

Phytosociological Research Center

www.globalbioclimatics.org

Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

TOUNGGOO (MYANMAR -BURMA-)

Altitude: 49 m.

Latitude: 18°55'N Longitude: 96°28'E

Temperature observation period.: 1942-1994 (53)

Rainfall observation period....: 1934-1994 (61)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	22.22	29.44	15.00	35.56	8.33	5.1	63.81
Feb.	24.45	32.78	16.11	40.00	8.33	5.1	87.37
Mar.	28.34	36.11	20.56	42.78	12.22	7.6	154.73
Apr.	31.11	37.78	24.44	42.78	16.11	53.3	181.02
May.	30.00	35.00	25.00	42.22	13.89	203.2	184.77
Jun.	27.78	31.67	23.89	38.89	18.33	365.8	160.32
Jul.	26.95	30.00	23.89	37.22	21.11	454.7	158.58
Aug.	26.95	30.00	23.89	36.11	20.00	480.1	153.01
Sep.	27.78	31.67	23.89	37.22	17.78	297.2	148.66
Oct.	27.78	32.22	23.33	37.22	17.78	182.9	145.75
Nov.	25.84	30.56	21.11	35.00	12.22	48.3	111.70
Dec.	22.50	28.33	16.67	38.89	9.44	10.2	66.97
Year	26.81	32.13	21.48	38.66	14.63	2114	1616.7

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	712
Compensated thermicity index.....(Itc):	712
Simple continentality index.....(Ic):	8.9
Diurnality index.....(Id):	16.7
Annual ombrothermic index.....(Io):	6.57
Monthly dry ombrothermic index.....(Iod1):	0.23
Bimonthly dry ombrothermic index.....(Iod2):	0.22
Three monthly dry ombrothermic index.....(Iod3):	0.24
Four monthly dry ombrothermic index.....(Iod4):	0.29
Annual ombro-evaporation index.....(Ioe):	2.85
Annual positive temperature.....(Tp):	3217
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	750
Positive precipitation.....(Pp):	2114

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

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Subhyperoceanic

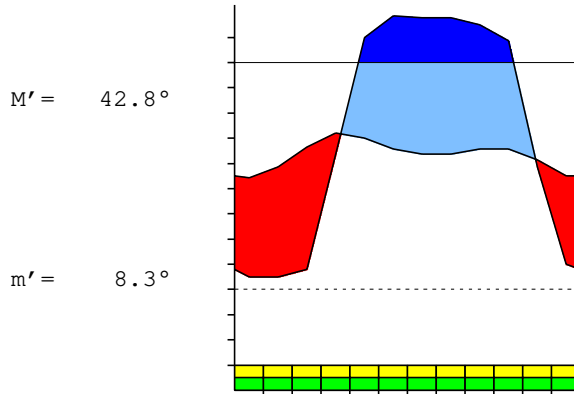
Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW HUMID

TOUNGOO (MYANMAR -BURMA-)

49 m

P= 2114 18° 55'N 96° 28'E 53/61 y.
 T= 26.8° Ic= 8.9 Tp= 3217 Tn= 0
 m= 15.0° M= 29.4° Itc= 712 Io= 6.6



TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)
 UPPER INFRATROPICAL LOW HUMID

WATER INDEX CARD

TOUNGOO (MYANMAR -BURMA-)

Altitude: 49 m.

Latitude: 18° 55'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	22.2	64	5	0	0	5	59	0	15	-0.9
Feb.	24.5	87	5	0	0	5	82	0	7	-0.9
Mar.	28.3	155	8	0	0	8	147	0	4	-0.9
Apr.	31.1	181	53	0	0	53	128	0	2	-0.7
May.	30.0	185	203	18	18	185	0	0	1	0.0
Jun.	27.8	160	366	82	100	160	0	124	62	1.2
Jul.	27.0	159	455	0	100	159	0	296	179	1.8
Aug.	27.0	153	480	0	100	153	0	327	253	2.1
Sep.	27.8	149	297	0	100	149	0	149	201	0.9
Oct.	27.8	146	183	0	100	146	0	37	119	0.2
Nov.	25.8	112	48	-63	37	112	0	0	60	-0.5
Dec.	22.5	67	10	-37	0	47	20	0	30	-0.8
Year	26.8	1617	2114	*	*	1181	436	933	933	*

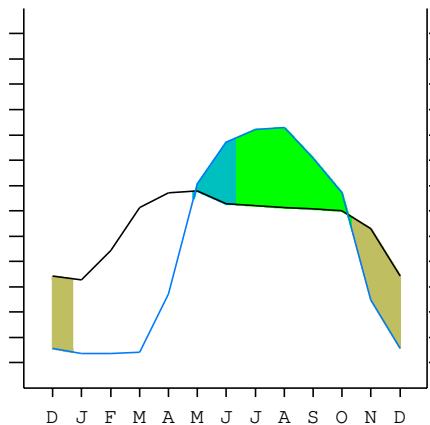
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

TOUNGOO (MYANMAR -BURMA-)

18°55'N 96°28'E 49 m 53/61 y.

