RED MEAT UPDATES

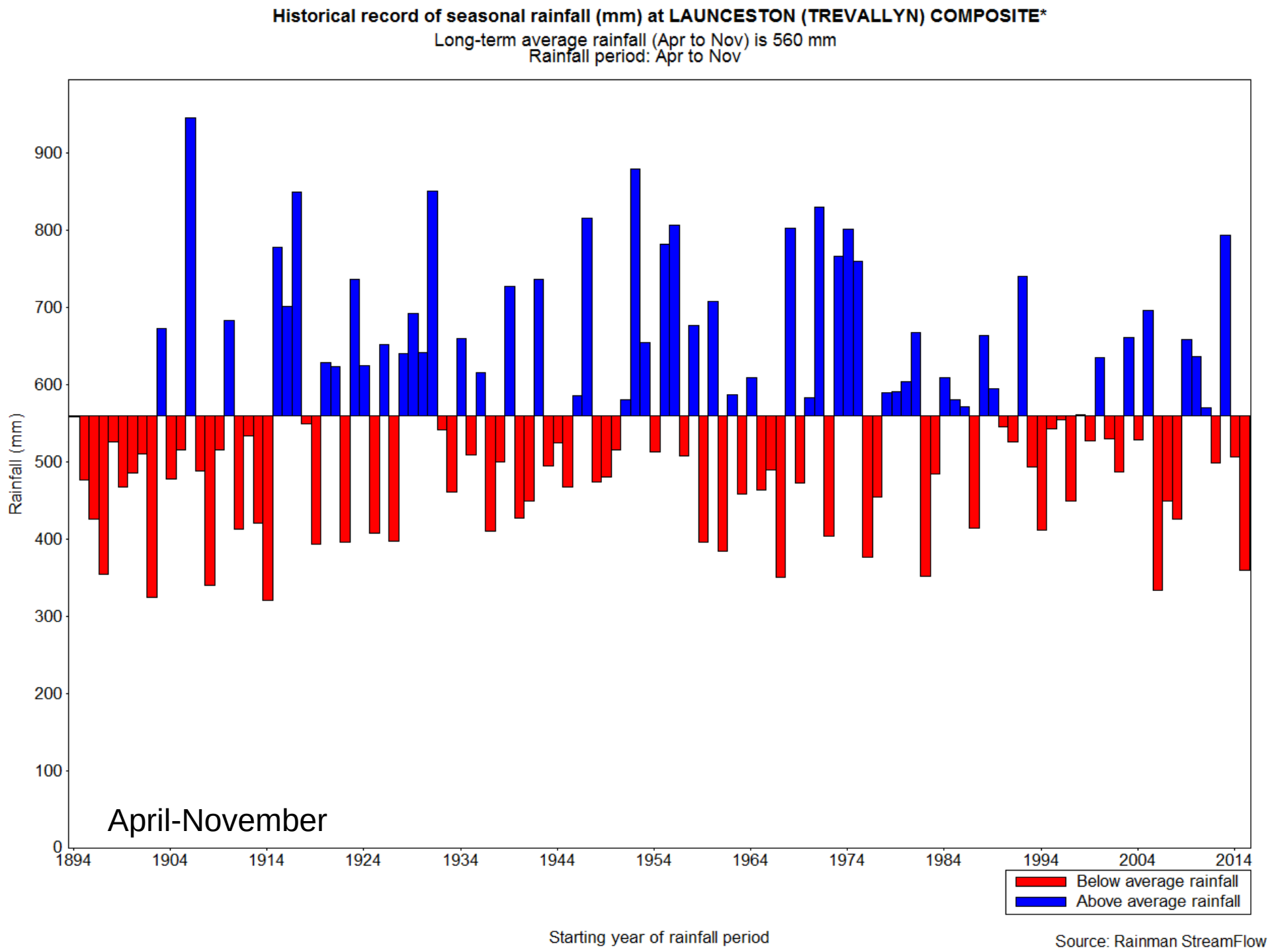
TASMANIA

22 July 2016

Are seasonal forecasts of any use in Tasmania?

