

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

KANDI (BENIN)

Altitude: 293 m.

Latitude: 11°8'N Longitude: 2°56'E

Temperature observation period.: 1989-1994 (6)

Rainfall observation period....: 1964-1994 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	26.95	35.56	18.33	41.11	12.78	0.0	137.71
Feb.	28.34	37.78	18.89	42.78	12.78	1.0	138.21
Mar.	31.39	39.44	23.33	44.44	15.00	8.1	179.88
Apr.	32.50	40.56	24.44	46.11	18.33	29.0	189.03
May.	30.28	36.67	23.89	42.22	17.78	92.0	180.67
Jun.	28.06	33.33	22.78	38.89	17.22	150.1	156.87
Jul.	26.67	31.11	22.22	35.00	18.33	191.0	149.18
Aug.	26.39	30.56	22.22	35.56	17.78	282.0	133.26
Sep.	26.67	31.67	21.67	35.56	18.89	219.0	139.60
Oct.	28.06	34.44	21.67	37.78	17.22	52.1	150.95
Nov.	28.06	36.67	19.44	39.44	12.78	2.0	143.55
Dec.	26.95	36.11	17.78	38.89	12.22	0.0	137.71
Year	28.36	35.33	21.39	39.81	15.93	1026	1836.6

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	811
Compensated thermicity index.....(Itc):	811
Simple continentality index.....(Ic):	6.1
Diurnality index.....(Id):	18.9
Annual ombrothermic index.....(Io):	3.02
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	No
Three monthly dry ombrothermic index.....(Iod3):	0.01
Four monthly dry ombrothermic index.....(Iod4):	0.03
Annual ombro-evaporation index.....(Ioe):	0.38
Annual positive temperature.....(Tp):	3403
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	822
Positive precipitation.....(Pp):	1026

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	4	1	1	6	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - Low Euhyperoceanic

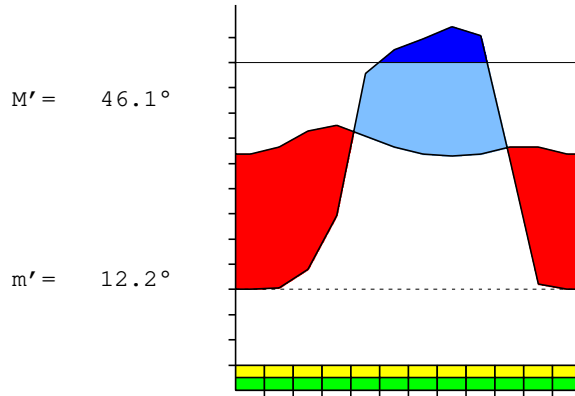
Bioclimate(Variant): TROPICAL XERIC (PLUVISEROTIN, DRY)

Bioclimatic Belt...: UPPER INFRATROPICAL UPPER DRY

KANDI (BENIN)

293 m

P= 1026 11° 8'N 2° 56'E 6/31 y.
 T= 28.4° Ic= 6.1 Tp= 3403 Tn= 0
 m= 22.2° M= 30.6° Itc= 811 Io= 3.0



TROPICAL XERIC (PLUVISEROTIN)
 UPPER INFRATROPICAL UPPER DRY

WATER INDEX CARD KANDI (BENIN)
 Altitude: 293 m.

Latitude: 11° 8'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	27.0	138	0	0	0	0	138	0	4	-1.0
Feb.	28.3	138	1	0	0	1	137	0	2	-0.9
Mar.	31.4	180	8	0	0	8	172	0	1	-0.9
Apr.	32.5	189	29	0	0	29	160	0	0	-0.8
May.	30.3	181	92	0	0	92	89	0	0	-0.4
Jun.	28.1	157	150	0	0	150	7	0	0	0.0
Jul.	26.7	149	191	42	42	149	0	0	0	0.2
Aug.	26.4	133	282	58	100	133	0	91	45	1.1
Sep.	26.7	140	219	0	100	140	0	79	62	0.5
Oct.	28.1	151	52	-99	1	151	0	0	31	-0.6
Nov.	28.1	144	2	-1	0	3	140	0	16	-0.9
Dec.	27.0	138	0	0	0	0	138	0	8	-1.0
Year	28.4	1837	1026	*	*	856	980	170	170	*

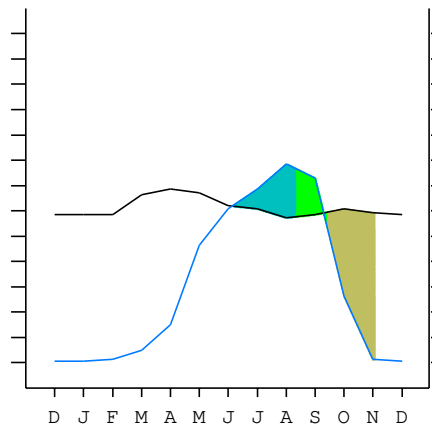
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

KANDI (BENIN)

11°8'N 2°56'E 293 m 6/31 y.

