Armenia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 35 stations in individual CSV files.

Users are asked to note that for most monthly normals, the Member provided values to six or more decimal places. NCEI rounded these to a single decimal place for publication.

The list of all CSV files is provided below.

Excel Files	CSV Files
N/A	Amasia_37682.csv Amberd_37782.csv AnanunPass_37878.csv Aparan_37699.csv AragatsHM_37781.csv Ararat_37874.csv Armavir_37787.csv Artashat_37871.csv Ashtarak_37785.csv Bagratashen_37626.csv Dilijan_37706.csv Fantan_37791.csv Gavar_37801.csv Goris_37953.csv Gyumri_37686.csv Hrazdan_37792.csv Ijevan_37711.csv Jermuk_37883.csv Martuni_37808.csv Masrik_37815.csv Meghri_37958.csv Odzun_37627.csv PushlkiniPass_37694.csv SevanLake_37717.csv Shorja_37802.csv Sisian_37897.csv Stepanavan_37693.csv Talin_37772.csv Tashir_37618.csv Tsaghkahovit_37690.csv Urtsadzor_37872.csv Vanadzor_37704.csv VorortaniPass_37879.csv YerevanAgro_37789.csv YerevanArabkir_37789.csv

Austria, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for nine (9) stations in individual CSV files.

Users are asked to note:

1) NCEI made a number of corrections to station metadata formatting for station elevation and latitude/longitude. In addition " quotation marks and tabs were replaced with spaces between the commas. NCEI also removed Parameters for which no values were present.
2) The WMO Member confirmed they had computed 'Days with' variables (Parameters 2, 12 to 18., eg) as direct averages of counts rather than computing as percentages first.
3) Days exceeding wind speed uses the Beaufort scale (>6 and >8).
4) NCEI renamed the originally submitted files using the standard WMO Normals naming convention.

Additional information from the WMO Member is provided below the table.

Excel Files	**CSV Files**
N/A	Feuerkogel_11155.csv Graz_Flughafen_11240.csv Innsbruck_Flugplatz_11120.csv Klagenfurt_11231.csv Kremsmuenster_11012.csv Salzburg_Flughafen_11150.csv Sonnblick_11343.csv Villacher_Alpe_11265.csv Wien_Hohe_Warte_11035.csv

Additional explanatory information from WMO Member

I send you here the climate normal of 9 Austrian stations.
Please be aware that parameters “days with…” are provided as count instead of percentages and therefore the “Calculation Name” was set to “Custom”.

The values are as far as available based on homogenised values. Some information on this can be found (in German only) here: https://www.zamg.ac.at/cms/de/klima/informationsportal-klimawandel/daten-download/copy_of_klimamittel

As I didn’t have the WIGOS numbers available in a way to include them into the file, I provide them to you in the list below. When there is no number provided it wasn’t clear to me, which one to use.

Attached are the values for the following stations:
Wien-Hohe Warte
Sonnblick 0-20000-0-11343
Salzburg Flughafen 0-20000-0-11150
Klagenfurt Flughafen

Graz Flughafen 0-20000-0-11240
Innsbruck Flughafen 0-20000-0-11120
Kremsmünster 0-20000-0-11012
Feuerkogel 0-20000-0-11155
Villacher Alpe

Belarus, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 41 stations in individual CSV files.

Users are asked to note that the latitude/longitude originally provided for Oktyabr (26950) was incorrectly presented as longitude/latitude. NCEI provided a correction in the published file OKTYABR_26950.csv.

Excel Files	CSV Files
N/A	BARANOVICHI_26941.csv BEREZINO_26853.csv BEREZINSKIIZAPOVEDNIK_26959.csv BOBRUISK_26961.csv BORISOV_26759.csv BRAGIN_33124.csv BREST_33008.csv DOKSHITSY_26657.csv GANTSEVICHI_26947.csv GOMEL_33041.csv GORKI_26774.csv GRODNO_26825.csv IVATSEVICHI_26938.csv KLICHEV_26864.csv KOSTUCKOVICHI_26887.csv LIDA_26832.csv LYNTUPY_26645.csv MARIYNAGORKA_26855.csv MINSK_26850.csv MOGILEV_26863.csv MOZYR_33036.csv NOVOGRUDOK_26836.csv OKTYABR_26950.csv ORSHA_26763.csv OSHMYANY_26736.csv PINSK_33019.csv POLESSKAYA_33015.csv POLOTSK_26653.csv PRYZHANY_26929.csv SHARCOVSCHINA_26643.csv SLAVGOROD_26878.csv SLUTSK_26951.csv STOLBTSY_26846.csv VASILEVICHI_33038.csv VERHNEDVINSK_26554.csv VITEBSK_26666.csv

	VOLKOVYSK_26923.csv VOLOZHIN_26748.csv VYSOKOE_33001.csv ZHITCKOVICHI_33027.csv ZHLOBIN_26966.csv

Belgium, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 14 stations in individual CSV files.

Excel Files	CSV Files
N/A	ANTWERPENDEURNE_06450.csv BEAUVECHAIN_06458.csv BIERSET_06478.csv BRUSSELSNATIONALAIRPORT_06451.csv CHARLEROIGOSSELIES_06449.csv ELSENBORN_06496.csv FLORENNES_06456.csv KLEINEBROGEL_06479.csv KOKSIJDE_06400.csv OOSTENDEAIRPORT_06407.csv SEMMERZAKE_06428.csv SPALASAUVENIERE_06490.csv STHUBERT_06476.csv UCCLE_06447.csv

Bosnia and Herzegovina, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for five (5) stations in individual Excel files. NCEI converted the Excel files to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel files are provided along with the CSV files.

Excel Files	CSV Files
BUGOJNO_14544.xls	BUGOJNO_14544.csv
MOSTAR_14648.xls	MOSTAR_14648.csv
SANSKI_MOST_14537.xls	SANSKI_MOST_14537.csv
SARAJEVO_14654.xls	SARAJEVO_14654.csv
TUZLA_14557.xls	TUZLA_14557.csv

Bulgaria, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 11 stations in individual CSV files.

Excel Files	CSV Files
N/A	Burgas_15655.csv Kardzhali_15730.csv Lovech_15525.csv MurgashPeak_15600.csv MusalaPeak_64215.csv Razgrad_15549.csv Sandanski_15712.csv Sliven_15640.csv Sofia_15614.csv Varna_15552.csv Vidin_15502.csv

Croatia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for two (2) stations in individual Excel files. NCEI converted the Excel files to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel files are provided along with the CSV files. Additional information from the WMO Member is provided below the table.

Excel Files	CSV Files
SplitMarjan_14445.xls	SplitMarjan_14445.csv
ZagrebMaksimir_14240.xls	ZagrebMaksimir_14240.csv

Additional Explanatory Information from WMO Member

Dear All,

Please find enclosed the updated and final version of climate normal for main meteorological stations Split-Marjan and Zagreb-Maksimir for the period 1991-2020. In this version parameter code 46 refers to the number of days with rain showers instead of the number of days with rain what we delivered in previous version. It is the reason that we send the climate normal for Split-Marjan again.

Best regards,
Tanja Likso, PhD

Head of Data Processing and Management Department
Croatian Meteorological and Hydrological Service

Cyprus, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for three (3) stations in a single Excel file with multiple spreadsheets. NCEI converted the Excel file spreadsheets to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

Users are asked to note:

1) Monthly and annual Normals of Total Number of Sunshine (TSUN) hours (Parameter 8) in the original files appeared to be computed as the average number of sunshine hours per day for each month rather than the average of the total number of sunshine hours per month. NCEI recomputed the TSUN monthly values by multiplying the value by the number of days in each month (28 days for February) and have included these in the CSV files rather than the originally provided values.

The original Excel file is provided along with the CSV files.

Excel Files	**CSV Files**
Cyprus_WMO_Normals_9120.xls	AthalassaRadiosonde_17607.csv LarnakaAirport_17609.csv PafosAirport_17600.csv

Czech Republic, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 28 stations in individual CSV files.

Excel Files	CSV Files
N/A	BrnoTurany_11723.csv Cervena_11766.csv CeskeBudejoviceRoznov_11546.csv Cheb_11406.csv Churanov_11457.csv Doksany_11509.csv Dukovany_11693.csv Holesov_11774.csv KarlovyVary_11414.csv Kocelovice_11487.csv KostelniMyslova_11636.csv Kucharovice_11698.csv Liberec_11603.csv Luka_11710.csv LysaHora_11787.csv Milesovka_11464.csv NamestNadOslavou_11692.csv OstravaMosnov_11782.csv Pardubice_11652.csv PrahaKbely_11567.csv PrahaLibus_11520.csv PrahaRuzyne_11518.csv Pribyslav_11659.csv Primda_11423.csv Svratouch_11683.csv Tusimice_11438.csv UstiNadLabem_11502.csv UstiNadOrlici_11679.csv

Denmark, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 22 stations in individual CSV files.

Users are asked to note that the provided files contained unnecessary empty lines and carriage returns as well as an absence of all necessary commas in the csv files. NCEI removed the unnecessary empty lines and carriage returns and added commas where absent.

