

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

IMPERATRIZ (BRAZIL)

Altitude: 123 m.

Latitude: 5°32'S Longitude: 47°30'W

Temperature observation period.: 1976-1990 (15)

Rainfall observation period....: 1976-1990 (15)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	26.31	31.10	22.20	35.20	19.20	227.0	137.43
Feb.	25.90	31.10	22.20	35.50	19.80	228.0	116.17
Mar.	26.00	31.20	22.20	35.30	19.40	279.0	129.02
Apr.	26.20	31.60	22.40	35.50	18.00	197.0	127.65
May.	26.60	32.30	21.00	35.90	18.80	55.0	139.03
Jun.	26.20	32.80	20.20	36.00	16.40	16.0	125.09
Jul.	26.40	33.50	19.40	36.50	15.00	6.0	133.94
Aug.	27.00	34.40	19.90	37.50	14.30	10.0	143.69
Sep.	27.00	34.10	21.40	37.70	16.60	38.0	139.50
Oct.	27.30	33.20	22.40	38.40	19.80	86.0	149.00
Nov.	26.90	32.30	22.30	37.30	18.00	123.0	142.86
Dec.	26.40	31.40	22.20	36.20	19.00	199.0	140.51
Year	26.52	32.42	21.48	36.42	17.86	1464	1623.9

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	798
Compensated thermicity index.....(Itc):	798
Simple continentality index.....(Ic):	1.4
Diurnality index.....(Id):	14.5
Annual ombrothermic index.....(Io):	4.60
Monthly dry ombrothermic index.....(Iod1):	0.23
Bimonthly dry ombrothermic index.....(Iod2):	0.30
Three monthly dry ombrothermic index.....(Iod3):	0.40
Four monthly dry ombrothermic index.....(Iod4):	0.82
Annual ombro-evaporation index.....(Ioe):	0.46
Annual positive temperature.....(Tp):	3182
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	796
Positive precipitation.....(Pp):	1464

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

Latitudinal Belt...: Equatorial

Continentalty.....: Hyperoceanic - High Ultrahyperoceanic

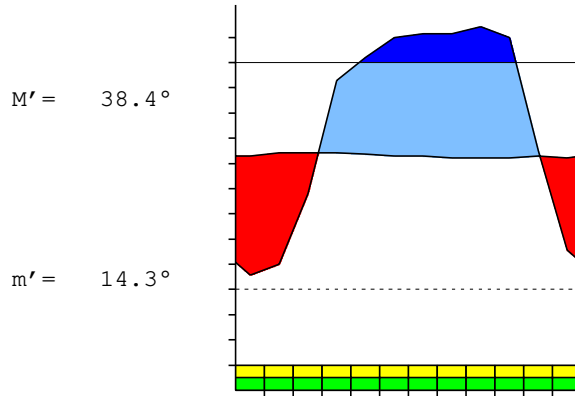
Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW SUBHUMID

IMPERATRIZ (BRAZIL)

123 m

P= 1464 5° 32' S 47° 30' W 15/15 y.
 T= 26.5° Ic= 1.4 Tp= 3182 Tn= 0
 m= 22.2° M= 31.1° Itc= 798 Io= 4.6



TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)
 UPPER INFRATROPICAL LOW SUBHUMID

WATER INDEX CARD IMPERATRIZ (BRAZIL)
 Altitude: 123 m. Latitude: 5° 32' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	26.4	134	6	0	0	6	128	0	11	-0.9
Aug.	27.0	144	10	0	0	10	134	0	6	-0.9
Sep.	27.0	140	38	0	0	38	102	0	3	-0.7
Oct.	27.3	149	86	0	0	86	63	0	1	-0.4
Nov.	26.9	143	123	0	0	123	20	0	1	-0.1
Dec.	26.4	141	199	58	58	141	0	0	0	0.4
Jan.	26.3	137	227	42	100	137	0	48	24	0.6
Feb.	25.9	116	228	0	100	116	0	112	68	0.9
Mar.	26.0	129	279	0	100	129	0	150	109	1.1
Apr.	26.2	128	197	0	100	128	0	69	89	0.5
May.	26.6	139	55	-84	16	139	0	0	45	-0.6
Jun.	26.2	125	16	-16	0	32	93	0	22	-0.8
Year	26.5	1624	1464	*	*	1085	539	379	379	*

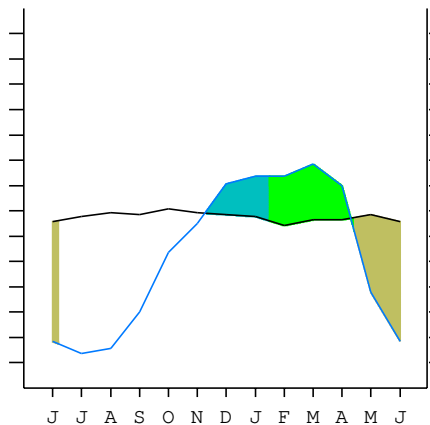
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

IMPERATRIZ (BRAZIL)

5°32' S 47°30' W 123 m 15/15 y.

