

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

LOBITO (ANGOLA)

Altitude: 3 m.

Latitude: 12°22'S Longitude: 13°32'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.	25.28	28.33	22.22	35.00	13.33	20.3	129.60
Feb.	26.39	29.44	23.33	35.00	16.11	38.1	130.02
Mar.	27.23	30.56	23.89	34.44	18.89	119.4	148.41
Apr.	26.95	30.00	23.89	35.56	18.33	53.3	136.32
May.	25.00	28.33	21.67	33.33	13.89	2.5	113.95
Jun.	22.23	25.56	18.89	33.33	12.78	0.0	76.11
Jul.	20.27	23.33	17.22	28.89	10.56	0.0	60.13
Aug.	20.00	23.33	16.67	29.44	11.67	1.3	59.50
Sep.	21.39	24.44	18.33	28.33	12.78	2.5	71.37
Oct.	23.34	26.11	20.56	30.56	13.89	30.5	99.21
Nov.	25.28	28.33	22.22	33.89	16.11	25.4	123.71
Dec.	25.28	28.33	22.22	32.78	17.22	61.0	130.78
Year	24.05	27.17	20.93	32.55	14.63	354	1279.1

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	641
Compensated thermicity index.....(Itc):	641
Simple continentality index.....(Ic):	7.2
Diurnality index.....(Id):	6.7
Annual ombrothermic index.....(Io):	1.23
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	No
Three monthly dry ombrothermic index.....(Iod3):	0.02
Four monthly dry ombrothermic index.....(Iod4):	0.04
Annual ombro-evaporation index.....(Ioe):	8.63
Annual positive temperature.....(Tp):	2886
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	625
Positive precipitation.....(Pp):	354

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

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - Low Euhyperoceanic

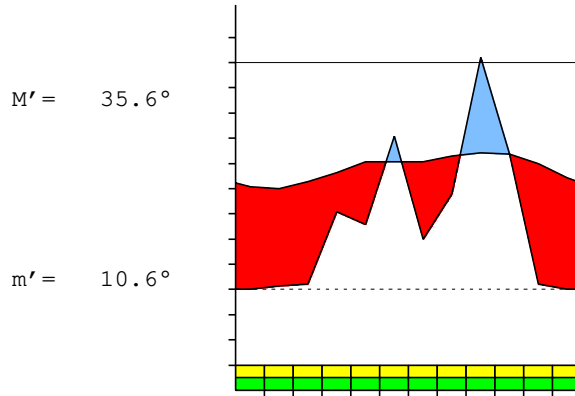
Bioclimate(Variant): TROPICAL XERIC (PLUVISEROTIN, SEMIARID)

Bioclimatic Belt...: LOW THERMOTROPICAL LOW SEMIARID

LOBITO (ANGOLA)

3 m

P= 354 12° 22'S 13° 32'E 17/20 y.
 T= 24.1° Ic= 7.2 Tp= 2886 Tn= 0
 m= 16.7° M= 23.3° Itc= 641 Io= 1.2



TROPICAL XERIC (PLUVISEROTIN)
 LOW THERMOTROPICAL LOW SEMIARID

WATER INDEX CARD

LOBITO (ANGOLA)

Altitude: 3 m.

Latitude: 12° 22'S

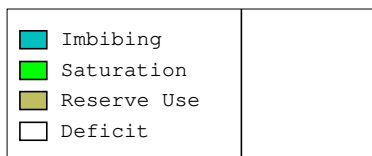
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	20.3	60	0	0	0	0	60	0	0	-1.0
Aug.	20.0	60	1	0	0	1	58	0	0	-0.9
Sep.	21.4	71	3	0	0	3	69	0	0	-0.9
Oct.	23.3	99	31	0	0	31	69	0	0	-0.6
Nov.	25.3	124	25	0	0	25	98	0	0	-0.7
Dec.	25.3	131	61	0	0	61	70	0	0	-0.5
Jan.	25.3	130	20	0	0	20	109	0	0	-0.8
Feb.	26.4	130	38	0	0	38	92	0	0	-0.7
Mar.	27.2	148	119	0	0	119	29	0	0	-0.1
Apr.	27.0	136	53	0	0	53	83	0	0	-0.6
May.	25.0	114	3	0	0	3	111	0	0	-0.9
Jun.	22.2	76	0	0	0	0	76	0	0	-1.0
Year	24.1	1279	354	*	*	354	925	0	0	*

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

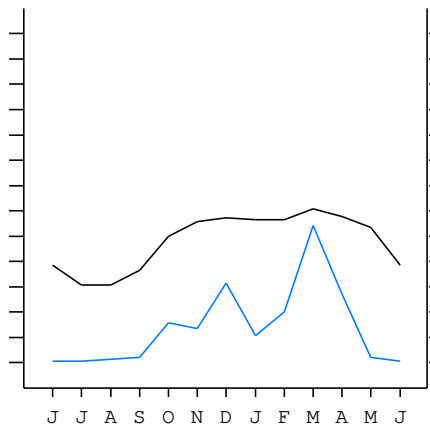
LOBITO (ANGOLA)

12°22'S 13°32'E 3 m 17/20 y.

