

Phytosociological Research Center

www.globalbioclimatics.org

Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

DANMARKSHAVN (GREENLAND -DNK-)

Altitude: 2 m.

Latitude: 76°46'N Longitude: 19°0'W

Temperature observation period.: 1992-1994 (3)

Rainfall observation period....: 1992-1994 (3)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	-22.22	-18.33	-26.11	-3.33	-36.11	30.5	0.00
Feb.	-27.22	-23.33	-31.11	-16.11	-38.33	17.8	0.00
Mar.	-22.78	-18.33	-27.22	-1.67	-41.11	17.8	0.00
Apr.	-19.72	-14.44	-25.00	-3.33	-33.89	2.5	0.00
May.	-7.78	-3.89	-11.67	5.00	-22.78	5.1	0.00
Jun.	0.84	3.89	-2.22	11.67	-9.44	5.1	81.00
Jul.	4.72	8.33	1.11	17.22	-2.22	1.3	197.80
Aug.	2.78	6.11	-0.56	12.22	-5.56	15.2	130.87
Sep.	-3.34	-0.56	-6.11	10.00	-13.89	7.6	0.00
Oct.	-13.62	-10.56	-16.67	0.00	-23.89	7.6	0.00
Nov.	-19.45	-16.11	-22.78	-7.78	-32.78	25.4	0.00
Dec.	-20.84	-16.67	-25.00	-0.56	-34.44	17.8	0.00
Year	-12.39	-8.66	-16.11	1.94	-24.54	154	409.67

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-668
Compensated thermicity index.....(Itc):	-450
Simple continentality index.....(Ic):	31.9
Diurnality index.....(Id):	10.6
Annual ombrothermic index.....(Io):	2.59
Monthly estival ombrothermic index.....(Ios1):	0.28
Bimonthly estival ombrothermic index.....(Ios2):	2.20
Threemonthly estival ombrothermic index.....(Ios3):	2.59
Fourmonthly estival ombrothermic index.....(Ios4):	47.68
Annual ombro-evaporation index.....(Ioe):	0.37
Annual positive temperature.....(Tp):	83
Annual negative temperature.....(Tn):	1570
Estival temperature.....(Ts):	83
Positive precipitation.....(Pp):	22

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	2	0	0	1	9

Latitudinal Belt...: Low polar

Continentality.....: Continental - Low Eucontinental

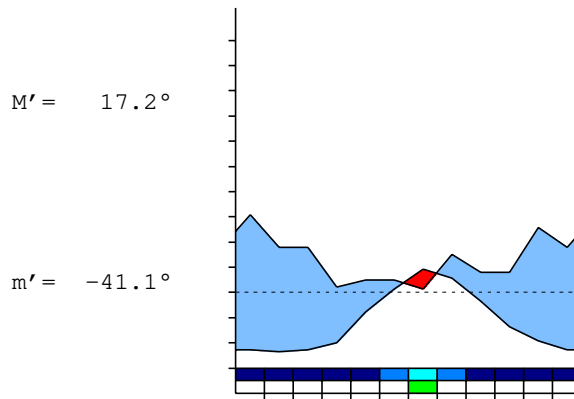
Bioclimate.....: POLAR XERIC

Bioclimatic Belt...: LOW SUPRAPOLAR LOW DRY

DANMARKSHAVN (GREENLAND -DNK-)

2 m

P= 154 76° 46'N 19° 0'W 3/3 y.
 T= -12.4° Ic= 31.9 Tp= 83 Tn= 1570
 m= -31.1° M= -23.3° Itc= -450 Io= 2.6



POLAR XERIC
 LOW SUPRAPOLAR LOW DRY

WATER INDEX CARD

DANMARKSHAVN (GREENLAND -DNK-)

Altitude: 2 m.

Latitude: 76° 46'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-22.2	0	31	31	89	0	0	0	0	*
Feb.	-27.2	0	18	11	100	0	0	7	3	*
Mar.	-22.8	0	18	0	100	0	0	18	11	*
Apr.	-19.7	0	3	0	100	0	0	3	7	*
May.	-7.8	0	5	0	100	0	0	5	6	*
Jun.	0.8	81	5	-76	24	81	0	0	3	-0.9
Jul.	4.7	198	1	-24	0	25	172	0	1	-0.9
Aug.	2.8	131	15	0	0	15	116	0	1	-0.8
Sep.	-3.3	0	8	8	8	0	0	0	0	*
Oct.	-13.6	0	8	8	15	0	0	0	0	*
Nov.	-19.5	0	25	25	41	0	0	0	0	*
Dec.	-20.8	0	18	18	58	0	0	0	0	*
Year	-12.4	410	154	*	*	122	288	32	32	*

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

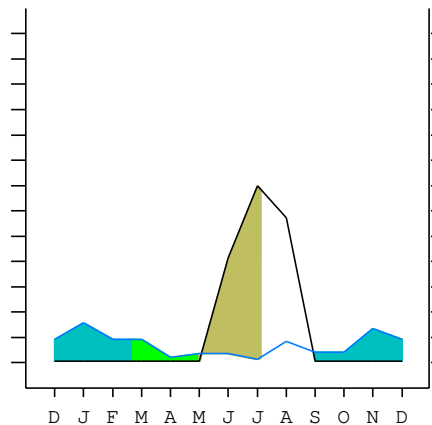
DANMARKSHAVN (GREENLAND -DNK-)

76°46'N 19°0'W

2 m 3/3 y.

