

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

ELCHO ISLAND (AUSTRALIA)

Altitude: 18 m.

Latitude: 12°2'S Longitude: 135°34'E

Temperature observation period.: 1966-1990 (25)

Rainfall observation period....: 1937-1989 (53)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	28.60	32.60	24.80	0.00	0.00	348.1	167.54
Feb.	28.20	30.80	25.60	0.00	0.00	315.7	144.63
Mar.	28.04	30.23	25.68	0.00	0.00	273.8	155.22
Apr.	27.98	30.23	25.68	0.00	0.00	143.8	144.40
May.	27.08	29.05	25.15	0.00	0.00	27.9	140.14
Jun.	25.29	28.55	22.05	0.00	0.00	7.7	103.10
Jul.	24.69	28.33	21.18	0.00	0.00	2.1	97.54
Aug.	25.16	28.35	21.85	0.00	0.00	1.0	108.42
Sep.	26.59	29.00	23.80	0.00	0.00	1.8	136.22
Oct.	27.83	31.05	24.55	0.00	0.00	11.4	156.38
Nov.	29.15	32.21	26.04	0.00	0.00	65.9	164.55
Dec.	29.31	32.55	26.05	0.00	0.00	197.9	175.37
Year	27.33	30.25	24.37	0.00	0.00	1397	1693.5

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	768
Compensated thermicity index.....(Itc):	768
Simple continentality index.....(Ic):	4.6
Diurnality index.....(Id):	7.8
Annual ombrothermic index.....(Io):	4.26
Monthly dry ombrothermic index.....(Iod1):	0.04
Bimonthly dry ombrothermic index.....(Iod2):	0.05
Three monthly dry ombrothermic index.....(Iod3):	0.06
Four monthly dry ombrothermic index.....(Iod4):	0.12
Annual ombro-evaporation index.....(Ioe):	25.96
Annual positive temperature.....(Tp):	3279
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	764
Positive precipitation.....(Pp):	1397

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	5	1	1	5	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Euhyperoceanic

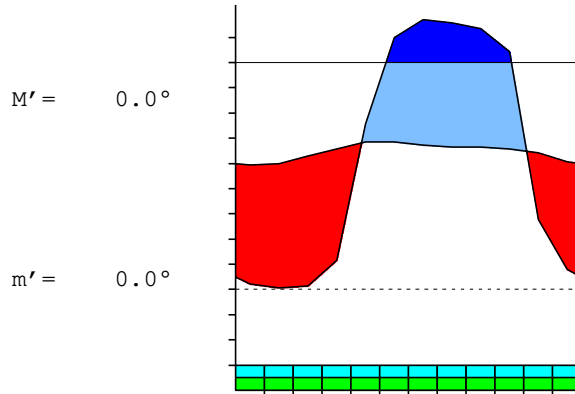
Bioclimate(Variant): TROPICAL PLUVISEASONAL (XEROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW SUBHUMID

ELCHO ISLAND (AUSTRALIA)

18 m

P= 1397 12° 2'S 135° 34'E 25/53 y.
 T= 27.3° Ic= 4.6 Tp= 3279 Tn= 0
 m= 21.2° M= 28.3° Itc= 768 Io= 4.3



TROPICAL PLUVISEASONAL (XEROPHYTIC)
 UPPER INFRATROPICAL LOW SUBHUMID

WATER INDEX CARD ELCHO ISLAND (AUSTRALIA)
 Altitude: 18 m. Latitude: 12° 2'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	24.7	98	2	0	0	2	95	0	7	-0.9
Aug.	25.2	108	1	0	0	1	107	0	4	-0.9
Sep.	26.6	136	2	0	0	2	134	0	2	-0.9
Oct.	27.8	156	11	0	0	11	145	0	1	-0.9
Nov.	29.1	165	66	0	0	66	99	0	0	-0.5
Dec.	29.3	175	198	23	23	175	0	0	0	0.1
Jan.	28.6	168	348	77	100	168	0	103	52	1.0
Feb.	28.2	145	316	0	100	145	0	171	111	1.1
Mar.	28.0	155	274	0	100	155	0	119	115	0.7
Apr.	28.0	144	144	-1	99	144	0	0	58	0.0
May.	27.1	140	28	-99	0	127	13	0	29	-0.8
Jun.	25.3	103	8	0	0	8	95	0	14	-0.9
Year	27.3	1694	1397	*	*	1004	689	393	393	*

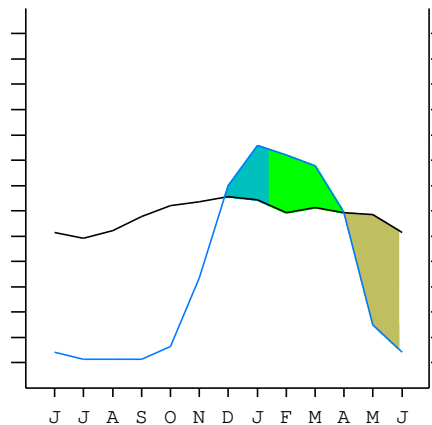
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

ELCHO ISLAND (AUSTRALIA)

12°2'S 135°34'E 18 m 25/53 y.

