

Supplement

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Weather in Surtsey 2020-2024

*Surtsey Research 16, 9-17***Monthly values for Surtsey 2020–2024**

Monthly values of all variables described in the text for Surtsey for the five-year period 2020–2024. Table A1 contains monthly values of temperature, temperature related variable and relative humidity. Table A2 contains the values for mean sea level pressure and wind speed. Table A3 values for precipitation and Table A4 for radiation and soil temperature. Missing values are marked with --.

Table S1. Monthly values for Surtsey 2020–2024: temperature and relative humidity.

	Mean temperature (°C)	Maximum temperature (°C)	Minimum temperature (°C)	No. days minimum temperature < 0°C	No. days maximum temperature < 0°C	Relative humidity (%)
Jan 2020	2.9	9.0	-4.9	10	0	79
Feb 2020	2.8	9.5	-2.5	11	1	80
Mar 2020	2.9	7.7	-3.6	13	0	75
Apr 2020	5.1	9.5	-3.9	6	0	82
May 2020	7.2	13.5	2.1	0	0	81
Jun 2020	9.7	16.4	4.9	0	0	85
Jul 2020	10.7	16.7	7.4	0	0	83
Aug 2020	10.9	15.1	8.0	0	0	91
Sep 2020	8.7	12.8	2.9	0	0	84
Oct 2020	7.0	9.9	3.1	0	0	84
Nov 2020	4.7	10.4	-3.5	2	0	82
Dec 2020	3.5	9.2	-4.1	12	2	82
Jan 2021	2.5	8.0	-5.8	13	2	78
Feb 2021	4.8	8.8	0.4	0	0	85
Mar 2021	4.0	8.1	-5.2	7	0	83
Apr 2021	4.3	10.3	-7.2	7	2	82
May 2021	5.7	10.2	0.4	0	0	77
Jun 2021	8.4	13.5	4.6	0	0	87
Jul 2021	11.1	17.7	8.1	0	0	93
Aug 2021	12.2	16.8	9.6	0	0	94
Sep 2021	9.4	13.5	2.3	0	0	87
Oct 2021	7.0	11.4	0.5	0	0	87
Nov 2021	4.6	10.0	-1.4	5	0	84
Dec 2021	4.3	9.0	-1.4	5	0	85
Jan 2022	3.5	8.4	-4.5	12	2	82
Feb 2022	1.4	8.1	-3.7	20	1	82
Mar 2022	4.6	8.6	-1.9	4	0	84
Apr 2022	6.0	11.0	-2.2	3	0	85

May 2022	7.8	14.2	1.1	0	0	84
Jun 2022	9.8	16.0	6.4	0	0	85
Jul 2022	10.8	15.3	7.8	0	0	88
Aug 2022	10.8	15.8	7.5	0	0	85
Sep 2022	10.3	15.1	5.8	0	0	85
Oct 2022	6.8	11.1	2.7	0	0	83
Nov 2022	7.1	9.7	2.0	0	0	85
Dec 2022	0.7	8.5	-7.5	22	4	78
Jan 2023	2.4	9.0	-4.6	11	2	78
Feb 2023	4.4	10.2	-4.8	6	0	83
Mar 2023	0.8	8.4	-7.9	18	7	71
Apr 2023	6.3	11.0	1.9	0	0	85
May 2023	7.4	10.3	0.9	0	0	87
Jun 2023	9.5	13.2	4.8	0	0	90
Jul 2023	11.7	18.6	6.8	0	0	81
Aug 2023	12.1	17.1	8.1	0	0	86
Sep 2023	9.9	13.4	6.1	0	0	83
Oct 2023	7.2	10.7	0.5	0	0	83
Nov 2023	5.8	9.5	0.0	0	0	82
Dec 2023	3.0	8.8	-6.6	7	1	81
Jan 2024	3.0	8.9	-7.0	13	2	82
Feb 2024	2.4	8.2	-6.6	11	1	80
Mar 2024	4.1	9.0	-3.0	8	1	79
Apr 2024	4.7	10.8	-1.4	5	0	79
May 2024	7.6	11.6	4.0	0	0	84
Jun 2024	8.9	14.6	3.1	0	0	84
Jul 2024	10.9	15.7	8.4	0	0	91
Aug 2024	10.4	14.0	6.5	0	0	86
Sep 2024	8.0	12.0	3.2	0	0	84
Oct 2024	5.8	9.7	-0.5	1	0	82
Nov 2024	3.8	11.5	-4.5	13	3	81
Dec 2024	2.5	9.4	-5.5	16	2	83

Table S2. Monthly values for Surtsey 2020–2024: mean sea level pressure and wind Missing values are marked as --.