T= -12.4 Ic= 31.9 POLAR XERIC
 m= -31.1 Tp= 83 LOW SUPRAPOLAR
 M= -23.3 Tn= 1570 LOW DRY
 M' = 17.2 Itc= -450
 m' = -41.1 Io= 2.6
 P= 154 mm ———
 PE= 410 mm ———

Imbibing	29 Aug.
Saturation	19 Feb.
Reserve Use	2 May.
Deficit	4 Jul.



DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C3a]
 + Type: C. Continental
 + Subtype: 3. Eucontinental
 + Variant: a. Low

Thermic types [C1.D8]
 + Latitudinal zone: C. Cold
 + Latitudinal belt: 1. Low polar
 + Thermic type: D. Gelid
 + Thermic subtype: 8. Ultramicrothermic

Bioclimatic types [E2.4b.5b]
 + Macrobioclimate: E. POLAR
 + Bioclimate: 2. XERIC
 + Bioclimatic variant .:
 + Thermic type.....: 4. SUPRAPOLAR
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: PooC.Apo.Dry

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 42
 Coldest semester of the year.....(Psw): 112
 Warmest four months period of the year.....(Pcm1): 29
 Following warmest four months period.....(Pcm2): 81
 Positive precipitation dryest 3 months.....(Ppd): 6
 Positive precipitation dryest 2 months.....(Ppd2): 6
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 22
 Positive precipitation warmest 2 months.....(Pps2): 17
 Positive precipitation warmest 1 month.....(Pps1): 1
 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	66	25	21	40

Seasonal rainfall rhythms: W > F > P > S

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 4.7
 Average coldest month [T].....(Tmin): -27.2
 Maximum temp. warmest month [M].....(Tmmax): 8.3
 Minimum temp. coldest month [m].....(Tmmin): -31.1
 Absolute Max.temp. warmest month [M'].....(Tamax): 17.2
 Absolute Min.temp. coldest month [m'].....(Tamin): -41.1
 First warmest contrasted month [M].....(Tcmax): -14.4 (4)
 First coldest contrasted month [m].....(Tcmin): -25.0 (4)
 Estival temperature.....(Ts): 83
 Positive temperature dryest 3 months.....(Tpd): 56
 Positive temperature dryest 2 months.....(Tpd2): 56
 Positive temperature dryest 1 month.....(Tpd1): 47
 Positive temperature warmest 3 months.....(Tps): 83
 Positive temperature warmest 2 months.....(Tps2): 75
 Positive temperature warmest 1 month.....(Tps1): 47
 Positive temperature coldest 3 months.....(Tpw): 0
 Positive temperature coldest 2 months.....(Tpw2): 0
 Positive temperature coldest 1 month.....(Tpw1): 0

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 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					
Ultragelid...[M' <=0] (Pf)	o	o	o	o						o	o	o
Hypergelid...[M <=0] (Pf)	o	o	o	o	o				o	o	o	o
Gelid.....[T <=0] (Pf)	o	o	o	o	o				o	o	o	o
Subgelid.....[m <=0] (Pf)	o	o	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)												

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 2.67
 Mediterranean index of July.[PE/P].....(Im1): 152.15
 Mediterranean index of July & August.....(Im2): 19.92
 Mediterranean index of June, July & August....(Im3): 18.97

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	*	*	*	*	*	*	51	13	152	*	*	*
Tp	*	*	*	*	*	*	8	47	28	*	*	*
Io (Iom)	*	*	*	*	*	*	6.07	0.28	5.47	*	*	*
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	*/*			*/*			216 / 83			*/*		
Io (Iot)	*			*			2.590			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 216/83=2.59 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	*	*	51	13	152	*	*	*
Tp [T*10]	*	*	*	*	*	*	8	47	28	*	*	*
Iom [Pp/Tp]	!!	!!	!!	!!	!!	!!	607	28	547	!!	!!	!!
Avm [200-Iom]	***	***	***	***	***	***	***	172	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			216 / 83			* / *		
Iot [Pp/Tp]	**			**			259			**		
Avs E[Avm<200]	***			***			***			***		
Lower hyperarid [1]												

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 31.94
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 35.38
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 40.38
 + Subcontinental (40<CI<60)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.20
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: -12.41
 +
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: -64.42
 +
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: -17.11
 +
 I of Dantin & Revenga (1940) [DR=100*T/P]: -8.06
 +
 Aridity Index of UNEP [I=P/PE]: 0.38
 + Semiarid (0.5>Im>0.2)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 6.05
 + Very low (K<60)

DANMARKSHAVN (GREENLAND -DNK-)

Latitude: 76°46'N Longitude: 19°0'W Altitude: 2 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: B. Cold and temperate cold
 + Region: 10. Psicroxeroteric (Submediterranean)
 + Thermic type: 8. Ultramicrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.24	0.13	0.13	0.02	0.03	0.03	0.01	0.09	0.05	0.05	0.20	0.13
T-E ratio	0.00	0.00	0.00	0.00	0.00	0.38	2.12	1.25	0.00	0.00	0.00	0.00
Precipitation-effectiveness: 11.26						Temperature-efficiency: 3.75						
Moisture Index [MI=100*(P-PE)/PE]: -62.48 + D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]: 70.30 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 7.81 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 409.67 + First microthermic (285<PE<427)												

