Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

SUKHANOVKA (RUSSIA) Altitude: 20 m.

Latitude: 51°21'N Longitude: 139°6'E
Temperature observation period.: 1968-1994 (27)
Rainfall observation period....: 1984-1994 (11)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	-22.78	-18.33	-27.22	0.00	-47.78	25.1	0.00
Feb.	-18.89	-13.33	-24.44	7.22	-47.22	13.7	0.00
Mar.	-10.83	-4.44	-17.22	12.22	-37.78	26.4	0.00
Apr.	-0.56	5.00	-6.11	23.89	-30.00	30.7	0.00
May.	7.22	13.33	1.11	31.11	-11.11	67.1	55.43
Jun.	14.45	20.56	8.33	33.89	-3.89	74.4	106.45
Jul.	18.89	24.44	13.33	36.11	2.22	80.3	136.78
Aug.	17.78	22.78	12.78	36.11	2.22	98.3	117.26
Sep.	12.22	17.22	7.22	31.11	-6.11	110.7	70.73
Oct.	3.06	7.78	-1.67	22.78	-25.00	63.5	17.26
Nov.	-9.45	-5.56	-13.33	12.78	-33.89	29.0	0.00
Dec.	-19.17	-15.56	-22.78	3.89	-42.22	40.6	0.00
Year	-0.67	4.49	-5.83	20.93	-23.38	660	503.91

BIOCLIMATIC INDICES AND DIAGNOSIS

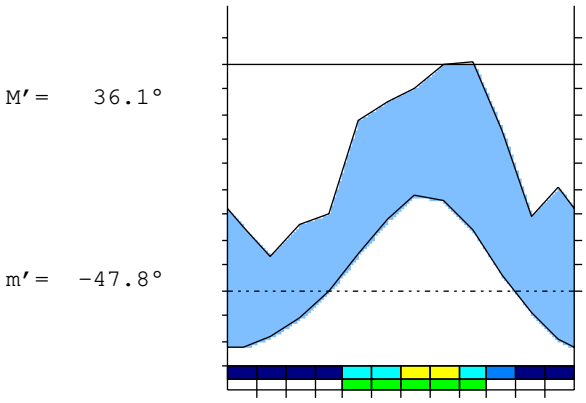
Thermicity index.....(It):	-462
Compensated thermicity index.....(Itc):	-0
Simple continentality index.....(Ic):	41.7
Diurnality index.....(Id):	12.8
Annual ombrothermic index.....(Io):	6.71
Monthly estival ombrothermic index.....(Ios1):	4.25
Bimonthly estival ombrothermic index.....(Ios2):	4.87
Threemonthly estival ombrothermic index.....(Ios3):	4.95
Fourmonthly estival ombrothermic index.....(Ios4):	5.49
Annual ombro-evaporation index.....(Ioe):	1.31
Annual positive temperature.....(Tp):	736
Annual negative temperature.....(Tn):	817
Estival temperature.....(Ts):	511
Positive precipitation.....(Pp):	494

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

Latitudinal Belt...: Low Subtemperate
Continentality.....: Continental - High Eucontinental
Bioclimate.....: BOREAL CONTINENTAL
Bioclimatic Belt...: LOW THERMOBOREAL LOW HUMID

SUKHANOVKA (RUSSIA) 20 m

P= 660 51° 21'N 139° 6'E 27/11 y.
T= -0.7 ° Ic= 41.7 Tp= 736 Tn= 817
m= -27.2 ° M= -18.3 ° Itc= -0 Io= 6.7



