

# Phytosociological Research Center

www.globalbioclimatics.org

## Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

GODHAVN (GREENLAND -DNK-)

Altitude: 11 m.

Latitude: 69°14'N Longitude: 53°31'W

Temperature observation period.: 1950-1980 (31)

Rainfall observation period....: 1950-1980 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	-11.80	0.00	0.00	9.00	-33.20	12.0	0.00
Feb.	-13.90	0.00	0.00	8.80	-32.00	22.0	0.00
Mar.	-12.70	0.00	0.00	9.70	-33.80	15.0	0.00
Apr.	-7.30	0.00	0.00	10.80	-25.50	15.0	0.00
May.	0.00	0.00	0.00	18.30	-17.50	32.0	0.00
Jun.	5.10	0.00	0.00	17.90	-6.70	30.0	120.30
Jul.	8.00	0.00	0.00	17.30	-0.70	47.0	151.88
Aug.	7.20	0.00	0.00	16.00	-0.20	45.0	114.09
Sep.	3.20	0.00	0.00	14.60	-6.10	60.0	51.74
Oct.	-2.20	0.00	0.00	11.60	-12.10	53.0	0.00
Nov.	-5.50	0.00	0.00	7.60	-19.80	38.0	0.00
Dec.	-8.90	0.00	0.00	7.50	-26.70	22.0	0.00
Year	-3.23	0.00	0.00	12.43	-17.86	391	438.01

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-310
Compensated thermicity index.....(Itc):	-282
Simple continentality index.....(Ic):	21.9
Diurnality index.....(Id):	0.0
Annual ombrothermic index.....(Io):	7.74
Monthly estival ombrothermic index.....(Ios1):	5.88
Bimonthly estival ombrothermic index.....(Ios2):	6.05
Three monthly estival ombrothermic index.....(Ios3):	6.01
Four monthly estival ombrothermic index.....(Ios4):	7.59
Annual ombro-evaporation index.....(Ioe):	2.15
Annual positive temperature.....(Tp):	235
Annual negative temperature.....(Tn):	623
Estival temperature.....(Ts):	203
Positive precipitation.....(Pp):	182

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	5	0	0	0	7

Latitudinal Belt...: Low polar

Continentality.....: Continental - Low Subcontinental

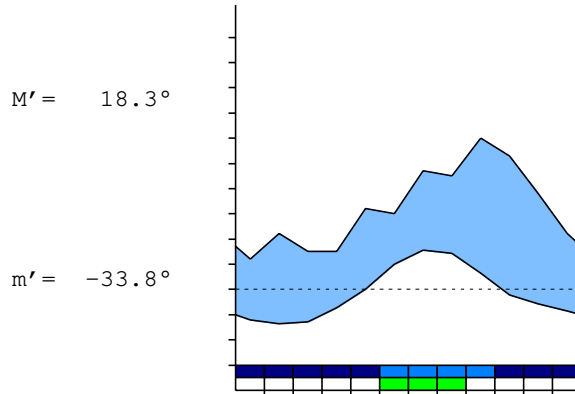
Bioclimate.....: POLAR CONTINENTAL

Bioclimatic Belt...: LOW MESOPOLAR LOW HUMID

GODHAVN (GREENLAND -DNK-)

11 m

P= 391      69° 14'N      53° 31'W      31/31 y.  
 T= -3.2°      Ic= 21.9      Tp= 235      Tn= 623  
 m= -13.9°      M= -13.9°      Itc= -282      Io= 7.7



POLAR CONTINENTAL  
 LOW MESOPOLAR LOW HUMID

WATER INDEX CARD  
 Altitude: 11 m.

GODHAVN (GREENLAND -DNK-)  
 Latitude: 69° 14'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-11.8	0	12	0	100	0	0	12	11	*
Feb.	-13.9	0	22	0	100	0	0	22	17	*
Mar.	-12.7	0	15	0	100	0	0	15	16	*
Apr.	-7.3	0	15	0	100	0	0	15	15	*
May.	0.0	0	32	0	100	0	0	32	24	*
Jun.	5.1	120	30	-90	10	120	0	0	12	-0.7
Jul.	8.0	152	47	-10	0	57	95	0	6	-0.6
Aug.	7.2	114	45	0	0	45	69	0	3	-0.6
Sep.	3.2	52	60	8	8	52	0	0	1	0.1
Oct.	-2.2	0	53	53	61	0	0	0	1	*
Nov.	-5.5	0	38	38	99	0	0	0	0	*
Dec.	-8.9	0	22	1	100	0	0	21	11	*
Year	-3.2	438	391	*	*	274	164	117	117	*

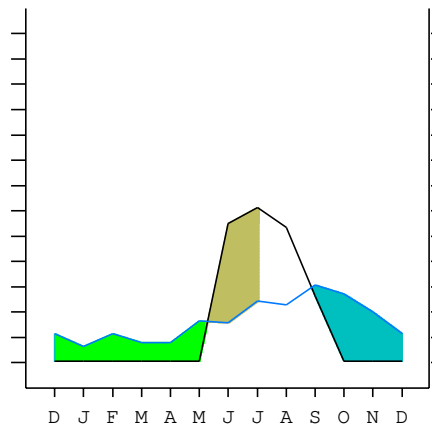
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

GODHAVN (GREENLAND -DNK-)

69°14'N    53°31'W    11 m 31/31 y.

