

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

TERESINA (BRAZIL)

Altitude: 100 m.

Latitude: 5°3'S Longitude: 42°48'W

Temperature observation period.: 1983-1994 (12)

Rainfall observation period....: 1981-1994 (14)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	27.50	32.22	22.78	37.78	17.78	132.1	152.12
Feb.	27.50	32.22	22.78	37.22	17.78	216.2	136.33
Mar.	27.23	31.67	22.78	33.89	20.00	220.5	147.00
Apr.	27.50	32.22	22.78	36.11	17.78	115.8	143.51
May.	27.22	32.22	22.22	35.00	18.89	96.8	144.09
Jun.	26.95	32.78	21.11	36.11	17.78	92.0	137.71
Jul.	26.67	33.33	20.00	38.89	16.11	88.9	139.60
Aug.	27.50	35.00	20.00	37.78	12.78	117.4	147.81
Sep.	28.89	36.11	21.67	37.78	17.22	26.2	154.63
Oct.	29.17	35.56	22.78	38.89	18.89	109.7	164.71
Nov.	29.17	35.00	23.33	38.89	18.89	119.4	161.58
Dec.	28.89	34.44	23.33	37.78	20.00	201.9	163.91
Year	27.85	33.56	22.13	37.18	17.83	1537	1793.0

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	812
Compensated thermicity index.....(Itc):	812
Simple continentality index.....(Ic):	2.5
Diurnality index.....(Id):	15.0
Annual ombrothermic index.....(Io):	4.60
Monthly dry ombrothermic index.....(Iod1):	0.91
Bimonthly dry ombrothermic index.....(Iod2):	2.55
Threemonthly dry ombrothermic index.....(Iod3):	2.80
Fourmonthly dry ombrothermic index.....(Iod4):	2.95
Annual ombro-evaporation index.....(Ioe):	0.86
Annual positive temperature.....(Tp):	3342
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	831
Positive precipitation.....(Pp):	1537

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	7	4	0	1	0

Latitudinal Belt...: Equatorial

Continentality.....: Hyperoceanic - Low Ultrahyperoceanic

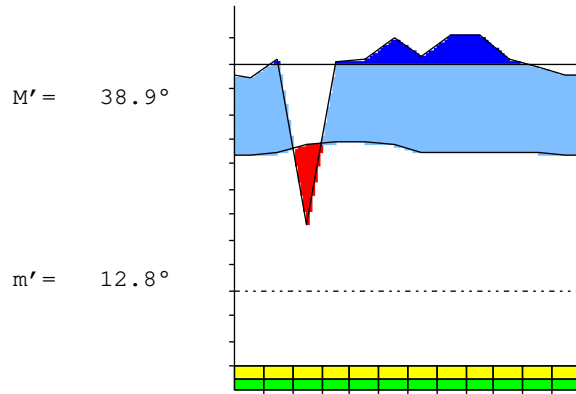
Bioclimate(Variant): TROPICAL PLUVIAL (SUBMESOPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW SUBHUMID

TERESINA (BRAZIL)

100 m

P= 1537 5° 3'S 42° 48'W 12/14 y.
 T= 27.8 ° Ic= 2.5 Tp= 3342 Tn= 0
 m= 20.0 ° M= 33.3 ° Itc= 812 Io= 4.6



TROPICAL PLUVIAL (SUBMESOPHYTIC)
 UPPER INFRATROPICAL LOW SUBHUMID

WATER INDEX CARD TERESINA (BRAZIL)
 Altitude: 100 m. Latitude: 5° 3'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	26.7	140	89	0	0	89	51	0	2	-0.3
Aug.	27.5	148	117	0	0	117	30	0	1	-0.2
Sep.	28.9	155	26	0	0	26	128	0	1	-0.8
Oct.	29.2	165	110	0	0	110	55	0	0	-0.3
Nov.	29.2	162	119	0	0	119	42	0	0	-0.2
Dec.	28.9	164	202	38	38	164	0	0	0	0.2
Jan.	27.5	152	132	-20	18	152	0	0	0	-0.1
Feb.	27.5	136	216	80	98	136	0	0	0	0.5
Mar.	27.2	147	221	2	100	147	0	71	36	0.5
Apr.	27.5	144	116	-28	72	144	0	0	18	-0.1
May.	27.2	144	97	-47	25	144	0	0	9	-0.3
Jun.	27.0	138	92	-25	0	117	21	0	4	-0.3
Year	27.8	1793	1537	*	*	1466	327	71	71	*

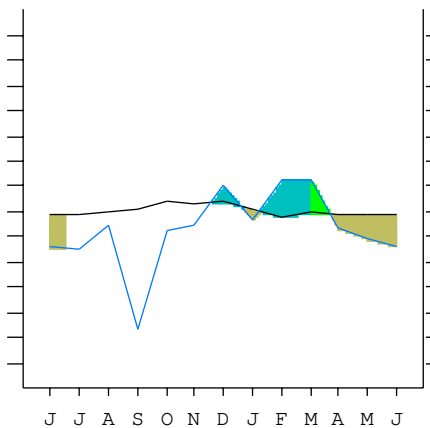
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

TERESINA (BRAZIL)

5°3'S 42°48'W 100 m 12/14 y.