BOREAL CONTINENTAL
LOW THERMOBOREAL LOW HUMID

WATER INDEX CARD SUKHANOVKA (RUSSIA)
Altitude: 20 m. Latitude: 51° 21'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-22.8	0	25	0	100	0	0	25	25	*
Feb.	-18.9	0	14	0	100	0	0	14	19	*
Mar.	-10.8	0	26	0	100	0	0	26	23	*
Apr.	-0.6	0	31	0	100	0	0	31	27	*
May.	7.2	55	67	0	100	55	0	12	19	0.2
Jun.	14.4	106	74	-32	68	106	0	0	10	-0.3
Jul.	18.9	137	80	-56	11	137	0	0	5	-0.4
Aug.	17.8	117	98	-11	0	110	7	0	2	-0.1
Sep.	12.2	71	111	40	40	71	0	0	1	0.5
Oct.	3.1	17	64	46	86	17	0	0	1	2.6
Nov.	-9.4	0	29	14	100	0	0	15	8	*
Dec.	-19.2	0	41	0	100	0	0	41	24	*
Year	-0.7	504	660	*	*	496	7	163	163	*

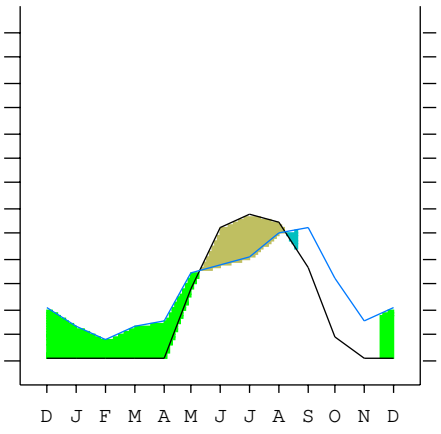
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

SUKHANOVKA (RUSSIA)

51°21'N 139°6'E 20 m 27/11 y.

T= -0.7 Ic= 41.7 BOREAL CONTINENTAL
m= -27.2 Tp= 736 LOW THERMOBOREAL
M= -18.3 Tn= 817 LOW HUMID
M'= 36.1 Itc= -0
m'= -47.8 Io= 6.7
P= 660 mm
PE= 504 mm

Imbibing	10 Aug.
Saturation	15 Nov.
Reserve Use	9 May.
Deficit	19 Aug.



SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [C3b]
- + Type .....: C. Continental
- + Subtype .....: 3. Eucontinental
- + Variant .....: b. High

Thermic types [B1.D8]
- + Latitudinal zone ....: B. Temperate
- + Latitudinal belt ....: 1. Low Subtemperate
- + Thermic type .....: D. Gelid
- + Thermic subtype .....: 8. Ultramicrothermic

Bioclimatic types [D3.2b.7b]
- + Macrobioclimate .....: D. BOREAL
- + Bioclimate .....: 3. CONTINENTAL
- + Bioclimatic variant .:
- + Thermic type.....: 2. THERMOBOREAL
- + Thermic subtype.....: b. LOW
- + Ombrothermic type ...: 7. HUMID
- + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....Boco.Tbo.Hum.Euc

SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 494
Coldest semester of the year.....(Psw): 166
Warmest four months period of the year.....(Pcm1): 364
Following warmest four months period.....(Pcm2): 158
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): 253
Positive precipitation warmest 2 months.....(Pps2): 179
Positive precipitation warmest 1 month.....(Pps1): 80
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	79	124	253	203

Seasonal rainfall rhythms: S > F > P > W

SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 18.9
Average coldest month [T].....(Tmin): -22.8
Maximum temp. warmest month [M].....(Tmmax): 24.4
Minimum temp. coldest month [m].....(Tmmin): -27.2
Absolute Max.temp. warmest month [M'].....(Tamax): 36.1
Absolute Min.temp. coldest month [m'].....(Tamin): -47.8
First warmest contrasted month [M].....(Tcmax): -4.4 (3)
First coldest contrasted month [m].....(Tcmin): -17.2 (3)
Estival temperature.....(Ts): 511
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): 511
Positive temperature warmest 2 months.....(Tps2): 367
Positive temperature warmest 1 month.....(Tps1): 189
Positive temperature coldest 3 months.....(Tpw): 0
Positive temperature coldest 2 months.....(Tpw2): 0
Positive temperature coldest 1 month.....(Tpw1): 0

SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

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

SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.76
Mediterranean index of July.[PE/P].....(Im1): 1.70
Mediterranean index of July & August.....(Im2): 1.42
Mediterranean index of June, July & August....(Im3): 1.42