	Mean sea level pressure (hPa)	Maximum sea level pressure (hPa)	Minimum sea level pressure (hPa)	Mean wind speed (m/s)	Maximum wind speed (m/s)	Maximum wind gust (m/s)	No. days with wind speed > 20 m/s
Jan 2020	985.1	1022.5	944.2	11.1	24.9	34.7	9
Feb 2020	980.9	1011.9	932.3	8.8	34.7	44.5	5
Mar 2020	1000.9	1050.4	967.0	9.6	25.4	33.2	6
Apr 2020	1012.6	1031.8	958.9	7.6	28.6	40.7	3
May 2020	1015.0	1032.1	992.1	7.4	20.1	26.2	1
Jun 2020	1013.4	1032.9	995.1	5.6	19.7	25.5	0
Jul 2020	1008.6	1018.8	981.8	5.4	15.8	26.0	0
Aug 2020	1007.5	1021.6	977.6	5.8	13.8	19.0	0
Sep 2020	1001.7	1025.6	976.6	7.2	20.7	27.4	1
Oct 2020	1004.4	1038.2	971.2	8.0	26.4	34.6	5
Nov 2020	998.0	1023.9	969.5	8.6	24.5	33.3	4
Dec 2020	999.2	1028.6	965.6	10.4	23.6	33.0	7
Jan 2021	1010.9	1031.3	993.0	10.2	22.1	30.2	6

Feb 2021	1000.8	1026.1	966.5	11.2	26.0	33.7	3
Mar 2021	1004.8	1038.1	963.4	7.5	31.1	40.6	1
Apr 2021	1021.4	1038.8	990.2	6.9	20.2	27.5	1
May 2021	1017.0	1025.4	1000.7	6.1	20.8	27.3	1
Jun 2021	1008.5	1029.6	978.7	6.4	22.8	28.5	1
Jul 2021	1012.2	1023.0	995.8	5.0	14.0	20.0	0
Aug 2021	1014.0	1035.3	1002.5	5.6	16.0	20.6	0
Sep 2021	1002.7	1034.8	964.0	7.4	32.1	42.0	2
Oct 2021	999.1	1023.8	965.6	9.3	27.4	37.0	5
Nov 2021	1004.7	1037.0	969.1	9.5	26.3	34.3	4
Dec 2021	1001.0	1034.9	964.6	9.3	22.6	30.2	3
Jan 2022	1001.7	1033.0	963.1	11.2	26.8	39.2	13
Feb 2022	987.9	1015.1	948.0	10.8	33.5	44.7	11
Mar 2022	1004.1	1026.3	964.9	9.4	21.2	29.9	3
Apr 2022	1015.9	1033.2	994.2	7.6	20.4	26.6	1
May 2022	1006.0	1032.1	987.9	6.6	19.3	25.0	0
Jun 2022	1007.2	1022.2	991.2	6.3	20.4	25.8	1
Jul 2022	1009.7	1022.4	989.3	5.8	16.7	22.2	0
Aug 2022	1007.8	1024.4	985.2	6.2	20.0	26.0	0
Sep 2022	1011.2	1028.6	967.5	5.6	23.6	32.7	1
Oct 2022	999.0	1031.9	964.0	7.8	22.9	31.9	3
Nov 2022	990.1	1010.3	968.4	9.8	24.8	32.7	4
Dec 2022	1014.4	1044.7	981.2	7.3	21.4	28.8	2
Jan 2023	998.1	1033.4	963.8	9.2	24.3	32.1	2
Feb 2023	1002.4	1040.4	962.5	10.1	27.0	35.8	6
Mar 2023	1011.1	1040.9	978.3	9.0	30.7	39.3	5
Apr 2023	1012.3	1032.8	988.9	7.2	19.2	26.8	0
May 2023	1011.3	1033.3	985.1	9.1	20.5	30.3	2
Jun 2023	1013.0	1033.2	988.4	5.0	16.8	21.3	0
Jul 2023	1010.3	1018.1	995.5	5.5	17.8	22.9	0
Aug 2023	1012.3	1021.2	997.7	5.7	19.5	24.9	0
Sep 2023	1002.1	1019.9	983.7	7.8	23.5	31.2	1
Oct 2023	1004.6	1027.7	982.5	9.9	21.7	30.7	3
Nov 2023	1006.4	1031.0	988.2	9.4	23.9	32.0	6
Dec 2023	1002.5	1025.2	957.7	9.4	23.1	32.9	5
Jan 2024	1000.7	1037.2	963.5	8.9	26.8	34.4	5
Feb 2024	994.7	1013.7	956.3	8.5	22.0	33.9	3
Mar 2024	1003.8	1022.1	959.3	9.2	19.8	25.9	0
Apr 2024	1010.7	1033.6	983.0	7.0	21.9	27.4	3
May 2024	1011.1	1022.5	998.0	6.3	23.2	30.3	1
Jun 2024	1008.7	1023.8	987.8	7.0	20.8	36.1	1
Jul 2024	--	--	--	5.8	14.2	18.5	0
Aug 2024	--	--	--	7.0	19.1	27.8	0
Sep 2024	--	--	--	6.9	25.1	32.2	1
Oct 2024	--	--	--	7.4	20.3	27.3	1
Nov 2024	--	--	--	10.1	23.2	30.8	3
Dec 2024	--	--	--	9.4	22.9	33.0	4