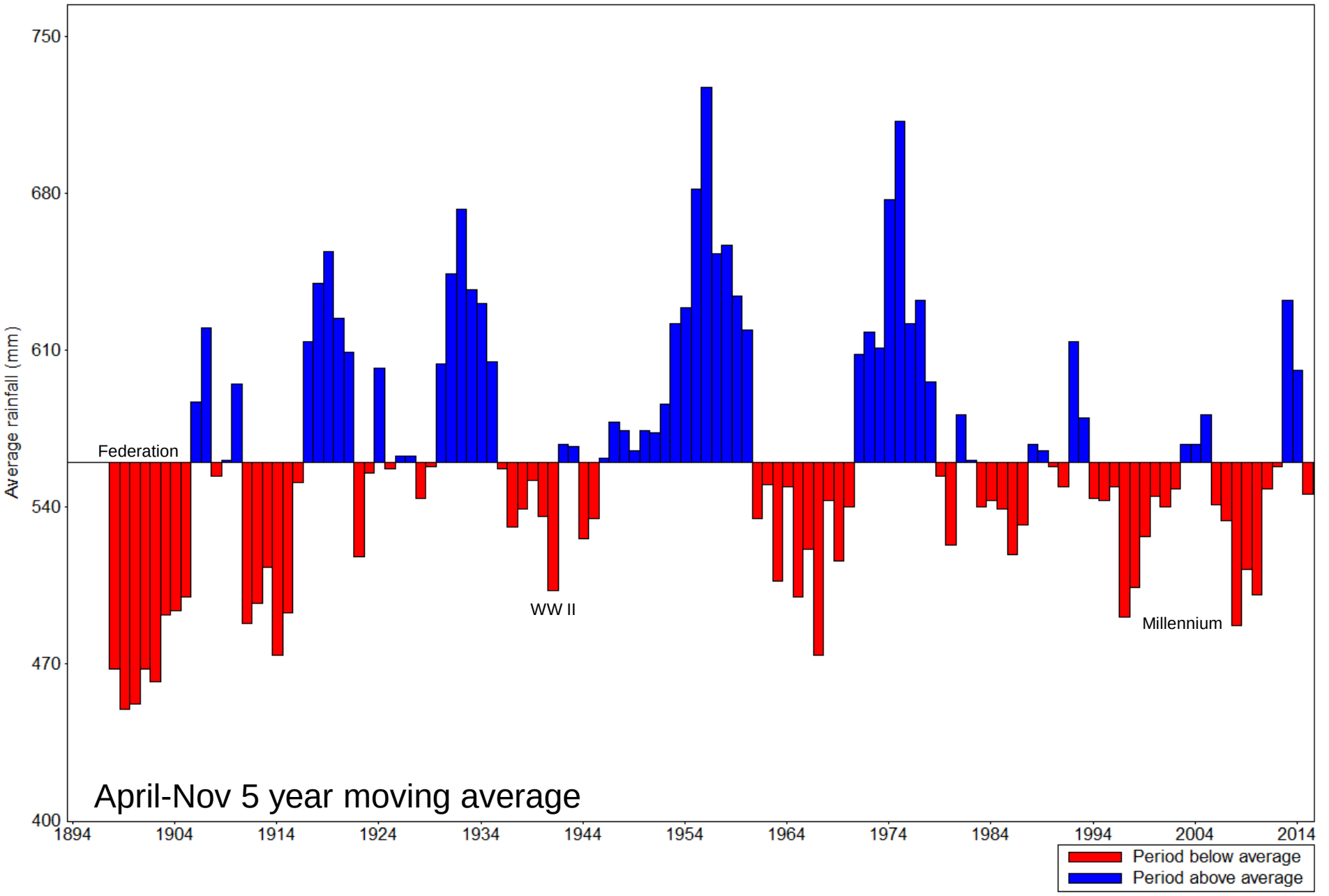
Dale Grey
Agriculture Victoria
Bendigo

AGRICULTURE VICTORIA

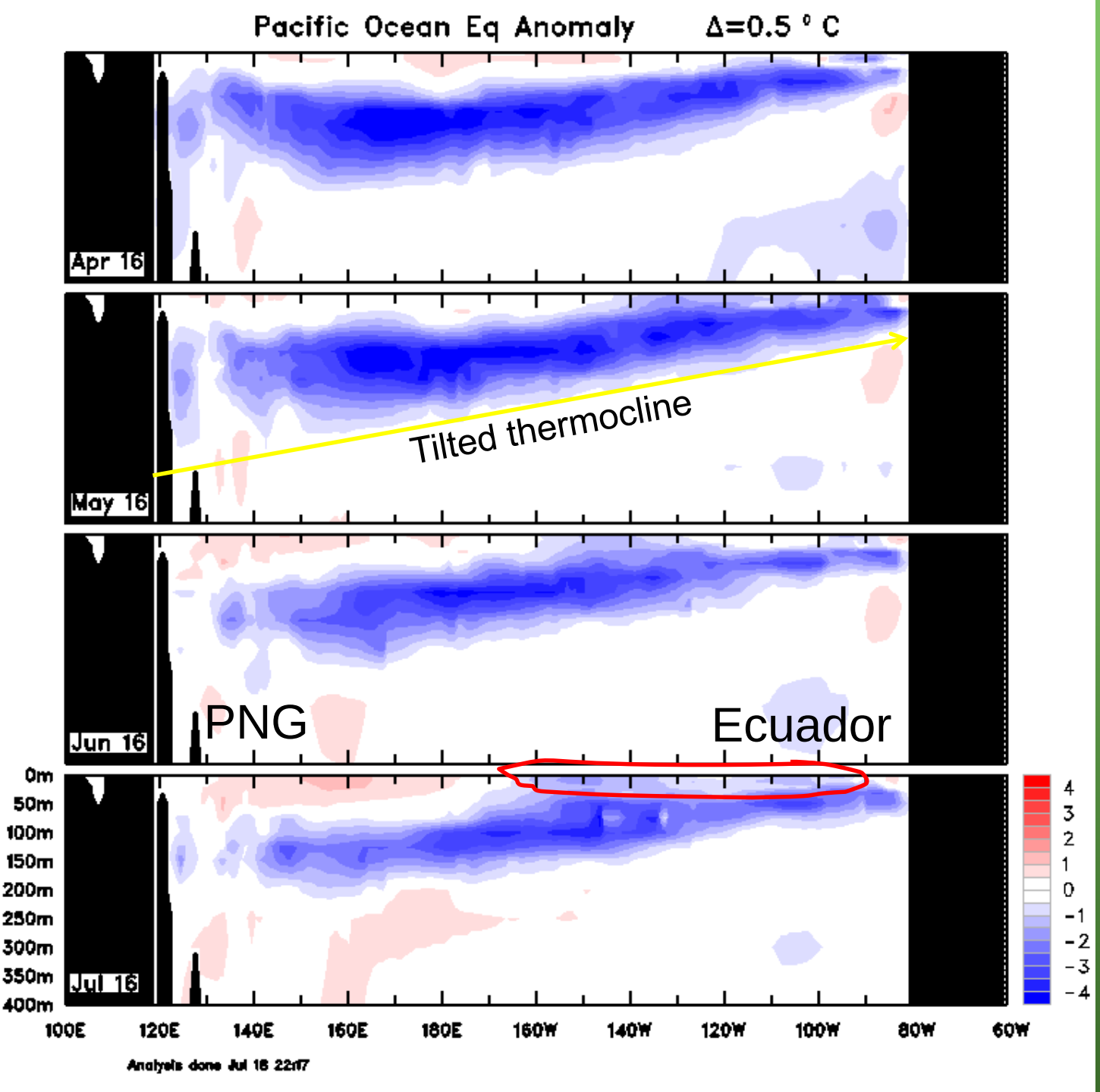

Historical record of seasonal rainfall (mm) at LAUNCESTON (TREVALLYN) COMPOSITE*
Long-term average rainfall (Apr to Nov) is 560 mm
Rainfall period: Apr to Nov
Rainfall (mm)
0
100
200
300
400
500
600
700
800
900
1894
1904
1914
1924
1934
1944
1954
1964
1974
1984
1994
2004
2014
April-November
Below average rainfall
Above average rainfall
Starting year of rainfall period
Source: Rainman StreamFlow

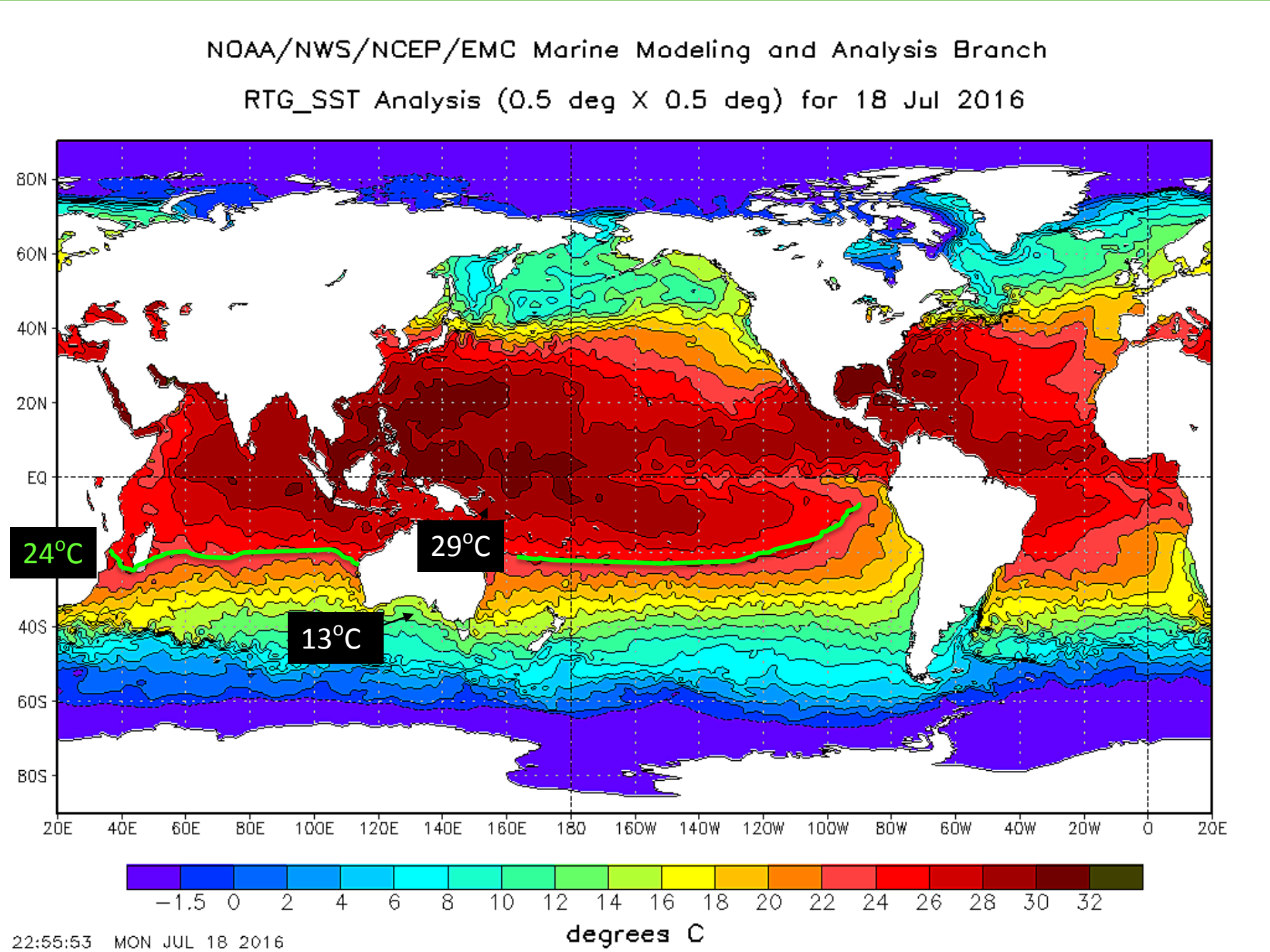
5-year moving average rainfall (8 months, Apr to Nov in year 1) at LAUNCESTON (TREVALLYN) COMPOSITE*

Long-term average rainfall (8 months, Apr to Nov in year 1) is 560 mm

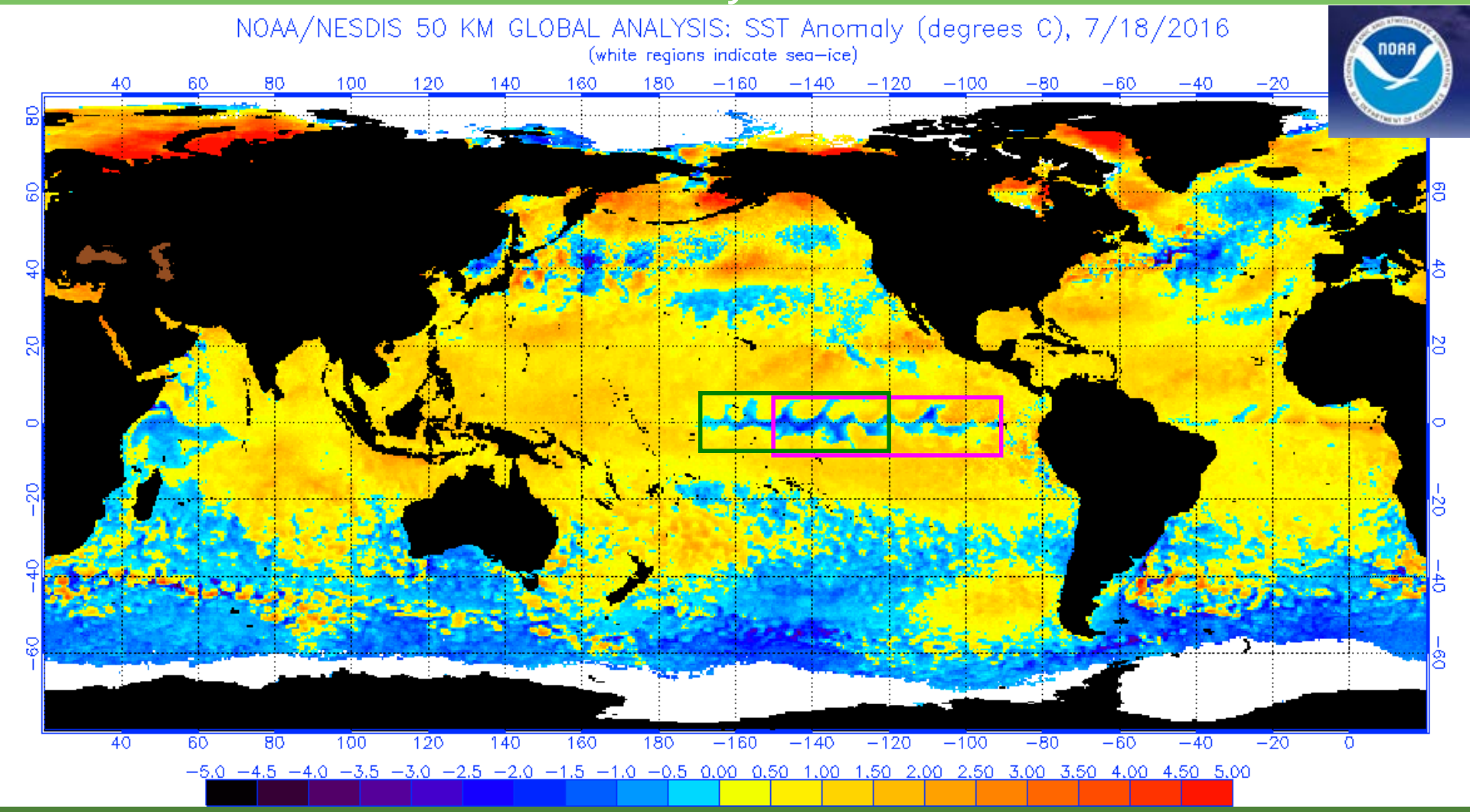


Source: Rainman StreamFlow


Pacific Ocean Eq Anomaly
Δ=0.5 ° C
Apr 16
May 16
Tilted thermocline
Jun 16
PNG
Ecuador
Jul 16
0m
50m
100m
150m
200m
250m
300m
350m
400m
100E
120E
140E
160E
180E
160W
140W
120W
100W
80W
60W
4
3
2
1
0
-1
-2
-3
-4
Analysis done Jul 16 22:07

