

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

TAURA (ECUADOR)

Altitude: 17 m.

Latitude: 2°17'S Longitude: 79°42'W

Temperature observation period.: 1986-1994 (9)

Rainfall observation period....: 1989-1994 (6)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	26.39	30.56	22.22	33.89	17.22	13.2	138.25
Feb.	26.39	30.56	22.22	33.89	17.78	47.2	124.95
Mar.	26.39	30.56	22.22	33.89	17.78	56.4	138.25
Apr.	26.67	31.11	22.22	33.89	17.78	10.2	138.23
May.	25.84	30.56	21.11	32.78	17.78	2.0	127.48
Jun.	24.45	28.89	20.00	32.22	16.11	2.3	102.60
Jul.	24.17	28.89	19.44	32.22	13.89	0.0	102.61
Aug.	24.17	29.44	18.89	32.78	13.89	0.0	102.61
Sep.	24.72	30.00	19.44	33.89	11.11	0.0	107.56
Oct.	25.00	30.00	20.00	32.22	15.00	0.0	115.07
Nov.	25.28	30.56	20.00	33.89	17.22	1.0	117.20
Dec.	26.39	31.67	21.11	35.00	17.78	3.0	139.58
Year	25.49	30.23	20.74	33.38	16.11	135	1454.4

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	738
Compensated thermicity index.....(Itc):	738
Simple continentality index.....(Ic):	2.5
Diurnality index.....(Id):	10.6
Annual ombrothermic index.....(Io):	0.44
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	No
Threemonthly dry ombrothermic index.....(Iod3):	No
Fourmonthly dry ombrothermic index.....(Iod4):	0.02
Annual ombro-evaporation index.....(Ioe):	0.09
Annual positive temperature.....(Tp):	3059
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	731
Positive precipitation.....(Pp):	135

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	0	1	1	10	0

Latitudinal Belt...: Equatorial

Continentality.....: Hyperoceanic - Low Ultrahyperoceanic

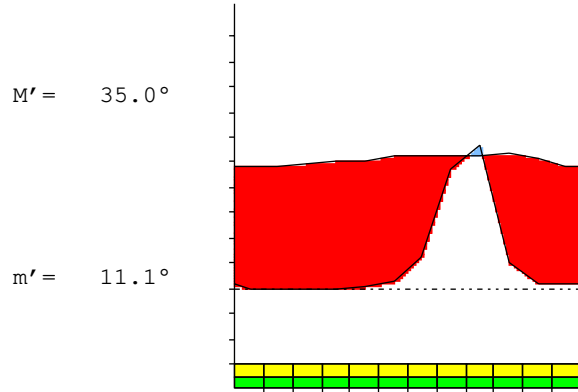
Bioclimate(Variant): TROPICAL DESERTIC (PLUVISEROTIN,ARID)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW ARID

TAURA (ECUADOR)

17 m

P= 135      2° 17' S      79° 42' W      9/6 y.  
 T= 25.5 °    Ic= 2.5      Tp= 3059      Tn= 0  
 m= 19.4 °    M= 28.9 °    Itc= 738      Io= 0.4



TROPICAL DESERTIC (PLUVISEROTIN)  
 UPPER INFRATROPICAL LOW ARID

WATER INDEX CARD      TAURA (ECUADOR)  
 Altitude: 17 m.      Latitude: 2° 17' S

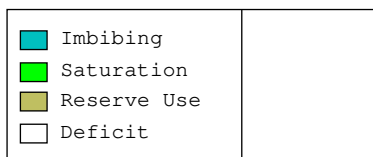
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	24.2	103	0	0	0	0	103	0	0	-1.0
Aug.	24.2	103	0	0	0	0	103	0	0	-1.0
Sep.	24.7	108	0	0	0	0	108	0	0	-1.0
Oct.	25.0	115	0	0	0	0	115	0	0	-1.0
Nov.	25.3	117	1	0	0	1	116	0	0	-0.9
Dec.	26.4	140	3	0	0	3	137	0	0	-0.9
Jan.	26.4	138	13	0	0	13	125	0	0	-0.9
Feb.	26.4	125	47	0	0	47	78	0	0	-0.6
Mar.	26.4	138	56	0	0	56	82	0	0	-0.5
Apr.	26.7	138	10	0	0	10	128	0	0	-0.9
May.	25.8	127	2	0	0	2	125	0	0	-0.9
Jun.	24.5	103	2	0	0	2	100	0	0	-0.9
Year	25.5	1454	135	*	*	135	1319	0	0	*

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

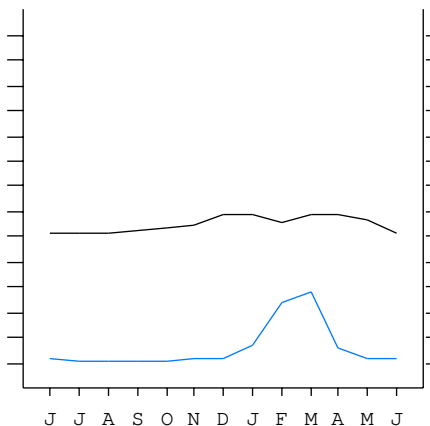
TAURA (ECUADOR)

2°17' S    79°42' W    17 m    9/6 y.

