

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

MARALINGA (AUSTRALIA)

Altitude: 266 m.

Latitude: 30°10'S Longitude: 131°37'E

Temperature observation period.: 1974-1994 (21)

Rainfall observation period....: 1960-1994 (35)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	21.67	31.11	12.22	47.22	4.44	10.2	112.79
Feb.	23.06	31.67	14.44	46.11	5.56	12.7	108.17
Mar.	21.11	29.44	12.78	45.56	2.78	17.8	95.09
Apr.	17.77	26.11	9.44	40.56	0.56	12.7	62.67
May.	14.17	21.67	6.67	34.44	-1.11	12.7	40.52
Jun.	11.11	18.33	3.89	26.67	-3.33	15.2	24.25
Jul.	10.00	17.22	2.78	29.44	-2.22	10.2	21.28
Aug.	12.22	20.00	4.44	36.67	-3.33	12.7	32.47
Sep.	14.73	23.89	5.56	39.44	-1.11	7.6	47.20
Oct.	17.23	26.67	7.78	42.22	0.56	12.7	69.93
Nov.	21.39	31.67	11.11	45.56	1.67	15.2	104.69
Dec.	22.50	32.22	12.78	45.00	5.00	12.7	121.62
Year	17.25	25.83	8.66	39.91	0.79	152	840.68

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	372
Compensated thermicity index.....(Itc):	372
Simple continentality index.....(Ic):	13.1
Diurnality index.....(Id):	20.6
Annual ombrothermic index.....(Io):	0.74
Monthly estival ombrothermic index.....(Ios1):	0.47
Bimonthly estival ombrothermic index.....(Ios2):	0.51
Three monthly estival ombrothermic index.....(Ios3):	0.53
Four monthly estival ombrothermic index.....(Ios4):	0.57
Annual ombro-evaporation index.....(Ioe):	1.14
Annual positive temperature.....(Tp):	2070
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	672
Positive precipitation.....(Pp):	152

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	0	3	9	0

Latitudinal Belt...: Subtropical

Continentality.....: Oceanic - Low Semihyperoceanic

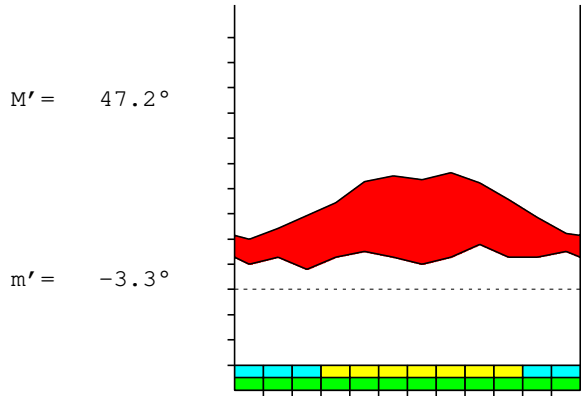
Bioclimate.....: MEDITERRANEAN DESERTIC-OCEANIC

Bioclimatic Belt...: UPPER THERMOMEDITERRANEAN UPPER ARID

MARALINGA (AUSTRALIA)

266 m

P= 152 30° 10' S 131° 37' E 21/35 y.
 T= 17.2° Ic= 13.1 Tp= 2070 Tn= 0
 m= 2.8° M= 17.2° Itc= 372 Io= 0.7



MEDITERRANEAN DESERTIC-OCEANIC
 UPPER THERMOMEDITERRANEAN UPPER ARID

WATER INDEX CARD MARALINGA (AUSTRALIA)
 Altitude: 266 m. Latitude: 30° 10' S

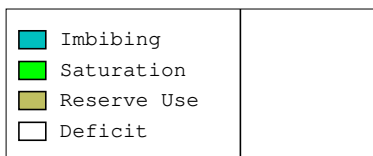
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	10.0	21	10	0	0	10	11	0	0	-0.5
Aug.	12.2	32	13	0	0	13	20	0	0	-0.6
Sep.	14.7	47	8	0	0	8	40	0	0	-0.8
Oct.	17.2	70	13	0	0	13	57	0	0	-0.8
Nov.	21.4	105	15	0	0	15	89	0	0	-0.8
Dec.	22.5	122	13	0	0	13	109	0	0	-0.8
Jan.	21.7	113	10	0	0	10	103	0	0	-0.9
Feb.	23.1	108	13	0	0	13	95	0	0	-0.8
Mar.	21.1	95	18	0	0	18	77	0	0	-0.8
Apr.	17.8	63	13	0	0	13	50	0	0	-0.7
May.	14.2	41	13	0	0	13	28	0	0	-0.6
Jun.	11.1	24	15	0	0	15	9	0	0	-0.3
Year	17.2	841	152	*	*	152	688	0	0	*

R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

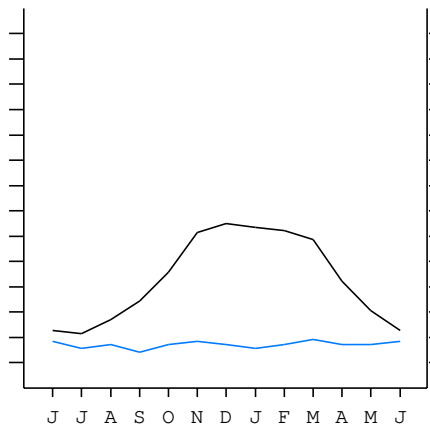
MARALINGA (AUSTRALIA)

30°10' S 131°37' E 266 m 21/35 y.