T= 27.8 Ic= 2.5 TROPICAL PLUVIAL (SUBMESOPHYTIC)
 m= 20.0 Tp= 3342 UPPER INFRATROPICAL
 M= 33.3 Tn= 0 LOW SUBHUMID
 M' = 38.9 Itc= 812
 m' = 12.8 Io= 4.6
 P= 1537 mm ———
 PE= 1793 mm ———

Imbibing	7 Jan.
Saturation	1 Mar.
Reserve Use	22 Mar.
Deficit	17 Jun.



TERESINA (BRAZIL)

Latitude: 5°3'S Longitude: 42°48'W Altitude: 100 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A1b]
 + Type: A. Hyperoceanic
 + Subtype: 1. Ultrahyperoceanic
 + Variant: b. Low
 Thermic types [A1.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 1. Equatorial
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A5.1a.6b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 5. PLUVIAL
 + Bioclimatic variant .: SUBMESOPHYTIC
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic ClassificationTrpl(Smf).Itr.Shu.Uho

TERESINA (BRAZIL)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 707
 Coldest semester of the year.....(Psw): 830
 Warmest four months period of the year.....(Pcm1): 457
 Following warmest four months period.....(Pcm2): 685
 Positive precipitation dryest 3 months.....(Ppd): 233
 Positive precipitation dryest 2 months.....(Ppd2): 136
 Positive precipitation dryest 1 month.....(Ppd1): 26
 Positive precipitation warmest 3 months.....(Pps): 255
 Positive precipitation warmest 2 months.....(Pps2): 229
 Positive precipitation warmest 1 month.....(Pps1): 110
 Positive precipitation coldest 3 months.....(Ppw): 278
 Positive precipitation coldest 2 months.....(Ppw2): 181
 Positive precipitation coldest 1 month.....(Ppw1): 89

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	298	255	550	433

Tropical rainfall rhythms: 1 > 2 > 3 > 4

TERESINA (BRAZIL)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 29.2
 Average coldest month [T].....(Tmin): 26.7
 Maximum temp. warmest month [M].....(Tmmax): 36.1
 Minimum temp. coldest month [m].....(Tmmin): 20.0
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.9
 Absolute Min.temp. coldest month [m'].....(Tamin): 12.8
 First warmest contrasted month [M].....(Tcmax): 35.0 (8)
 First coldest contrasted month [m].....(Tcmin): 20.0 (8)
 Dry station temperature.....(Td): 831
 Positive temperature dryest 3 months.....(Tpd): 831
 Positive temperature dryest 2 months.....(Tpd2): 581
 Positive temperature dryest 1 month.....(Tpd1): 289
 Positive temperature warmest 3 months.....(Tps): 872
 Positive temperature warmest 2 months.....(Tps2): 583
 Positive temperature warmest 1 month.....(Tps1): 292
 Positive temperature coldest 3 months.....(Tpw): 808
 Positive temperature coldest 2 months.....(Tpw2): 536
 Positive temperature coldest 1 month.....(Tpw1): 267

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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): 1.17
 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)	2019	1321	2162	2205	1158	968	920	889	1174	262	1097	1194
Tp	289	275	275	272	275	272	270	267	275	289	292	292
Io (Iom)	6.99	4.80	7.86	8.10	4.21	3.56	3.41	3.33	4.27	0.91	3.76	4.09
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	5502 / 839			4331 / 819			2983 / 811			2553 / 872		
Io (Iot)	6.559			5.285			3.677			2.927		
Semesters	December-May						June-November					
Pp(x10)/Tp	9833 / 1658						5536 / 1684					
Io (Iosm)	5.929						3.288					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 15369/3342=4.60 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2019	1321	2162	2205	1158	968	920	889	1174	262	1097	1194
Tp [T*10]	289	275	275	272	275	272	270	267	275	289	292	292
Iom [Pp/Tp]	699	480	786	810	421	356	341	333	427	91	376	409
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	109	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	5502 / 839			4331 / 819			2983 / 811			2553 / 872		
Iot [Pp/Tp]	656			528			368			293		
Avs E[Avm<200]	***			***			***			***		
Weak upper arid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	2.50
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		27.88
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		2.37
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.93
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		55.19
+ Semiarid (60>R>40)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		40.61
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmmax ² -Tmmin ²)]		170.02
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		1.81
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE]		0.86
+ Humid (I>0.65)		
Potencial Erosion I of Fournier (1960) [K=Pi ² /P].....		31.64
+ Very low (K<60)		

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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	0.48	0.82	0.84	0.41	0.34	0.32	0.31	0.42	0.08	0.37	0.41	0.74
T-E ratio	12.38	12.38	12.25	12.38	12.25	12.13	12.00	12.38	13.00	13.13	13.13	13.00
Precipitation-effectiveness: 55.40						Temperature-efficiency: 150.39						
Moisture Index [MI=100*(P-PE)/PE]												
+ C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]												
+ Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]												
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												
+ Megathermic (PE>1440)												