T= 26.5 Ic= 1.4 TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)
 m= 22.2 Tp= 3182 UPPER INFRATROPICAL
 M= 31.1 Tn= 0 LOW SUBHUMID
 M' = 38.4 Itc= 798
 m' = 14.3 Io= 4.6
 P= 1464 mm ———
 PE= 1624 mm ———

Imbibing	8 Nov.
Saturation	14 Jan.
Reserve Use	14 Apr.
Deficit	5 Jun.



IMPERATRIZ (BRAZIL)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A1a]
 + Type: A. Hyperoceanic
 + Subtype: 1. Ultrahyperoceanic
 + Variant: a. High
 Thermic types [A1.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 1. Equatorial
 + 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): 462
 Coldest semester of the year.....(Psw): 1002
 Warmest four months period of the year.....(Pcm1): 257
 Following warmest four months period.....(Pcm2): 933
 Positive precipitation dryest 3 months.....(Ppd): 32
 Positive precipitation dryest 2 months.....(Ppd2): 16
 Positive precipitation dryest 1 month.....(Ppd1): 6
 Positive precipitation warmest 3 months.....(Pps): 134
 Positive precipitation warmest 2 months.....(Pps2): 124
 Positive precipitation warmest 1 month.....(Pps1): 86
 Positive precipitation coldest 3 months.....(Ppw): 704
 Positive precipitation coldest 2 months.....(Ppw2): 507
 Positive precipitation coldest 1 month.....(Ppw1): 228

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	32	247	654	531

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.3
 Average coldest month [T].....(Tmin): 25.9
 Maximum temp. warmest month [M].....(Tmmax): 34.4
 Minimum temp. coldest month [m].....(Tmmin): 19.4
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.4
 Absolute Min.temp. coldest month [m'].....(Tamin): 14.3
 First warmest contrasted month [M].....(Tcmax): 34.4 (8)
 First coldest contrasted month [m].....(Tcmin): 19.9 (8)
 Dry station temperature.....(Td): 796
 Positive temperature dryest 3 months.....(Tpd): 796
 Positive temperature dryest 2 months.....(Tpd2): 534
 Positive temperature dryest 1 month.....(Tpd1): 264
 Positive temperature warmest 3 months.....(Tps): 813
 Positive temperature warmest 2 months.....(Tps2): 543
 Positive temperature warmest 1 month.....(Tps1): 273
 Positive temperature coldest 3 months.....(Tpw): 781
 Positive temperature coldest 2 months.....(Tpw2): 519
 Positive temperature coldest 1 month.....(Tpw1): 259

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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): 1.11
 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)	1990	2270	2280	2790	1970	550	160	60	100	380	860	1230
Tp	264	263	259	260	262	266	262	264	270	270	273	269
Io (Iom)	7.54	8.63	8.80	10.7	7.52	2.07	0.61	0.23	0.37	1.41	3.15	4.57
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	6540 / 786			5310 / 788			320 / 796			2470 / 812		
Io (Iot)	8.320			6.739			0.402			3.042		
Semesters	December-May						June-November					
Pp(x10)/Tp	11850 / 1574						2790 / 1608					
Io (Iosm)	7.528						1.735					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 14640/3182=4.60 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1990	2270	2280	2790	1970	550	160	60	100	380	860	1230
Tp [T*10]	264	263	259	260	262	266	262	264	270	270	273	269
Iom [Pp/Tp]	754	863	880	\$\$\$	752	207	61	23	37	141	315	457
Avm [200-Iom]	***	***	***	***	***	***	139	177	163	59	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	6540 / 786			5310 / 788			320 / 796			2470 / 812		
Iot [Pp/Tp]	832			674			40			304		
Avs E[Avm<200]	***			***			479			***		
Lower hyperarid [1]							Upper hyperarid [1]					
Strong lower arid [1]							Weak lower arid [1]					
Weak lower semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 1.40
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 4.28
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: -5.11
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.49
 + Hyperoceanic (0<CI<0.6)
 Rainfall Index of Lang (1925) [R=P/T]: 55.21
 + Semiarid (60>R>40)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 40.09
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 181.41
 + 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]: 0.90
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 53.17
 + 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	0.89	0.90	1.13	0.76	0.18	0.05	0.02	0.03	0.12	0.30	0.44	0.77
T-E ratio	11.84	11.65	11.70	11.79	11.97	11.79	11.88	12.15	12.15	12.28	12.10	11.88
Precipitation-effectiveness:	55.86					Temperature-efficiency: 143.19						
Moisture Index [MI=100*(P-PE)/PE]: -9.85 + C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]: 33.20 + Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]: 23.35 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1623.90 + Megathermic (PE>1440)												

