Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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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

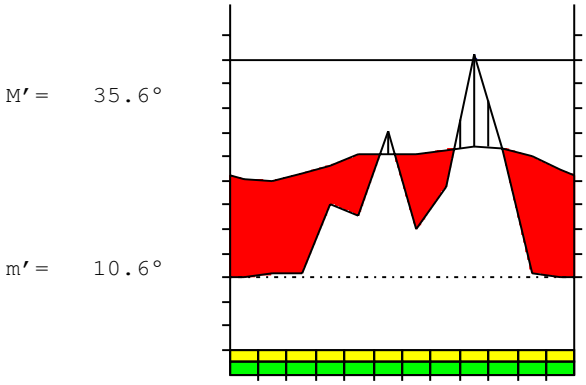
Thermicity index.....(It): 641
Compensated thermicity index.....(Itc): 641
Simple continentality index.....(Ic): 7.2
Diurnality index.....(Id): 6.7
Annual ombrothermic index.....(Io): 1.23
Monthly dry ombrothermic index.....(Iod1): No
Bimonthly dry ombrothermic index.....(Iod2): No
Threemonthly dry ombrothermic index.....(Iod3): 0.02
Fourmonthly dry ombrothermic index.....(Iod4): 0.04
Annual ombro-evaporation index.....(Ioe): 0.28
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
Continentality.....: 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	2	0	0	2	69	0	0	-0.9
Oct.	23.3	99	30	0	0	30	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	2	0	0	2	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	*

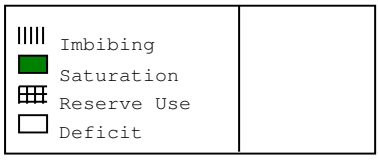
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

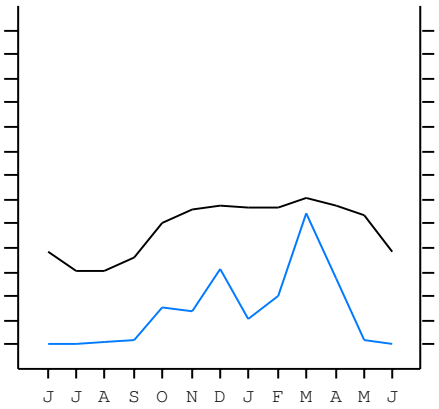
LOBITO (ANGOLA)

12°22'S 13°32'E 3 m 17/20 y.

T= 24.1 Ic= 7.2
m= 16.7 Tp= 2886
M= 23.3 Tn= -0
M'= 35.6 Itc= 641
m'= 10.6 Io= 1.2
P= 354 mm
PE= 1279 mm

TROPICAL XERIC (PLUVISEROTIN)
LOW THERMOTROPICAL
LOW SEMIARID





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

Continentality 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

LOBITO (ANGOLA)

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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

LOBITO (ANGOLA)

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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

LOBITO (ANGOLA)

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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

LOBITO (ANGOLA)

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

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					

LOBITO (ANGOLA)

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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/(Tmmax²-Tmmin²)] .....: 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)
Potencial Erosion I of Fournier (1960) [K=Pi²/P].....: 40.24
  + Very low (K<60)

LOBITO (ANGOLA)

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

BIOCLIMATIC INDICES II

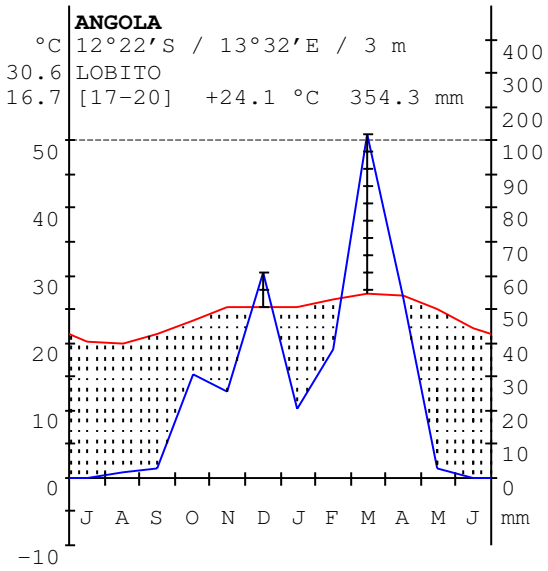
Bioclimatic classification of Gaussen & Bagnouls (1957)
+ Climate ....: A. Warm and temperate warm
+ Region .....: 5. Bixeric (Bixeric)
+ Thermic type: 1. Megathermic

