

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SA DA BANDEIRA (ANGOLA)

Altitude: 1760 m.

Latitude: 14°55'S Longitude: 13°34'E

Temperature observation period.: 1978-1994 (17)

Rainfall observation period....: 1975-1994 (20)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	18.89	25.56	12.22	30.00	5.56	149.9	79.25
Feb.	18.61	25.00	12.22	30.56	5.56	157.5	67.41
Mar.	18.61	25.00	12.22	30.00	2.22	167.6	72.22
Apr.	18.61	25.56	11.67	28.89	3.33	94.0	67.41
May.	17.22	25.00	9.44	30.00	0.56	2.5	58.16
Jun.	15.56	24.44	6.67	28.33	-1.11	1.3	46.02
Jul.	15.56	24.44	6.67	27.78	-1.11	0.0	47.48
Aug.	18.34	26.67	10.00	30.00	0.00	0.0	68.24
Sep.	20.56	28.33	12.78	31.67	4.44	5.1	83.12
Oct.	20.56	28.33	12.78	34.44	3.89	71.1	88.94
Nov.	19.45	26.67	12.22	38.33	5.00	111.8	80.04
Dec.	18.61	25.00	12.22	31.67	3.89	160.0	77.04
Year	18.38	25.83	10.93	30.97	2.69	921	835.33

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	495
Compensated thermicity index.....(Itc):	495
Simple continentality index.....(Ic):	5.0
Diurnality index.....(Id):	17.8
Annual ombrothermic index.....(Io):	4.17
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	No
Three monthly dry ombrothermic index.....(Iod3):	0.03
Four monthly dry ombrothermic index.....(Iod4):	0.06
Annual ombro-evaporation index.....(Ioe):	2.47
Annual positive temperature.....(Tp):	2206
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	495
Positive precipitation.....(Pp):	921

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	6	1	0	5	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Euhyperoceanic

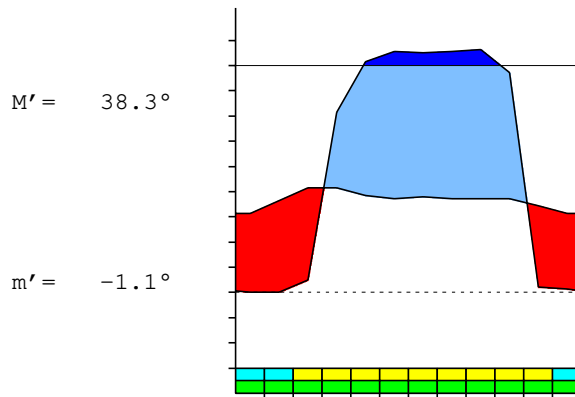
Bioclimate(Variant): TROPICAL PLUVISEASONAL (XEROPHYTIC)

Bioclimatic Belt...: UPPER THERMOTROPICAL LOW SUBHUMID

SA DA BANDEIRA (ANGOLA)

1760 m

P= 921 14° 55' S 13° 34' E 17/20 y.
 T= 18.4° Ic= 5.0 Tp= 2206 Tn= 0
 m= 6.7° M= 24.4° Itc= 495 Io= 4.2



TROPICAL PLUVISEASONAL (XEROPHYTIC)
 UPPER THERMOTROPICAL LOW SUBHUMID

WATER INDEX CARD SA DA BANDEIRA (ANGOLA)
 Altitude: 1760 m. Latitude: 14° 55' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	15.6	47	0	0	0	0	47	0	7	-1.0
Aug.	18.3	68	0	0	0	0	68	0	3	-1.0
Sep.	20.6	83	5	0	0	5	78	0	2	-0.9
Oct.	20.6	89	71	0	0	71	18	0	1	-0.2
Nov.	19.5	80	112	32	32	80	0	0	0	0.3
Dec.	18.6	77	160	68	100	77	0	15	8	1.0
Jan.	18.9	79	150	0	100	79	0	71	39	0.8
Feb.	18.6	67	158	0	100	67	0	90	65	1.3
Mar.	18.6	72	168	0	100	72	0	95	80	1.3
Apr.	18.6	67	94	0	100	67	0	27	53	0.3
May.	17.2	58	3	-56	44	58	0	0	27	-0.9
Jun.	15.6	46	1	-44	0	46	0	0	13	-0.9
Year	18.4	835	921	*	*	623	212	297	297	*

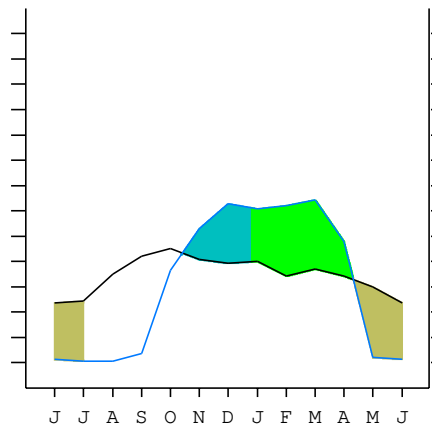
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SA DA BANDEIRA (ANGOLA)

14°55' S 13°34' E 1760 m 17/20 y.