T= 27.3 Ic= 4.6 TROPICAL PLUVISEASONAL (XEROPHYTIC)
 m= 21.2 Tp= 3279 UPPER INFRATROPICAL
 M= 28.3 Tn= 0 LOW SUBHUMID
 M' = 0.0 Itc= 768
 m' = 0.0 Io= 4.3
 P= 1397 mm ———
 PE= 1694 mm ———

Imbibing	25 Nov.
Saturation	13 Jan.
Reserve Use	30 Mar.
Deficit	27 May.



ELCHO ISLAND (AUSTRALIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A2a]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: a. High
 Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A4.1a.6b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trde.Itr.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1345
 Coldest semester of the year.....(Psw): 52
 Warmest four months period of the year.....(Pcm1): 928
 Following warmest four months period.....(Pcm2): 453
 Positive precipitation dryest 3 months.....(Ppd): 5
 Positive precipitation dryest 2 months.....(Ppd2): 3
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 612
 Positive precipitation warmest 2 months.....(Pps2): 264
 Positive precipitation warmest 1 month.....(Pps1): 198
 Positive precipitation coldest 3 months.....(Ppw): 11
 Positive precipitation coldest 2 months.....(Ppw2): 3
 Positive precipitation coldest 1 month.....(Ppw1): 2

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	10	79	861	445

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 29.3
 Average coldest month [T].....(Tmin): 24.7
 Maximum temp. warmest month [M].....(Tmmax): 32.6
 Minimum temp. coldest month [m].....(Tmmin): 21.2
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
 First warmest contrasted month [M].....(Tcmax): 32.6 (1)
 First coldest contrasted month [m].....(Tcmin): 24.8 (1)
 Dry station temperature.....(Td): 764
 Positive temperature dryest 3 months.....(Tpd): 764
 Positive temperature dryest 2 months.....(Tpd2): 518
 Positive temperature dryest 1 month.....(Tpd1): 252
 Positive temperature warmest 3 months.....(Tps): 871
 Positive temperature warmest 2 months.....(Tps2): 585
 Positive temperature warmest 1 month.....(Tps1): 293
 Positive temperature coldest 3 months.....(Tpw): 751
 Positive temperature coldest 2 months.....(Tpw2): 499
 Positive temperature coldest 1 month.....(Tpw1): 247

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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)												
Agelid.....[m' > 0] (Pf)												
HiperAgelid..[all>0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.21
 Mediterranean index of January.....(Im1): No
 Mediterranean index of January & February.....(Im2): No
 Mediterranean index of December to February...(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1979	3481	3157	2738	1438	279	77	21	10	18	114	659
Tp	293	286	282	280	280	271	253	247	252	266	278	292
Io (Iom)	6.75	12.2	11.2	9.77	5.14	1.03	0.30	0.08	0.04	0.07	0.41	2.26
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	8618 / 861			4455 / 831			108 / 751			791 / 836		
Io (Iot)	10.01			5.361			0.143			0.947		
Semesters	December-May						June-November					
Pp(x10)/Tp	13073 / 1692						899 / 1587					
Io (Iosm)	7.726						0.566					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 13972/3279=4.26 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1979	3481	3157	2738	1438	279	77	21	10	18	114	659
Tp [T*10]	293	286	282	280	280	271	253	247	252	266	278	292
Iom [Pp/Tp]	675	\$\$	\$\$	977	514	103	30	8	4	7	41	226
Avm [200-Iom]	***	***	***	***	***	97	170	192	196	193	159	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	8618 / 861			4455 / 831			108 / 751			791 / 836		
Iot [Pp/Tp]	1001			536			14			95		
Avs E[Avm<200]	***			***			557			***		
Lower ultrahyperarid [3]							Upper ultrahyperarid [1]					
Upper hyperarid [1]							Strong lower arid [1]					
Strong lower semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 4.62
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 17.27
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 6.94
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.92
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 51.13
 + Semiarid (60>R>40)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 37.43
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 227.49
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.96
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 0.83
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 86.74
 + Low (60<K<90)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 3. Termoxeroteric (Mediterranean warm)
 + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.36	1.23	1.06	0.52	0.09	0.02	0.01	0.00	0.00	0.03	0.21	0.72
T-E ratio	12.87	12.69	12.62	12.59	12.19	11.38	11.11	11.32	11.97	12.52	13.12	13.19
Precipitation-effectiveness:	52.45					Temperature-efficiency: 147.56						
Moisture Index [MI=100*(P-PE)/PE]: -17.50 + C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]: 40.69 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 23.19 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1693.52 + Megathermic (PE>1440)												