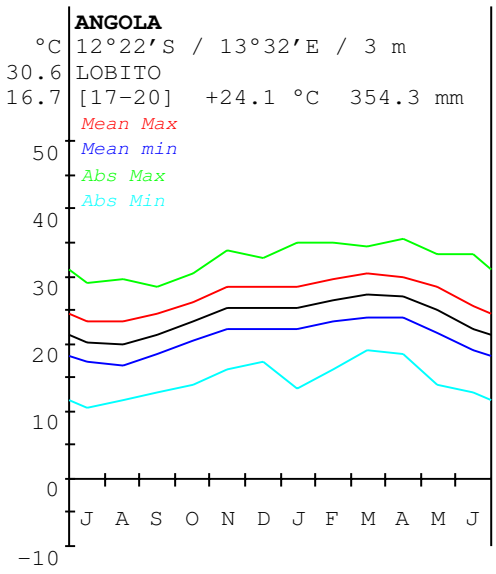
Thornthwaite (1948)

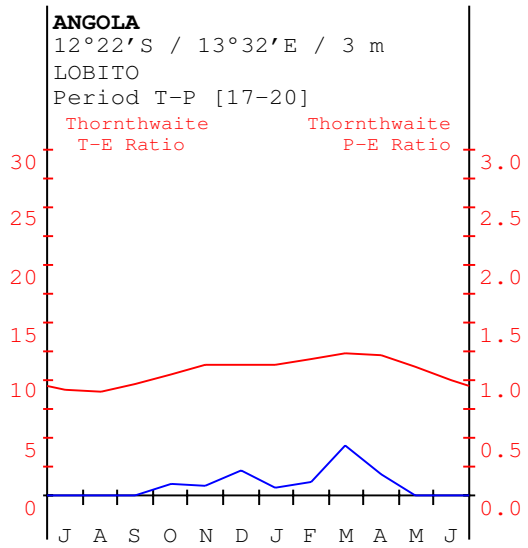
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.06	0.12	0.43	0.18	0.01	0.00	0.00	0.00	0.01	0.10	0.08	0.21
T-E ratio	11.38	11.88	12.25	12.13	11.25	10.00	9.12	9.00	9.63	10.50	11.38	11.38

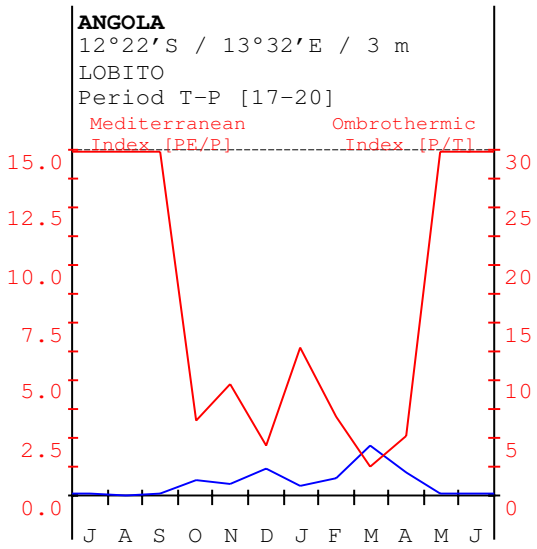
Precipitation-effectiveness: 11.98 Temperature-efficiency ....: 129.89

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)






ANGOLA
12°22'S / 13°32'E / 3 m
LOBITO
Period T-P [17-20]
Thornthwaite T-E Ratio
Thornthwaite P-E Ratio
30
25
20
15
10
5
0
3.0
2.5
2.0
1.5
1.0
0.5
0.0
J A S O N D J F M A M J


ANGOLA
12°22'S / 13°32'E / 3 m
LOBITO
Period T-P [17-20]
Mediterranean Index [PE/P]
Ombrothermic Index [P/T]
15.0
12.5
10.0
7.5
5.0
2.5
0.0
30
25
20
15
10
5
0
J A S O N D J F M A M J