

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

MAN (COTE D'IVOIRE)

Altitude: 520 m.

Latitude: 7°23'N Longitude: 7°31'W

Temperature observation period.: 1988-1994 (7)

Rainfall observation period....: 1960-1994 (35)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	25.28	31.11	19.44	35.00	16.11	15.0	118.16
Feb.	25.84	31.67	20.00	35.00	14.44	63.0	115.26
Mar.	25.84	31.11	20.56	35.00	15.56	119.9	129.04
Apr.	25.84	30.56	21.11	34.44	17.78	151.9	127.79
May.	25.56	30.00	21.11	33.33	17.22	165.1	129.56
Jun.	24.17	27.78	20.56	31.67	16.67	209.1	105.75
Jul.	22.50	25.56	19.44	30.00	16.67	220.0	86.99
Aug.	22.50	25.56	19.44	31.11	17.22	268.0	86.18
Sep.	23.61	27.22	20.00	30.56	17.22	324.1	95.45
Oct.	24.17	28.33	20.00	31.11	17.22	176.0	104.73
Nov.	24.72	29.44	20.00	32.22	17.22	58.9	107.99
Dec.	24.72	30.00	19.44	32.78	16.11	22.1	110.18
Year	24.56	29.03	20.09	32.68	16.62	1793	1317.1

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	696
Compensated thermicity index.....(Itc):	696
Simple continentality index.....(Ic):	3.3
Diurnality index.....(Id):	11.7
Annual ombrothermic index.....(Io):	6.08
Monthly dry ombrothermic index.....(Iod1):	0.59
Bimonthly dry ombrothermic index.....(Iod2):	0.74
Threemonthly dry ombrothermic index.....(Iod3):	1.28
Fourmonthly dry ombrothermic index.....(Iod4):	2.75
Annual ombro-evaporation index.....(Ioe):	1.36
Annual positive temperature.....(Tp):	2948
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	747
Positive precipitation.....(Pp):	1793

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	8	2	0	2	0

Latitudinal Belt...: Eutropical

Continentality.....: Hyperoceanic - Low Ultrahyperoceanic

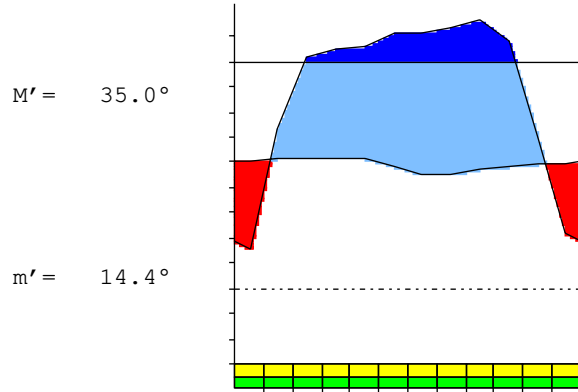
Bioclimate(Variant): TROPICAL PLUVISEASONAL (PLUVISEROTIN, SUBMESOPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW HUMID

MAN (COTE D'IVOIRE)

520 m

P= 1793      7° 23'N      7° 31'W      7/35 y.  
 T= 24.6 °    Ic= 3.3      Tp= 2948      Tn= 0  
 m= 19.4 °    M= 25.6 °    Itc= 696      Io= 6.1



TROPICAL PLUVISEASONAL (PLUVISEROTIN)  
 UPPER INFRATROPICAL LOW HUMID

WATER INDEX CARD      MAN (COTE D'IVOIRE)

Altitude: 520 m.      Latitude: 7° 23'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	25.3	118	15	0	0	15	103	0	16	-0.8
Feb.	25.8	115	63	0	0	63	52	0	8	-0.4
Mar.	25.8	129	120	0	0	120	9	0	4	0.0
Apr.	25.8	128	152	24	24	128	0	0	2	0.1
May.	25.6	130	165	36	60	130	0	0	1	0.2
Jun.	24.2	106	209	40	100	106	0	63	32	0.9
Jul.	22.5	87	220	0	100	87	0	133	83	1.5
Aug.	22.5	86	268	0	100	86	0	182	132	2.1
Sep.	23.6	95	324	0	100	95	0	229	180	2.3
Oct.	24.2	105	176	0	100	105	0	71	126	0.6
Nov.	24.7	108	59	-49	51	108	0	0	63	-0.4
Dec.	24.7	110	22	-51	0	73	37	0	31	-0.7
Year	24.6	1317	1793	*	*	1115	202	678	678	*

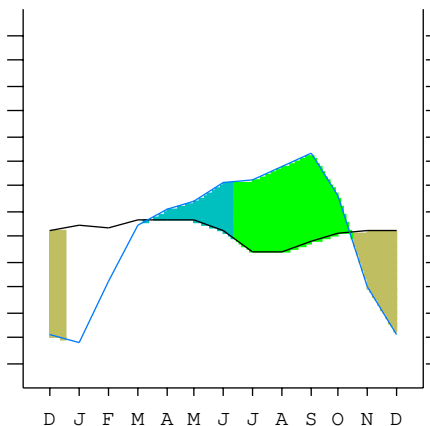
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

MAN (COTE D'IVOIRE)

7°23'N    7°31'W    520 m    7/35 y.

