

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SETE LAGOAS (BRAZIL)

Altitude: 732 m.

Latitude: 19°28'S Longitude: 44°15'W

Temperature observation period.: 1970-1990 (21)

Rainfall observation period....: 1970-1990 (21)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	22.90	28.90	18.20	36.20	13.70	289.0	109.99
Feb.	23.00	29.70	18.10	34.60	13.60	161.0	96.48
Mar.	22.80	29.60	17.40	34.80	10.00	133.0	100.28
Apr.	21.20	28.50	16.10	33.40	9.80	53.0	78.30
May.	19.30	27.10	13.70	33.00	3.90	26.0	62.37
Jun.	17.90	26.10	11.50	31.20	2.40	10.0	50.22
Jul.	17.50	26.70	11.10	31.60	3.90	15.0	49.22
Aug.	19.30	27.80	16.60	34.80	4.40	10.0	64.97
Sep.	20.90	28.70	14.80	36.00	8.60	33.0	78.10
Oct.	22.10	28.90	16.90	38.60	10.90	116.0	96.86
Nov.	22.10	28.60	17.70	36.00	10.90	217.0	96.86
Dec.	22.30	28.20	18.10	36.10	13.40	266.0	103.44
Year	20.94	28.23	15.85	34.69	8.79	1329	987.10

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	587
Compensated thermicity index.....(Itc):	587
Simple continentality index.....(Ic):	5.5
Diurnality index.....(Id):	15.6
Annual ombrothermic index.....(Io):	5.29
Monthly dry ombrothermic index.....(Iod1):	0.56
Bimonthly dry ombrothermic index.....(Iod2):	0.71
Three monthly dry ombrothermic index.....(Iod3):	0.64
Four monthly dry ombrothermic index.....(Iod4):	0.82
Annual ombro-evaporation index.....(Ioe):	8.04
Annual positive temperature.....(Tp):	2513
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	547
Positive precipitation.....(Pp):	1329

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	6	1	2	3	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Euhyperoceanic

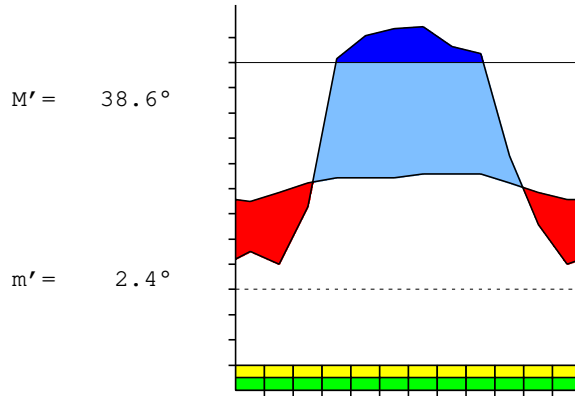
Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)

Bioclimatic Belt...: LOW THERMOTROPICAL UPPER SUBHUMID

SETE LAGOAS (BRAZIL)

732 m

P= 1329 19° 28'S 44° 15'W 21/21 y.
 T= 20.9° Ic= 5.5 Tp= 2513 Tn= 0
 m= 11.1° M= 26.7° Itc= 587 Io= 5.3



TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)
 LOW THERMOTROPICAL UPPER SUBHUMID

WATER INDEX CARD
 Altitude: 732 m.

SETE LAGOAS (BRAZIL)
 Latitude: 19° 28'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	17.5	49	15	0	0	15	34	0	4	-0.6
Aug.	19.3	65	10	0	0	10	55	0	2	-0.8
Sep.	20.9	78	33	0	0	33	45	0	1	-0.5
Oct.	22.1	97	116	19	19	97	0	0	1	0.1
Nov.	22.1	97	217	81	100	97	0	39	20	1.2
Dec.	22.3	103	266	0	100	103	0	163	91	1.5
Jan.	22.9	110	289	0	100	110	0	179	135	1.6
Feb.	23.0	96	161	0	100	96	0	65	100	0.6
Mar.	22.8	100	133	0	100	100	0	33	66	0.3
Apr.	21.2	78	53	-25	75	78	0	0	33	-0.3
May.	19.3	62	26	-36	38	62	0	0	17	-0.5
Jun.	17.9	50	10	-38	0	48	2	0	8	-0.8
Year	20.9	987	1329	*	*	851	136	478	478	*

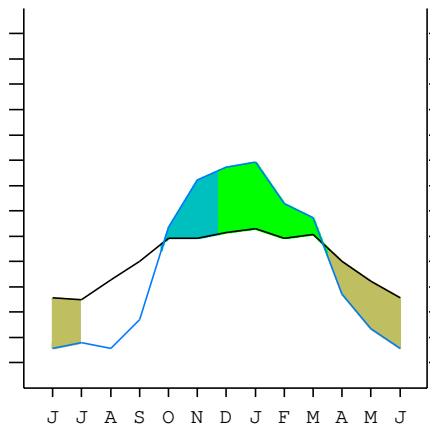
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SETE LAGOAS (BRAZIL)

19°28'S 44°15'W 732 m 21/21 y.