Excel Files	CSV Files
N/A	ABED_06141.csv BILLUND_LUFTHAVN_06104.csv BLAVANDSHUK_FYR_06081.csv BORRIS_06082.csv HAMMER_ODDE_FYR_06193.csv H_C_ANDERSEN_AIRPORT_06120.csv KEGAES_FYR_06119.csv LANDBOHYJSKOLEN_06186.csv NORDBY_06088.csv ODUM_06072.csv ROSKILDE_LUFTHAVN_06170.csv RYMY_JUVRE_06096.csv RYSAES_FYR_06159.csv SILSTRUP_06019.csv SJAELSMARK_06188.csv SKAGEN_FYR_06041.csv STORE_JYNDEVAD_06116.csv THYBORYN_06052.csv TRANEBJERG_OEST_06132.csv TYLSTRUP_06031.csv TYSTOFTE_06136.csv VESTERVIG_06051.csv

Estonia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 20 stations in a single Excel file with multiple spreadsheets. NCEI converted the Excel file spreadsheets to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel file is provided along with the CSV files.

Excel Files	**CSV Files**
Estonia_WMO_Normals_9120.xlsx	Jogeva_26144.csv Johvi_26046.csv Kihnu_26226.csv Kunda_26045.csv Kuusiku_26134.csv Laane-Nigula_26124.csv Pakri_26029.csv Parnu_26231.csv Ristna_26115.csv Sorve_26218.csv Tallinn-Harku_26038.csv Tartu-Toravere_26242.csv Tiirikoja_26145.csv Turi_26135.csv Vaike-Maarja_26141.csv Valga_26247.csv Viljandi_26233.csv Vilsandi_26214.csv Virtsu_26128.csv Voru_26249.csv

Denmark Faroe Islands, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for one (1) station in a CSV file.

Excel Files	CSV Files
N/A	Torshavn_06011.csv

Finland 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 195 stations in individual CSV files.

Users are asked to note:

1) NCEI renamed the station filenames containing diacritic marks (to remove them) because the diacritic marks cause filename corruption in some systems. The letters with diacritic marks remain in the station names within the respective CSV files.
2) Information regarding stations Jamsa_Halli_Lentoasema_02945.csv and Jamsa_Halli_Lentoasemantie_02946.csv is as follows. Although files for both stations were initially provided by the WMO Member, the second file had no data and was removed by NCEI. The WMO Member provided additional information regarding these stations. "Essentially they can be treated as one station. The original airport station and a station right outside the airport premises 700 m away. They have different station ID's since the airport has been operated by other institutes at some point and have measured slightly different parameters at different times. With 1991-2020 we've saved the statistics on the ID that currently measures that particular parameter. Since the original airport station 02945 has data in the CLINO files, you can essentially ignore the other station (02946)."

Excel Files	**CSV Files**
N/A	Aanekoski_Kalaniemi_01541.csv Ahtari_Inha_02924.csv Alajarvi_Moksy_02787.csv Alavus_Sulkavankyla_01305.csv AsikkalaPulkkilanharju_02727.csv EnonkoskiSimanala_01446.csv Enontekio_Kaaresuvanto_01968.csv Enontekio_Kilpisjarvi_Kylakeskus_02801.csv Enontekio_Kilpisjarvi_Saana_02701.csv Haapavesi_Mustikkamaki_02797.csv Hailuoto_Keskikyla_02874.csv HailuotoMarjaniemi_02873.csv HalsuaPurola_02725.csv Hameenlinna_Lammi_Pappila_02767.csv Hameenlinna_Pirttikoski_01143.csv Hammarland_Market_02993.csv Hanko_Russaro_02982.csv HankoTulliniemi_02746.csv Hanko_Tvarminne_02750.csv HattulaLepaa_02704.csv Hausjarvi_Lavinto.csv Heinavesi_Palokki_01589.csv HeinolaAsemantaus_02768.csv HelsinkiHarmaja_02795.csv HelsinkiKaisaniemi_02978.csv

	HelsinkiKumpula_02998.csv HuittinenSallila_01075.csv Hyvinkaa_Hyvinkaankyla_02829.csv IkaalinenVehuvarpee_01277.csv IlomantsiNaarva_05367.csv InariIvaloLentoasema_02807.csv Inari_Kirkonkyla_02046.csv InariNellim_02835.csv Inari_RajaJooseppi_Kontiojarvi_02008.csv Inari_Saariselka_Matkailukeskus_02722.csv Inari_Vayla_02827.csv Inkoo_Bagaskar_02984.csv Isojoki_Karjenkoski_01258.csv Jamsa_Halli_Lentoasema_02945.csv JoensuuHuhtilampi_01460.csv Joensuu_Pyhaselka_01610.csv JokioinenIlmala_02963.csv JomalaJomalaby_02741.csv JomalaMaarianhaminaLentoasema_02970.csv Joutsa_Parnamaki_01390.csv JoutsaSavenaho_02771.csv Juuka_Niemela_02791.csv Juupajoki_Hyytiala_02770.csv JuvaPartala_02736.csv Jyvaskyla_Lentoasema_02935.csv Jyvaskyla_Muuratjarvi_01352.csv Kaarina_Yltoinen_02828.csv KajaaniLentoasema_02897.csv KajaaniPaltaniemi_01742.csv Kalajoki_Mehtakyla_01685.csv Kalajoki_Pitkasenkyla_01683.csv Kangasniemi_Kirkonkyla_01385.csv Kankaanpaa_Niinisalo_Lentokentta_02753.csv Kankaanpaa_Niinisalo_Puolustusvoim_02942.csv Karsamaki_Venetpalo.csv KarviaAlkkia_02708.csv KauhajokiKaupunki.csv KauhajokiKujaKokko_02769.csv Kauhava_Lentokentta_02913.csv KaustinenTastula_01665.csv KemiAjos_02862.csv KemiKemiTornioLentoasema_02864.csv Kemionsaari_Kemio_02906.csv Kemionsaari_Vano_02743.csv Kirkkonummi_Makiluoto_02794.csv Kittila_Alakyla_01918.csv Kittila_Pokka_02717.csv KiuruvesiKorpijoki_01712.csv

	Kokemaki_Rausenkulma_02762.csv Kokemaki_Tulkkila_02937.csv KokkolaSantahaka_02852.csv KokkolaTankar_02721.csv Korsnas_Bredskaret_02780.csv KotkaHaapasaari_02967.csv KotkaRankki_02976.csv KouvolaAnjala_02830.csv KouvolaUttiLentoasema_02966.csv KouvolaUttiLentoportintie_02956.csv Koylio_Yttila.csv KruunupyyKokkolaPietarsaariLentoasema_02903.csv KuhmoApaja_01771.csv Kumlinge_Kirkonkyla_02790.csv KuopioKarttula_01579.csv KuopioMaaninka_02788.csv Kurikka_Hirvijarvi_01285.csv KustaviIsokari_02964.csv Kuusamo_Kiutakongas_02811.csv KuusamoLentoasema_02869.csv KuusamoToranginaho.csv LahtiLaune_02965.csv LaitilaHaukka_01050.csv LappeenrantaLentoasema_02958.csv LappeenrantaLepola_02959.csv LemlandNyhamn_02980.csv LieksaKoli_01616.csv LieksaLampela_02796.csv LietoTammentaka.csv LiperiJoensuuLentoasema_02929.csv Lohja_Leppakorpi_00963.csv LohjaPorla_02706.csv LoviisaOrrengrund_02992.csv Luhanka_Tammijarvi_01348.csv MerikarviaTuorila_01257.csv MikkeliLentoasema_02947.csv Mikkeli_Pitkahiekka_01410.csv MultiaKarhila_02927.csv Multia_Pirttipera_05364.csv Muonio_Kirkonkyla_02823.csv MustasaariRiimala_01474.csv MustasaariValassaaret_02910.csv Narpio_Alamarkku_01468.csv Nokia_Tottijarvi_01116.csv Nurmes_Mujejarvi_01763.csv NurmesValtimo_02798.csv Nurmijarvi_Roykka_02983.csv OuluLentoasema_02875.csv

