

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

SAO FELIX XINGU (BRAZIL)

Altitude: 150 m.

Latitude: 6°38'S Longitude: 51°59'W

Temperature observation period.: 1973-1990 (18)

Rainfall observation period....: 1973-1990 (18)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	24.70	30.60	19.60	34.70	12.00	291.0	115.32
Feb.	24.60	30.60	19.80	34.90	12.00	322.0	102.12
Mar.	24.80	30.80	19.80	34.50	11.30	310.0	113.56
Apr.	25.00	31.20	20.20	34.70	14.50	260.0	112.07
May.	25.20	31.80	19.70	34.50	12.00	102.0	117.29
Jun.	24.70	32.10	18.30	35.10	10.50	44.0	105.62
Jul.	24.60	32.80	17.40	35.10	8.60	18.0	107.44
Aug.	25.20	33.40	18.00	35.70	9.00	57.0	117.29
Sep.	25.40	33.00	19.20	36.30	13.80	100.0	117.97
Oct.	25.30	32.20	19.60	36.30	12.00	164.0	122.30
Nov.	25.30	32.00	19.80	35.30	12.60	170.0	121.14
Dec.	24.80	31.00	19.60	34.80	11.50	230.0	116.84
Year	24.97	31.79	19.25	35.16	11.65	2068	1369.0

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	754
Compensated thermicity index.....(Itc):	754
Simple continentality index.....(Ic):	0.8
Diurnality index.....(Id):	15.4
Annual ombrothermic index.....(Io):	6.90
Monthly dry ombrothermic index.....(Iod1):	0.73
Bimonthly dry ombrothermic index.....(Iod2):	1.26
Threemonthly dry ombrothermic index.....(Iod3):	1.60
Fourmonthly dry ombrothermic index.....(Iod4):	2.22
Annual ombro-evaporation index.....(Ioe):	1.51
Annual positive temperature.....(Tp):	2996
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	745
Positive precipitation.....(Pp):	2068

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	8	2	1	1	0

Latitudinal Belt...: Equatorial

Continentality.....: Hyperoceanic - High Ultrahyperoceanic

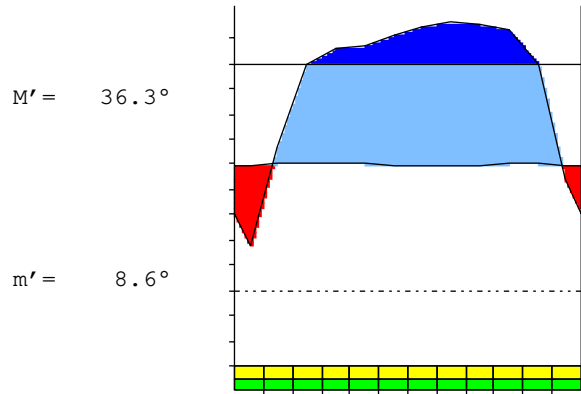
Bioclimate(Variant): TROPICAL PLUVISEASONAL (MESOPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW HUMID

SAO FELIX XINGU (BRAZIL)

150 m

P= 2068 6° 38'S 51° 59'W 18/18 y.
 T= 25.0 ° Ic= 0.8 Tp= 2996 Tn= 0
 m= 19.8 ° M= 30.6 ° Itc= 754 Io= 6.9



TROPICAL PLUVISEASONAL (MESOPHYTIC)
 UPPER INFRATROPICAL LOW HUMID

WATER INDEX CARD SAO FELIX XINGU (BRAZIL)

Altitude: 150 m. Latitude: 6° 38'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	24.6	107	18	-23	0	41	66	0	21	-0.8
Aug.	25.2	117	57	0	0	57	60	0	10	-0.5
Sep.	25.4	118	100	0	0	100	18	0	5	-0.1
Oct.	25.3	122	164	42	42	122	0	0	3	0.3
Nov.	25.3	121	170	49	91	121	0	0	1	0.4
Dec.	24.8	117	230	9	100	117	0	104	53	0.9
Jan.	24.7	115	291	0	100	115	0	176	114	1.5
Feb.	24.6	102	322	0	100	102	0	220	167	2.1
Mar.	24.8	114	310	0	100	114	0	196	182	1.7
Apr.	25.0	112	260	0	100	112	0	148	165	1.3
May.	25.2	117	102	-15	85	117	0	0	82	-0.1
Jun.	24.7	106	44	-62	23	106	0	0	41	-0.5
Year	25.0	1369	2068	*	*	1224	145	844	844	*

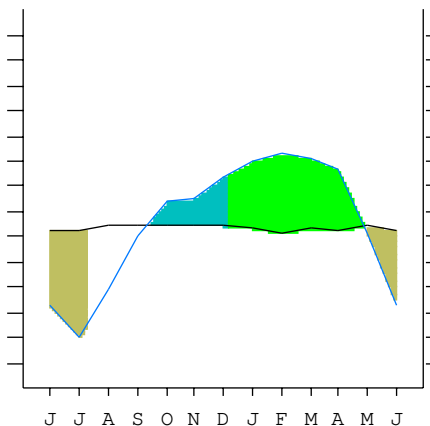
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SAO FELIX XINGU (BRAZIL)

6°38'S 51°59'W 150 m 18/18 y.

