

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

SJUREN-KJUEL (RUSSIA)

Altitude: 737 m.

Latitude: 65°0'N Longitude: 130°41'E

Temperature observation period.: 1984-1994 (11)

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

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	-34.45	-31.67	-37.22	-12.22	-50.00	8.4	0.00
Feb.	-30.56	-26.67	-34.44	-7.78	-50.00	5.6	0.00
Mar.	-23.34	-17.78	-28.89	1.11	-45.00	9.4	0.00
Apr.	-13.61	-7.78	-19.44	7.78	-40.00	14.7	0.00
May.	-1.11	3.89	-6.11	17.22	-27.22	40.4	0.00
Jun.	9.45	15.00	3.89	28.89	-7.78	80.3	129.38
Jul.	12.50	18.33	6.67	32.22	-2.78	111.3	149.52
Aug.	10.00	15.56	4.44	31.11	-7.78	73.4	108.18
Sep.	1.67	5.56	-2.22	18.89	-20.00	67.8	25.23
Oct.	-11.95	-8.89	-15.00	7.78	-37.78	16.8	0.00
Nov.	-27.22	-24.44	-30.00	-7.78	-47.22	13.7	0.00
Dec.	-33.34	-30.56	-36.11	-15.00	-48.89	12.4	0.00
Year	-11.83	-7.45	-16.20	8.52	-32.04	454	412.31

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-807
Compensated thermicity index.....(Itc):	-209
Simple continentality index.....(Ic):	47.0
Diurnality index.....(Id):	11.7
Annual ombrothermic index.....(Io):	9.90
Monthly estival ombrothermic index.....(Ios1):	8.90
Bimonthly estival ombrothermic index.....(Ios2):	8.21
Threemonthly estival ombrothermic index.....(Ios3):	8.29
Fourmonthly estival ombrothermic index.....(Ios4):	9.90
Annual ombro-evaporation index.....(Ioe):	1.10
Annual positive temperature.....(Tp):	336
Annual negative temperature.....(Tn):	1756
Estival temperature.....(Ts):	320
Positive precipitation.....(Pp):	333

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

Latitudinal Belt...: High Subtemperate

Continentality.....: Continental - Low Hypercontinental

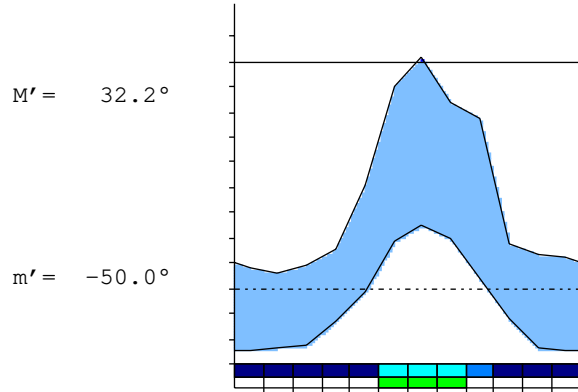
Bioclimate.....: BOREAL HYPERCONTINENTAL

Bioclimatic Belt...: LOW CRYOROBREAL UPPER HUMID

SJUREN-KJUEL (RUSSIA)

737 m

P= 454      65° 0'N      130° 41'E      11/11 y.  
 T= -11.8 °      Ic= 47.0      Tp= 336      Tn= 1756  
 m= -37.2 °      M= -31.7 °      Itc= -209      Io= 9.9



BOREAL HYPERCONTINENTAL  
 LOW CRYOROBOREAL UPPER HUMID

WATER INDEX CARD      SJUREN-KJUEL (RUSSIA)  
 Altitude: 737 m.      Latitude: 65° 0'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-34.5	0	8	8	94	0	0	0	0	*
Feb.	-30.6	0	6	6	99	0	0	0	0	*
Mar.	-23.3	0	9	1	100	0	0	9	4	*
Apr.	-13.6	0	15	0	100	0	0	15	10	*
May.	-1.1	0	40	0	100	0	0	40	25	*
Jun.	9.4	129	80	-49	51	129	0	0	12	-0.3
Jul.	12.5	150	111	-38	13	150	0	0	6	-0.2
Aug.	10.0	108	73	-13	0	86	22	0	3	-0.3
Sep.	1.7	25	68	43	43	25	0	0	2	1.6
Oct.	-11.9	0	17	17	59	0	0	0	1	*
Nov.	-27.2	0	14	14	73	0	0	0	0	*
Dec.	-33.3	0	12	12	85	0	0	0	0	*
Year	-11.8	412	454	*	*	390	22	64	64	*

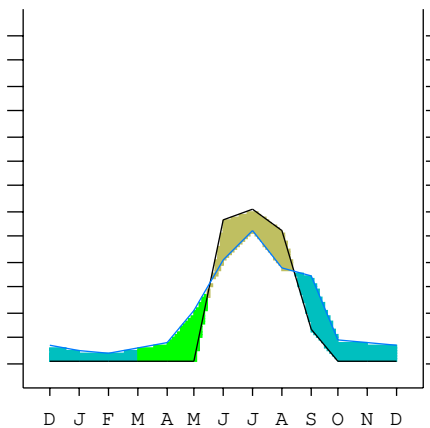
R = Reserve      VR = Variation of the reserve      RE = Real evapotranspiration  
 DR = Drainage      HC = Humidity coefficient      DF = Deficit      SP = Superavit

SJUREN-KJUEL (RUSSIA)

65°0'N 130°41'E      737 m 11/11 y.

