

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

S.Rivas-Martinez(+) & S.Rivas-Saenz

(Adapted to Synoptical Table 14/02/2020)

MAELIFELL (ICELAND)

Altitude: 95 m.

Latitude: 65°26'N Longitude: 19°19'W

Temperature observation period.: 1991-1994 (4)

Rainfall observation period....: 1991-1994 (4)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	-3.06	-0.56	-5.56	8.89	-17.22	27.9	0.00
Feb.	-1.67	1.11	-4.44	10.00	-15.00	30.5	0.00
Mar.	-1.94	1.11	-5.00	10.00	-15.00	48.3	0.00
Apr.	3.06	6.11	0.00	11.67	-8.89	40.6	38.59
May.	6.39	10.56	2.22	18.33	-8.89	22.9	83.55
Jun.	8.34	11.67	5.00	25.00	-2.78	27.9	110.56
Jul.	9.45	12.22	6.67	23.89	0.56	22.9	116.00
Aug.	10.28	13.33	7.22	23.89	-1.67	58.4	103.14
Sep.	8.33	11.11	5.56	20.56	-0.56	45.7	67.51
Oct.	2.78	5.56	0.00	15.00	-10.56	40.6	23.58
Nov.	-0.83	1.11	-2.78	11.11	-13.89	35.6	0.00
Dec.	-0.55	1.67	-2.78	11.11	-13.89	45.7	0.00
Year	3.38	6.25	0.51	15.79	-8.98	447	542.93

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-27
Compensated thermicity index.....(Itc):	-27
Simple continentality index.....(Ic):	13.3
Diurnality index.....(Id):	8.3
Annual ombrothermic index.....(Io):	5.33
Monthly estival ombrothermic index.....(Ios1):	5.68
Bimonthly estival ombrothermic index.....(Ios2):	4.12
Threemonthly estival ombrothermic index.....(Ios3):	3.89
Fourmonthly estival ombrothermic index.....(Ios4):	3.83
Annual ombro-evaporation index.....(Ioe):	0.82
Annual positive temperature.....(Tp):	486
Annual negative temperature.....(Tn):	81
Estival temperature.....(Ts):	281
Positive precipitation.....(Pp):	259

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	4	3	0	0	5

Latitudinal Belt...: High Subtemperate

Continentality.....: Oceanic - Low Semihyperoceanic

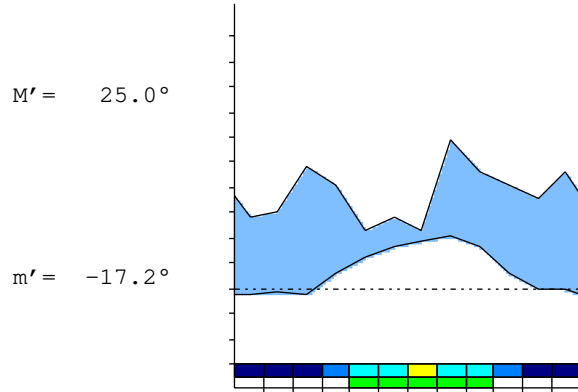
Bioclimate.....: BOREAL OCEANIC

Bioclimatic Belt...: UPPER SUPRABOREAL UPPER SUBHUMID

MAELIFELL (ICELAND)

95 m

P= 447      65° 26'N      19° 19'W      4/4 y.  
 T= 3.4 °      Ic= 13.3      Tp= 486      Tn= 81  
 m= -5.6 °      M= -0.6 °      Itc= -27      Io= 5.3