	Oulu_Oulunsalo_Pellonpaa_02851.csv OutokumpuViuruniemi_01590.csv ParainenFagerholm_02950.csv Parainen_Uto_02981.csv ParikkalaKoitsanlahti_02734.csv Pello_Kirkonkyla_02844.csv Pello_Konttajarvi.csv Pielavesi_Venetmaki_01569.csv PirkkalaTamperePirkkalaLentoasema_02944.csv PoriLentoasema_02952.csv PorvooHarabacka_02759.csv PosioRaistakka_01881.csv Poytya_Ylane_01093.csv Pudasjarvi_Jaurakkajarvi_01812.csv Pudasjarvi_Lentokentta_02866.csv PuolankaKotila_01830.csv RaaheLapaluotoSatama_02872.csv Raakkyla_Kirkonkyla_01450.csv Raasepori_Jussaro_02757.csv Ranua_Lentokentta_02881.csv Rauma_Kylmapihlaja_02761.csv Rautavaara_Yla-Luosta_02789.csv RovaniemiApukka_02813.csv RovaniemiLentoasema_02845.csv RuokolahtiKotaniemi_01248.csv Salla_Kelloselka_01956.csv Salla_Kirkonkyla_02849.csv SallaNaruska_02745.csv Salla_Varriotunturi_02819.csv Salo_Karkka_02756.csv SavonlinnaLaukansaari_01423.csv SavonlinnaPunkaharjuLaukansaari_02778.csv Savukoski_Kirkonkyla_02815.csv SavukoskiRuuvaoja.csv Seinajoki_Pelmaa_02833.csv SiikajokiRuukki_02803.csv Siikalatva_Kestila_01717.csv Siilinjarvi_Kuopio_Lentoasema_02917.csv Sodankyla_Lokka_02719.csv Sodankyla_Tahtela_02836.csv Sodankyla_Vuotso_02816.csv SotkamoKuolaniemi_02739.csv SotkamoSaviaho.csv SulkavaHalttula_01425.csv Suomussalmi_Pesio_02889.csv Sysma_Joutsjarvi_01342.csv Taivalkoski_Kirkonkyla_02804.csv Tampere_Harmala_02763.csv

	Teuva_Kauppilankyla_01262.csv Tohmajarvi_Kemie_02832.csv ToholampiLaitala_02737.csv ToholampiOravala_01679.csv TornioTorppi_02880.csv TurkuArtukainen_02773.csv TurkuLentoasema_02972.csv Tyrnava_Temmes.csv Utajarvi_Sarkijarvi_01809.csv UtsjokiKevo_02805.csv Utsjoki_Leppala.csv UtsjokiNuorgam_02825.csv Uusikaupunki_Itatulli_01049.csv VaalaPelso_02714.csv VaasaLentoasema_02911.csv VantaaHelsinkiVantaanLentoasema_02974.csv VarkausKosulanniemi_02850.csv Vesanto_Kirkonkyla_02710.csv Vierema_Kaarakkala_02834.csv VihtiHiiskula_01135.csv VihtiMaasoja_02758.csv ViitasaariHaapaniemi_02915.csv Viitasaari_Karna_01545.csv VirolahtiKoivuniemi_02831.csv Virrat_Aijanneva_02735.csv Ylitornio_Meltosjarvi_02812.csv

France, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 149 stations in individual CSV files.

Excel Files	CSV Files
N/A	ABBEVILLE_07005.csv AEROPORT_METZ_NANCY_LORRAINE_07093.csv Agen_La_Garenne_07524.csv AJACCIO_07761.csv ALBI_07632.csv ALENCON_07139.csv ALISTRO_07775.csv AMBERIEU_07482.csv AUCH_07622.csv AURILLAC_07549.csv AVIGNON_07563.csv AVORD_07257.csv BALE_MULHOUSE_07299.csv BASTIA_07790.csv BEAUCOUZE_07230.csv BEAUVAIS_TILLE_07055.csv BELLE_ILE_LE_TALUT_07207.csv BERGERAC_07530.csv BESANCON_07288.csv BEZIERS_VIAS_07638.csv BIARRITZ_PAYS_BASQUE_07602.csv BISCARROSSE_07503.csv BLOIS_07245.csv BORDEAUX_MERIGNAC_07510.csv BOULOGNE_SEM_07002.csv BOURGES_07255.csv BOURG_ST_MAURICE_07497.csv BREST_GUIPAVAS_07110.csv BRIGNOGAN_07107.csv BRIVE_07438.csv CAEN_CARPIQUET_07027.csv CALVI_07754.csv CANNES_07684.csv CAP_BEAR_07749.csv CAP_CEPET_07661.csv CAP_CORSE_07785.csv CAP_DE_LA_HEVE_07028.csv CAP_FERRET_07500.csv CAP_PERTUSATO_07770.csv CARCASSONNE_07635.csv CARPENTRAS_07586.csv

	CAZAUX_07502.csv CHAMBERY_AIX_07491.csv CHARLEVILLE_MEZ_07075.csv CHARTRES_07143.csv CHASSIRON_07314.csv CHATEAUDUN_07140.csv CHATEAUROUX__DEOLS_07354.csv CLERMONT_FD_07460.csv COGNAC_07412.csv COLMAR_MEYENHEIM_07197.csv DAX_07603.csv DIEPPE_07040.csv DIJON_LONGVIC_07280.csv DINARD_07125.csv DUNKERQUE_07010.csv EMBRUN_07591.csv EVREUX_HUEST_07038.csv FIGARI_07780.csv GONNEVILLE_07024.csv GOURDON_07535.csv GRENOBLE_ST_GEOIRS_07486.csv HYERES_07667.csv ILE_DE_GROIX_07203.csv ILE_ROUSSE_07753.csv ISTRES_07647.csv LANAS_SYN_07570.csv LANDIVISIAU_07106.csv LANGRES_07283.csv LANNION_AERO_07118.csv LANVEOC_07109.csv LA_ROCHELLE_ILE_DE_RE_07316.csv LA_ROCHE_SUR_YON_07306.csv LAVAL_ETRONNIER_07134.csv LE_BOURGET_07150.csv LE_LUC_07675.csv LE_MANS_07235.csv LE_PUY_LOUDES_07471.csv LE_TOUQUET_07003.csv LEUCATE_07666.csv L_ILE_D_YEU_07300.csv LILLE_LESQUIN_07015.csv LIMOGES_BELLEGARDE_07434.csv LORIENT_LANN_BIHOUE_07205.csv LUXEUIL_07292.csv LYON_BRON_07480.csv LYON_ST_EXUPERY_07481.csv MACON_07385.csv MARIGNANE_07650.csv

	MEAULTE_07059.csv MELUN_07153.csv MEYTHET_07490.csv MILLAU_07558.csv MONT_AIGOUAL_07560.csv MONTAUBAN_07540.csv MONT_DE_MARSAN_07607.csv MONTELIMAR_07577.csv MONTPELLIER_AEROPORT_07643.csv MURET_LHERM_07628.csv NANCY_ESSEY_07180.csv NANCY_OCHEY_07181.csv NANTES_BOUGUENAIS_07222.csv NEVERS_MARZY_07260.csv NICE_07690.csv NIMES_COURBESSAC_07645.csv NIMES_GARONS_07646.csv NIORT_07330.csv OCTEVILLE_07046.csv ORANGE_07579.csv ORLEANS_07249.csv ORLY_07149.csv OUESSANT_STIFF_07100.csv PARIS_MONTSOURIS_07156.csv PAU_UZEIN_07610.csv PERPIGNAN_07747.csv PLOUMANACH_07117.csv POITIERS_BIARD_07335.csv PONTOISE_AERO_07053.csv PTE_DE_LA_HAGUE_07020.csv QUIMPER_07201.csv REIMS_PRUNAY_07072.csv RENNES_ST_JACQUES_07130.csv RODEZ_AVEYRON_07552.csv ROISSY_07157.csv ROMORANTIN_07247.csv ROUEN_BOOS_07037.csv SALON_DE_PROVENCE_07648.csv SETE_07641.csv SOCOA_07600.csv SOLENZARA_07765.csv ST_AUBAN_07588.csv ST_BRIEUC_07120.csv ST_DIZIER_07169.csv ST_ETIENNE_BOUTHEON_07475.csv ST_GATIEN_DES_B_07031.csv ST_GIRONS_07627.csv ST_NAZAIRE_MONTOIR_07217.csv

	ST_QUENTIN_07061.csv STRASBOURG_ENTZHEIM_07190.csv ST_YAN_07379.csv TARBES_LOURDES_PYRENEES_07621.csv TAVAUX_SA_07386.csv TOULOUSE_BLAGNAC_07630.csv TOURS_07240.csv TOUSSUS_LE_NOBLE_07146.csv TRAPPES_07145.csv TROYES_BARBEREY_07168.csv VICHY_CHARMEIL_07374.csv VILLACOUBLAY_07147.csv

Georgia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 21 stations in individual CSV files.

Excel Files	CSV Files
N/A	Akhalkhalakhi_37602.csv Akhaltsikhe_37514.csv Ambrolauri_37308.csv Bolnisi_37621.csv Borjomi_37515.csv Dedoplistskaro_37651.csv Gori_37531.csv Khashuri_37417.csv MtaSabueti_37665.csv Pasanauri_37432.csv Poti_37379.csv Qobuleti_37481.csv Qutaisi_37395.csv Sachkhere_37403.csv Sagarejo_37556.csv Tbilisi_37445.csv Telavi_37553.csv Tianeti_37439.csv Tsalka_37537.csv Zestaphoni_37404.csv Zugdidi_37279.csv

Germany, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 178 stations in individual CSV files.

