

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

KUALA TRENGGANU (MALAYSIA)

Altitude: 32 m.

Latitude: 5°20'N Longitude: 103°8'E

Temperature observation period.: 1968-1980 (13)

Rainfall observation period....: 1965-1980 (16)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	25.30	28.30	22.20	31.10	17.20	295.0	113.95
Feb.	25.60	29.40	21.70	31.70	18.30	163.0	108.60
Mar.	26.70	30.60	22.80	33.30	18.90	160.0	141.22
Apr.	27.20	31.70	22.80	33.90	20.00	155.0	143.93
May.	27.80	32.20	23.30	35.00	20.00	135.0	154.66
Jun.	27.20	31.70	22.80	35.00	20.60	109.0	145.34
Jul.	27.20	31.70	22.80	34.40	20.60	117.0	149.57
Aug.	27.20	31.70	22.80	33.30	20.00	150.0	148.16
Sep.	27.00	31.10	22.80	33.30	20.00	191.0	140.90
Oct.	26.70	30.60	22.80	33.30	20.60	279.0	141.22
Nov.	26.10	29.40	22.80	32.80	21.10	610.0	124.33
Dec.	25.30	28.30	22.20	31.70	19.40	554.0	113.95
Year	26.61	30.56	22.65	33.23	19.73	2918	1625.8

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	771
Compensated thermicity index.....(Itc):	771
Simple continentality index.....(Ic):	2.5
Diurnality index.....(Id):	8.9
Annual ombrothermic index.....(Io):	9.14
Monthly dry ombrothermic index.....(Iod1):	4.01
Bimonthly dry ombrothermic index.....(Iod2):	4.15
Three monthly dry ombrothermic index.....(Iod3):	4.39
Four monthly dry ombrothermic index.....(Iod4):	4.72
Annual ombro-evaporation index.....(Ioe):	0.42
Annual positive temperature.....(Tp):	3193
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	822
Positive precipitation.....(Pp):	2918

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	12	0	0	0	0

Latitudinal Belt...: Equatorial

Continentalty.....: Hyperoceanic - Low Ultrahyperoceanic

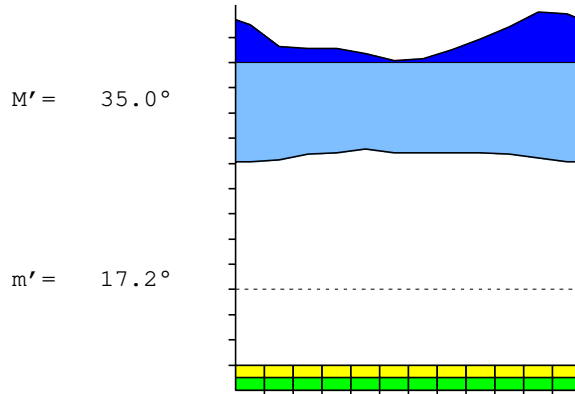
Bioclimate(Variant): TROPICAL PLUVIAL (HYGROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL UPPER HUMID

KUALA TRENGGANU (MALAYSIA)

32 m

P= 2918 5° 20'N 103° 8'E 13/16 y.
 T= 26.6° Ic= 2.5 Tp= 3193 Tn= 0
 m= 22.2° M= 28.3° Itc= 771 Io= 9.1



TROPICAL PLUVIAL (HYGROPHYTIC)
 UPPER INFRATROPICAL UPPER HUMID

WATER INDEX CARD KUALA TRENGGANU (MALAYSIA)
 Altitude: 32 m. Latitude: 5° 20'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	25.3	114	295	0	100	114	0	181	268	1.5
Feb.	25.6	109	163	0	100	109	0	54	161	0.5
Mar.	26.7	141	160	0	100	141	0	19	90	0.1
Apr.	27.2	144	155	0	100	144	0	11	50	0.0
May.	27.8	155	135	-20	80	155	0	0	25	-0.1
Jun.	27.2	145	109	-36	44	145	0	0	13	-0.2
Jul.	27.2	150	117	-33	11	150	0	0	6	-0.2
Aug.	27.2	148	150	2	13	148	0	0	3	0.0
Sep.	27.0	141	191	50	63	141	0	0	2	0.3
Oct.	26.7	141	279	37	100	141	0	101	51	0.9
Nov.	26.1	124	610	0	100	124	0	486	269	3.9
Dec.	25.3	114	554	0	100	114	0	440	354	3.8
Year	26.6	1626	2918	*	*	1626	0	1292	1292	*

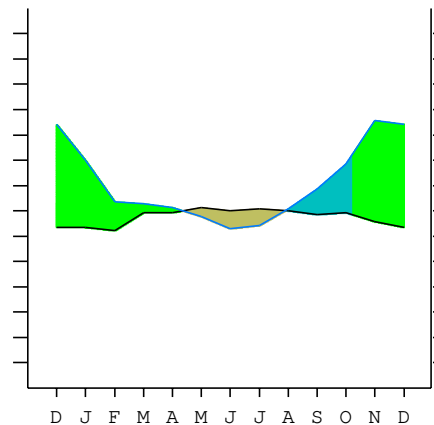
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

KUALA TRENGGANU (MALAYSIA)

5°20'N 103°8'E 32 m 13/16 y.

