

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

IN SALAH (ALGERIA)

Altitude: 276 m.

Latitude: 27°15'N Longitude: 2°31'E

Temperature observation period.: 1979-1994 (16)

Rainfall observation period....: 1979-1994 (16)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	13.34	20.56	6.11	31.11	-3.33	2.5	10.73
Feb.	16.11	23.89	8.33	35.00	-2.22	2.5	20.09
Mar.	20.00	28.33	11.67	38.89	0.56	1.3	50.75
Apr.	25.00	33.33	16.67	41.67	8.89	1.3	116.63
May.	28.89	37.22	20.56	59.44	12.22	1.3	179.37
Jun.	35.00	43.33	26.67	50.00	16.11	1.3	234.06
Jul.	36.67	45.00	28.33	50.00	22.78	0.0	255.94
Aug.	35.84	43.89	27.78	50.00	22.22	2.5	237.59
Sep.	32.78	40.56	25.00	48.89	17.22	1.3	189.48
Oct.	26.67	34.44	18.89	43.89	8.89	1.3	135.49
Nov.	19.17	26.67	11.67	36.11	3.33	5.1	38.14
Dec.	14.45	21.67	7.22	31.11	0.00	2.5	13.95
Year	25.33	33.24	17.41	43.01	8.89	23	1482.2

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	520
Compensated thermicity index.....(Itc):	570
Simple continentality index.....(Ic):	23.3
Diurnality index.....(Id):	16.7
Annual ombrothermic index.....(Io):	0.08
Monthly estival ombrothermic index.....(Ios1):	No
Bimonthly estival ombrothermic index.....(Ios2):	0.03
Threemonthly estival ombrothermic index.....(Ios3):	0.04
Fourmonthly estival ombrothermic index.....(Ios4):	0.04
Annual ombro-evaporation index.....(Ioe):	0.51
Annual positive temperature.....(Tp):	3039
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	1075
Positive precipitation.....(Pp):	23

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

Latitudinal Belt...: Subtropical

Continentality.....: Continental - Low Subcontinental

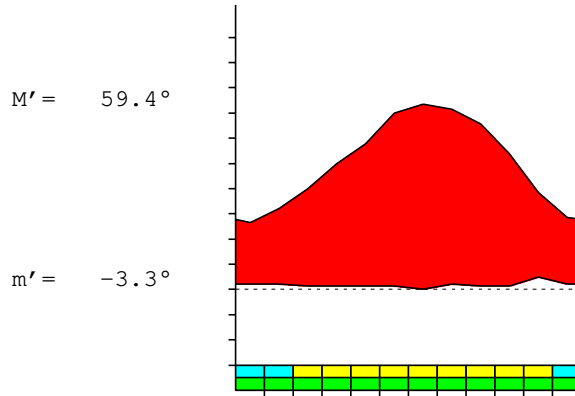
Bioclimate.....: MEDITERRANEAN HYPERDESERTIC CONTINENTAL

Bioclimatic Belt...: LOW INFRAMEDITERRANEAN LOW ULTRAHYPERARID

IN SALAH (ALGERIA)

276 m

P= 23      27° 15'N      2° 31'E      16/16 y.  
 T= 25.3°    Ic= 23.3      Tp= 3039      Tn= 0  
 m= 6.1°      M= 20.6°      Itc= 570      Io= 0.1



MEDITERRANEAN HYPERDESERTIC CONTINENTAL  
 LOW INFRAMEDITERRANEAN LOW ULTRAHYPERARID

WATER INDEX CARD      IN SALAH (ALGERIA)  
 Altitude: 276 m.      Latitude: 27° 15'N