BOREAL OCEANIC  
 UPPER SUPRABOREAL UPPER SUBHUMID

WATER INDEX CARD      MAELIFELL (ICELAND)  
 Altitude: 95 m.      Latitude: 65° 26'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-3.1	0	28	2	100	0	0	26	13	*
Feb.	-1.7	0	31	0	100	0	0	31	22	*
Mar.	-1.9	0	48	0	100	0	0	48	35	*
Apr.	3.1	39	41	0	100	39	0	2	19	0.0
May.	6.4	84	23	-61	39	84	0	0	9	-0.7
Jun.	8.3	111	28	-39	0	67	43	0	5	-0.7
Jul.	9.4	116	23	0	0	23	93	0	2	-0.8
Aug.	10.3	103	58	0	0	58	45	0	1	-0.4
Sep.	8.3	68	46	0	0	46	22	0	1	-0.3
Oct.	2.8	24	41	17	17	24	0	0	0	0.7
Nov.	-0.8	0	36	36	53	0	0	0	0	*
Dec.	-0.6	0	46	46	98	0	0	0	0	*
Year	3.4	543	447	*	*	340	203	107	107	*

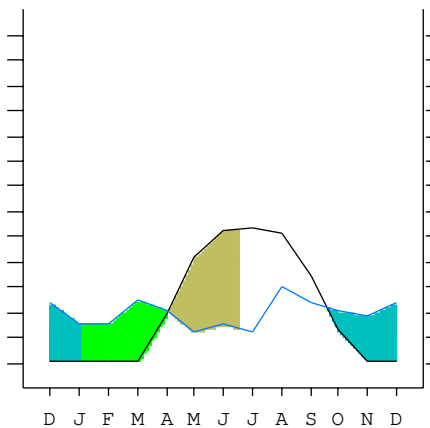
R = Reserve      VR = Variation of the reserve      RE = Real evapotranspiration  
 DR = Drainage      HC = Humidity coefficient      DF = Deficit      SP = Superavit

MAELIFELL (ICELAND)

65°26'N      19°19'W      95 m      4/4 y.

T= 3.4      Ic= 13.3      BOREAL OCEANIC  
 m= -5.6      Tp= 486      UPPER SUPRABOREAL  
 M= -0.6      Tn= 81      UPPER SUBHUMID  
 M' = 25.0      Itc= -27  
 m' = -17.2      Io= 5.3  
 P= 447      mm ———  
 PE= 543      mm ———

Imbibing	17 Sep.
Saturation	2 Jan.
Reserve Use	1 Apr.
Deficit	15 Jun.



MAELIFELL (ICELAND)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1b]  
 + Type .....: B. Oceanic  
 + Subtype .....: 1. Semihyperoceanic  
 + Variant .....: b. Low  
 Thermic types [B2.C6]  
 + Latitudinal zone ....: B. Temperate  
 + Latitudinal belt ....: 2. High Subtemperate  
 + Thermic type .....: C. Cold  
 + Thermic subtype .....: 6. Cool  
 Bioclimatic types [D5.4a.6a]  
 + Macrobioclimate .....: D. BOREAL  
 + Bioclimate .....: 5. OCEANIC  
 + Bioclimatic variant .:  
 + Thermic type.....: 4. SUPRABOREAL  
 + Thermic subtype.....: a. UPPER  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : a. UPPER  
 Bioclimatic Classification .....Booc.Sbo.Shu.Seo

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 218  
 Coldest semester of the year.....(Psw): 229  
 Warmest four months period of the year.....(Pcm1): 155  
 Following warmest four months period.....(Pcm2): 150  
 Positive precipitation dryest 3 months.....(Ppd): 74  
 Positive precipitation dryest 2 months.....(Ppd2): 51  
 Positive precipitation dryest 1 month.....(Ppd1): 23  
 Positive precipitation warmest 3 months.....(Pps): 109  
 Positive precipitation warmest 2 months.....(Pps2): 81  
 Positive precipitation warmest 1 month.....(Pps1): 58  
 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	104	111	109	121