Excel Files	CSV Files
N/A	Aachen_10501.csv Andernach_10520.csv Angermuende_10291.csv Arkona_10091.csv Artern_10460.csv Augsburg_10852.csv Bamberg_10675.csv Barth_10180.csv Baruth_10376.csv Bendorf_10515.csv Berlin-Alexanderplatz_10389.csv Berlin-Brandenburg_10385.csv Berlin-Dahlem-FU_10381.csv Berlin-Tegel_10382.csv Berlin-Tempelhof_10384.csv Berus_10704.csv Boizenburg_10249.csv Boltenhagen_10161.csv Braunlage_10452.csv Braunschweig_10348.csv Bremen_10224.csv Bremerhaven_10129.csv Bremervoerde_10139.csv Brocken_10453.csv Bueckeburg_10335.csv Carlsfeld_10574.csv Celle_10343.csv Chemnitz_10577.csv Chieming_10982.csv Cottbus_10496.csv Cuxhaven_10131.csv Deuselbach_10615.csv Diepholz_10321.csv Doberlug-Kirchhain_10490.csv Doernick_10150.csv Dresden-Klotzsche_10488.csv Duesseldorf_10400.csv Elpersbuettel_10130.csv Emden_10200.csv Erfurt-Weimar_10554.csv Essen-Bredeney_10410.csv

	Fehmarn_10055.csv FeldbergMecklenburg_10282.csv FeldbergSchwarzwald_10908.csv Fichtelberg_10578.csv FrankfurtMain_10637.csv Freiburg_10803.csv Freudenstadt_10815.csv Friesoythe-Altenoythe_10210.csv FritzlarEder_10439.csv Fuerstenzell_10895.csv Gardelegen_10359.csv Garmisch-Partenkirchen_10963.csv Geisenheim_10628.csv Gelbelsee_10777.csv Genthin_10365.csv Gera-Leumnitz_10567.csv GiessenWettenberg_10532.csv Gluecksburg-Meierwik_10033.csv Goerlitz_10499.csv Goettingen_10444.csv Goldberg_10168.csv Greifswald_10184.csv Greifswalder-Oie_10097.csv Grosser-Arber_10791.csv Gruenow_10289.csv Hahn_10616.csv Halle-Kroellwitz_10466.csv Hamburg-Fuhlsbuettel_10147.csv Hannover_10338.csv Harburg_10850.csv Harzgerode_10458.csv Helgoland_10015.csv Hersfeld-Bad_10542.csv Hof_10685.csv Hohenpeissenberg_10962.csv Hohn_10038.csv Itzehoe_10142.csv Kahler-Asten_10427.csv Kaisersbach-Cronhuette_10747.csv Karlsruhe_10727.csv Kassel_10438.csv Kempten_10946.csv Kiel-Holtenau_10046.csv Kissingen-Bad_10658.csv Kleiner-FeldbergTaunus_10635.csv Klippeneck_10818.csv KoelnBonn_10513.csv Koenigswinter-Heiderhof_10519.csv

	Konstanz_10929.csv Kyritz_10267.csv Lahr_10805.csv Lautertal-Oberlauter_10671.csv Leck_10022.csv Leinefelde_10449.csv LeipzigHalle_10469.csv Leipzig-Holzhausen_10471.csv Lichtenhain-Mittelndorf_10591.csv Lindenberg_10393.csv Lingen_10305.csv Lippspringe-Bad_10430.csv List-auf-Sylt_10020.csv Luebeck-Blankensee_10156.csv Luechow_10253.csv Luedenscheid_10418.csv Luegde-Paenbruch_10433.csv Magdeburg_10361.csv Mannheim_10729.csv Manschnow_10396.csv Marienberg_10579.csv Marienberg-Bad_10526.csv Marnitz_10264.csv Meiningen_10548.csv Michelstadt-Vielbrunn_10648.csv Muehlacker_10736.csv Muehldorf_10875.csv Muenchen-Flughafen_10870.csv Muenchen-Stadt_10865.csv MuensterOsnabrueck_10315.csv Neuhaus-am-Rennweg_10557.csv Neuruppin_10270.csv Norderney_10113.csv Nuerburg-Barweiler_10506.csv Nuernberg_10763.csv Oberstdorf_10948.csv Oehringen_10742.csv Offenbach-Wetterpark_10641.csv Oldenburg_10215.csv Oschatz_10480.csv Osnabrueck_10317.csv Osterfeld_10565.csv Pelzerhaken_10152.csv Plauen_10569.csv Potsdam_10379.csv Putbus_10093.csv Quickborn_10146.csv Regensburg_10776.csv

	Rostock-Warnemuende_10170.csv Saarbruecken-Ensheim_10708.csv Salzuflen-Bad_10325.csv Sankt-Peter-Ording_10028.csv Schleiz_10564.csv Schleswig_10035.csv Schleswig-Jagel_10037.csv Schmuecke_10552.csv Schoenhagen-Ostseebad_10042.csv Schwerin_10162.csv Seehausen_10261.csv Soltau_10235.csv Sonneberg-Neufang_10558.csv Stoetten_10836.csv Straubing_10788.csv Stuttgart-Echterdingen_10738.csv Stuttgart-Schnarrenberg_10739.csv Tholey_10706.csv Toelz-Bad_10971.csv Trier-Petrisberg_10609.csv Ueckermuende_10193.csv Ulm_10838.csv Ummendorf_10356.csv Warburg_10435.csv Waren-Mueritz_10268.csv Wasserkuppe_10544.csv Weiden_10688.csv Weihenstephan-Duernast_10863.csv Weimar_10555.csv Weinbiet_10724.csv Weissenburg-Emetzheim_10761.csv Wendelstein_10980.csv Werl_10424.csv Wernigerode_10454.csv Wiesenburg_10368.csv Wittenberg_10474.csv Wuerzburg_10655.csv Wunstorf_10334.csv Zinnwald-Georgenfeld_10582.csv Zugspitze_10961.csv Zwiesel_10796.csv

Denmark Greenland, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 36 stations in individual CSV files.

Excel Files	CSV Files
N/A	Aasiaat_04220.csv Angissoq_04285.csv Aputiteeq_04351.csv Daneborg_04330.csv Danmarkshavn_04320.csv Ikerasassuaq_04390.csv Ikermit_04373.csv Ikermiuarssuk_04382.csv Ittoqqortoormiit_04339.csv KapMorrisJesup_04301.csv Kitsissorsuit_04208.csv Kitsissut_04203.csv KitsissutAttu_04228.csv MittarfikAasiaat_04224.csv MittarfikIlulissat_04221.csv MittarfikKangerlussuaq_04231.csv MittarfikManiitsoq_04241.csv MittarfikNarsarsuaq_04270.csv MittarfikNuuk_04254.csv MittarfikPaamiut_04260.csv MittarfikPituffik_04202.csv MittarfikQaanaaq_04205.csv MittarfikSisimiut_04234.csv MittarfikUpernavik_04211.csv MittarfikUummannaqQaarsut_04213.csv NarsaqHeliport_04280.csv Nunarssuit_04266.csv Nuuk_04250.csv Nuussuaq_04214.csv Qaqortoq_04272.csv QaqortoqHeliport_04273.csv Sioralik_04242.csv StationNord_04312.csv SummitTower_04419.csv Tasiilaq_04360.csv Ukiiviit_04253.csv

Hungary, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 32 stations in individual CSV files.

Excel Files	CSV Files
N/A	Baja_12960.csv Bekescsaba_12992.csv BudapestBelterulet_12840.csv BudapestPestszentlorinc_12843.csv Debrecen_12882.csv Eger_12870.csv GyorLikocs_12822.csv Josvafo_12766.csv Kaposvar_12930.csv Kecskemet_12970.csv Kekesteto_12851.csv Keszthely_12920.csv MiskolcDiosgyor_12772.csv Mosonmagyarovar_12812.csv Nagykanizsa_12925.csv NyiregyhazaNapkor_12892.csv Paks_12950.csv Papa_12824.csv PecsPogany_12942.csv Per_12821.csv Poroszlo_12866.csv Siofok_12935.csv Szecseny_12756.csv SzegedKulterulet_12982.csv SzentgotthardFarkasfa_12910.csv Szentkiralyszabadja_12830.csv Szolnok_12860.csv Szombathely_12812.csv Tat_12847.csv Tata_12836.csv Zahony_12786.csv ZalaegerszegNagykutas_12915.csv

Iceland, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for nine (9) stations in individual CSV files.

Additional explanatory metadata information from the WMO Member is included below the table.

Excel Files	CSV Files
N/A	Akureyri_04063.csv Dalatangi_04097.csv Grimsstadir_04073.csv Hjardarland_04042.csv Keflavik_04018.csv Reykjavik_04030.csv Saudanesviti_04059.csv Stykkisholmur_04013.csv Vatnsskardsholar_04058.csv

Additional Explanatory information from the WMO Member

WMO number: 04063
Country name: ICELAND
Station name: AKUREYRI

Latitude: 65 41 08 N
Longitude: 18 06 01 W
Station Height: 23 m

Type of station: Manned synoptic station

Number of observations per day: 8, at 3,6,9,12,15,18,21,24

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Mean sea level pressure hPa, mean of 8 observations measured at 3,6,9,12,15,18,21,24.
Mean Vapor Pressure hPa, calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 8 observations

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WMO number: 04097
Country name: ICELAND
Station name: DALATANGI

Latitude: 65 16 05 N
Longitude: 13 34 33 W
Station Height: 9 m

Type of station: Manned synoptic station

Number of observations per day: 8, at 3,6,9,12,15,18,21,24

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Mean sea level pressure hPa, mean of 8 observations measured at 3,6,9,12,15,18,21,24.
Mean Vapor Pressure hPa, calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 8 observations

****
WMO number: 04073
Country name: ICELAND
Station name: GRIMSSTADIR

Latitude: 65 38 32 N
Longitude: 16 07 15 W
Station Height: 384 m

Type of station: Manned synoptic station

Number of observations per day: 5, at 9,12,15,18,21

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of the observations measured at 9 and 21 in addition to a separate fixed constant
for each month (to account for the seasonal variation of the diurnal range).
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.