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	*	*	*	*	*	671	744	803	983	1107	635	*
Tp	*	*	*	*	*	72	145	189	178	122	31	*
Io (Iom)	*	*	*	*	*	9.29	5.15	4.25	5.53	9.06	20.8	*
Seasons	Winter			Spring			Summer			Automn		
Pp(x10)/Tp	*/*			*/*			2530 / 511			*/*		
Io (Iot)	*			*			4.949			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 4943/736=6.71 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	*	671	744	803	983	1107	635	*
Tp [T*10]	*	*	*	*	*	72	145	189	178	122	31	*
Iom [Pp/Tp]	!!	!!	!!	!!	!!	929	515	425	553	906	$$	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Automn		
Pp / Tp	* / *			* / *			2530 / 511			* / *		
Iot [Pp/Tp]	**			**			495			**		
Avs E[Avm<200]	***			***			***			***		

SUKHANOVKA (RUSSIA)

Latitude: 51°21'N Longitude: 139°6'E Altitude: 20 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 41.67
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....: 70.31
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....: 66.72
  + Continental (60<CI<80)
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 2.30
  + Hypercontinental (2.3<CI<5)
Rainfall Index of Lang (1925) [R=P/T] .....:-982.33
  +
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 70.73
  + Perhumid (Ia>60)
I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)] .....:-459.42
  +
I of Dantin & Revenga (1940) [DR=100*T/P] .....: -0.10
  +
Aridity Index of UNEP [I=P/PE] .....: 1.31
  + Humid (I>0.65)
Potencial Erosion I of Fournier (1960) [K=Pi²/P].....: 18.57
  + Very low (K<60)

SUKHANOVKA (RUSSIA)

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BIOCLIMATIC INDICES II

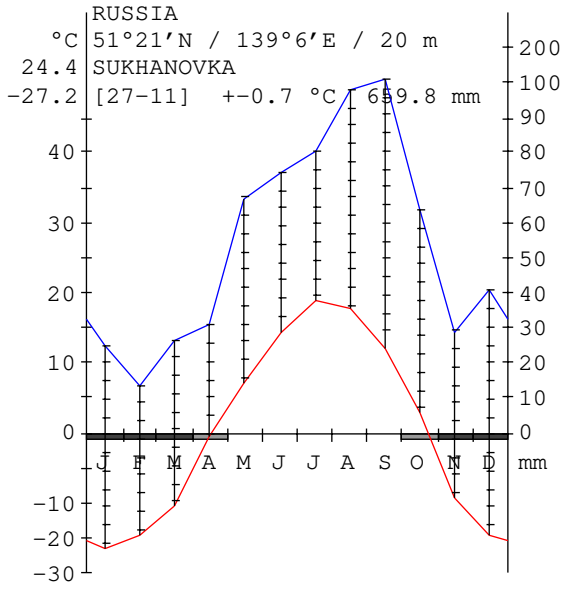
Bioclimatic classification of Gaussen & Bagnouls (1957)
  + Climate ....: B. Cold and temperate cold
  + Region .....: 11. Psicroaxeric (Axeric cold)
  + Thermic type: 8. Ultramicrothermic

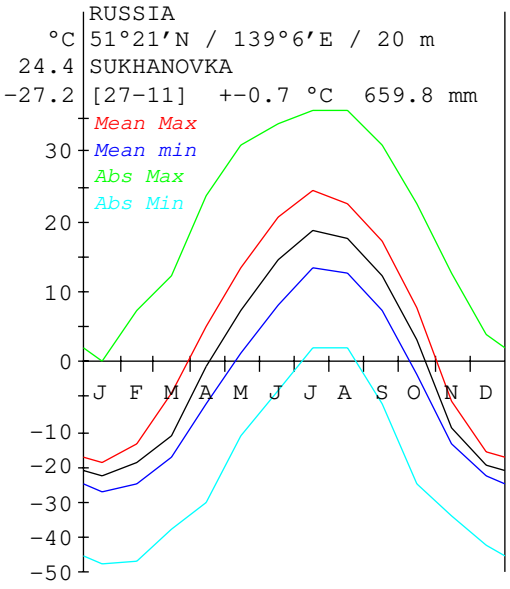
Thornthwaite (1948)