T= 24.1 Ic= 7.2 TROPICAL XERIC (PLUVISEROTIN)
 m= 16.7 Tp= 2886 LOW THERMOTROPICAL
 M= 23.3 Tn= 0 LOW SEMIARID
 M' = 35.6 Itc= 641
 m' = 10.6 Io= 1.2
 P= 354 mm ———
 PE= 1279 mm ———



All over the year,
 there is hydric deficit



LOBITO (ANGOLA)

Latitude: 12°22'S Longitude: 13°32'E Altitude: 3 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2b]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: b. Low

Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid

Bioclimatic types [A3e.2b.4b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .: e. PLUVISEROTIN, SEMIARID
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trxe (Pse).Ttr.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 318
 Coldest semester of the year.....(Psw): 37
 Warmest four months period of the year.....(Pcm1): 231
 Following warmest four months period.....(Pcm2): 4
 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): 211
 Positive precipitation warmest 2 months.....(Pps2): 173
 Positive precipitation warmest 1 month.....(Pps1): 119
 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	58	119	175

Tropical rainfall rhythms: 2 > 1 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.2
 Average coldest month [T].....(Tmin): 20.0
 Maximum temp. warmest month [M].....(Tmmax): 30.6
 Minimum temp. coldest month [m].....(Tmmin): 16.7
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.6
 Absolute Min.temp. coldest month [m'].....(Tamin): 10.6
 First warmest contrasted month [M].....(Tcmax): 30.6 (3)
 First coldest contrasted month [m].....(Tcmin): 23.9 (3)
 Dry station temperature.....(Td): 625
 Positive temperature dryest 3 months.....(Tpd): 625
 Positive temperature dryest 2 months.....(Tpd2): 425
 Positive temperature dryest 1 month.....(Tpd1): 222
 Positive temperature warmest 3 months.....(Tps): 806
 Positive temperature warmest 2 months.....(Tps2): 542
 Positive temperature warmest 1 month.....(Tps1): 272
 Positive temperature coldest 3 months.....(Tpw): 617
 Positive temperature coldest 2 months.....(Tpw2): 403
 Positive temperature coldest 1 month.....(Tpw1): 200

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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): 3.61
 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)	610	203	381	1194	533	25	0	0	13	25	305	254
Tp	253	253	264	272	270	250	222	203	200	214	233	253
Io (Iom)	2.41	0.80	1.44	4.38	1.98	0.10	0.00	0.00	0.07	0.12	1.31	1.00
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	1194 / 770			1752 / 792			13 / 625			584 / 700		
Io (Iot)	1.552			2.213			0.021			0.834		
Semesters	December-May						June-November					
Pp(x10)/Tp	2946 / 1561						597 / 1325					
Io (Iosm)	1.887						0.451					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3543/2886=1.23 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	610	203	381	1194	533	25	0	0	13	25	305	254
Tp [T*10]	253	253	264	272	270	250	222	203	200	214	233	253
Iom [Pp/Tp]	241	80	144	438	198	10	0	0	7	12	131	100
Avm [200-Iom]	***	120	56	***	2	190	200	200	194	188	69	100
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	1194 / 770			1752 / 792			13 / 625			584 / 700		
Iot [Pp/Tp]	155			221			2			83		
Avs E[Avm<200]	***			***			594			357		
Lower ultrahyperarid [5]						Upper ultrahyperarid [1]						
Weak upper arid [2]						Strong lower semiarid [1]						
Weak lower semiarid [2]						Weak upper semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	7.23
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		36.99
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		18.30
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.41
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		14.73
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		10.40
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		54.01
+ Subhumid (90>Q>50)		
I of Dantin & Revenga (1940) [DR=100*T/P]		6.79
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.28
+ Semiarid (0.5>Im>0.2)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		40.24
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate: A. Warm and temperate warm
- + Region: 5. Bixeric (Bixeric)
- + Thermic type: 1. Megathermic

Thornthwaite (1948)

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.06	0.12	0.43	0.18	0.01	0.00	0.00	0.00	0.01	0.10	0.08	0.21
T-E ratio	11.38	11.88	12.25	12.13	11.25	10.00	9.12	9.00	9.63	10.50	11.38	11.38
Precipitation-effectiveness:	11.98						Temperature-efficiency: 129.89					
Moisture Index [MI=100*(P-PE)/PE]	-72.30											
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]	72.30											
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]	0.00											
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE	1279.12											
+ Forth mesothermic (997<PE<1440)												