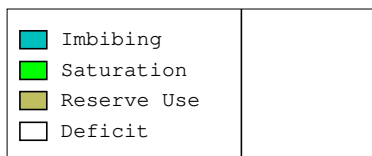
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	13.3	11	3	0	0	3	8	0	0	-0.7
Feb.	16.1	20	3	0	0	3	18	0	0	-0.8
Mar.	20.0	51	1	0	0	1	49	0	0	-0.9
Apr.	25.0	117	1	0	0	1	115	0	0	-0.9
May.	28.9	179	1	0	0	1	178	0	0	-0.9
Jun.	35.0	234	1	0	0	1	233	0	0	-0.9
Jul.	36.7	256	0	0	0	0	256	0	0	-1.0
Aug.	35.8	238	3	0	0	3	235	0	0	-0.9
Sep.	32.8	189	1	0	0	1	188	0	0	-0.9
Oct.	26.7	135	1	0	0	1	134	0	0	-0.9
Nov.	19.2	38	5	0	0	5	33	0	0	-0.8
Dec.	14.4	14	3	0	0	3	11	0	0	-0.8
Year	25.3	1482	23	*	*	23	1459	0	0	*

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

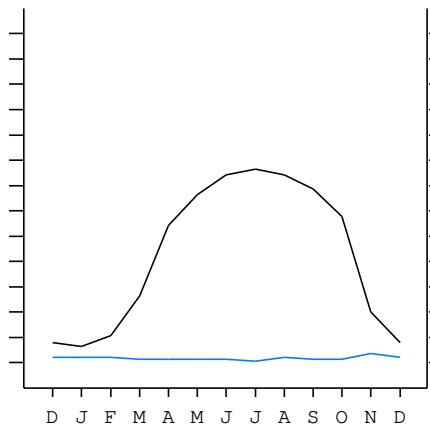
IN SALAH (ALGERIA)

27°15'N    2°31'E    276 m 16/16 y.

T= 25.3    Ic= 23.3    MEDITERRANEAN HYPERDESERTIC CONTINENTAL  
 m= 6.1    Tp= 3039    LOW INFRAMEDITERRANEAN  
 M= 20.6    Tn= 0    LOW ULTRAHYPERARID  
 M' = 59.4    Itc= 570  
 m' = -3.3    Io= 0.1  
 P= 23    mm    ———  
 PE= 1482    mm    ———



All over the year,  
 there is hydric deficit



IN SALAH (ALGERIA)

Latitude: 27°15'N Longitude: 2°31'E Altitude: 276 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C2a]  
 + Type .....: C. Continental  
 + Subtype .....: 2. Subcontinental  
 + Variant .....: a. Low

Thermic types [A3.A1]  
 + Latitudinal zone ....: A. Warm  
 + Latitudinal belt ....: 3. Subtropical  
 + Thermic type .....: A. Warm  
 + Thermic subtype .....: 1. Torrid

Bioclimatic types [B1.1b.1b]  
 + Macrobioclimate .....: B. MEDITERRANEAN  
 + Bioclimate .....: 1. HYPERDESERTIC CONTINENTAL  
 + Bioclimatic variant ..:  
 + Thermic type.....: 1. INFRAMEDITERRANEAN  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 1. ULTRAHYPERARID  
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....: Mepo.Ime.Uha

IN SALAH (ALGERIA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 8  
 Coldest semester of the year.....(Psw): 15  
 Warmest four months period of the year.....(Pcm1): 5  
 Following warmest four months period.....(Pcm2): 11  
 Positive precipitation dryest 3 months.....(Ppd): 3  
 Positive precipitation dryest 2 months.....(Ppd2): 1  
 Positive precipitation dryest 1 month.....(Ppd1): 0  
 Positive precipitation warmest 3 months.....(Pps): 4  
 Positive precipitation warmest 2 months.....(Pps2): 3  
 Positive precipitation warmest 1 month.....(Pps1): 0  
 Positive precipitation coldest 3 months.....(Ppw): 8  
 Positive precipitation coldest 2 months.....(Ppw2): 5  
 Positive precipitation coldest 1 month.....(Ppw1): 3