Precipitation total (mm), amount morning previous day at 9am until morning today
Mean sea level pressure hPa, mean of 5 observations measured at 9,12,15,18,21.
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 5 observations

****

WMO number: 04042
Country name: ICELAND
Station name: HJARDARLAND

Latitude: 64 15 02 N
Longitude: 20 19 51 W
Station Height: 89 m

Type of station: Manned synoptic station

Number of observations per day: 5, at 6,9,15,18,21

The method of calculation for daily means of temperature:

Daily mean temperature (°C). Calculated as average of the observations measured at 9 and 21 in addition to a separate fixed constant
for each month (to account for the seasonal variation of the diurnal range).
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 5 observations

****

WMO number: 4018
Country name: ICELAND
Station name: KEFLAVIKURFLUGVOLLUR

Latitude: 63 58 29 N
Longitude: 22 35 15 W
Station Height: 47 m

Type of station: Manned synoptic station

Number of observations per day: 8, at 3,6,9,12,15,18,21,24

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Mean sea level pressure hPa, mean of 8 observations measured at 3,6,9,12,15,18,21,24.
Mean Vapor Pressure hPa, calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 8 observations

Small site move in March 2007.

****

WMO number: 04030
Country name: ICELAND
Station name: REYKJAVIK

Latitude: 64 07 39 N
Longitude: 21 54 10 W
Station Height: 52 m

Type of station: Manned synoptic station

Number of observations per day: 8, at 3,6,9,12,15,18,21,24

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Mean sea level pressure hPa, mean of 8 observations measured at 3,6,9,12,15,18,21,24.
Mean Vapor Pressure hPa, calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 8 observations

****

WMO number: 04059
Country name: ICELAND
Station name: SAUDANESVITI

Latitude: 66 11 07 N

Longitude: 18 57 12 W
Station Height: 30 m

Type of station: Manned synoptic station

Number of observations per day: 7, at 6,9,12,15,18,21,24

The method of calculation for daily means of temperature:

Daily mean temperature (°C). Calculated as average of the observations measured at 9 and 21 in addition to a separate fixed constant
for each month (to account for the seasonal variation of the diurnal range).
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 7 observations

****

WMO number: 04013
Country name: ICELAND
Station name: STYKKISHOLMUR

Latitude: 65 04 27 N
Longitude: 22 44 02 W
Station Height: 13 m

Type of station: Manned synoptic station

Number of observations per day: 8, at 3,6,9,12,15,18,21,24

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of 8 observations measured at 3,6,9,12,15,18,21,24.
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Mean sea level pressure hPa, mean of 8 observations measured at 3,6,9,12,15,18,21,24.
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 8 observations

Small site move in May 2007.

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WMO number: 4058
Country name: ICELAND
Station name: VATNSSKARDSHOLAR

Latitude: 63 25 25 N
Longitude: 19 10 59 W
Station Height: 20 m

Type of station: Manned synoptic station

Number of observations per day: 7, at 6,9,12,15,18,21,24

The method of calculation for daily means of temperature, pressure and vapour pressure:

Daily mean temperature (°C). Calculated as average of the observations measured at 9 and 21 in addition to a separate fixed constant
for each month (to account for the seasonal variation of the diurnal range).
Maximum temperature (°C). From 18 the previous day to 18 today.
Minimum temperature (°C). From 18 the previous day to 18 today.
Precipitation total (mm), amount morning previous day at 9am until morning today
Snow depth (cm), measured at 9am
Mean cloud cover, oktas, mean of 7 observations

Ireland, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for seven (7) stations in individual Excel files. NCEI converted the Excel files to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel files are provided along with the CSV files.

Excel Files	CSV Files
Belmullet_03976.xlsx	Belmullet_03976.csv
CasementAerodrome_03967.xlsx	CasementAerodrome_03967.csv
CorkAirport_03955.xlsx	CorkAirport_03955.csv
DublinAirport_03969.xlsx	DublinAirport_03969.csv
MalinHead_03980.xlsx	MalinHead_03980.csv
ShannonAirport_03962.xlsx	ShannonAirport_03962.csv
ValentiaObservatory_03953.xlsx	ValentiaObservatory_03953.csv

Israel, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 79 stations in individual CSV files.

Excel Files	CSV Files
N/A	AFULA_NA.csv AKKO_NA.csv AlonAgalil_NA.csv AshdotYakov_NA.csv AVNEETAN_NA.csv AyeletAshahar_NA.csv Azorea_NA.csv Beari_NA.csv BeerotItzhak_NA.csv BEERSHEVA_40190.csv BeerTuvia_NA.csv BeitAshita_NA.csv BeitGovrin_NA.csv BEITJIMAL_NA.csv BESORFARM_NA.csv BETDAGAN_40179.csv BETZAYDA_NA.csv DAFNA_NA.csv DganiaA_NA.csv DOROT_NA.csv EinHarud_NA.csv EinKarmel_NA.csv ELAT_40199.csv ELON_NA.csv ENHAHORESH_NA.csv Evron_NA.csv Eyal_NA.csv Frod_NA.csv Gaash_NA.csv GALED_NA.csv GanShlomo_NA.csv GanShmuel_NA.csv GAT_NA.csv Gazit_NA.csv GivatOz_NA.csv Haifa_NA.csv Hamdia_NA.csv HARASHIM_NA.csv HAZERIM_NA.csv HAZEVA_NA.csv Hulda_NA.csv

	JERUSALEM_40183.csv KEFARBLUM_NA.csv KefarGiladi_NA.csv KefarMenahem_NA.csv KefarRoshHanikra_40150.csv KefarShmariao_NA.csv KEFARYEHOSHUA_NA.csv Kineret_NA.csv KriyatAnavim_NA.csv LAHAV_NA.csv Lavi_NA.csv MaayanBaruch_NA.csv Magen_NA.csv MEROMGOLAN_NA.csv MesohotItzhak_NA.csv MikveIsrael_NA.csv NahalOz_NA.csv NEGBA_NA.csv NeotMordechay_NA.csv NirGalim_NA.csv Orim_NA.csv QEVUZATYAVNE_NA.csv Regavim_NA.csv Revivim_NA.csv ROSHZURIM_NA.csv Ruhama_NA.csv Sarid_NA.csv SEDEBOQER_NA.csv SEDEELIYYAHU_NA.csv SEDOM_40193.csv TAVOR_NA.csv TELAVIVCOAST_NA.csv Yagur_NA.csv Yehiam_NA.csv Yirhon_NA.csv YOTVATA_NA.csv ZEFAT_40153.csv ZEMAH_NA.csv

Italy, 1991-2020 Climatological Normals

Explanatory Information

Data for 84 stations were provided by the WMO Member in individual Comma Separated Values (CSV) files.

The list of all published CSV files is provided below.

Excel Files	CSV Files
N/A	Amendola_FOGGIA_16261.csv Arezzo_16172.csv Bari_Palese_16270.csv Bergamo_16076.csv Bologna_16140.csv Bonifati_16337.csv Brescia_Ghedi_16088.csv Brindisi_16320.csv Cagliari_Elmas_16560.csv Campobasso_16252.csv Capo_Bellavista_16550.csv Capo_Caccia_16522.csv Capo_Carbonara_16564.csv Capo_Frasca_16539.csv Capo_Mele_16153.csv Capo_Palinuro_16310.csv Capo_San Lorenzo_16542.csv Capri_16294.csv Catania_Fontanarossa_16460.csv Catania_Sigonella_16459.csv Cervia_16148.csv Civitavecchia_16214.csv Cozzo_Spadaro_16480.csv Decimomannu_16546.csv Dobbiaco_16033.csv Enna_16450.csv Firenze_Peretola_16170.csv Frontone_16179.csv Frosinone_16244.csv Gela_16453.csv Genova_Sestri_16120.csv Gioia_del_Colle_16312.csv Grazzanise_16253.csv Grosseto_16206.csv Guidonia_16234.csv

	Lamezia_Terme_16362.csv Latina_16243.csv Latronico_16316.csv Lecce_16332.csv Marina_di_Ginosa_16325.csv Messina_16420.csv Milano_Linate_16080.csv Milano_Malpensa_16066.csv Mondovi_16114.csv Monte_Argentario_16168.csv Monte_Calamita_16197.csv Monte_Cimone_16134.csv Monte_Sant_Angelo_16258.csv Monte_Scuro_16344.csv Monte_Terminillo_16219.csv Napoli_Capodichino_16289.csv Novara_Cameri_16064.csv Olbia_16531.csv Paganella_16022.csv Pantelleria_16470.csv Passo_della_Cisa_16124.csv Passo_Rolle_16021.csv Pescara_16230.csv Piacenza_16084.csv Pisa_16158.csv Ponza_16280.csv Pratica_di_Mare_16245.csv Prizzi_16434.csv Punta_Marina_16146.csv Rimini_Miramare_16149.csv Roma_Ciampino_16239.csv Roma_Fiumicino_16242.csv Santa_Maria_di_Leuca_16360.csv San_Valentino_alla_Muta_16008.csv Sarzana_Luni_16125.csv Tarvisio_16040.csv Termoli_16232.csv Torino_Bric_16061.csv Trapani_Birgi_16429.csv Trevico_16263.csv Treviso_Istrana_16098.csv Treviso_Sant_Angelo_16099.csv Trieste_16110.csv Udine_Rivolto_16045.csv

	Ustica_16400.csv Venezia_Tessera_16105.csv Verona_Villafranca_16090.csv Vigna_di_Valle_16224.csv Viterbo_16216.csv

Latvia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 25 stations in individual Excel files. NCEI converted the Excel files to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel files are provided along with the CSV files.