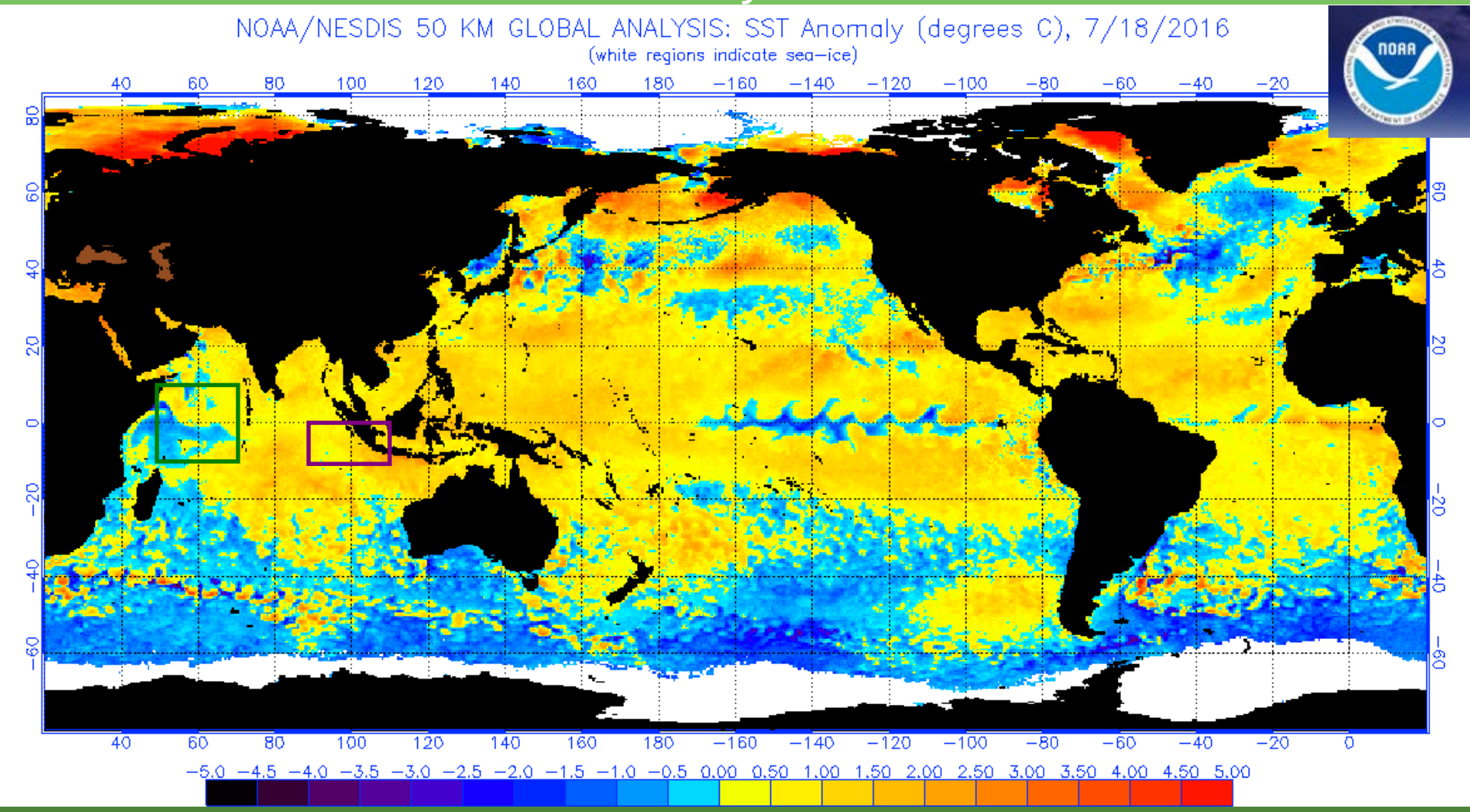

NOAA/NWS/NCEP/EMC Marine Modeling and Analysis Branch
RTG_SST Analysis (0.5 deg X 0.5 deg) for 18 Jul 2016
80N
60N
40N
20N
EQ
40S
60S
80S
20E
40E
60E
80E
100E
120E
140E
160E
180
160W
140W
120W
100W
80W
60W
40W
20W
0
20E
24°C
29°C
13°C
−1.5
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
degrees C
22:55:53 MON JUL 18 2016

18 July 2016

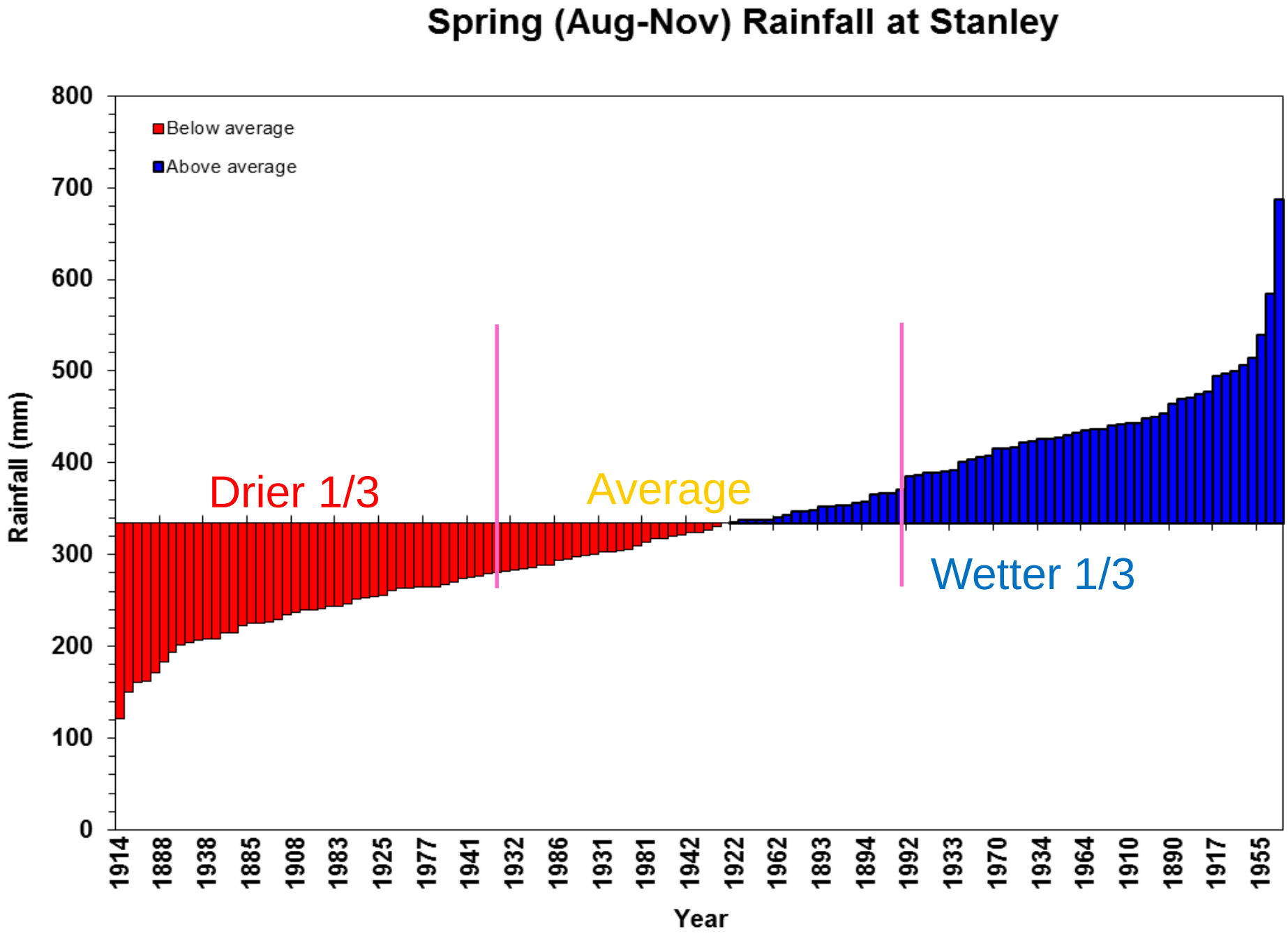


Currently the Nino 3 and 3.4 areas of the Pacific are normal at -0.23ºC, -0.24ºC, between the El Niño/La Niña thresholds of +/-0.8ºC. Pacific Ocean is in a neutral condition.

