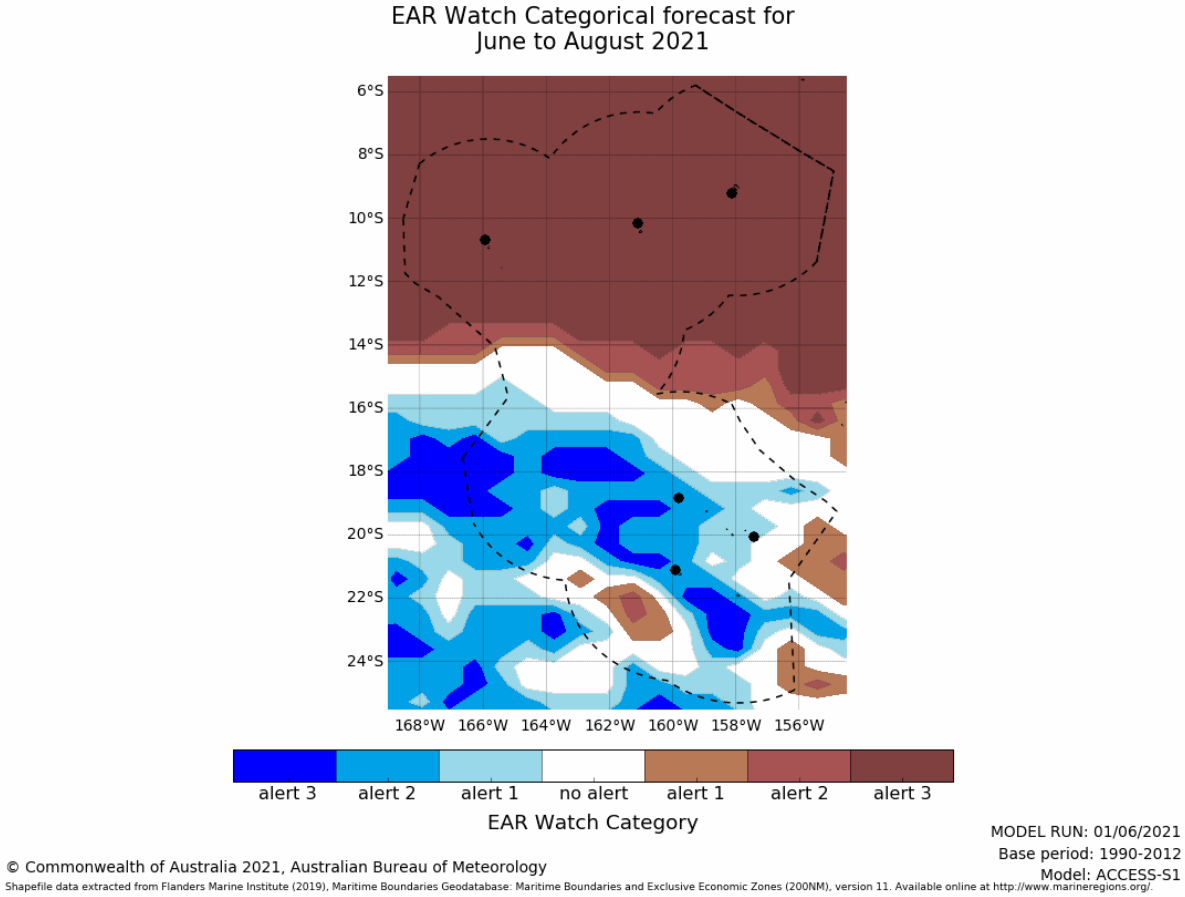
Southern Cook Islands							
	Rainfall Status					Rainfall Outlook	
	Past 12 months	Past 6 months	Past 3 months	Past month		Next month Jun. 2021	Next 3 months to Aug. 2021
Aitutaki							
Mauke							
Rarotonga							

Rainfall status key	Meteorological Drought	Drought Warning	Drought Watch	Missing Observations	No Alert	Very Wet

Outlook Key	High Chance Dry	Medium Chance Dry	Low Chance Dry	Outlook not available	No Alert	Low Chance Wet	Medium Chance Wet	High Chance Wet

ACCESS-S Rainfall Outlooks for June, and June to August 2021





Rainfall status

The Percentile Index is used to assess rainfall status. Meteorological Drought is defined as drought assessed by rainfall data only. A station is assigned 'No Alert' when rainfall has been near normal for the period(s) in question.