T= 20.9 Ic= 5.5 TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)
 m= 11.1 Tp= 2513 LOW THERMOTROPICAL
 M= 26.7 Tn= 0 UPPER SUBHUMID
 M' = 38.6 Itc= 587
 m' = 2.4 Io= 5.3
 P= 1329 mm ———
 PE= 987 mm ———

Imbibing	22 Sep.
Saturation	21 Nov.
Reserve Use	17 Mar.
Deficit	29 Jun.



SETE LAGOAS (BRAZIL)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2a]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: a. High

Thermic types [A2.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm

Bioclimatic types [A4.2b.6a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification: Trde.Ttr.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1182
 Coldest semester of the year.....(Psw): 147
 Warmest four months period of the year.....(Pcm1): 849
 Following warmest four months period.....(Pcm2): 104
 Positive precipitation dryest 3 months.....(Ppd): 35
 Positive precipitation dryest 2 months.....(Ppd2): 25
 Positive precipitation dryest 1 month.....(Ppd1): 10
 Positive precipitation warmest 3 months.....(Pps): 583
 Positive precipitation warmest 2 months.....(Pps2): 450
 Positive precipitation warmest 1 month.....(Pps1): 161
 Positive precipitation coldest 3 months.....(Ppw): 51
 Positive precipitation coldest 2 months.....(Ppw2): 25
 Positive precipitation coldest 1 month.....(Ppw1): 15

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	35	366	716	212

Tropical rainfall rhythms: 1 > 4 > 2 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 23.0
 Average coldest month [T].....(Tmin): 17.5
 Maximum temp. warmest month [M].....(Tmmax): 29.7
 Minimum temp. coldest month [m].....(Tmmin): 11.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.6
 Absolute Min.temp. coldest month [m'].....(Tamin): 2.4
 First warmest contrasted month [M].....(Tcmax): 26.7 (7)
 First coldest contrasted month [m].....(Tcmin): 11.1 (7)
 Dry station temperature.....(Td): 547
 Positive temperature dryest 3 months.....(Tpd): 547
 Positive temperature dryest 2 months.....(Tpd2): 354
 Positive temperature dryest 1 month.....(Tpd1): 179
 Positive temperature warmest 3 months.....(Tps): 687
 Positive temperature warmest 2 months.....(Tps2): 459
 Positive temperature warmest 1 month.....(Tps1): 230
 Positive temperature coldest 3 months.....(Tpw): 547
 Positive temperature coldest 2 months.....(Tpw2): 354
 Positive temperature coldest 1 month.....(Tpw1): 175

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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)	o	o	o	o	o	o	o	o	o	o	o	o
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): 0.74
 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)	2660	2890	1610	1330	530	260	100	150	100	330	1160	2170
Tp	223	229	230	228	212	193	179	175	193	209	221	221
Io (Iom)	11.9	12.6	7.00	5.83	2.50	1.35	0.56	0.86	0.52	1.58	5.25	9.82
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	7160 / 682			2120 / 633			350 / 547			3660 / 651		
Io (Iot)	10.50			3.349			0.640			5.622		
Semesters	December-May						June-November					
Pp(x10)/Tp	9280 / 1315						4010 / 1198					
Io (Iosm)	7.057						3.347					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 13290/2513=5.29 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2660	2890	1610	1330	530	260	100	150	100	330	1160	2170
Tp [T*10]	223	229	230	228	212	193	179	175	193	209	221	221
Iom [Pp/Tp]	\$\$	\$\$	700	583	250	135	56	86	52	158	525	982
Avm [200-Iom]	***	***	***	***	***	65	144	114	148	42	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	7160 / 682			2120 / 633			350 / 547			3660 / 651		
Iot [Pp/Tp]	1050			335			64			562		
Avs E[Avm<200]	***			***			407			***		
Weak lower arid [3]						Weak upper arid [1]						
Weak lower semiarid [1]						Strong upper semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	5.50
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		7.66
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		5.01
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.73
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		63.46
+ Temperate warm (100>R>60)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		42.95
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		175.13
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		1.58
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE]		1.35
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		62.84
+ Low (60<K<90)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 2. Macrothermic

Thornthwaite (1948)													
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	1.26	0.66	0.53	0.20	0.09	0.03	0.05	0.03	0.12	0.47	0.93	1.17	
T-E ratio	10.30	10.35	10.26	9.54	8.68	8.05	7.88	8.68	9.40	9.95	9.95	10.03	
Precipitation-effectiveness:	55.52					Temperature-efficiency							113.08
Moisture Index [MI=100*(P-PE)/PE]												34.64	
+ B1.Humid low-humid (20<MI<40)													
Index of dryness [DI=100*d/PE]												13.79	
+ No deficit (0<DI<16.7)													
Index of humidity [HI=100*s/PE]												48.42	
+ Strong surplus (20<HI)													
Potential Evapotranspiration PE												987.10	
+ Third mesothermic (855<PE<997)													

