

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

ZAKATALY (AZERBAIJAN)

Altitude: 518 m.

Latitude: 41°38'N Longitude: 46°39'E

Temperature observation period.: 1952-1994 (43)

Rainfall observation period....: 1984-1994 (11)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	1.67	5.56	-2.22	20.00	-22.78	25.7	2.23
Feb.	3.06	7.22	-1.11	23.89	-13.89	38.6	5.25
Mar.	6.67	11.11	2.22	27.78	-12.22	71.4	19.83
Apr.	12.22	17.22	7.22	31.11	-3.89	120.9	50.69
May.	17.50	22.78	12.22	36.11	1.11	106.7	94.71
Jun.	21.12	26.67	15.56	36.11	6.11	113.3	124.49
Jul.	24.17	29.44	18.89	38.89	8.89	68.3	151.80
Aug.	24.45	30.00	18.89	38.89	7.78	42.4	143.44
Sep.	18.89	24.44	13.33	37.22	2.22	106.4	87.08
Oct.	14.17	18.89	9.44	32.78	-5.00	84.6	53.00
Nov.	8.06	12.22	3.89	25.00	-7.78	50.5	20.62
Dec.	3.61	7.22	0.00	22.78	-18.89	25.7	6.39
Year	12.97	17.73	8.19	30.88	-4.86	855	759.53

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	163
Compensated thermicity index.....(Itc):	205
Simple continentality index.....(Ic):	22.8
Diurnality index.....(Id):	11.1
Annual ombrothermic index.....(Io):	5.49
Monthly estival ombrothermic index.....(Ios1):	1.73
Bimonthly estival ombrothermic index.....(Ios2):	2.28
Threemonthly estival ombrothermic index.....(Ios3):	3.21
Fourmonthly estival ombrothermic index.....(Ios4):	3.79
Annual ombro-evaporation index.....(Ioe):	1.57
Annual positive temperature.....(Tp):	1556
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	697
Positive precipitation.....(Pp):	855

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

Latitudinal Belt...: Low eutemperate

Continentality.....: Continental - Low Subcontinental

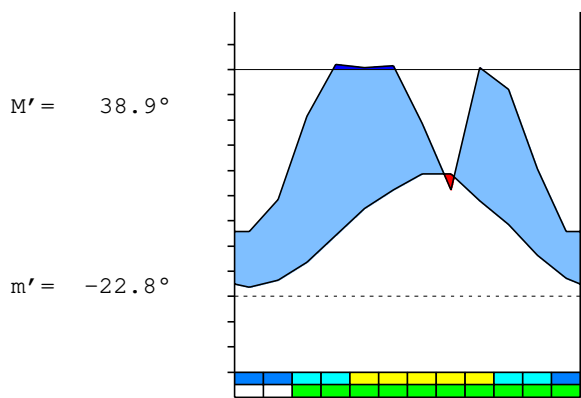
Bioclimate(Variant): TEMPERATE CONTINENTAL (STEPPIC)

Bioclimatic Belt...: UPPER MESOTEMPERATE UPPER SUBHUMID

ZAKATALY (AZERBAIJAN)

518 m

P= 855      41° 38'N      46° 39'E      43/11 y.  
 T= 13.0°    Ic= 22.8      Tp= 1556      Tn= 0  
 m= -2.2°    M= 5.6°      Itc= 205      Io= 5.5



TEMPERATE CONTINENTAL (STEPPIC)  
 UPPER MESOTEMPERATE UPPER SUBHUMID

WATER INDEX CARD      ZAKATALY (AZERBAIJAN)

Altitude: 518 m.      Latitude: 41° 38'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	1.7	2	26	0	100	2	0	23	12	10.5
Feb.	3.1	5	39	0	100	5	0	33	23	6.3
Mar.	6.7	20	71	0	100	20	0	52	37	2.6
Apr.	12.2	51	121	0	100	51	0	70	54	1.3
May.	17.5	95	107	0	100	95	0	12	33	0.1
Jun.	21.1	124	113	-11	89	124	0	0	16	0.0
Jul.	24.2	152	68	-84	5	152	0	0	8	-0.5
Aug.	24.5	143	42	-5	0	48	96	0	4	-0.7
Sep.	18.9	87	106	19	19	87	0	0	2	0.2
Oct.	14.2	53	85	32	51	53	0	0	1	0.5
Nov.	8.1	21	51	30	81	21	0	0	1	1.4
Dec.	3.6	6	26	19	100	6	0	0	0	3.0
Year	13.0	760	855	*	*	664	96	191	191	*

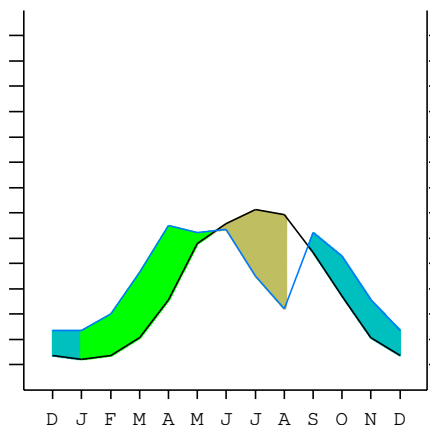
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

ZAKATALY (AZERBAIJAN)

41°38'N    46°39'E    518 m 43/11 y.

T= 13.0    Ic= 22.8    TEMPERATE CONTINENTAL (STEPPIC)  
 m= -2.2    Tp= 1556    UPPER MESOTEMPERATE  
 M= 5.6    Tn= 0    UPPER SUBHUMID  
 M' = 38.9    Itc= 205  
 m' = -22.8    Io= 5.5  
 P= 855    mm    ———  
 PE= 760    mm    ———

Imbibing	26 Aug.
Saturation	30 Dec.
Reserve Use	16 May.
Deficit	2 Aug.