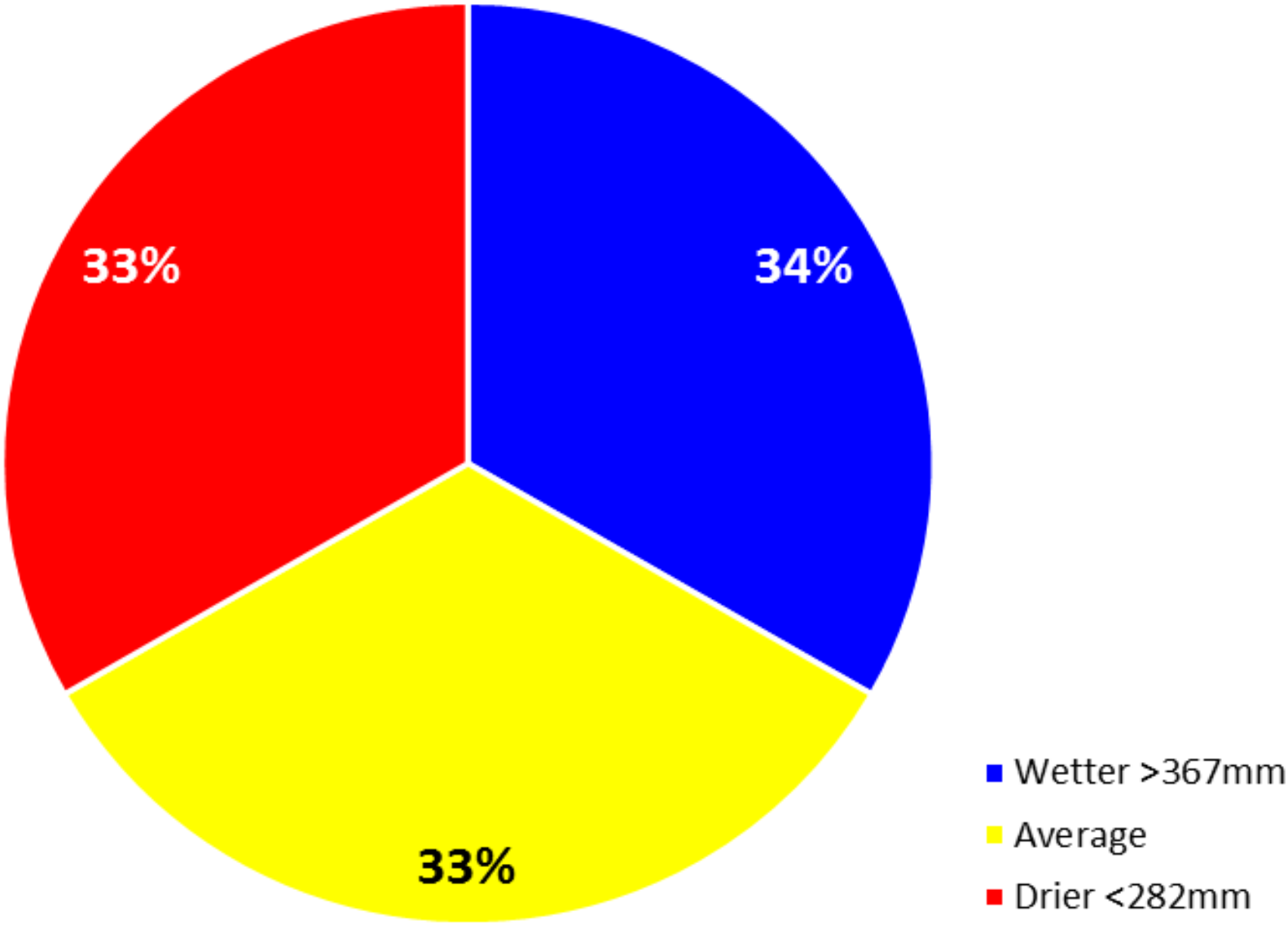
18th July 2016



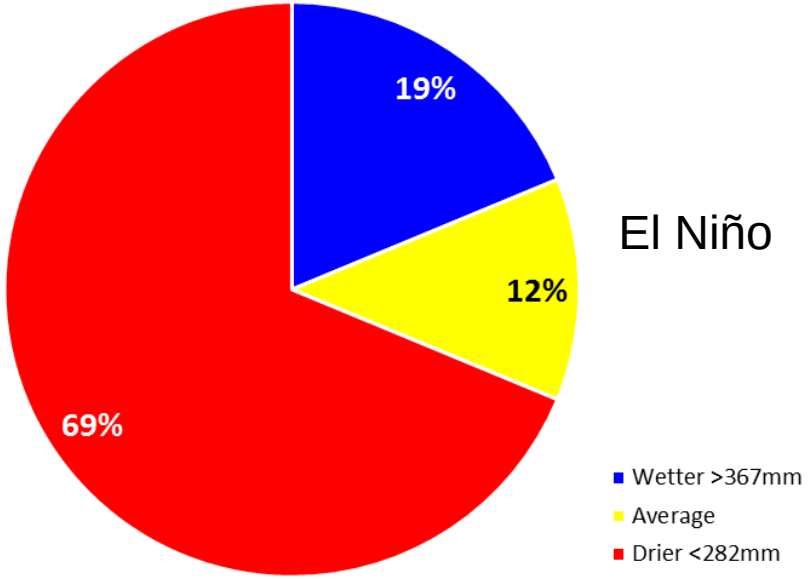
The DMI measurement of the IOD is -1.37ºC, strongly IOD- .
Threshold is +/- 0.4ºC, strongest one for many years and set up early too.


Spring (Aug-Nov) Rainfall at Stanley
Below average
Above average
Drier 1/3
Average
Wetter 1/3
Rainfall (mm)
800
700
600
500
400
300
200
100
0
1914
1888
1938
1885
1908
1983
1925
1977
1941
1932
1986
1931
1981
1942
1922
1962
1893
1894
1992
1933
1970
1934
1964
1910
1890
1917
1955
Year