T= 28.4 Ic= 6.1 TROPICAL XERIC (PLUVISEROTIN)
 m= 22.2 Tp= 3403 UPPER INFRATROPICAL
 M= 30.6 Tn= 0 UPPER DRY
 M' = 46.1 Itc= 811
 m' = 12.2 Io= 3.0
 P= 1026 mm ———
 PE= 1837 mm ———

Imbibing	5 Jun.
Saturation	12 Aug.
Reserve Use	14 Sep.
Deficit	1 Nov.



KANDI (BENIN)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental 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.1a.5a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .: e. PLUVISEROTIN, DRY
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Trxe (Pse).Itr.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 280
 Coldest semester of the year.....(Psw): 746
 Warmest four months period of the year.....(Pcm1): 130
 Following warmest four months period.....(Pcm2): 842
 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): 129
 Positive precipitation warmest 2 months.....(Pps2): 37
 Positive precipitation warmest 1 month.....(Pps1): 29
 Positive precipitation coldest 3 months.....(Ppw): 692
 Positive precipitation coldest 2 months.....(Ppw2): 473
 Positive precipitation coldest 1 month.....(Ppw1): 282

Seasons	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4
Rainfall	1	129	623	273

Tropical rainfall rhythms: 3 > 4 > 2 > 1

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 32.5
 Average coldest month [T].....(Tmin): 26.4
 Maximum temp. warmest month [M].....(Tmmax): 40.6
 Minimum temp. coldest month [m].....(Tmmin): 17.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 46.1
 Absolute Min.temp. coldest month [m'].....(Tamin): 12.2
 First warmest contrasted month [M].....(Tcmax): 37.8 (2)
 First coldest contrasted month [m].....(Tcmin): 18.9 (2)
 Dry station temperature.....(Td): 822
 Positive temperature dryest 3 months.....(Tpd): 822
 Positive temperature dryest 2 months.....(Tpd2): 539
 Positive temperature dryest 1 month.....(Tpd1): 270
 Positive temperature warmest 3 months.....(Tps): 942
 Positive temperature warmest 2 months.....(Tps2): 639
 Positive temperature warmest 1 month.....(Tps1): 325
 Positive temperature coldest 3 months.....(Tpw): 797
 Positive temperature coldest 2 months.....(Tpw2): 531
 Positive temperature coldest 1 month.....(Tpw1): 264

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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): 1.79
 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)	0	0	10	81	290	920	1501	1910	2820	2190	521	20
Tp	270	270	283	314	325	303	281	267	264	267	281	281
Io (Iom)	0.00	0.00	0.04	0.26	0.89	3.04	5.35	7.16	10.7	8.21	1.86	0.07
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	10 / 822			1291 / 942			6231 / 811			2731 / 828		
Io (Iot)	0.012			1.371			7.681			3.299		
Semesters	December-May						June-November					
Pp(x10)/Tp	1301 / 1764						8962 / 1639					
Io (Iosm)	0.737						5.468					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 10263/3403=3.02 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	0	0	10	81	290	920	1501	1910	2820	2190	521	20
Tp [T*10]	270	270	283	314	325	303	281	267	264	267	281	281
Iom [Pp/Tp]	0	0	4	26	89	304	535	716	\$\$	821	186	7
Avm [200-Iom]	200	200	196	174	111	***	***	***	***	***	14	193
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	10 / 822			1291 / 942			6231 / 811			2731 / 828		
Iot [Pp/Tp]	1			137			768			330		
Avs E[Avm<200]	596			***			***			***		
Lower ultrahyperarid [5]							Lower hyperarid [1]					
Weak upper arid [1]							Weak upper semiarid [1]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 6.11
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 33.39
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 14.81
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.30
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: 36.19
 + Steppic (40>R>0)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 26.75
 + Subhumid (30>Ia>20)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 77.22
 + Subhumid (90>Q>50)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 2.76
 + Semiarid (3>DR>2)
 Aridity Index of UNEP [I=P/PE]: 0.56
 + Subhumid - dry (0.65>I>0.5)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 77.49
 + Low (60<K<90)

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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	0.00	0.00	0.02	0.08	0.30	0.54	0.73	1.13	0.85	0.17	0.00	0.00
T-E ratio	12.13	12.75	14.13	14.63	13.63	12.63	12.00	11.88	12.00	12.63	12.63	12.13
Precipitation-effectiveness:	38.23					Temperature-efficiency: 153.14						
Moisture Index [MI=100*(P-PE)/PE]: -44.12 + D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]: 53.37 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 9.25 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 1836.62 + Megathermic (PE>1440)												