ZAKATALY (AZERBAIJAN)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C2a]  
 + Type .....: C. Continental  
 + Subtype .....: 2. Subcontinental  
 + Variant .....: a. Low  
 Thermic types [B1.B4]  
 + Latitudinal zone .....: B. Temperate  
 + Latitudinal belt .....: 1. Low eutemperate  
 + Thermic type .....: B. Temperate  
 + Thermic subtype .....: 4. Temperate  
 Bioclimatic types [C2a.3a.6a]  
 + Macrobioclimate .....: C. TEMPERATE  
 + Bioclimate .....: 2. CONTINENTAL  
 + Bioclimatic variant .: a. STEPPIC  
 + Thermic type.....: 3. MESOTEMPERATE  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : a. UPPER  
 Bioclimatic Classification .....: Teoc(Stp).Mte.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 522  
 Coldest semester of the year.....(Psw): 333  
 Warmest four months period of the year.....(Pcm1): 330  
 Following warmest four months period.....(Pcm2): 187  
 Positive precipitation dryest 3 months.....(Ppd): 90  
 Positive precipitation dryest 2 months.....(Ppd2): 51  
 Positive precipitation dryest 1 month.....(Ppd1): 26  
 Positive precipitation warmest 3 months.....(Pps): 224  
 Positive precipitation warmest 2 months.....(Pps2): 111  
 Positive precipitation warmest 1 month.....(Pps1): 42  
 Positive precipitation coldest 3 months.....(Ppw): 90  
 Positive precipitation coldest 2 months.....(Ppw2): 64  
 Positive precipitation coldest 1 month.....(Ppw1): 26

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	90	299	224	241

Seasonal rainfall rhythms: P > F > S > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 24.5  
 Average coldest month [T].....(Tmin): 1.7  
 Maximum temp. warmest month [M].....(Tmmax): 30.0  
 Minimum temp. coldest month [m].....(Tmmin): -2.2  
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.9  
 Absolute Min.temp. coldest month [m'].....(Tamin): -22.8  
 First warmest contrasted month [M].....(Tcmax): 26.7 (6)  
 First coldest contrasted month [m].....(Tcmin): 15.6 (6)  
 Estival temperature.....(Ts): 697  
 Positive temperature dryest 3 months.....(Tpd): 83  
 Positive temperature dryest 2 months.....(Tpd2): 53  
 Positive temperature dryest 1 month.....(Tpd1): 17  
 Positive temperature warmest 3 months.....(Tps): 697  
 Positive temperature warmest 2 months.....(Tps2): 486  
 Positive temperature warmest 1 month.....(Tps1): 245  
 Positive temperature coldest 3 months.....(Tpw): 83  
 Positive temperature coldest 2 months.....(Tpw2): 47  
 Positive temperature coldest 1 month.....(Tpw1): 17

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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
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)	o	o										o
Pregelid.....[m' <=0] (Pf)	o	o	o	o						o	o	o
Agelid.....[m' > 0] (Pf)					o	o	o	o	o			
HiperAgelid..[all>0] (Pf)					o	o	o	o	o			

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.89  
 Mediterranean index of July.[PE/P].....(Im1): 2.22  
 Mediterranean index of July & August.....(Im2): 2.67  
 Mediterranean index of June, July & August....(Im3): 1.87

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	257	257	386	714	1209	1067	1133	683	424	1064	846	505
Tp	36	17	31	67	122	175	211	242	245	189	142	81
Io (Iom)	7.12	15.4	12.6	10.7	9.89	6.10	5.36	2.83	1.73	5.63	5.97	6.27
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	900 / 83			2990 / 364			2240 / 697			2415 / 411		
Io (Iot)	10.79			8.217			3.212			5.873		
Semesters	December-May						June-November					
Pp(x10)/Tp	3890 / 447						4655 / 1109					
Io (Iosm)	8.697						4.199					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 8545/1556=5.49 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	257	257	386	714	1209	1067	1133	683	424	1064	846	505
Tp [T*10]	36	17	31	67	122	175	211	242	245	189	142	81
Iom [Pp/Tp]	712	\$\$	\$\$	\$\$	989	610	536	283	173	563	597	627
Avm [200-Iom]	***	***	***	***	***	***	***	***	27	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	900 / 83			2990 / 364			2240 / 697			2415 / 411		
Iot [Pp/Tp]	1079			822			321			587		
Avs E[Avm<200]	***			***			***			***		
Weak upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp): 22.78
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....	37.89
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....	35.39
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....	1.53
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T] .....	65.90
+ Temperate warm (100>R>60)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....	37.21
+ Humid (60>Ia>30)	
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....	95.47
+ Humid (Q>90)	
I of Dantin & Revenga (1940) [DR=100*T/P] .....	1.52
+ Humid (2>DR>0)	
Aridity Index of UNEP [I=P/PE] .....	1.13
+ Humid (I>0.65)	
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....	17.11
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....

- + Climate .....
- + Region .....
- + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.17	0.25	0.43	0.64	0.48	0.47	0.25	0.14	0.46	0.41	0.28	0.16
T-E ratio	0.75	1.38	3.00	5.50	7.88	9.50	10.88	11.00	8.50	6.38	3.63	1.62
Precipitation-effectiveness: 41.27						Temperature-efficiency .....						70.02
Moisture Index [MI=100*(P-PE)/PE] .....												12.50
+ C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE] .....												12.60
+ No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE] .....												25.11
+ Strong surplus (20<HI)												
Potential Evapotranspiration PE .....												759.53
+ Second mesothermic (712<PE<855)												