Stanley Tas Aug-Nov rainfall since 1883

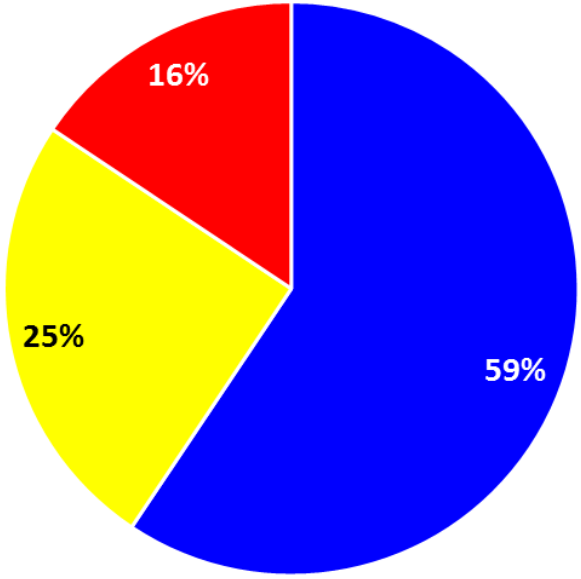


Stanley Tas Aug-Nov rainfall in 32 El Nino years since 1883



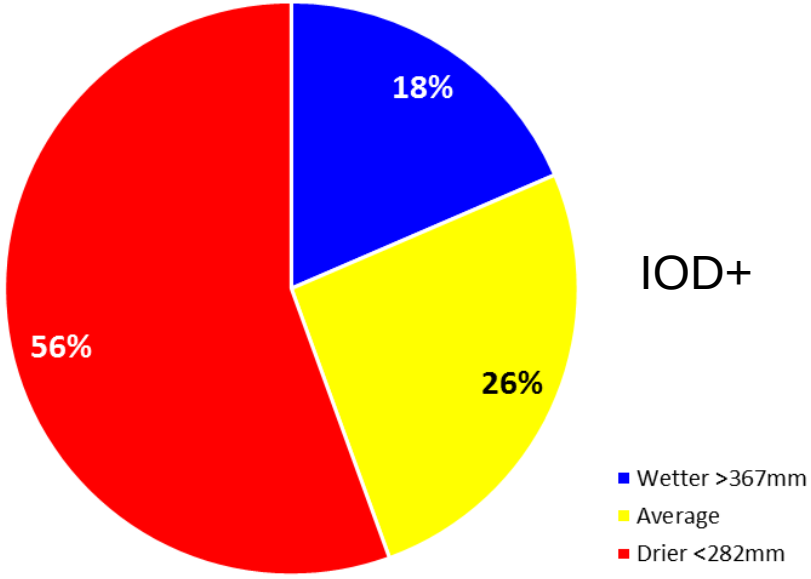
El Niño

Stanley Tas Aug-Nov rainfall in 32 La Nina years since 1883



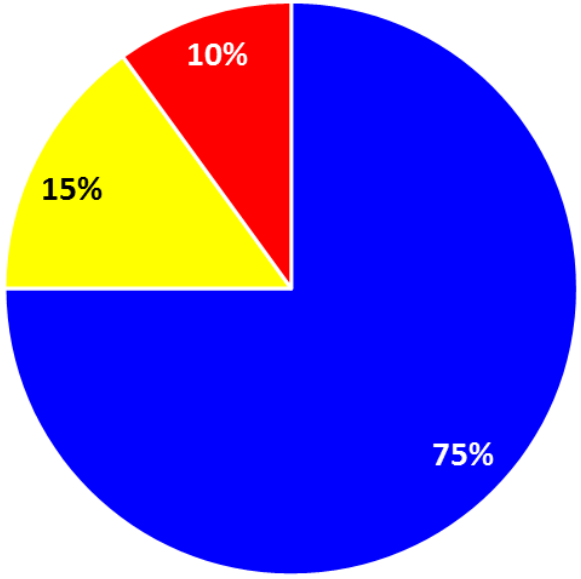
La Niña

Stanley Tas Aug-Nov rainfall in 27 IOD+ years since 1883



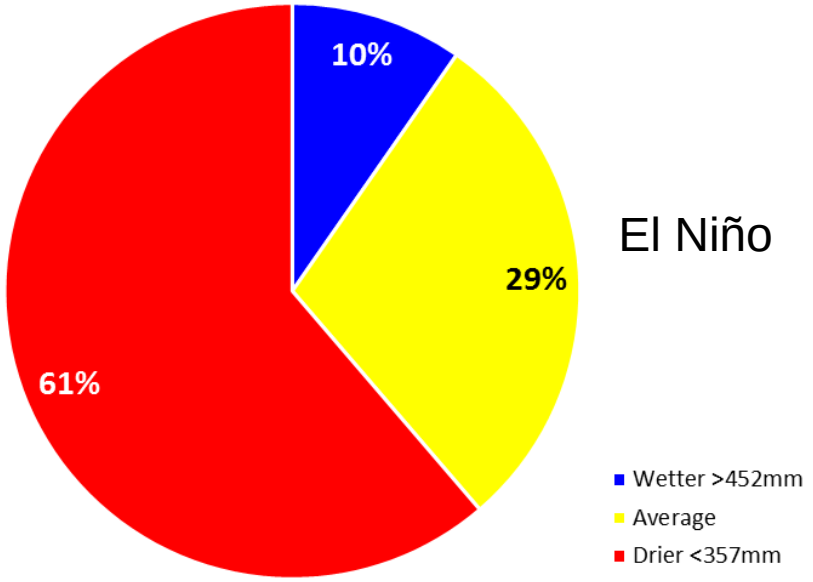
IOD+

Stanley Tas Aug-Nov rainfall in 20 IOD- years since 1883



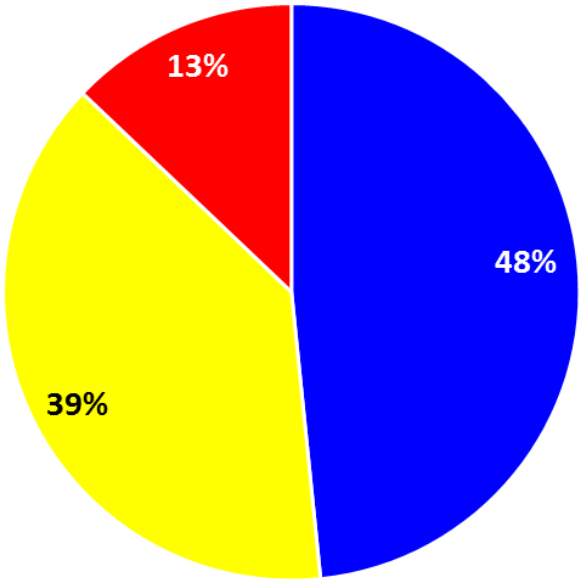
IOD-

Branxholm Tas Aug-Nov rainfall in 31 El Nino years since 1889



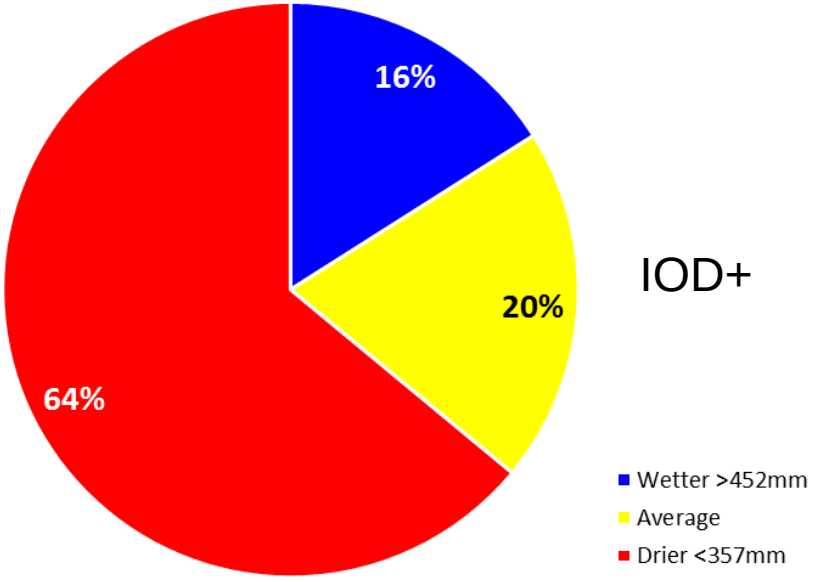
El Niño

Branxholm Tas Aug-Nov rainfall in 31 La Nina years since 1889



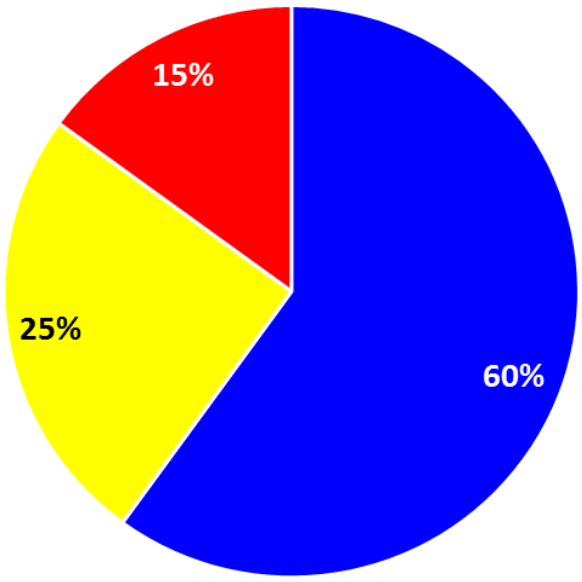
La Niña