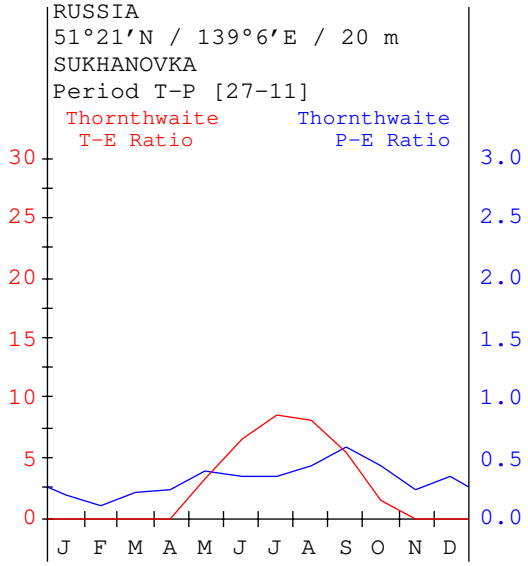
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.20	0.10	0.21	0.23	0.39	0.35	0.34	0.43	0.58	0.44	0.23	0.34
T-E ratio	0.00	0.00	0.00	0.00	3.25	6.50	8.50	8.00	5.50	1.38	0.00	0.00

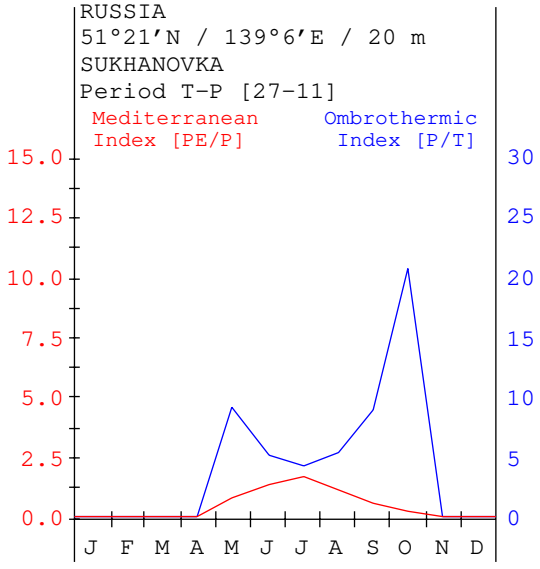
Precipitation-effectiveness: 38.33 Temperature-efficiency ....: 33.13

Moisture Index [MI=100*(P-PE)/PE] .....: 30.94
  + B1.Humid low-humid (20<MI<40)
Index of dryness [DI=100*d/PE] .....: 1.47
  + No deficit (0<DI<16.7)
Index of humidity [HI=100*s/PE] .....: 32.41
  + Strong surplus (20<HI)
Potential Evapotranspiration PE .....: 503.91
  + Second microthermic (427<PE<570)




RUSSIA
°C
51°21'N / 139°6'E / 20 m
24.4
SUKHANOVKA
-27.2
[27-11] +-0.7 °C 659.8 mm
Mean Max
Mean min
Abs Max
Abs Min
30
20
10
0
-10
-20
-30
-40
-50
J F M A M J J A S O N D


RUSSIA
51°21'N / 139°6'E / 20 m
SUKHANOVKA
Period T-P [27-11]
Thornthwaite T-E Ratio
Thornthwaite P-E Ratio
30
25
20
15
10
5
0
3.0
2.5
2.0
1.5
1.0
0.5
0.0
J F M A M J J A S O N D


RUSSIA
51°21'N / 139°6'E / 20 m
SUKHANOVKA
Period T-P [27-11]
Mediterranean Index [PE/P]
Ombrothermic Index [P/T]
15.0
12.5
10.0
7.5
5.0
2.5
0.0
30
25
20
15
10
5
0
J F M A M J J A S O N D