T= 26.8 Ic= 8.9 TROPICAL PLUVISEASONAL (SUBXEROPHYTIC)
 m= 15.0 Tp= 3217 UPPER INFRATROPICAL
 M= 29.4 Tn= 0 LOW HUMID
 M' = 42.8 Itc= 712
 m' = 8.3 Io= 6.6
 P= 2114 mm ———
 PE= 1617 mm ———

Imbibing	27 Apr.
Saturation	12 Jun.
Reserve Use	12 Oct.
Deficit	20 Dec.



TOUNGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3a]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: a. High

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

Bioclimatic types [A4.1a.7b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trde.Itr.Hum

TOUNGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1565
 Coldest semester of the year.....(Psw): 549
 Warmest four months period of the year.....(Pcm1): 630
 Following warmest four months period.....(Pcm2): 1415
 Positive precipitation dryest 3 months.....(Ppd): 18
 Positive precipitation dryest 2 months.....(Ppd2): 10
 Positive precipitation dryest 1 month.....(Ppd1): 5
 Positive precipitation warmest 3 months.....(Pps): 264
 Positive precipitation warmest 2 months.....(Pps2): 257
 Positive precipitation warmest 1 month.....(Pps1): 53
 Positive precipitation coldest 3 months.....(Ppw): 20
 Positive precipitation coldest 2 months.....(Ppw2): 15
 Positive precipitation coldest 1 month.....(Ppw1): 5

Seasons	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4
Rainfall	20	264	1300	528

Tropical rainfall rhythms: 3 > 4 > 2 > 1

TOUNGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.1
 Average coldest month [T].....(Tmin): 22.2
 Maximum temp. warmest month [M].....(Tmmax): 37.8
 Minimum temp. coldest month [m].....(Tmmin): 15.0
 Absolute Max.temp. warmest month [M'].....(Tamax): 42.8
 Absolute Min.temp. coldest month [m'].....(Tamin): 8.3
 First warmest contrasted month [M].....(Tcmax): 32.8 (2)
 First coldest contrasted month [m].....(Tcmin): 16.1 (2)
 Dry station temperature.....(Td): 750
 Positive temperature dryest 3 months.....(Tpd): 750
 Positive temperature dryest 2 months.....(Tpd2): 467
 Positive temperature dryest 1 month.....(Tpd1): 222
 Positive temperature warmest 3 months.....(Tps): 895
 Positive temperature warmest 2 months.....(Tps2): 611
 Positive temperature warmest 1 month.....(Tps1): 311
 Positive temperature coldest 3 months.....(Tpw): 692
 Positive temperature coldest 2 months.....(Tpw2): 447
 Positive temperature coldest 1 month.....(Tpw1): 222

TOUNGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

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

TOUNGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.76
 Mediterranean index of July.[PE/P].....(Im1): No
 Mediterranean index of July & August.....(Im2): No
 Mediterranean index of June, July & August....(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	102	51	51	76	533	2032	3658	4547	4801	2972	1829	483
Tp	225	222	245	283	311	300	278	270	270	278	278	258
Io (Iom)	0.45	0.23	0.21	0.27	1.71	6.77	13.2	16.9	17.8	10.7	6.58	1.87
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	204 / 692			2641 / 895			13006 / 817			5284 / 814		
Io (Iot)	0.295			2.952			15.92			6.491		
Semesters	December-May						June-November					
Pp(x10)/Tp	2845 / 1586						18290 / 1631					
Io (Iosm)	1.794						11.22					

TOUNGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 21135/3217=6.57 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	102	51	51	76	533	2032	3658	4547	4801	2972	1829	483
Tp [T*10]	225	222	245	283	311	300	278	270	270	278	278	258
Iom [Pp/Tp]	45	23	21	27	171	677	\$\$	\$\$	\$\$	\$\$	658	187
Avm [200-Iom]	155	177	179	173	29	***	***	***	***	***	***	13
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	204 / 692			2641 / 895			13006 / 817			5284 / 814		
Iot [Pp/Tp]	29			295			1592			649		
Avs E[Avm<200]	511			***			***			***		
Lower hyperarid [4]						Strong lower arid [1]						
Weak upper semiarid [2]												

TOUNGGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 8.89
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 26.22
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 17.26
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.22
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: 78.84
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 57.42
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 175.78
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.27
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.31
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 109.06
 + Moderate (90<K<120)

TOUNGGOO (MYANMAR -BURMA-)

Latitude: 18°55'N Longitude: 96°28'E Altitude: 49 m

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	0.01	0.01	0.02	0.16	0.73	1.46	1.90	2.02	1.16	0.68	0.16	0.03
T-E ratio	10.00	11.00	12.75	14.00	13.50	12.50	12.13	12.13	12.50	12.50	11.63	10.13
Precipitation-effectiveness:	83.52					Temperature-efficiency: 144.77						
Moisture Index [MI=100*(P-PE)/PE]: 30.73 + B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE]: 26.96 + Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]: 57.70 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1616.69 + Megathermic (PE>1440)												