Branxholm Tas Aug-Nov rainfall in 25 IOD+ years since 1889



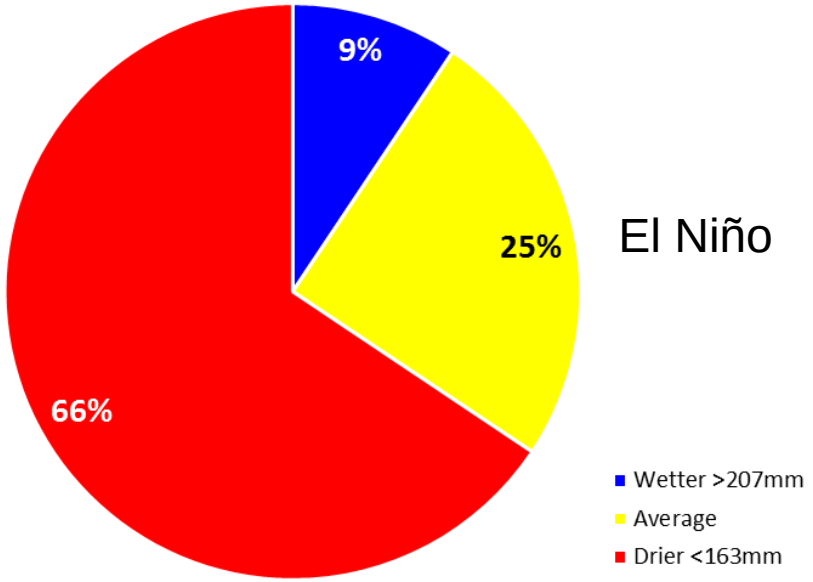
IOD+

Branxholm Tas Aug-Nov rainfall in 20 IOD- years since 1889



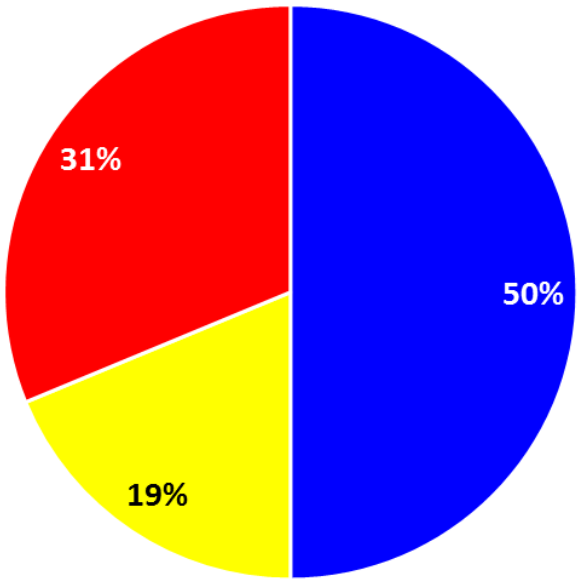
IOD-

Oatlands Tas Aug-Nov rainfall in 32 El Nino years since 1883



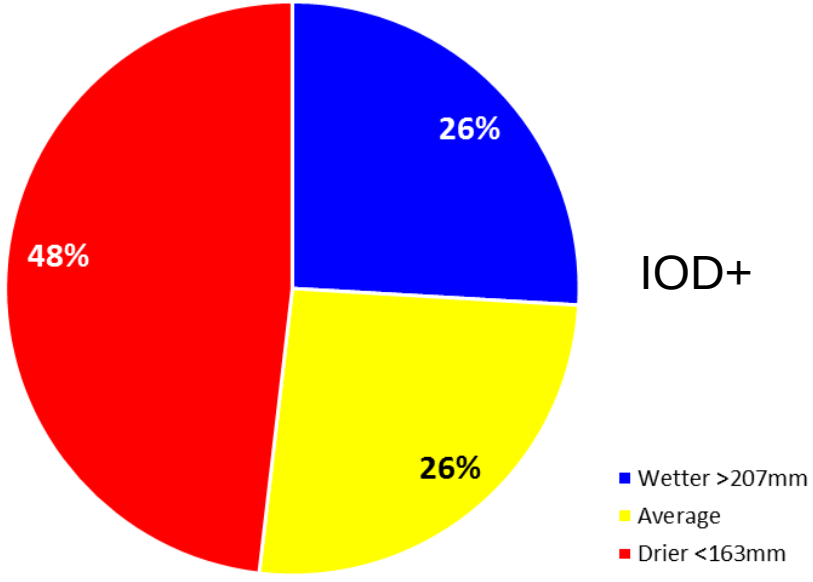
El Niño

Oatlands Tas Aug-Nov rainfall in 32 La Nina years since 1883



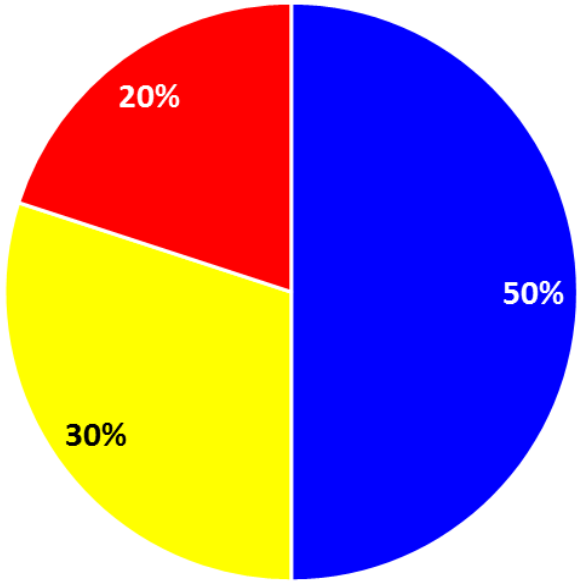
La Niña

Oatlands Tas Aug-Nov rainfall in 27 IOD+ years since 1883



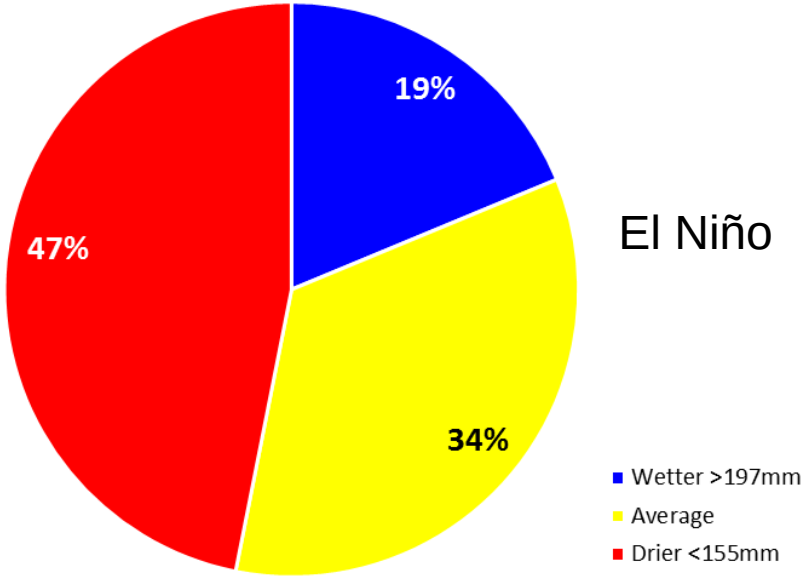
IOD+

Oatlands Tas Aug-Nov rainfall in 20 IOD- years since 1883



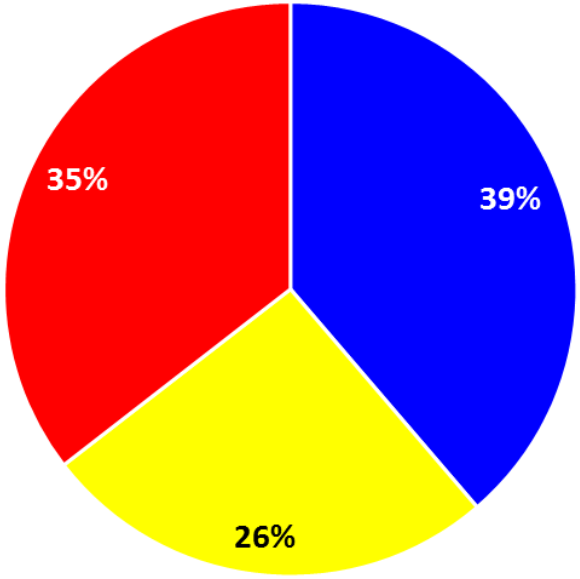
IOD-

Sorell Tas Aug-Nov rainfall in 32 El Nino years since 1887



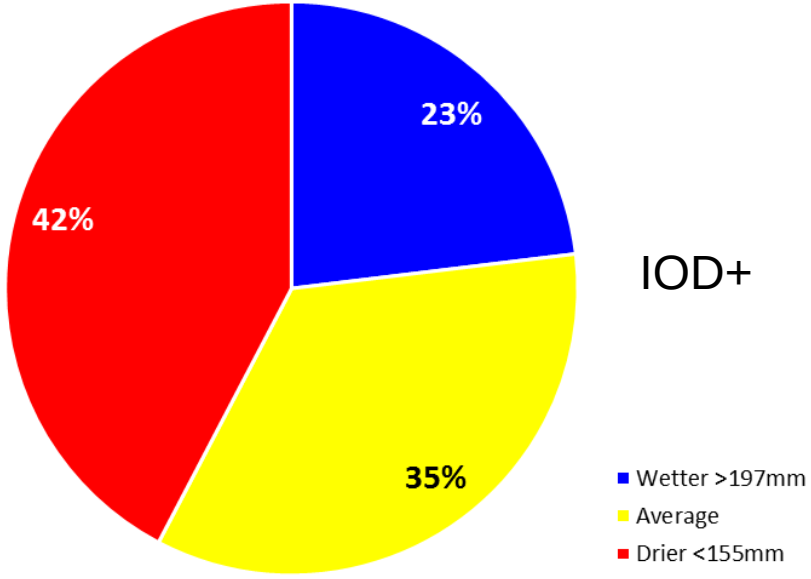