Table S3. Monthly values for Surtsey 2020–2024: precipitation. Missing values are marked as --.

	Maximum hourly precipitation (mm/klst)	Maximum daily precipitation (mm/day)	Monthly precipitation (mm)	No. days with precipitation
Jan 2020	--	--	--	--
Feb 2020	--	--	--	--
Mar 2020	--	--	--	--
Apr 2020	--	--	--	--
May 2020	--	--	--	--
Jun 2020	--	--	--	--
Jul 2020	8.5	44.9	--	--
Aug 2020	7.8	27.0	119.4	19
Sep 2020	3.9	17.9	101.4	23
Oct 2020	4.3	27.4	72.7	16
Nov 2020	4.1	19.2	108.1	20
Dec 2020	4.3	21.7	58.6	13
Jan 2021	2.4	11.4	44.9	13
Feb 2021	3.6	19.5	98.2	24
Mar 2021	4.1	20.5	69.2	20
Apr 2021	2.8	19.8	59.9	15
May 2021	3.7	12.7	--	--
Jun 2021	--	--	--	--
Jul 2021	2.1	7.0	--	--
Aug 2021	3.2	10.4	36.6	15
Sep 2021	5.7	25.6	--	--
Oct 2021	--	--	--	--
Nov 2021	--	--	--	--
Dec 2021	--	--	--	--
Jan 2022	--	--	--	--
Feb 2022	--	--	--	--
Mar 2022	--	--	--	--
Apr 2022	--	--	--	--
May 2022	--	--	--	--
Jun 2022	--	--	--	--
Jul 2022	--	--	--	--
Aug 2022	--	--	--	--
Sep 2022	--	--	--	--
Oct 2022	--	--	--	--
Nov 2022	--	--	--	--
Dec 2022	--	--	--	--
Jan 2023	--	--	--	--
Feb 2023	--	--	--	--
Mar 2023	--	--	--	--
Apr 2023	--	--	--	--
May 2023	--	--	--	--
Jun 2023	--	--	--	--
Jul 2023	--	--	--	--
Aug 2023	5.7	34.2	--	--
Sep 2023	5.1	24.0	111.8	22
Oct 2023	4.0	37.8	141.3	--

Nov 2023	3.3	17.6	73.5	22
Dec 2023	4.5	19.3	93.1	20
Jan 2024	3.5	15.4	93.4	23
Feb 2024	3.2	21.6	69.7	--
Mar 2024	3.5	19.6	84.1	19
Apr 2024	4.0	15.9	57.2	13
May 2024	3.1	18.8	67.7	20
Jun 2024	5.2	15.2	63.0	12
Jul 2024	2.7	9.8	--	--
Aug 2024	7.2	33.1	110.1	16
Sep 2024	4.8	20.5	72.3	--
Oct 2024	7.9	30.1	85.9	21
Nov 2024	6.3	25.6	99.8	18
Dec 2024	4.5	16.7	111.3	26

Table S4. Monthly values for Surtsey 2020–2024: radiation and soil temperature. Missing values are marked as --.