Excel Files	CSV Files
Ainazi_26229.xls	Ainazi_26229.csv
Aluksne_26346.xls	Aluksne_26346.csv
Bauska_26429.xls	Bauska_26429.csv
Dagda_26551.xls	Dagda_26551.csv
Daugavpils_26544.xls	Daugavpils_26544.csv
Dobele_26424.xls	Dobele_26424.csv
Gulbene_26348.xls	Gulbene_26348.csv
Jelgava_26425.xls	Jelgava_26425.csv
Kolka_26313.xls	Kolka_26313.csv
Liepaja_26406.xls	Liepaja_26406.csv
Madona_26447.xls	Madona_26447.csv
Mersrags_26324.xls	Mersrags_26324.csv
Pavilosta_26406.xls	Pavilosta_26406.csv
Priekuli_26335.xls	Priekuli_26335.csv
Rezekne_26446.xls	Rezekne_26446.csv
RigaLu_26422.xls	RigaLu_26422.csv
Rucava_26503.xls	Rucava_26503.csv
Rujiena_26238.xls	Rujiena_26238.csv
Saldus_26416.xls	Saldus_26416.csv
Skriveri_26435.xls	Skriveri_26435.csv
Skulte_26326.xls	Skulte_26326.csv
Stende_26318.xls	Stende_26318.csv
Ventspils_26314.xls	Ventspils_26314.csv
Zilani_26436.xls	Zilani_26436.csv
Zoseni_26339.xls	Zoseni_26339.csv

Luxembourg, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for six (6) stations in a single Excel file with multiple spreadsheets. NCEI converted the Excel file spreadsheets to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel file is provided along with the CSV files.

Additional explanatory information provided by the WMO Member is included below.

Excel Files	CSV Files
Luxembourg_WMO_Normals_9120.xlsx	Asselborn.csv Clemency.csv Grevenmacher.csv Luxembourg_06590.csv LuxembourgVille_06589.csv Remich.csv

Additional Explanatory Information provided by the WMO Member

Please find attached the Climatological Standard Normals for 1991–2020 for those stations in Luxembourg where the period 1991-2020 is covered both for precipitation and temperatures following WMO criteria.

These include the stations operated by the Meteorological Department of Administration of Technical Agricultural Services (AgriMeteo):
Asselborn, Clemency, Grevenmacher, Luxembourg Villle (WMO 6589), Remich
As well as one station operated by Meteorological Department of Air Navigation Administration (MeteoLux): Findel (WMO 6590).

Unfortunately for the WMO stations Clervaux (6585) and Echternach (6597) the data was not complete enough to comply with the WMO criteria.

The data for precipitation and temperatures have been validated and homogenized following WMO recommendations for all stations operated by AgriMeteo. For the station operated by MeteoLux the date was validated following WMO recommendations but not homogenized.

We used the template provided to inform the data, but allowed our self to add the Zero Quintile for monthly precipitation (i.e. minimum monthly precipitation) for stations operated by ArgiMeteo.

Moldova, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 17 stations in individual CSV files.

Excel Files	CSV Files
N/A	Baltata_33824.csv Balti_33745.csv Bravicea_33749.csv Briceni_33664.csv Cahul_33885.csv Camenca_33679.csv CeadirLunga_33886.csv Chisinau_33815.csv Comrat_33883.csv Cornesti_33748.csv Dubasari_33821.csv Falesti_33744.csv Leova_33881.csv Ribnita_33754.csv Soroca_33678.csv StefanVoda_33892.csv Tiraspol_33829.csv

Montenegro, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for nine (9) stations in individual CSV files. Additional information provided by the WMO Member is included below.

Excel Files	CSV Files
N/A	Bar_13461.csv BijeloPolje_13230.csv HercegNovi_13455.csv Kolasin_13465.csv Niksic_13459.csv Pljevlja_13363.csv Podgorica_13463.csv Ulcinj_13464.csv Zabljak_13361.csv

Additional Explanatory Information provided by the WMO Member

The set of climatological and precipitation stations was suggested taking into consideration the availability of data in the electronic data-base and/or the possibility to complete the gaps in variables from the paper archive or other sources as much as possible. and for which an appropriate number of years is available with data according to WMO guidelines.

The criterion for selecting the stations was the same as in the DANUBECLIM project (http://www.carpatclim-eu.org/danubeclim/Partners)

The homogenization, the data quality control and the data completion were implemented by software MASH (Multiple Analysis of Series for Homogenization; Szentimrey, 1999, 2008, 2014). Between the neighbouring countries there was an exchange of the near border station data series in order to cross-border harmonization.

The MASH software, which was developed for homogenization of monthly and daily data series, includes also quality control and missing data completion units for the daily as well as the monthly data.

Basic meteorological parameters were homogenized and processed:

1. **Daily_Maximum_Temperature** Deg_C
2. **Daily_Minimum_Temperature** Deg_C
3. **Daily mean temperature (T_a)** Deg_C

daily $T_a(t)$ series were calculated as the arithmetic mean of the homogenized daily $T_{min}(t)$, $T_{max}(t)$ series: $T_a(t) = \frac{1}{2}(T_{min}(t) + T_{max}(t))$

4. **Precipitation_Total** mm - The daily amount of precipitation or 24-hour amount of precipitation is measured at 06 UTC and refers to the previous 24 hours

The homogenization procedure was performed for the period 1961 – 2020.

Format Climatological Standard Normals file for a station is .csv

Climate normals are calculated using CLINO software and the results are in the folder

Montenegro_WMO_Normals_9120.rar

Netherlands, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 24 stations in individual CSV files.

Excel Files	CSV Files
N/A	AmsterdamSchipholAp_06240.csv ArcenAws_06391.csv CabauwTowerAws_06348.csv DeBiltAws_06260.csv Deelen_06275.csv DeKooyVk_06235.csv EindhovenAp_06370.csv GilzeRijen_06350.csv GroningenApEelde_06280.csv HerwijnenAws_06356.csv HoogeveenAws_06279.csv HupselAws_06283.csv Leeuwarden_06270.csv LelystadAp_06269.csv LichteilandGoeree_06320.csv MaastrichtAachenAp_06380.csv MarknesseAws_06273.csv NieuwBeertaAws_06286.csv RotterdamTheHagueAp_06344.csv TwentheAws_06290.csv VlissingenAws_06310.csv Volkel_06375.csv VoorschotenAws_06215.csv WestdorpeAws_06319.csv

Norway, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 496 stations in individual CSV files.

Excel Files	CSV Files
N/A	ABJORSBRATEN_23160.csv AFJORD_MOMYR_71810.csv AKRESTROMMEN_7660.csv ALEN_67780.csv ALESUND_IV_01224.csv ALFOTEN_II_57940.csv AL_III_25320.csv ALSVAG_I_VESTERALEN_II_86950.csv ALTA_LUFTHAVN_01049.csv ALVUNDFJORD_64580.csv AMOTSDAL_32350.csv ANDALSNES_61350.csv ANDOYA_01010.csv ANGARDSVATNET_63580.csv ARENDAL_BRANNSTASJON_II_36110.csv ARNES_4920.csv AS_01463.csv ASERAL_41480.csv ASKER_01486.csv ASK_PA_RINGERIKE_24100.csv ATNDALEN_ERIKSRUD_8770.csv ATNDALEN_RONNINGEN_8450.csv ATNSJOEN_8720.csv AUNET_68420.csv AURLAND_53700.csv AURSKOG_II_01484.csv AURSUND_10600.csv BAKKE_42720.csv BANAK_01059.csv BANGDALEN_72250.csv BARDAL_78350.csv BARDUFOSS_01023.csv BARKESTAD_86850.csv BATEROD_3200.csv BEITO_23560.csv BERGELIGREND_30860.csv BERGEN_FLORIDA_01317.csv BERKAK_TERMINALVEIEN_66720.csv BESSAKER_71900.csv BIRI_11900.csv BJERKA_VALLA_78370.csv