El Niño

Sorell Tas Aug-Nov rainfall in 31 La Nina years since 1887



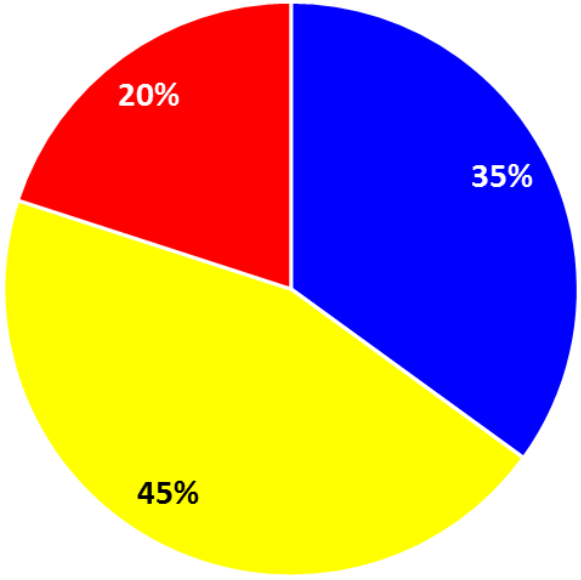
La Niña

Sorell Tas Aug-Nov rainfall in 26 IOD+ years since 1887



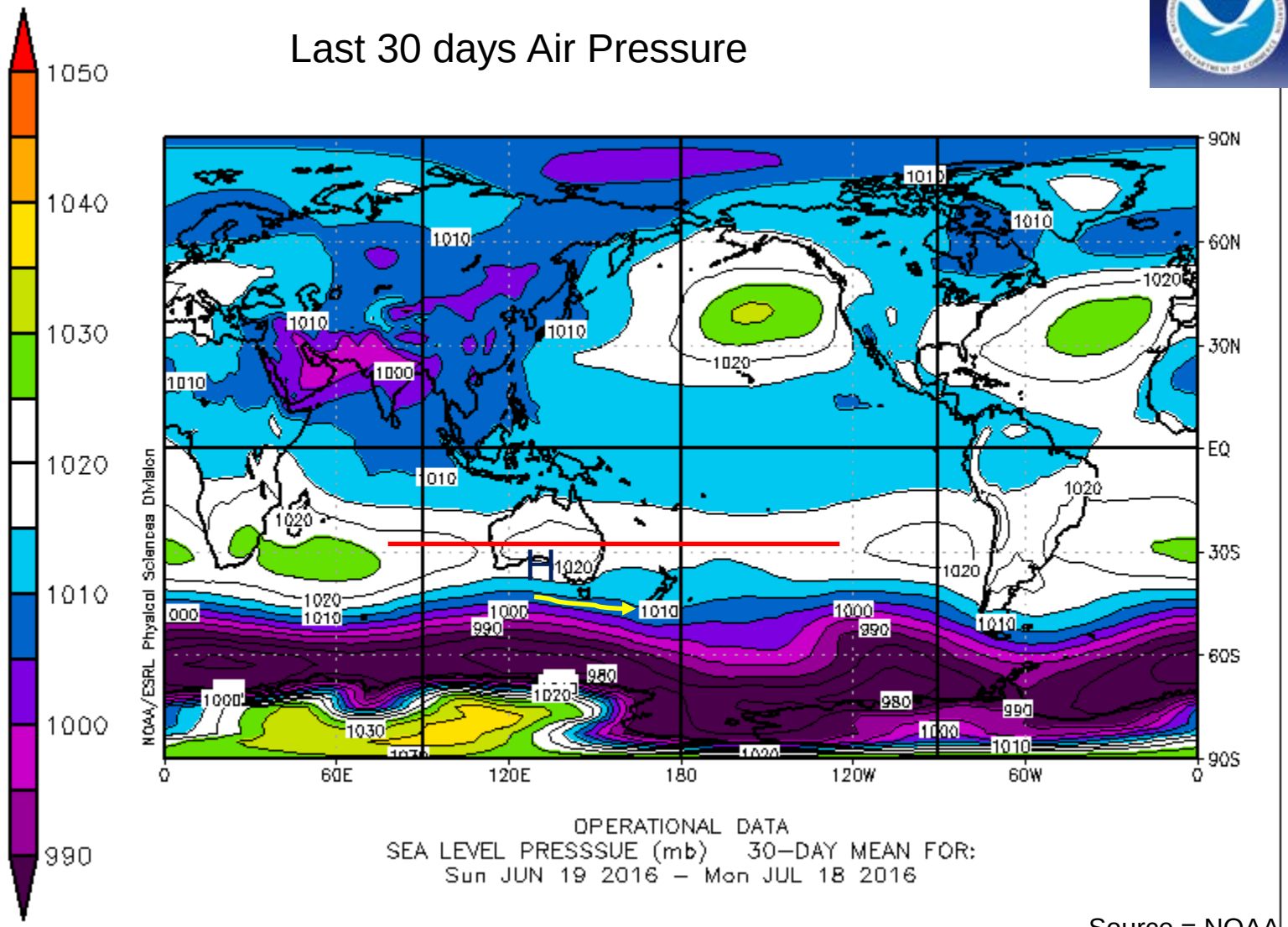
IOD+

Sorell Tas Aug-Nov rainfall in 20 IOD- years since 1887



IOD-

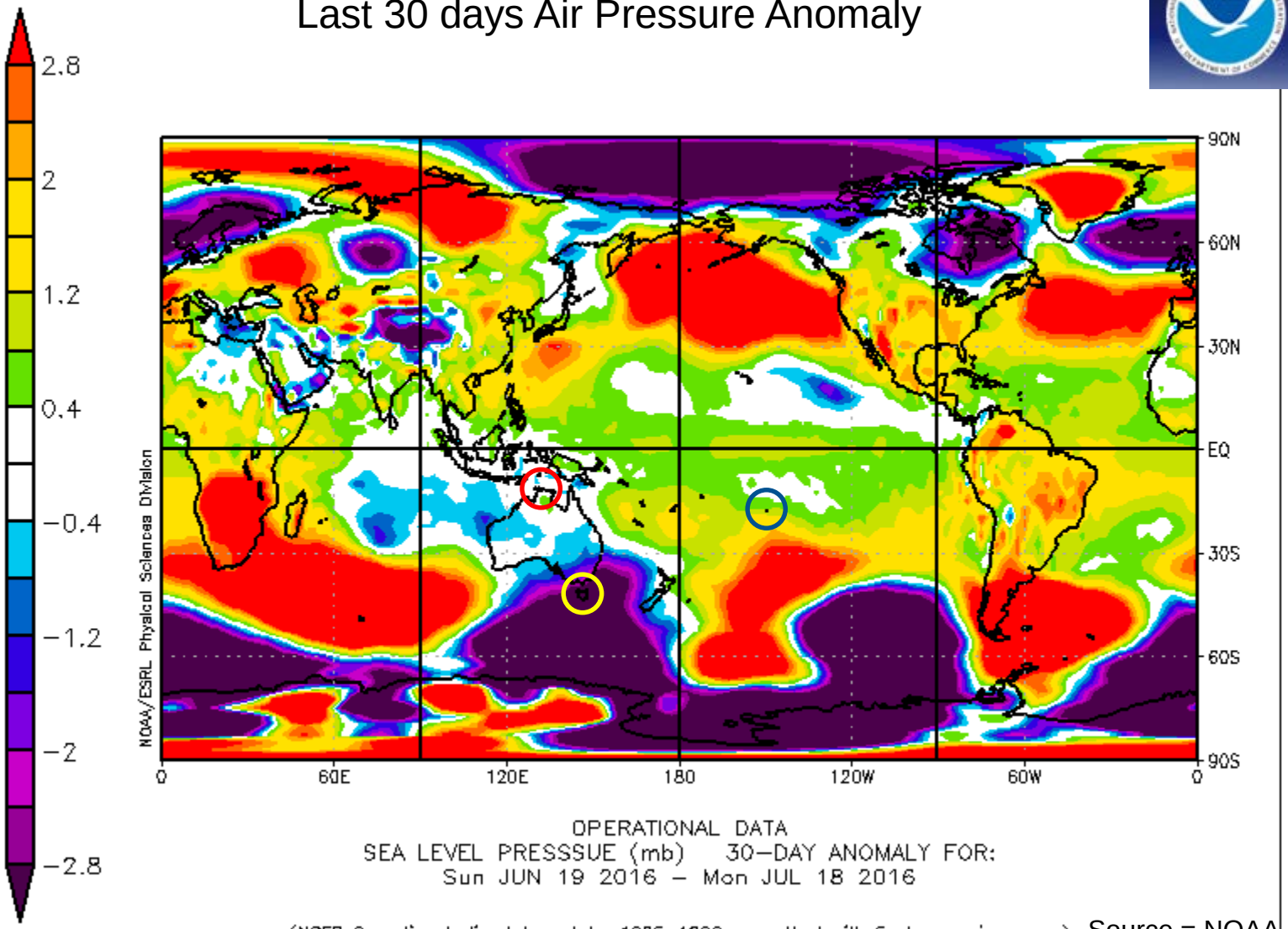
Last 30 days Air Pressure



Source = NOAA

The Sub Tropical Ridge latitude is higher than normal, allowing fronts through.

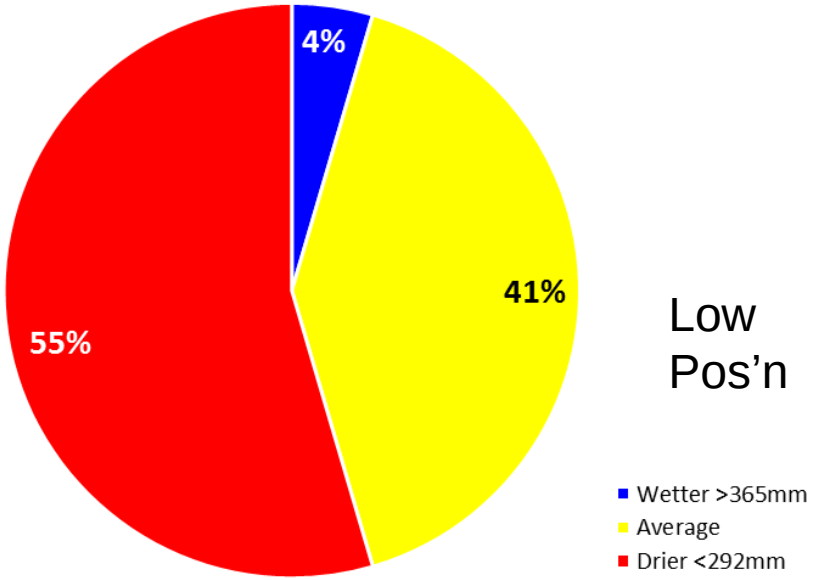
Last 30 days Air Pressure Anomaly



Source = NOAA

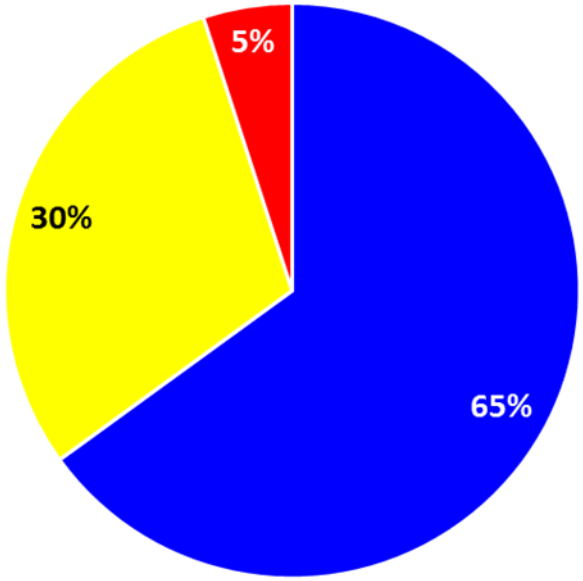
Pressure was lower over Tasmania, meaning more trigger mechanisms are passing by. Darwin pressure average, Tahiti slightly higher = SOI weakly positive