T= 24.6    Ic= 3.3    TROPICAL PLUVISEASONAL (PLUVISEROTIN)  
 m= 19.4    Tp= 2948    UPPER INFRATROPICAL  
 M= 25.6    Tn= 0    LOW HUMID  
 M' = 35.0    Itc= 696  
 m' = 14.4    Io= 6.1  
 P= 1793    mm ———  
 PE= 1317    mm ———

Imbibing	9 Mar.
Saturation	12 Jun.
Reserve Use	18 Oct.
Deficit	18 Dec.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A1b]  
 + Type .....: A. Hyperoceanic  
 + Subtype .....: 1. Ultrahyperoceanic  
 + 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 [A4e.1a.7b]  
 + Macrobioclimate .....: A. TROPICAL  
 + Bioclimate .....: 4. PLUVISEASONAL  
 + Bioclimatic variant .: PLUVISEROTIN, SUBMESOPHYTIC  
 + Thermic type.....: 1. INFRATROPICAL  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 7. HUMID  
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....Trps(Pse).Itr.Hum.Uho

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 537  
 Coldest semester of the year.....(Psw): 1256  
 Warmest four months period of the year.....(Pcm1): 500  
 Following warmest four months period.....(Pcm2): 1021  
 Positive precipitation dryest 3 months.....(Ppd): 96  
 Positive precipitation dryest 2 months.....(Ppd2): 37  
 Positive precipitation dryest 1 month.....(Ppd1): 15  
 Positive precipitation warmest 3 months.....(Pps): 335  
 Positive precipitation warmest 2 months.....(Pps2): 183  
 Positive precipitation warmest 1 month.....(Pps1): 63  
 Positive precipitation coldest 3 months.....(Ppw): 812  
 Positive precipitation coldest 2 months.....(Ppw2): 488  
 Positive precipitation coldest 1 month.....(Ppw1): 220

Seasons	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4
Rainfall	100	436	697	559

Tropical rainfall rhythms: 3 > 4 > 2 > 1

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.8  
 Average coldest month [T].....(Tmin): 22.5  
 Maximum temp. warmest month [M].....(Tmmax): 31.7  
 Minimum temp. coldest month [m].....(Tmmin): 19.4  
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.0  
 Absolute Min.temp. coldest month [m'].....(Tamin): 14.4  
 First warmest contrasted month [M].....(Tcmax): 31.1 (1)  
 First coldest contrasted month [m].....(Tcmin): 19.4 (1)  
 Dry station temperature.....(Td): 747  
 Positive temperature dryest 3 months.....(Tpd): 747  
 Positive temperature dryest 2 months.....(Tpd2): 500  
 Positive temperature dryest 1 month.....(Tpd1): 253  
 Positive temperature warmest 3 months.....(Tps): 775  
 Positive temperature warmest 2 months.....(Tps2): 517  
 Positive temperature warmest 1 month.....(Tps1): 258  
 Positive temperature coldest 3 months.....(Tpw): 686  
 Positive temperature coldest 2 months.....(Tpw2): 450  
 Positive temperature coldest 1 month.....(Tpw1): 225

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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): 0.73  
 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)	221	150	630	1199	1519	1651	2091	2200	2680	3241	1760	589
Tp	247	253	258	258	258	256	242	225	225	236	242	247
Io (Iom)	0.89	0.59	2.44	4.64	5.88	6.46	8.65	9.78	11.9	13.7	7.28	2.38
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	1001 / 758			4369 / 772			6971 / 692			5590 / 725		
Io (Iot)	1.320			5.656			10.08			7.710		
Semesters	December-May						June-November					
Pp(x10)/Tp	5370 / 1531						12561 / 1417					
Io (Iosm)	3.508						8.866					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 17931/2948=6.08 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	221	150	630	1199	1519	1651	2091	2200	2680	3241	1760	589
Tp [T*10]	247	253	258	258	258	256	242	225	225	236	242	247
Iom [Pp/Tp]	89	59	244	464	588	646	865	978	\$\$	\$\$	728	238
Avm [200-Iom]	111	141	***	***	***	***	***	***	***	***	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	1001 / 758			4369 / 772			6971 / 692			5590 / 725		
Iot [Pp/Tp]	132			566			1008			771		
Avs E[Avm<200]	***			***			***			***		
Weak lower arid [1]						Weak upper arid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 3.34  
 CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 23.78  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 5.01  
 + Hyperoceanic (-20<CI<20)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 0.97  
 + Oceanic (0.6<CI<1.1)  
 Rainfall Index of Lang (1925) [R=P/T] .....: 73.00  
 + Temperate warm (100>R>60)  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 51.88  
 + Humid (60>Ia>30)  
 I of Emberger (1930) [Q=100\*P/(Tmmax<sup>2</sup>-Tmmin<sup>2</sup>)] .....: 286.86  
 + Humid (Q>90)  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: 1.37  
 + Humid (2>DR>0)  
 Aridity Index of UNEP [I=P/PE] .....: 1.36  
 + Humid (I>0.65)  
 Potencial Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 58.58  
 + Very low (K<60)

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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	0.04	0.22	0.44	0.58	0.64	0.85	0.94	1.17	1.41	0.70	0.21	0.07
T-E ratio	11.38	11.63	11.63	11.63	11.50	10.88	10.13	10.13	10.62	10.88	11.12	11.12
Precipitation-effectiveness: 72.68						Temperature-efficiency .....: 132.64						
Moisture Index [MI=100*(P-PE)/PE] .....: 36.14 + B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE] .....: 15.31 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE] .....: 51.46 + Strong surplus (20<HI)												
Potential Evapotranspiration PE .....: 1317.07 + Forth mesothermic (997<PE<1440)												