Seasonal rainfall rhythms: F > P > S > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 10.3  
 Average coldest month [T].....(Tmin): -3.1  
 Maximum temp. warmest month [M].....(Tmax): 13.3  
 Minimum temp. coldest month [m].....(Tmin): -5.6  
 Absolute Max.temp. warmest month [M'].....(Tamax): 25.0  
 Absolute Min.temp. coldest month [m'].....(Tamin): -17.2  
 First warmest contrasted month [M].....(Tcmax): 10.6 (5)  
 First coldest contrasted month [m].....(Tcmin): 2.2 (5)  
 Estival temperature.....(Ts): 281  
 Positive temperature dryest 3 months.....(Tpd): 242  
 Positive temperature dryest 2 months.....(Tpd2): 147  
 Positive temperature dryest 1 month.....(Tpd1): 64  
 Positive temperature warmest 3 months.....(Tps): 281  
 Positive temperature warmest 2 months.....(Tps2): 197  
 Positive temperature warmest 1 month.....(Tps1): 103  
 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	o	o			
Ultragelid... [M' <=0] (Pf)												
Hypergelid... [M <=0] (Pf)	o											
Gelid... [T <=0] (Pf)	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	o
Agelid... [m' > 0] (Pf)							o					
HiperAgelid... [all >0] (Pf)							o					

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OMBROTHERMIC PARAMETERS

Annual aridity index. [PE/P]..... (Iar): 1.21  
 Mediterranean index of July. [PE/P]..... (Im1): 5.07  
 Mediterranean index of July & August..... (Im2): 2.70  
 Mediterranean index of June, July & August.... (Im3): 3.02

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp (x10)	*	*	*	*	406	229	279	229	584	457	406	*
Tp	*	*	*	*	31	64	83	95	103	83	28	*
Io (Iom)	*	*	*	*	13.3	3.58	3.35	2.42	5.68	5.49	14.6	*
Seasons	Winter			Spring			Summer			Autumn		
Pp (x10) / Tp	* / *			* / *			1092 / 281			* / *		
Io (Iot)	*			*			3.890			*		
Semesters	December-May						June-November					
Pp (x10) / Tp	* / *						* / *					
Io (Iosm)	*						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 2590/486=5.33 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	406	229	279	229	584	457	406	*
Tp [T*10]	*	*	*	*	31	64	83	95	103	83	28	*
Iom [Pp/Tp]	!!	!!	!!	!!	\$\$	358	335	242	568	549	\$\$	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			1092 / 281			* / *		
Iot [Pp/Tp]	**			**			389			**		
Avs E [Avm < 200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 13.34  
 CI of Gorezinski (1920) [1.7\*Sp/sin(Lat)-20.4] .....: 4.54  
 CI of Conrad (1946) [1.7\*Sp/sin(Lat+10)-14] .....: 9.43  
 + Hyperoceanic (-20<CI<20)  
 CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 0.58  
 + Hyperoceanic (0<CI<0.6)  
 Rainfall Index of Lang (1925) [R=P/T] .....: 132.18  
 + Temperate humid (160>R>100)  
 Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 33.40  
 + Humid (60>Ia>30)  
 I of Emberger (1930) [Q=100\*P/(Tmmax<sup>2</sup>-Tmmin<sup>2</sup>)] .....: 304.55  
 + Humid (Q>90)  
 I of Dantin & Revenga (1940) [DR=100\*T/P] .....: 0.76  
 + Humid (2>DR>0)  
 Aridity Index of UNEP [I=P/PE] .....: 0.82  
 + Humid (I>0.65)  
 Potencial Erosion I of Fournier (1960) [K=Pi<sup>2</sup>/P].....: 7.63  
 + 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: 6. Microthermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.22	0.24	0.41	0.27	0.12	0.14	0.11	0.30	0.25	0.27	0.27	0.36
T-E ratio	0.00	0.00	0.00	1.38	2.88	3.75	4.25	4.63	3.75	1.25	0.00	0.00
Precipitation-effectiveness: 29.61						Temperature-efficiency .....: 21.88						
Moisture Index [MI=100*(P-PE)/PE] .....: -17.67 + C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE] .....: 37.37 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE] .....: 19.71 + Moderate surplus (10<HI<20)												
Potential Evapotranspiration PE .....: 542.93 + Second microthermic (427<PE<570)												