	BJORHEIM_I_RYFYLKE_45600.csv BJORKASEN_84070.csv BJORNHOLT_01489.csv BLANKTJERNMOEN_I_KVIKNE_9870.csv BODO_VI_01152.csv BO_I_VESTERALEN_III_01156.csv BONES_I_BARDU_88100.csv BORLO_54500.csv BORSELV_II_95590.csv BOTNEN_I_FORDE_57480.csv BOTNHAMN_88660.csv BOVERDAL_15430.csv BOYLEFOSS_36490.csv BRATA_SLETTOM_01360.csv BREIVOLL_71750.csv BREKKE_I_SOGN_52930.csv BREKKE_SLUSE_1400.csv BRONNOYSUND_LUFTHAVN_01112.csv BRUSDALSVATN_II_60890.csv BUHOLMRASA_FYR_01259.csv BULKEN_01336.csv BURAN_69960.csv BYGLANDSFJORD_NESET_01442.csv BYKLE_KULTRAN_40420.csv CUOVDDATMOHKKI_01057.csv DAGALI_LUFTHAVN_01363.csv DAVIKNES_57850.csv DIVIDALEN_II_01198.csv DOMBAS_NORDIGARD_01233.csv DOVLAND_38380.csv DRAMMEN_BERSKOG_01480.csv DRANGEDAL_REFSDALSKILEN_34580.csv DRAUGEN_76925.csv DREVSJO_01393.csv DREVVASSBYGDA_78180.csv DROBAK_DYRLOKKE_17741.csv EGERSUND_43360.csv EGGEDAL_III_26380.csv EIDE_PA_NORDMORE_62900.csv EIDFJORD_II_49631.csv EIDSVOLL_VERK_11120.csv EIKANGER_MYR_52400.csv EIKEFJORD_57680.csv EIKELAND_35090.csv EIKEMO_47820.csv EIK_HOVE_01425.csv EIMHJELLEN_57660.csv EINAVATN_11710.csv

	EINUNNA_KRAFTVERK_8970.csv EKSET_I_VOLDA_59670.csv EKSINGEDAL_52170.csv ELLEFSPLASS_770.csv ELVERUM_FAGERTUN_6620.csv ENEBAKK_BARBOL_4040.csv ERESFJORD_61820.csv ESPEDALEN_13700.csv ETNE_47500.csv ETNE_II_47498.csv EVENES_LUFTHAVN_01183.csv EVENSTAD_01383.csv FAERDER_FYR_01482.csv FAGERNES_01367.csv FALLMOEN_77270.csv FAMVATNET_78770.csv FANA_STEND_50450.csv FAVANG_TROMSNES_13140.csv FEDAFJORDEN_II_42250.csv FET_I_EIDFJORD_01340.csv FINSEVATN_01350.csv FINSLAND_41200.csv FINSTAD_7900.csv FISKABYGD_59610.csv FISTER_SIGMUNDSTAD_01422.csv FITJAR_PRESTBO_48250.csv FJAERLAND_BREMUSEET_01332.csv FLEKKEFJORD_42650.csv FLESLAND_01311.csv FLISA_II_01392.csv FLORO_LUFTHAMN_01310.csv FLOTER_17500.csv FOKSTUGU_01238.csv FOLDSAE_37500.csv FOLLDAL_FREDHEIM_01250.csv FORDE_LH_BRINGELAND_01323.csv FORDE_TEFRE_57420.csv FRESVIK_53130.csv FROYSET_52750.csv FRUHOLMEN_FYR_01055.csv FYRESDAL_ALANDSLI_37740.csv GARDERMOEN_01384.csv GAUSTATOPPEN_01461.csv GAUSVIK_87750.csv GEILO_01359.csv GEILO_OLDEBRATEN_01359.csv GJENGEDAL_57990.csv GJERSTAD_I_AUST-AGDER_35200.csv

	GLOMFJORD_80700.csv GLOTVOLA_TROAN_610.csv GODAL_30380.csv GOL_STAKE_24960.csv GRIMELI_I_KRODSHERAD_24600.csv GRONNING_60620.csv GROV_SOLHAUG_14711.csv GRUNNFARNES_88460.csv GRUNNFJORD_STAKKEN_90650.csv GULLBRA_52220.csv GULSVIK_II_01376.csv GVARV_NES_01470.csv HAFSAS_63530.csv HAFSLO_55550.csv HAKAVIK_26670.csv HALDEN_1230.csv HALSAFJORD_II_64460.csv HALTEN_FYR_01240.csv HAMMERFEST_LUFTHAVN_01052.csv HARSTAD_STADION_01180.csv HASJOEN_SOLGLOTT_10300.csv HATLESTRAND_50150.csv HAUGESUND_LUFTHAVN_01408.csv HAUKEDAL_56960.csv HAUKELAND_STOREVATN_52601.csv HEDAL_I_VALDRES_II_22730.csv HEDRUM_27800.csv HEGGERISET_NORDSTRAND_420.csv HEGRA_II_69230.csv HEIDRUN_76928.csv HEKKINGEN_FYR_01015.csv HELLAND_I_GJESDAL_44520.csv HELLIGVAER_II_01144.csv HEMNE_LENES_65230.csv HEMSEDAL_HOLTO_25100.csv HEREFOSS_38450.csv HIASEN_26240.csv HILDRE_61040.csv HITRA_65600.csv HITRA_SANDSTAD_II_01237.csv HOGNESTAD_44160.csv HOIDALEN_I_SOLUM_32780.csv HOLE_20250.csv HONNINGSVAG_LUFTHAVN_01068.csv HORNI_19610.csv HORNINDAL_58960.csv HOVDEN_LUNDANE_01441.csv HOVDGRENDA_13450.csv

	HOVLANDSDAL_56520.csv HOVRINGEN_II_16271.csv HOYANGER_VERK_56010.csv HOYDALSMO_II_01447.csv HUNDSEID_I_VIKEDAL_46850.csv HUSNES_48450.csv HUSTADVATN_62700.csv HVALER_1080.csv IGSI_I_HOBOL_3780.csv ILSENG_12180.csv IMS_44760.csv INNSET_I_BARDU_89650.csv INNVIK_HEGGDAL_58390.csv ISTAD_KRAFTSTASJON_62160.csv JOMFRULAND_01476.csv JONSBERG_LANDBRUKSSKOLE_12200.csv JORDALEN_NASEN_53160.csv JOTKAJAVRE_93500.csv JUNKERDAL_81730.csv JUVVASSHOE_01362.csv KARASJOK_MARKANNJARGA_01065.csv KAUTOKEINO_01047.csv KILEGREND_37650.csv KINSARVIK_49550.csv KIRKENES_LUFTHAVN_01089.csv KISE_PA_HEDMARK_01382.csv KJELSAS_I_SORKEDALEN_19100.csv KJERRINGOY_OS_82530.csv KJEVIK_01452.csv KLUKSDAL_69420.csv KONGSBERG_BRANNSTASJON_01473.csv KONGSVINGER_01468.csv KONSMO_HOYLAND_41670.csv KRAKENES_01203.csv KRISTIANSUND_LUFTHAVN_01223.csv KVAMSKOGEN_JONSHOGDI_01327.csv KVAVIK_41820.csv KVIKNE_I_OSTERDAL_66850.csv KVINESHEI_SORHELLE_41860.csv KVITESEID_MOEN_32850.csv KVITFJELL_01375.csv KVITHAMAR_01270.csv KVITSOY_NORDBO_01411.csv LAERDAL_IV_01355.csv LANDVIK_01464.csv LARVIK_30000.csv LAUDAL_KLEIVEN_01439.csv LAVIK_56320.csv

	LEBESBY_KARLMYHR_96220.csv LEINSTRAND_67150.csv LEIRFJORD_78250.csv LEKNES_I_LOFOTEN_85540.csv LEKNES_LUFTHAVN_01141.csv LEKSVIK_MYRAN_71280.csv LESJASKOG_61770.csv LESJA_SVANBORG_16790.csv LIAFOSS_75100.csv LIEN_I_SELBU_68330.csv LIFJELL_32200.csv LILLEHAMMER_SAETHERENGEN_01378.csv LINDESNES_FYR_01436.csv LINNES_60.csv LISTA_FYR_01427.csv LITLEDAL_47600.csv LJOSLAND_MONEN_41550.csv LOKEN_I_VOLBU_01371.csv LOKSMYR_68270.csv LUNNER_20520.csv LUROY_80200.csv LYKKJA_I_HEMSEDAL_23390.csv LYNGOR_FYR_01467.csv LYSEBOTN_45350.csv MAKKAUR_FYR_01092.csv MANDAL_III_01430.csv MARIDALSOSET_18450.csv MARISTOVA_54600.csv MAUDAL_43810.csv MELSOM_01481.csv MERAKER_VARDETUN_01293.csv MESNA_TYRIA_12800.csv MESTAD_I_ODDERNES_39220.csv MJOEN_63750.csv MJOLFJELL_UH_01344.csv MODALEN_III_01326.csv MODUM_S_KOPLAND_26161.csv MOGEN_31660.csv MO_I_RANA_III_79480.csv MO_I_RANA_LUFTHAVN_01151.csv MOLDE_LUFTHAVN_01217.csv MOSJOEN_LUFTHAVN_01122.csv MOSS_BRANNSTASJON_17251.csv MOSSTRAND_II_01450.csv MOSVATN_HAUG_31570.csv MOSVIK_TROAHAUGEN_71200.csv MYKEN_01115.csv MYKLAND_38600.csv