T= 25.5    Ic= 2.5    TROPICAL DESERTIC (PLUVISEROTIN)  
 m= 19.4    Tp= 3059    UPPER INFRATROPICAL  
 M= 28.9    Tn= 0    LOW ARID  
 M' = 35.0    Itc= 738  
 m' = 11.1    Io= 0.4  
 P= 135    mm    ———  
 PE= 1454    mm    ———



All over the year,  
 there is hydic deficit



TAURA (ECUADOR)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality 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 [A2e.1a.3b]  
 + Macrobioclimate .....: A. TROPICAL  
 + Bioclimate .....: 2. DESERTIC  
 + Bioclimatic variant .: PLUVISEROTIN, ARID  
 + Thermic type.....: 1. INFRATROPICAL  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 3. ARID  
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....Trde(Pse).Itr.Ari.Uho

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 132  
 Coldest semester of the year.....(Psw): 3  
 Warmest four months period of the year.....(Pcm1): 127  
 Following warmest four months period.....(Pcm2): 4  
 Positive precipitation dryest 3 months.....(Ppd): 0  
 Positive precipitation dryest 2 months.....(Ppd2): 0  
 Positive precipitation dryest 1 month.....(Ppd1): 0  
 Positive precipitation warmest 3 months.....(Pps): 114  
 Positive precipitation warmest 2 months.....(Pps2): 67  
 Positive precipitation warmest 1 month.....(Pps1): 10  
 Positive precipitation coldest 3 months.....(Ppw): 2  
 Positive precipitation coldest 2 months.....(Ppw2): 0  
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	2	1	63	68

Tropical rainfall rhythms: 2 > 1 > 3 > 4

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 26.7  
 Average coldest month [T].....(Tmin): 24.2  
 Maximum temp. warmest month [M].....(Tmmax): 31.7  
 Minimum temp. coldest month [m].....(Tmmin): 18.9  
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.0  
 Absolute Min.temp. coldest month [m'].....(Tamin): 11.1  
 First warmest contrasted month [M].....(Tcmax): 30.0 (9)  
 First coldest contrasted month [m].....(Tcmin): 19.4 (9)  
 Dry station temperature.....(Td): 731  
 Positive temperature dryest 3 months.....(Tpd): 731  
 Positive temperature dryest 2 months.....(Tpd2): 483  
 Positive temperature dryest 1 month.....(Tpd1): 242  
 Positive temperature warmest 3 months.....(Tps): 795  
 Positive temperature warmest 2 months.....(Tps2): 531  
 Positive temperature warmest 1 month.....(Tps1): 267  
 Positive temperature coldest 3 months.....(Tpw): 728  
 Positive temperature coldest 2 months.....(Tpw2): 483  
 Positive temperature coldest 1 month.....(Tpw1): 242

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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): 10.75  
 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)	30	132	472	564	102	20	23	0	0	0	0	10
Tp	264	264	264	264	267	258	245	242	242	247	250	253
Io (Iom)	0.11	0.50	1.79	2.14	0.38	0.08	0.09	0.00	0.00	0.00	0.00	0.04
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	634 / 792			686 / 789			23 / 728			10 / 750		
Io (Iot)	0.801			0.869			0.032			0.013		
Semesters	December-May						June-November					
Pp(x10)/Tp	1320 / 1581						33 / 1478					
Io (Iosm)	0.835						0.022					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 1353/3059=0.44 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	30	132	472	564	102	20	23	0	0	0	0	10
Tp [T*10]	264	264	264	264	267	258	245	242	242	247	250	253
Iom [Pp/Tp]	11	50	179	214	38	8	9	0	0	0	0	4
Avm [200-Iom]	189	150	21	***	162	192	191	200	200	200	200	196
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	634 / 792			686 / 789			23 / 728			10 / 750		
Iot [Pp/Tp]	80			87			3			1		
Avs E[Avm<200]	360			***			591			596		
Lower ultrahyperarid [9]						Upper ultrahyperarid [1]						
Upper hyperarid [1]						Weak lower arid [1]						
Weak upper arid [1]						Weak upper semiarid [1]						

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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] .....: 86.27  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 5.98  
 + Hyperoceanic (-20<CI<20)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 1.42  
 + Subcontinental (1.1<CI<1.7)  
 Rainfall Index of Lang (1925) [R=P/T] .....: 5.31  
 + Steppic (40>R>0)  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 3.81  
 + Extremely arid -desert- (5>Ia>0)  
 I of Emberger (1930) [Q=100\*P/(Tmax<sup>2</sup>-Tmin<sup>2</sup>)] .....: 20.94  
 + Arid (30>Q>0)  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: 18.84  
 + Extremely arid (DR>6)  
 Aridity Index of UNEP [I=P/PE] .....: 0.09  
 + Arid (0.2>Im>0.05)  
 Potential Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 23.51  
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....: A. Warm and temperate warm  
 + Region .....: 2. Termohemieremic (Subdesertic warm)  
 + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.04	0.16	0.19	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
T-E ratio	11.88	11.88	11.88	12.00	11.63	11.00	10.88	10.88	11.12	11.25	11.38	11.88
Precipitation-effectiveness: 4.30						Temperature-efficiency .....: 137.64						
Moisture Index [MI=100*(P-PE)/PE] .....: -90.70 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE] .....: 90.69 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE .....: 1454.38 + Megathermic (PE>1440)												