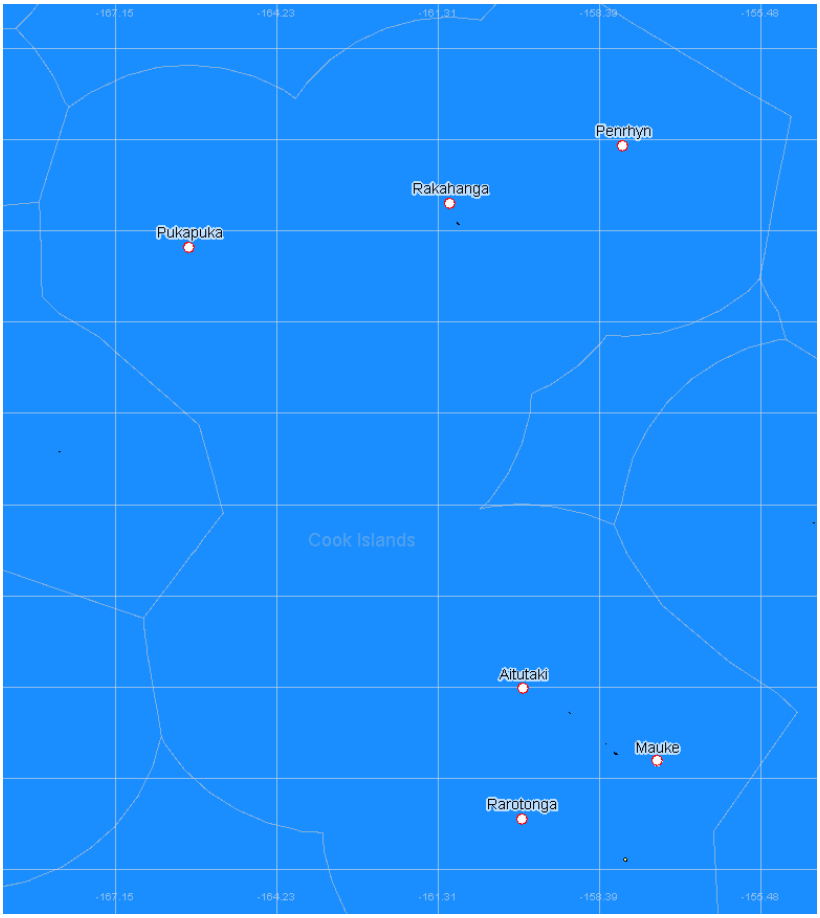
After the specified period of below or above average rainfall, the following primary agricultural and hydrological variables and secondary socio-economic and health variables may to be impacted. Note the periods are estimates only. Allow for uncertainty associated with island size, topography, geology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

Southern Cook Islands				
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	Sanitation issues, household water supply	Low water pressure, water rationing, household water tanks, household water barrels, small streams, intakes, waterfalls	Medium to large streams, intakes, waterfalls, water transportation required	Wells, community tanks
Agriculture	Shallow rooted crops (e.g. tomato, watermelon and lettuce), crop pests and diseases,	Wet and dry taro, pawpaw, mango, oranges, banana, pineapple, raparapa		
Socio-economic and health	Shallow rooted plants (e.g. flowers)	Diarrhoea, increased reliance on imported food, school closure, reduced tourist numbers	Social conflict, water stealing	Livestock death
Northern Cook Islands				
Water	Household water levels reduced			
Agriculture		Loss of some crops		
Socio-economic and health	Health conditions e.g. diarrhoea	Reduced availability of coconuts for food, social conflict increase	Mental health issues e.g. stress and anxiety	Copra yield reduced

Rainfall Outlook

Seasonal outlooks have been produced using the Australian Bureau of Meteorology ACCESS-S model http://www.bom.gov.au/climate/ahead/about/model/access.shtml. The outlook provides an indication of total one and three-month rainfall, not how intense the rain may be in any one event, nor how it may vary within the three months. A station is assigned 'No Alert' when near normal rainfall is favoured or there are equal chances of below normal, normal and above normal rainfall.

Cook Islands rainfall monitoring stations



Contact the Cook Islands Meteorological Service for further information.

The Director, Cook Islands Meteorological Service
P.O Box 127, Rarotonga, Cook Islands, Phone: 682 20603,
Website: http://www.met.gov.ck Email: mot.weather@cookislands.gov.ck