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	7	3	3	7

Seasonal rainfall rhythms: W > F > P > S

IN SALAH (ALGERIA)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 36.7  
 Average coldest month [T].....(Tmin): 13.3  
 Maximum temp. warmest month [M].....(Tmmax): 45.0  
 Minimum temp. coldest month [m].....(Tmmin): 6.1  
 Absolute Max.temp. warmest month [M'].....(Tamax): 59.4  
 Absolute Min.temp. coldest month [m'].....(Tamin): -3.3  
 First warmest contrasted month [M].....(Tcmax): 45.0 (7)  
 First coldest contrasted month [m].....(Tcmin): 28.3 (7)  
 Estival temperature.....(Ts): 1075  
 Positive temperature dryest 3 months.....(Tpd): 1006  
 Positive temperature dryest 2 months.....(Tpd2): 717  
 Positive temperature dryest 1 month.....(Tpd1): 367  
 Positive temperature warmest 3 months.....(Tps): 1075  
 Positive temperature warmest 2 months.....(Tps2): 725  
 Positive temperature warmest 1 month.....(Tps1): 367  
 Positive temperature coldest 3 months.....(Tpw): 439  
 Positive temperature coldest 2 months.....(Tpw2): 278  
 Positive temperature coldest 1 month.....(Tpw1): 133

IN SALAH (ALGERIA)

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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)	o	o										o
Agelid.....[m' > 0] (Pf)			o	o	o	o	o	o	o	o	o	
HiperAgelid..[all>0] (Pf)			o	o	o	o	o	o	o	o	o	

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 64.73  
 Mediterranean index of July.[PE/P].....(Im1): No  
 Mediterranean index of July & August.....(Im2): 197.41  
 Mediterranean index of June, July & August....(Im3): 191.47

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	25	25	25	13	13	13	13	0	25	13	13	51
Tp	145	133	161	200	250	289	350	367	358	328	267	192
Io (Iom)	0.17	0.19	0.16	0.07	0.05	0.04	0.04	0.00	0.07	0.04	0.05	0.27
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	75 / 439			39 / 739			38 / 1075			77 / 786		
Io (Iot)	0.171			0.053			0.035			0.098		
Semesters	December-May						June-November					
Pp(x10)/Tp	114 / 1178						115 / 1861					
Io (Iosm)	0.097						0.062					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 229/3039=0.08 Lower ultrahyperarid (1) [2286]

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	25	25	25	13	13	13	13	0	25	13	13	51
Tp [T*10]	145	133	161	200	250	289	350	367	358	328	267	192
Iom [Pp/Tp]	17	19	16	7	5	4	4	0	7	4	5	27
Avm [200-Iom]	183	181	184	194	195	196	196	200	193	196	195	173
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	75 / 439			39 / 739			38 / 1075			77 / 786		
Iot [Pp/Tp]	17			5			4			10		
Avs E[Avm<200]	548			584			589			565		
Lower ultrahyperarid [10]							Upper ultrahyperarid [5]					
Lower hyperarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 23.33  
 CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 66.22  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 51.52  
 + Subcontinental (40<CI<60)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 2.31  
 + Hypercontinental (2.3<CI<5)  
 Rainfall Index of Lang (1925) [R=P/T] .....: 0.90  
 + Steppic (40>R>0)  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 0.65  
 + Extremely arid -desert- (5>Ia>0)  
 I of Emberger (1930) [Q=100\*P/(Tmmax<sup>2</sup>-Tmmin<sup>2</sup>)] .....: 1.15  
 + Arid (30>Q>0)  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: 110.60  
 + Extremely arid (DR>6)  
 Aridity Index of UNEP [I=P/PE] .....: 0.02  
 + Hyperarid (0.05>Im)  
 Potential Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 1.14  
 + Very low (K<60)

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BIOCLIMATIC INDICES II

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

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01
T-E ratio	6.00	7.25	9.00	11.25	13.00	15.75	16.50	16.13	14.75	12.00	8.63	6.50
Precipitation-effectiveness: 0.61						Temperature-efficiency .....: 136.76						
Moisture Index [MI=100*(P-PE)/PE] .....: -98.46 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE] .....: 98.45 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE .....: 1482.23 + Megathermic (PE>1440)												