T= 26.6 Ic= 2.5 TROPICAL PLUVIAL (HYGROPHYTIC)
 m= 22.2 Tp= 3193 UPPER INFRATROPICAL
 M= 28.3 Tn= 0 UPPER HUMID
 M' = 35.0 Itc= 771
 m' = 17.2 Io= 9.1
 P= 2918 mm ———
 PE= 1626 mm ———

Imbibing	29 Jul.
Saturation	8 Oct.
Reserve Use	11 Apr.
Deficit	



KUALA TRENGGANU (MALAYSIA)

Latitude: 5°20'N Longitude: 103°8'E Altitude: 32 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A1b]
 + Type: A. Hyperoceanic
 + Subtype: 1. Ultrahyperoceanic
 + Variant: b. Low
 Thermic types [A1.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 1. Equatorial
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A5.1a.7a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 5. PLUVIAL
 + Bioclimatic variant ..:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Trhd.Itr.Hum

KUALA TRENGGANU (MALAYSIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 857
 Coldest semester of the year.....(Psw): 2061
 Warmest four months period of the year.....(Pcm1): 516
 Following warmest four months period.....(Pcm2): 1230
 Positive precipitation dryest 3 months.....(Ppd): 361
 Positive precipitation dryest 2 months.....(Ppd2): 226
 Positive precipitation dryest 1 month.....(Ppd1): 109
 Positive precipitation warmest 3 months.....(Pps): 399
 Positive precipitation warmest 2 months.....(Pps2): 290
 Positive precipitation warmest 1 month.....(Pps1): 135
 Positive precipitation coldest 3 months.....(Ppw): 1012
 Positive precipitation coldest 2 months.....(Ppw2): 849
 Positive precipitation coldest 1 month.....(Ppw1): 295

Seasons	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4
Rainfall	1012	450	376	1080

Tropical rainfall rhythms: 4 > 1 > 2 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.8
 Average coldest month [T].....(Tmin): 25.3
 Maximum temp. warmest month [M].....(Tmmax): 32.2
 Minimum temp. coldest month [m].....(Tmmin): 21.7
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 17.2
 First warmest contrasted month [M].....(Tcmax): 31.7 (4)
 First coldest contrasted month [m].....(Tcmin): 22.8 (4)
 Dry station temperature.....(Td): 822
 Positive temperature dryest 3 months.....(Tpd): 822
 Positive temperature dryest 2 months.....(Tpd2): 544
 Positive temperature dryest 1 month.....(Tpd1): 272
 Positive temperature warmest 3 months.....(Tps): 822
 Positive temperature warmest 2 months.....(Tps2): 550
 Positive temperature warmest 1 month.....(Tps1): 278
 Positive temperature coldest 3 months.....(Tpw): 762
 Positive temperature coldest 2 months.....(Tpw2): 506
 Positive temperature coldest 1 month.....(Tpw1): 253

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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

KUALA TRENGGANU (MALAYSIA)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.56
 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)	5540	2950	1630	1600	1550	1350	1090	1170	1500	1910	2790	6100
Tp	253	253	256	267	272	278	272	272	272	270	267	261
Io (Iom)	21.9	11.7	6.37	5.99	5.70	4.86	4.01	4.30	5.51	7.07	10.4	23.4
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	10120 / 762			4500 / 817			3760 / 816			10800 / 798		
Io (Iot)	13.28			5.508			4.608			13.53		
Semesters	December-May						June-November					
Pp(x10)/Tp	14620 / 1579						14560 / 1614					
Io (Iosm)	9.259						9.021					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 29180/3193=9.14 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	5540	2950	1630	1600	1550	1350	1090	1170	1500	1910	2790	6100
Tp [T*10]	253	253	256	267	272	278	272	272	272	270	267	261
Iom [Pp/Tp]	\$\$	\$\$	637	599	570	486	401	430	551	707	\$\$	\$\$
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	10120 / 762			4500 / 817			3760 / 816			10800 / 798		
Iot [Pp/Tp]	1328			551			461			1353		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 2.50
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 25.32
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 2.07
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.90
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 109.66
 + Temperate humid (160>R>100)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 79.71
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 515.59
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.91
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.79
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 127.52
 + High (120<K<160)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 6. Termoaxeric (Axic warm)
 + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.22	0.63	0.60	0.57	0.48	0.39	0.42	0.55	0.72	1.11	2.68	2.46
T-E ratio	11.38	11.52	12.02	12.24	12.51	12.24	12.24	12.24	12.15	12.02	11.75	11.38
Precipitation-effectiveness: 118.27						Temperature-efficiency: 143.69						
Moisture Index [MI=100*(P-PE)/PE]: 79.48 + B3.Humid high-humid (60<MI<80)												
Index of dryness [DI=100*d/PE]: 0.00 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 79.47 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1625.81 + Megathermic (PE>1440)												