	Mean global radiation (W/m ²)	Mean soil temperature 5 cm-gras (°C)	Mean soil temperature 15 cm-gras (°C)	Mean soil temperature 5 cm-sand (°C)	Mean soil temperature 15 cm-sand (°C)
Jan 2020	7	1.5	1.6	0.9	1.7
Feb 2020	25	1.2	1.3	1.0	1.6
Mar 2020	73	1.6	1.6	1.7	1.7
Apr 2020	129	5.7	5.4	6.7	5.8
May 2020	203	10.2	9.8	11.0	9.9
Jun 2020	217	13.3	12.8	14.6	13.2
Jul 2020	231	15.2	14.6	16.3	15.3
Aug 2020	139	13.4	13.1	14.0	13.6
Sep 2020	93	9.5	9.4	9.4	9.9
Oct 2020	45	6.2	6.2	6.4	7.0
Nov 2020	11	3.3	3.4	2.9	4.0
Dec 2020	4	2.2	2.2	1.7	2.7
Jan 2021	7	0.6	0.6	0.3	1.2
Feb 2021	28	2.8	2.7	3.0	2.9
Mar 2021	75	3.9	3.9	3.9	3.9
Apr 2021	128	5.1	4.8	5.7	5.1
May 2021	207	9.1	8.7	10.6	9.4
Jun 2021	199	11.4	10.9	12.6	11.4
Jul 2021	149	14.0	13.5	14.6	13.8
Aug 2021	119	14.7	14.5	15.5	14.9
Sep 2021	76	10.3	10.4	10.2	10.8
Oct 2021	37	6.3	6.4	6.7	7.3
Nov 2021	10	3.5	3.6	3.3	4.2
Dec 2021	3	2.5	2.8	2.5	3.2
Jan 2022	6	2.2	2.3	1.7	2.4
Feb 2022	24	0.2	0.3	-0.3	0.5
Mar 2022	55	3.4	3.4	3.7	3.3
Apr 2022	134	6.8	6.7	8.4	7.3
May 2022	206	10.6	10.3	12.4	11.1
Jun 2022	203	12.7	12.4	14.0	13.0

Jul 2022	183	13.7	13.4	14.5	13.9
Aug 2022	160	13.0	12.8	14.0	13.6
Sep 2022	100	11.3	11.4	12.5	12.2
Oct 2022	46	6.3	6.4	6.3	7.2
Nov 2022	11	5.5	5.7	5.3	6.0
Dec 2022	4	1.2	1.6	-1.0	1.2
Jan 2023	7	0.0	0.1	-0.8	-0.5
Feb 2023	25	2.4	2.4	2.5	2.4
Mar 2023	90	1.1	1.3	1.3	2.1
Apr 2023	127	6.8	6.6	7.7	6.7
May 2023	142	8.2	7.9	8.8	8.0
Jun 2023	163	12.2	11.8	13.5	12.4
Jul 2023	241	16.3	15.6	18.5	16.8
Aug 2023	153	14.8	14.5	16.3	15.5
Sep 2023	94	10.3	10.2	10.8	11.1
Oct 2023	38	6.7	6.8	6.7	7.4
Nov 2023	12	4.6	4.8	4.3	5.3
Dec 2023	3	1.8	2.0	1.0	2.4
Jan 2024	7	1.5	1.6	1.1	1.9
Feb 2024	32	0.7	0.7	0.4	1.0
Mar 2024	83	3.2	3.2	3.7	3.3
Apr 2024	--	5.6	5.3	7.3	6.1
May 2024	--	10.1	9.6	11.5	10.4
Jun 2024	--	12.2	11.6	13.8	12.7
Jul 2024	--	14.0	13.6	15.3	14.5
Aug 2024	--	12.3	12.1	13.7	13.1
Sep 2024	--	9.1	9.1	9.6	9.8
Oct 2024	--	5.4	5.5	5.2	6.1
Nov 2024	--	3.6	3.8	2.5	4.0
Dec 2024	--	0.7	0.8	0.4	1.3