T= 17.2 Ic= 13.1 MEDITERRANEAN DESERTIC-OCEANIC
 m= 2.8 Tp= 2070 UPPER THERMOMEDITERRANEAN
 M= 17.2 Tn= 0 UPPER ARID
 M' = 47.2 Itc= 372
 m' = -3.3 Io= 0.7
 P= 152 mm
 PE= 841 mm



All over the year,
 there is hydric deficit



MARALINGA (AUSTRALIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]
 + Type: B. Oceanic
 + Subtype: 1. Semihyperoceanic
 + Variant: b. Low
 Thermic types [A3.A3]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm
 Bioclimatic types [B4.2a.3a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 4. DESERTIC-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOMEDITERRANEAN
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 3. ARID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Mexc.Tme.Ari

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 81
 Coldest semester of the year.....(Psw): 71
 Warmest four months period of the year.....(Pcm1): 51
 Following warmest four months period.....(Pcm2): 58
 Positive precipitation dryest 3 months.....(Ppd): 31
 Positive precipitation dryest 2 months.....(Ppd2): 20
 Positive precipitation dryest 1 month.....(Ppd1): 8
 Positive precipitation warmest 3 months.....(Pps): 36
 Positive precipitation warmest 2 months.....(Pps2): 23
 Positive precipitation warmest 1 month.....(Pps1): 13
 Positive precipitation coldest 3 months.....(Ppw): 38
 Positive precipitation coldest 2 months.....(Ppw2): 25
 Positive precipitation coldest 1 month.....(Ppw1): 10

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	38	35	35	43

Seasonal rainfall rhythms: F > W > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 23.1
 Average coldest month [T].....(Tmin): 10.0
 Maximum temp. warmest month [M].....(Tmmax): 32.2
 Minimum temp. coldest month [m].....(Tmmin): 2.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 47.2
 Absolute Min.temp. coldest month [m'].....(Tamin): -3.3
 First warmest contrasted month [M].....(Tcmax): 31.7 (11)
 First coldest contrasted month [m].....(Tcmin): 11.1 (11)
 Estival temperature.....(Ts): 672
 Positive temperature dryest 3 months.....(Tpd): 370
 Positive temperature dryest 2 months.....(Tpd2): 270
 Positive temperature dryest 1 month.....(Tpd1): 147
 Positive temperature warmest 3 months.....(Tps): 672
 Positive temperature warmest 2 months.....(Tps2): 447
 Positive temperature warmest 1 month.....(Tps1): 231
 Positive temperature coldest 3 months.....(Tpw): 333
 Positive temperature coldest 2 months.....(Tpw2): 211
 Positive temperature coldest 1 month.....(Tpw1): 100

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o	o	o							o	o
Dryest semester....(Smd)				o	o	o	o	o	o			
Warmest 4 months...(Cm1)	o	o									o	o
Dryest 4 months....(Cmd)							o	o	o	o		
Vegetation Activity(Pav)	o	o	o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)					o	o	o	o	o			
Agelid.....[m' > 0] (Pf)	o	o	o	o						o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o						o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 5.52
 Mediterranean index of January.....(Im1): 11.06
 Mediterranean index of January & February.....(Im2): 9.65
 Mediterranean index of December to February...(Im3): 9.62

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	127	102	127	178	127	127	152	102	127	76	127	152
Tp	225	217	231	211	178	142	111	100	122	147	172	214
Io (Iom)	0.56	0.47	0.55	0.84	0.71	0.90	1.37	1.02	1.04	0.52	0.74	0.71
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	356 / 672			432 / 531			381 / 333			355 / 533		
Io (Iot)	0.530			0.814			1.143			0.665		
Semesters	December-May						June-November					
Pp(x10)/Tp	788 / 1203						736 / 867					
Io (Iosm)	0.655						0.849					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 1524/2070=0.74 [Strong upper arid \(7\) \[1457\]](#)

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	127	102	127	178	127	127	152	102	127	76	127	152
Tp [T*10]	225	217	231	211	178	142	111	100	122	147	172	214
Iom [Pp/Tp]	56	47	55	84	71	90	137	102	104	52	74	71
Avm [200-Iom]	144	153	145	116	129	110	63	98	96	148	126	129
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	356 / 672			432 / 531			381 / 333			355 / 533		
Iot [Pp/Tp]	53			81			114			67		
Avs E[Avm<200]	441			355			257			404		
Strong lower arid [1]						Weak lower arid [5]						
Strong upper arid [3]						Weak upper arid [3]						
Strong lower semiarid [3]						Weak lower semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	13.06
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		23.78
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		20.42
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.18
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		8.84
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		5.59
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		14.79
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		11.32
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.18
+ Arid (0.2>Im>0.05)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		2.08
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.03	0.04	0.06	0.04	0.05	0.07	0.04	0.05	0.03	0.05	0.05	0.04
T-E ratio	9.75	10.38	9.50	8.00	6.38	5.00	4.50	5.50	6.63	7.75	9.63	10.13
Precipitation-effectiveness: 5.49						Temperature-efficiency						93.13
Moisture Index [MI=100*(P-PE)/PE]												-81.87
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												81.86
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												840.68
+ Second mesothermic (712<PE<855)												