Deloraine Tas rainfall Jun-Aug rainfall in 22 position LOW years since 1890



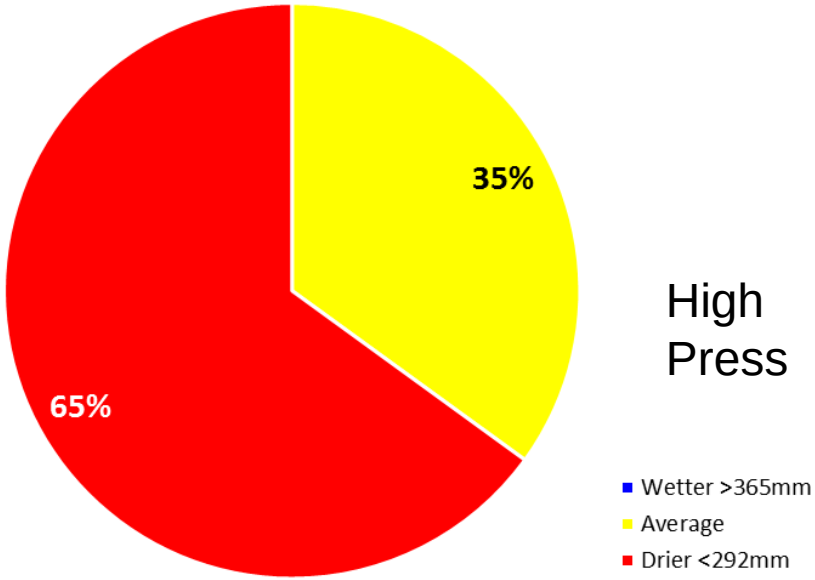
Low Pos'n

Deloraine Tas rainfall Jun-Aug rainfall in 20 position HIGH years since 1890



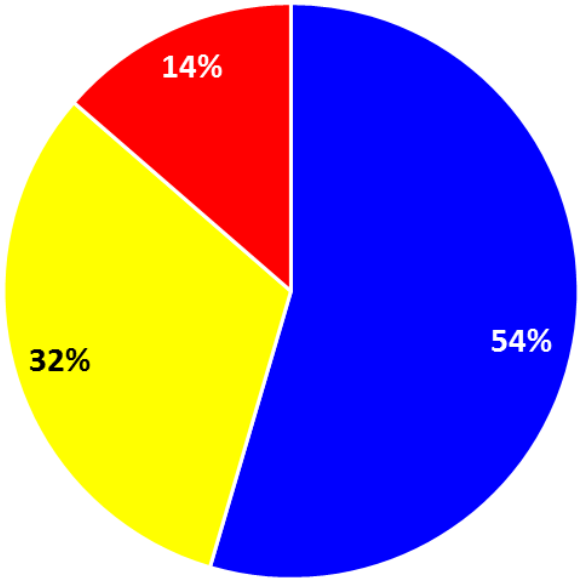
High Pos'n

Deloraine Tas rainfall Jun-Aug rainfall in 20 pressure HIGH years since 1890



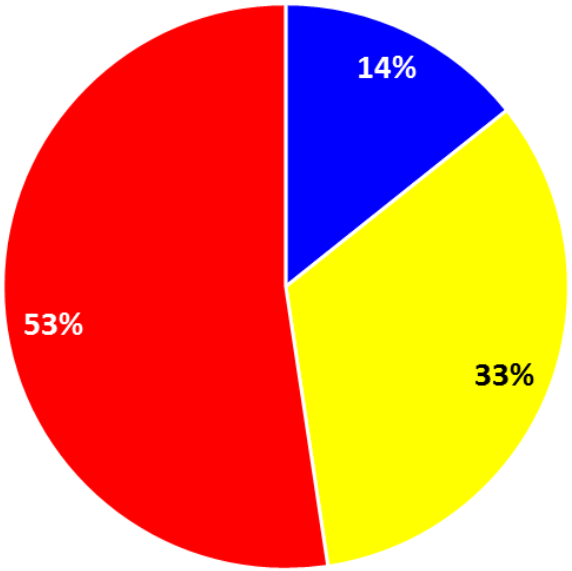
High Press

Deloraine Tas rainfall Jun-Aug in 22 pressure LOW years since 1890



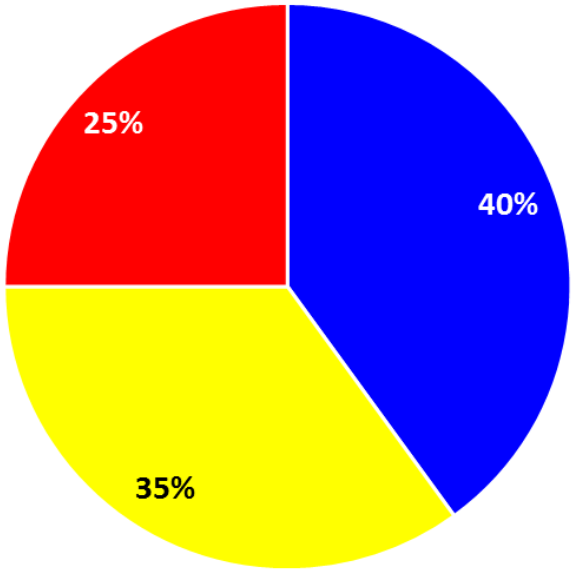
Low Press

Sorell Tas rainfall Jun-Aug rainfall in 22 position LOW years since 1890



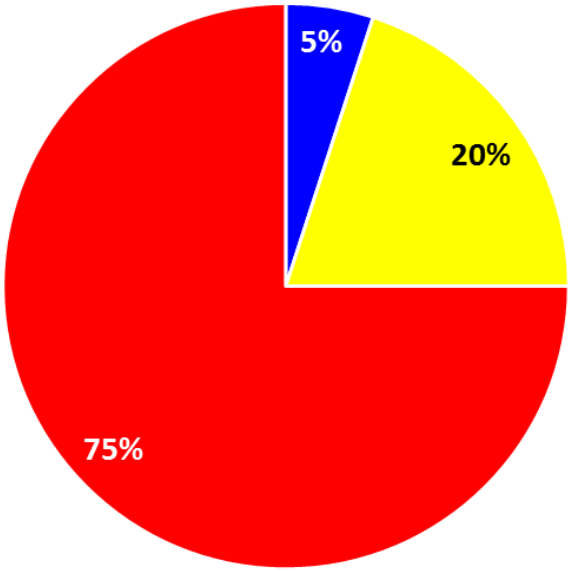
Low Pos'n

Sorell Tas rainfall Jun-Aug rainfall in 20 position HIGH years since 1890



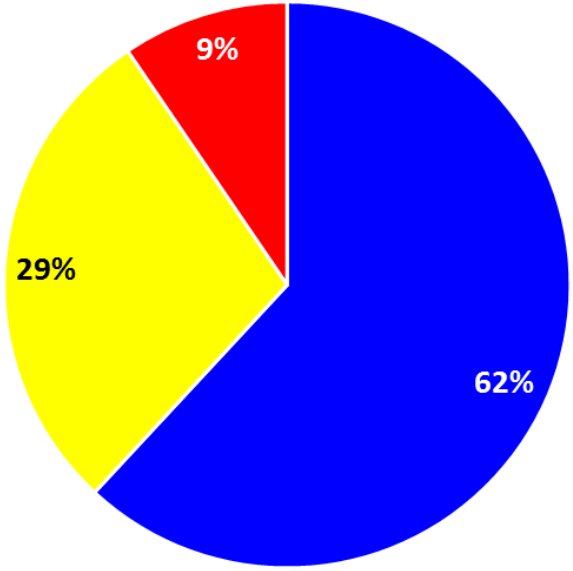
High Pos'n

Sorell Tas rainfall Jun-Aug rainfall in 20 pressure HIGH years since 1890



High Press

Sorell Tas rainfall Jun-Aug in 22 pressure LOW years since 1890



Low Press

Tasmania	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ENSO						✓	✓	✓	✓	✓	✓	✓
IOD					✓	✓	✓	✓	✓	✓		
SAM	✓	✓				✓	✓	✓	✓	✓	✓	✓
STR Position			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
STR Strength	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Months of the year where the main climate drivers have skill

Predictability

ENSO: 3 – 6 months out
IOD 1: – 3 months out
STR: 1 month out
SAM: 14 days out

Modelled Climate and Ocean Predictions for Tasmania from June/July 2016 run models

	Coupled GCM's								Ensembles		Statistical
	System 4 ECMWF Europe	ACCESS BoM Australia	SINTEX-F JAMSTEC Japan	CFSv2 NCEP USA	GEOS-5 NASA USA	ENS JMA Japan	CGCM BCC China	UKMO UK GlosSea5	IRI USA	APCC Korea	SOI phase USQ/Qld Australia
Month of Run	July	July	July	July	July	July	June	July	June	June	July
Forecast months	ASO	ASO	SON	ASO	ASO	ASO	ASO	ASO	JAS	JAS	ASO
Spring Pacific Ocean NINO3.4	Slightly cool (weak La Niña)	Cool (La Niña)	Neutral	Slightly cool	Slightly cool	Cool (La Niña)		Cool (La Niña)	Slightly cool	Cool (La Niña)	
Spring Eastern Indian Ocean	Warm (weak IOD-)	Warm (IOD-)	Warm (IOD-)	Warm (IOD-)	Warm	Warm (IOD-)		Warm (IOD-)	Warm (weak IOD-)	Warm (IOD-)	
Spring Rainfall	Slightly wetter?	Slightly wetter	Slightly wetter	Average, slightly wetter NE, Slightly drier SW	Slightly wetter	Average	Average	Average	Average	Average	Average
Spring Temperature	Slightly cooler?	Slightly warmer, average NW,	Average	Slightly warmer W, average E	Slightly warmer	Average	Average	Average	Slightly warmer S, average N	Slightly warmer	

Spring

Pacific Ocean: Cool possible La Nina?
Indian Ocean; Warm (IOD-)
Rainfall: Average/slightly wetter
Temperature: Average/slightly warmer

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TASMANIA

Modelled Climate and Ocean Predictions for Tasmania from June/July 2016 run models

	Coupled GCM's								Ensembles		Statistical
	System 4 ECMWF Europe	ACCESS BoM Australia	SINTEX-F JAMSTEC Japan	CFSv2 NCEP USA	GEOS-5 NASA USA	ENS JMA Japan	CGCM BCC China	UKMO UK GlosSea5	IRI USA	APCC Korea	SOI phase USQ/Qld Australia
Month of Run	July	July	July	July	July	July	June	July	June	June	July
Forecast months	NDJ	NDJ	DJF	NDJ	NDJ		NDJ	OND	OND	OND	
Summer Pacific Ocean NINO3.4	Neutral	Slightly cool (weak La Niña)	Slightly cool	Slightly cool	Neutral			Cool (La Niña)	Slightly cool	Slightly cool	
Summer Eastern Indian Ocean	Warm	Slightly warm	Slightly warm	Warm	Warm			Warm (IOD-)	Warm (IOD-)	Warm (weak IOD-)	
Summer Rainfall	Average	Slightly wetter N, average S	Average, slightly wetter NE	Slightly wetter, average SW	Slightly wetter		Average	Slightly wetter	Average	Average	
Summer Temperature	Slightly warmer?	Slightly warmer	Slightly cooler W, slightly warmer E	Slightly warmer	Slightly warmer		Average	Slightly warmer	Average	Slightly warmer	

Summer

Pacific Ocean: Slightly cool
Indian Ocean: Warm
Rainfall: Average/slightly wetter
Temperature: Slightly warmer

RED MEAT UPDATES
TASMANIA

Top four take home messages

1. Main drivers of climate in SE Australia affect Tasmania too.
2. Ocean temperatures to the north of Australia matter.
3. Model skill is greatest at this time of the year.
4. The outlook is rosy for the next six months.

Tools, resources & training

- This information is too important to trust “the media” to tell you what’s going on.
- Subscribe to the BoM “ENSO wrap” e-news
- Subscribe to “The Fast Break” model summary
- Subscribe to the “Very Fast Break” Youtube
- Download Rainman Streamflow for free

RED MEAT UPDATES

TASMANIA

Thank you

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