T= -3.2      Ic= 21.9      POLAR CONTINENTAL  
 m= -13.9      Tp= 235      LOW MESOPOLAR  
 M= -13.9      Tn= 623      LOW HUMID  
 M' = 18.3      Itc= -282  
 m' = -33.8      Io= 7.7  
 P= 391      mm    ———  
 PE= 438      mm    ———

Imbibing	27 Aug.
Saturation	2 Dec.
Reserve Use	8 May.
Deficit	3 Jul.



GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

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

Thermic types [C1.D10]  
 + Latitudinal zone .....: C. Cold  
 + Latitudinal belt .....: 1. Low polar  
 + Thermic type .....: D. Gelid  
 + Thermic subtype .....: 10.Hipergelid

Bioclimatic types [E3.3b.7b]  
 + Macrobioclimate .....: E. POLAR  
 + Bioclimate .....: 3. CONTINENTAL  
 + Bioclimatic variant ..:  
 + Thermic type.....: 3. MESOPOLAR  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 7. HUMID  
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification .....: Poco.Spo.Hum

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 267  
 Coldest semester of the year.....(Psw): 124  
 Warmest four months period of the year.....(Pcm1): 182  
 Following warmest four months period.....(Pcm2): 125  
 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): 122  
 Positive precipitation warmest 2 months.....(Pps2): 92  
 Positive precipitation warmest 1 month.....(Pps1): 47  
 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	56	62	122	151

Seasonal rainfall rhythms: F > S > P > W

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 8.0  
 Average coldest month [T].....(Tmin): -13.9  
 Maximum temp. warmest month [M].....(Tmmax): 0.0  
 Minimum temp. coldest month [m].....(Tmmin): 0.0  
 Absolute Max.temp. warmest month [M'].....(Tamax): 18.3  
 Absolute Min.temp. coldest month [m'].....(Tamin): -33.8  
 First warmest contrasted month [M].....(Tcmax): 0.0 (0)  
 First coldest contrasted month [m].....(Tcmin): 0.0 (0)  
 Estival temperature.....(Ts): 203  
 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): 203  
 Positive temperature warmest 2 months.....(Tps2): 152  
 Positive temperature warmest 1 month.....(Tps1): 80  
 Positive temperature coldest 3 months.....(Tpw): 0  
 Positive temperature coldest 2 months.....(Tpw2): 0  
 Positive temperature coldest 1 month.....(Tpw1): 0

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 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				
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)	o	o	o	o	o					o	o	o
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
Agelid.....[m' > 0] (Pf)												
HiperAgelid..[all>0] (Pf)												

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.12  
 Mediterranean index of July.[PE/P].....(Im1): 3.23  
 Mediterranean index of July & August.....(Im2): 2.89  
 Mediterranean index of June, July & August....(Im3): 3.17

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	*	*	*	*	*	*	300	470	450	600	*	*
Tp	*	*	*	*	*	*	51	80	72	32	*	*
Io (Iom)	*	*	*	*	*	*	5.88	5.88	6.25	18.8	*	*
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	*/*			*/*			1220 / 203			*/*		
Io (Iot)	*			*			6.010			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 1820/235=7.74 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	*	*	300	470	450	600	*	*
Tp [T*10]	*	*	*	*	*	*	51	80	72	32	*	*
Iom [Pp/Tp]	!!	!!	!!	!!	!!	!!	588	588	625	!!	!!	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			1220 / 203			* / *		
Iot [Pp/Tp]	**			**			601			**		
Avs E[Avm<200]	***			***			***			***		

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 21.90  
 CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 19.42  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 23.90  
 + Oceanic (20<CI<40)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 0.91  
 + Oceanic (0.6<CI<1.1)  
 Rainfall Index of Lang (1925) [R=P/T] .....:-120.93  
 +  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 57.78  
 + Humid (60>Ia>30)  
 I of Emberger (1930) [Q=100\*P/(Tmax<sup>2</sup>-Tmin<sup>2</sup>)] .....: 0.00  
 + Arid (30>Q>0)  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: -0.83  
 +  
 Aridity Index of UNEP [I=P/PE] .....: 0.89  
 + Humid (I>0.65)  
 Potential Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 9.21  
 + Very low (K<60)

GODHAVN (GREENLAND -DNK-)

Latitude: 69°14'N Longitude: 53°31'W Altitude: 11 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....: B. Cold and temperate cold  
 + Region .....: 11. Psicroaxeric (Axeric cold)  
 + Thermic type: 10. Hipergelid

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.09	0.17	0.11	0.11	0.23	0.17	0.26	0.25	0.41	0.45	0.31	0.17
T-E ratio	0.00	0.00	0.00	0.00	0.00	2.29	3.60	3.24	1.44	0.00	0.00	0.00
Precipitation-effectiveness: 27.41						Temperature-efficiency .....: 10.57						
Moisture Index [MI=100*(P-PE)/PE] .....: -10.73 + C1.Subhumid dry (-33.3<MI<0) Index of dryness [DI=100*d/PE] .....: 37.49 + Strong deficit (33.3<DI) Index of humidity [HI=100*s/PE] .....: 26.76 + Strong surplus (20<HI) Potential Evapotranspiration PE .....: 438.01 + Second microthermic (427<PE<570)												