T= 25.0 Ic= 0.8 TROPICAL PLUVISEASONAL (MESOPHYTIC)
 m= 19.8 Tp= 2996 UPPER INFRATROPICAL
 M= 30.6 Tn= 0 LOW HUMID
 M' = 36.3 Itc= 754
 m' = 8.6 Io= 6.9
 P= 2068 mm ———
 PE= 1369 mm ———

Imbibing	10 Sep.
Saturation	3 Dec.
Reserve Use	28 Apr.
Deficit	8 Jul.



SAO FELIX XINGU (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.7b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .: MESOPHYTIC
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic ClassificationTrps (Mes).Itr.Hum.Uho

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1012
 Coldest semester of the year.....(Psw): 1056
 Warmest four months period of the year.....(Pcm1): 491
 Following warmest four months period.....(Pcm2): 1153
 Positive precipitation dryest 3 months.....(Ppd): 119
 Positive precipitation dryest 2 months.....(Ppd2): 62
 Positive precipitation dryest 1 month.....(Ppd1): 18
 Positive precipitation warmest 3 months.....(Pps): 434
 Positive precipitation warmest 2 months.....(Pps2): 264
 Positive precipitation warmest 1 month.....(Pps1): 100
 Positive precipitation coldest 3 months.....(Ppw): 923
 Positive precipitation coldest 2 months.....(Ppw2): 613
 Positive precipitation coldest 1 month.....(Ppw1): 322

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	119	434	843	672

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.4
 Average coldest month [T].....(Tmin): 24.6
 Maximum temp. warmest month [M].....(Tmmax): 33.4
 Minimum temp. coldest month [m].....(Tmmin): 17.4
 Absolute Max.temp. warmest month [M'].....(Tamax): 36.3
 Absolute Min.temp. coldest month [m'].....(Tamin): 8.6
 First warmest contrasted month [M].....(Tcmax): 32.8 (7)
 First coldest contrasted month [m].....(Tcmin): 17.4 (7)
 Dry station temperature.....(Td): 745
 Positive temperature dryest 3 months.....(Tpd): 745
 Positive temperature dryest 2 months.....(Tpd2): 493
 Positive temperature dryest 1 month.....(Tpd1): 246
 Positive temperature warmest 3 months.....(Tps): 760
 Positive temperature warmest 2 months.....(Tps2): 507
 Positive temperature warmest 1 month.....(Tps1): 254
 Positive temperature coldest 3 months.....(Tpw): 741
 Positive temperature coldest 2 months.....(Tpw2): 493
 Positive temperature coldest 1 month.....(Tpw1): 246

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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): 0.66
 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)	2300	2910	3220	3100	2600	1020	440	180	570	1000	1640	1700
Tp	248	247	246	248	250	252	247	246	252	254	253	253
Io (Iom)	9.27	11.8	13.1	12.5	10.4	4.05	1.78	0.73	2.26	3.94	6.48	6.72
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	8430 / 741			6720 / 750			1190 / 745			4340 / 760		
Io (Iot)	11.38			8.960			1.597			5.711		
Semesters	December-May						June-November					
Pp(x10)/Tp	15150 / 1491						5530 / 1505					
Io (Iosm)	10.16						3.674					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 20680/2996=6.90 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2300	2910	3220	3100	2600	1020	440	180	570	1000	1640	1700
Tp [T*10]	248	247	246	248	250	252	247	246	252	254	253	253
Iom [Pp/Tp]	927	\$\$\$	\$\$\$	\$\$\$	\$\$\$	405	178	73	226	394	648	672
Avm [200-Iom]	***	***	***	***	***	***	22	127	***	***	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	8430 / 741			6720 / 750			1190 / 745			4340 / 760		
Iot [Pp/Tp]	1138			896			160			571		
Avs E[Avm<200]	***			***			***			***		
Strong upper arid [1]							Weak upper semiarid [1]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 0.80
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: -8.63
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: -9.25
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.25
 + Hyperoceanic (0<CI<0.6)
 Rainfall Index of Lang (1925) [R=P/T]: 82.83
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 59.14
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 254.43
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.21
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.51
 + Humid (I>0.65)
 Potencial Erosion I of Fournier (1960) [K=Pi²/P].....: 50.14
 + 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	1.22	1.37	1.30	1.07	0.38	0.15	0.06	0.20	0.37	0.63	0.66	0.94
T-E ratio	11.12	11.07	11.16	11.25	11.34	11.12	11.07	11.34	11.43	11.38	11.38	11.16
Precipitation-effectiveness: 83.26						Temperature-efficiency: 134.82						
Moisture Index [MI=100*(P-PE)/PE]: 51.06 + B2.Humid medium-humid (40<MI<60)												
Index of dryness [DI=100*d/PE]: 10.56 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 61.62 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1368.96 + Forth mesothermic (997<PE<1440)												