T= 18.4 Ic= 5.0 TROPICAL PLUVISEASONAL (XEROPHYTIC)
 m= 6.7 Tp= 2206 UPPER THERMOTROPICAL
 M= 24.4 Tn= 0 LOW SUBHUMID
 M' = 38.3 Itc= 495
 m' = -1.1 Io= 4.2
 P= 921 mm ———
 PE= 835 mm ———

Imbibing	11 Oct.
Saturation	25 Dec.
Reserve Use	10 Apr.
Deficit	30 Jun.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2a]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: a. High
 Thermic types [A2.A3]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm
 Bioclimatic types [A4.2a.6b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trde.Ttr.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 655
 Coldest semester of the year.....(Psw): 265
 Warmest four months period of the year.....(Pcm1): 348
 Following warmest four months period.....(Pcm2): 569
 Positive precipitation dryest 3 months.....(Ppd): 1
 Positive precipitation dryest 2 months.....(Ppd2): 0
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 188
 Positive precipitation warmest 2 months.....(Pps2): 76
 Positive precipitation warmest 1 month.....(Pps1): 5
 Positive precipitation coldest 3 months.....(Ppw): 4
 Positive precipitation coldest 2 months.....(Ppw2): 1
 Positive precipitation coldest 1 month.....(Ppw1): 1

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	1	188	467	264

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 20.6
 Average coldest month [T].....(Tmin): 15.6
 Maximum temp. warmest month [M].....(Tmmax): 28.3
 Minimum temp. coldest month [m].....(Tmmin): 6.7
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -1.1
 First warmest contrasted month [M].....(Tcmax): 24.4 (6)
 First coldest contrasted month [m].....(Tcmin): 6.7 (6)
 Dry station temperature.....(Td): 495
 Positive temperature dryest 3 months.....(Tpd): 495
 Positive temperature dryest 2 months.....(Tpd2): 339
 Positive temperature dryest 1 month.....(Tpd1): 156
 Positive temperature warmest 3 months.....(Tps): 606
 Positive temperature warmest 2 months.....(Tps2): 411
 Positive temperature warmest 1 month.....(Tps1): 206
 Positive temperature coldest 3 months.....(Tpw): 483
 Positive temperature coldest 2 months.....(Tpw2): 311
 Positive temperature coldest 1 month.....(Tpw1): 156

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.91
 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)	1600	1499	1575	1676	940	25	13	0	0	51	711	1118
Tp	186	189	186	186	186	172	156	156	183	206	206	195
Io (Iom)	8.60	7.94	8.46	9.01	5.05	0.15	0.08	0.00	0.00	0.25	3.46	5.75
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	4674 / 561			2641 / 544			13 / 495			1880 / 606		
Io (Iot)	8.330			4.851			0.026			3.104		
Semesters	December-May						June-November					
Pp(x10)/Tp	7315 / 1106						1893 / 1100					
Io (Iosm)	6.617						1.720					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 9208/2206=4.17 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1600	1499	1575	1676	940	25	13	0	0	51	711	1118
Tp [T*10]	186	189	186	186	186	172	156	156	183	206	206	195
Iom [Pp/Tp]	860	794	846	901	505	15	8	0	0	25	346	575
Avm [200-Iom]	***	***	***	***	***	185	192	200	200	175	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	4674 / 561			2641 / 544			13 / 495			1880 / 606		
Iot [Pp/Tp]	833			485			3			310		
Avs E[Avm<200]	***			***			592			***		
Lower ultrahyperarid [4]							Upper ultrahyperarid [1]					
Lower hyperarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	5.00
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		12.62
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		6.18
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.84
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		50.09
+ Semiarid (60>R>40)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		32.44
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		121.46
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		2.00
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE]		1.10
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		30.51
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.67	0.72	0.77	0.40	0.01	0.00	0.00	0.00	0.02	0.28	0.48	0.73
T-E ratio	8.50	8.37	8.37	8.37	7.75	7.00	7.00	8.25	9.25	9.25	8.75	8.37
Precipitation-effectiveness: 40.71						Temperature-efficiency						99.26
Moisture Index [MI=100*(P-PE)/PE]												10.23
+ C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE]												25.37
+ Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]												35.60
+ Strong surplus (20<HI)												
Potential Evapotranspiration PE												835.33
+ Second mesothermic (712<PE<855)												