T= -11.8      Ic= 47.0      BOREAL HYPERCONTINENTAL  
 m= -37.2      Tp= 336      LOW CRYOROBOREAL  
 M= -31.7      Tn= 1756      UPPER HUMID  
 M' = 32.2      Itc= -209  
 m' = -50.0      Io= 9.9  
 P= 454      mm ———  
 PE= 412      mm ———

Imbibing	14 Aug.
Saturation	2 Mar.
Reserve Use	14 May.
Deficit	11 Aug.



SJUREN-KJUEL (RUSSIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [C4a]  
 + Type .....: C. Continental  
 + Subtype .....: 4. Hypercontinental  
 + Variant .....: a. Low

Thermic types [B2.D8]  
 + Latitudinal zone ....: B. Temperate  
 + Latitudinal belt ....: 2. High Subtemperate  
 + Thermic type .....: D. Gelid  
 + Thermic subtype .....: 8. Ultramicrothermic

Bioclimatic types [D2.6b.7a]  
 + Macrobioclimate .....: D. BOREAL  
 + Bioclimate .....: 2. HYPERCONTINENTAL  
 + Bioclimatic variant .:  
 + Thermic type.....: 6. CRYOROBREAL  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 7. HUMID  
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification .....Bohc.Cbo.Hum.Hco

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 390  
 Coldest semester of the year.....(Psw): 64  
 Warmest four months period of the year.....(Pcm1): 333  
 Following warmest four months period.....(Pcm2): 51  
 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): 265  
 Positive precipitation warmest 2 months.....(Pps2): 185  
 Positive precipitation warmest 1 month.....(Pps1): 111  
 Positive precipitation coldest 3 months.....(Ppw): 0  
 Positive precipitation coldest 2 months.....(Ppw2): 0  
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	26	64	265	98

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 12.5  
 Average coldest month [T].....(Tmin): -34.5  
 Maximum temp. warmest month [M].....(Tmmax): 18.3  
 Minimum temp. coldest month [m].....(Tmmin): -37.2  
 Absolute Max.temp. warmest month [M'].....(Tamax): 32.2  
 Absolute Min.temp. coldest month [m'].....(Tamin): -50.0  
 First warmest contrasted month [M].....(Tcmax): -7.8 (4)  
 First coldest contrasted month [m].....(Tcmin): -19.4 (4)  
 Estival temperature.....(Ts): 320  
 Positive temperature dryest 3 months.....(Tpd): 0  
 Positive temperature dryest 2 months.....(Tpd2): 0  
 Positive temperature dryest 1 month.....(Tpd1): 0  
 Positive temperature warmest 3 months.....(Tps): 320  
 Positive temperature warmest 2 months.....(Tps2): 225  
 Positive temperature warmest 1 month.....(Tps1): 125  
 Positive temperature coldest 3 months.....(Tpw): 0  
 Positive temperature coldest 2 months.....(Tpw2): 0  
 Positive temperature coldest 1 month.....(Tpw1): 0

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.91  
 Mediterranean index of July.[PE/P].....(Im1): 1.34  
 Mediterranean index of July & August.....(Im2): 1.40  
 Mediterranean index of June, July & August....(Im3): 1.46

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	*	*	*	*	*	*	803	1113	734	678	*	*
Tp	*	*	*	*	*	*	95	125	100	17	*	*
Io (Iom)	*	*	*	*	*	*	8.50	8.90	7.34	40.6	*	*
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	*/*			*/*			2650 / 320			*/*		
Io (Iot)	*			*			8.294			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3328/336=9.90 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	*	*	803	1113	734	678	*	*
Tp [T*10]	*	*	*	*	*	*	95	125	100	17	*	*
Iom [Pp/Tp]	!!	!!	!!	!!	!!	!!	850	890	734	\$\$	!!	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			2650 / 320			* / *		
Iot [Pp/Tp]	**			**			829			**		
Avs E[Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 46.95  
 CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 67.67  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 68.63  
 + Continental (60<CI<80)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 2.07  
 + Continental (1.7<CI<2.3)  
 Rainfall Index of Lang (1925) [R=P/T] .....: -38.39  
 +  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....:-248.20  
 +  
 I of Emberger (1930) [Q=100\*P/(Tmmax<sup>2</sup>-Tmmin<sup>2</sup>)] .....: -43.28  
 +  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: -2.60  
 +  
 Aridity Index of UNEP [I=P/PE] .....: 1.10  
 + Humid (I>0.65)  
 Potencial Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 27.27  
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....: B. Cold and temperate cold  
 + Region .....: 11. Psicroaxeric (Axeric cold)  
 + Thermic type: 8. Ultramicrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.06	0.04	0.07	0.11	0.32	0.45	0.58	0.40	0.50	0.13	0.10	0.09
T-E ratio	0.00	0.00	0.00	0.00	0.00	4.25	5.63	4.50	0.75	0.00	0.00	0.00
Precipitation-effectiveness: 28.25						Temperature-efficiency .....: 15.13						
Moisture Index [MI=100*(P-PE)/PE] .....: 10.16 + C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE] .....: 5.34 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE] .....: 15.50 + Moderate surplus (10<HI<20)												
Potential Evapotranspiration PE .....: 412.31 + First microthermic (285<PE<427)												