	MYKLEBUST_I_BREIM_58320.csv NAMDALSEID_72100.csv NAMSOS_LUFTHAVN_01290.csv NAMSSKOGAN_01281.csv NAMSSKOGAN_-_BERGLI_74530.csv NARVIK_LUFTHAVN_84700.csv NELAUG_01459.csv NESBYEN_TODOKK_01373.csv NES_PA_HEDMARK_12520.csv NORDDAL_60400.csv NORDFJORDEID_NYMARK_58780.csv NORDLI_HOLAND_73500.csv NORD-ODAL_5350.csv NORDOYAN_FYR_01262.csv NORDSTRAND_18160.csv NORDSTRAUM_I_KVAENANGEN_01045.csv NOTODDEN_30530.csv NOTODDEN_LUFTHAVN_30650.csv OBRESTAD_FYR_01412.csv ODNES_21360.csv OKSENDAL_63100.csv OKSNINGOY_76100.csv OKSOY_FYR_01448.csv OLDEDALEN_58480.csv OLSTAPPEN_13640.csv OLTEDAL_44900.csv ONA_II_01212.csv OPPDAL_SAETER_01245.csv OPSTVEIT_47890.csv ORJE_1950.csv ORLAND_III_01241.csv ORSJOSETRA_250.csv ORSKOG_60800.csv ORSTA_VOLDA_LUFTHAMN_01209.csv ORTNEVIK_52990.csv OSLO_BLINDERN_01492.csv OSTAS_I_HEGRA_69550.csv OSTRE_TOTEN_APELSVOLL_01381.csv OTTEROY_75020.csv OVERHALLA_UNNSET_72650.csv OVRE_ARDAL_54780.csv OVRE_KROSSDALEN_49080.csv OVRE_SIRDAL_42950.csv OVSTEDAL_51250.csv OYSTESE_BORGE_50080.csv PLASSEN_100.csv POLMAK_TOLLSTED_96931.csv PORSA_II_94130.csv

	PORSGRUNN_BRANNSTASJON_30260.csv POSTMYR_I_DRANGEDAL_34900.csv PRESTSTULEN_14550.csv RAMNES_BERG_27301.csv RAULAND_33250.csv REFVIK_59250.csv REINE_85660.csv REINLI_22840.csv REIPA_01114.csv RENA_FLYPLASS_01389.csv RENNEBU_RAMSTAD_66620.csv RINDAL_64900.csv RISNES_I_FJOTLAND_42520.csv RISOR_BRANNSTASJON_35340.csv RJUKAN_31410.csv ROLDAL_46450.csv ROROS_LUFTHAVN_01288.csv RORVIK_LUFTHAVN_01282.csv RORVIKVATN_VED_VADHEIM_56280.csv ROSBJORGEN_67540.csv ROSENDAL_48500.csv ROSSVATN_HEGGMO_78850.csv ROST_LUFTHAVN_01107.csv ROVERUD_5660.csv RUSTEFJELBMA_96800.csv RYGGE_01494.csv SAEBO_59900.csv SAERHEIM_01413.csv SAETERMOEN_II_89500.csv SANDANE_58070.csv SANDANE_LUFTHAMN_01320.csv SANDEFJORD_27600.csv SANDE_GALLEBERG_01485.csv SAND_I_RYFYLKE_II_46150.csv SANDNESSJOEN_LH_STOKKA_01116.csv SARPSBORG_01493.csv SAUDA_01424.csv SAUSVATN_SKOGMO_76380.csv SELBU_II_01273.csv SENUMSTAD_38421.csv SIHCCAJAVRI_01199.csv SIRBMA_96970.csv SJOA_14050.csv SKABU_01370.csv SKAIDI_II_94170.csv SKEI_I_JOLSTER_57390.csv SKIBOTN_II_01037.csv SKIEN_ELSTROM_30320.csv

	SKJAEKERFOSSEN_70480.csv SKJAK_15660.csv SKJAK_II_15480.csv SKJENALDFOSSEN_I_ORKDAL_66070.csv SKJOLD_FROVIK_47090.csv SKJOMEN_STIBERG_84190.csv SKLINNA_FYR_01102.csv SKOGFOSS_99500.csv SKROVA_FYR_01160.csv SLATTEROY_FYR_01406.csv SLETTNES_FYR_01078.csv SLIPER_71370.csv SMOLA_MOLDSTAD_65370.csv SNASA_KJEVLIA_01124.csv SNASA_NAGELHUS_70930.csv SOGNDAL_LUFTHAMN_01347.csv SOGNDAL_SELSENG_55730.csv SOGNEFJELLHYTTA_01366.csv SOKNA_II_24210.csv SOLA_01415.csv SOLENDET_01287.csv SOLVAER_III_01121.csv SOMNA_STEIN_76250.csv SONGLI_66100.csv SORE_BREKKOM_13310.csv SORKJOSEN_LUFTHAVN_01046.csv SORLI_73250.csv SORTLAND_86500.csv SOVATNET_65270.csv SOYLAND_I_GJESDAL_44480.csv STADLANDET_59450.csv STAVANGER_VALAND_01416.csv STEIGEN_83300.csv STEINKJER_SONDRE_EGGE_01277.csv STOKKE_SOLLI_27770.csv STOKMARKNES_LH_SKAGEN_01162.csv STORSTEINNES_I_BALSFJORD_90200.csv STRAUMOY_47450.csv STROMSFOSS_SLUSE_1650.csv STROMTANGEN_FYR_01495.csv STRYN_KROKEN_01321.csv STUGUDAL_KASEN_68840.csv STYRKESNES_HESTVIKA_82840.csv SULA_01228.csv SULDALSVATN_46300.csv SULITJELMA_81900.csv SUNDSFJORD_TVERRLIA_80840.csv SUNNDALSORA_III_63420.csv

	SUOLOVUOPMI_LULIT_01058.csv SURNADAL_64800.csv SUSENDAL_77850.csv SVELGEN_II_57810.csv SVILAND_44800.csv SVINOY_FYR_01205.csv SVOLVAER_LUFTHAVN_01161.csv SYGNA_56780.csv TAFJORD_01218.csv TAKLE_01319.csv TESSUNGDALEN_BAKKHUS_31080.csv TOMMERNESET_83520.csv TONSTAD_NETTFED_42810.csv TORDAL_SUVDOLA_34800.csv TORSVAG_FYR_01033.csv TORUNGEN_FYR_01465.csv TOVDAL_38800.csv TROMSO_01026.csv TROMSO_HOLT_01027.csv TROMSO_LANGNES_01025.csv TRONDHEIM_VOLL_01257.csv TRONES_TROMSSTAD_74320.csv TRYSIL_VEGSTASJON_01397.csv TRYVANNSHOGDA_01490.csv TUDDAL_31900.csv TUFSINGDAL_MIDTDAL_810.csv TUNHOVD_29600.csv TUNNSJO_73800.csv TUSTERVATNET_II_78610.csv TVEITSUND_01455.csv TYNSET_HANSMOEN_01265.csv TYSSEDAL_IA_49351.csv UKKESTAD_4740.csv ULLENSVANG_FORSOKSGARD_01342.csv UTGARD_70820.csv UTSIRA_FYR_01403.csv UVDAL_KRAFTVERK_29350.csv VADSO_LUFTHAVN_01088.csv VAERNES_01271.csv VAEROY_HELIPORT_01139.csv VAGSLI_01434.csv VALDALEN_730.csv VALLE_01444.csv VANG_I_VALDRES_23720.csv VANGSNES_01338.csv VARDO_RADIO_01098.csv VARNTRESK_01147.csv VATS_I_VINDAFJORD_01417.csv

	VATS_RANDEN_25260.csv VEA_12600.csv VEGA_VALLSJO_01108.csv VEGGLI_II_01471.csv VEIDNES_I_LAKSEFJORD_95900.csv VEIHOLMEN_01225.csv VEINES_I_NEIDEN_99330.csv VEITASTROND_55670.csv VENABU_01380.csv VERA_II_70510.csv VERDAL_REPPE_70150.csv VERMA_61550.csv VERMUNDSJOEN_6440.csv VESTRE_GAUSDAL_13100.csv VEST-TORPA_II_01374.csv VIGMOSTAD_41640.csv VIGRA_01210.csv VIK_I_SOGN_III_53070.csv VIKSDALEN_I_GAULAR_56850.csv VINTERTUN_47750.csv VOSSEVANGEN_01337.csv YTRE_SOLUND_56400.csv YTTEROYANE_FYR_01304.csv

Poland, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 51 stations in individual CSV files.

Excel Files	CSV Files
N/A	Bialystok_12295.csv BielskoBiala_12600.csv Chojnice_12235.csv GorzowWielkopolski_12300.csv Hel_12135.csv JeleniaGora_12500.csv Kalisz_12435.csv KasprowyWierch_12650.csv Katowice_12560.csv Ketrzyn_12185.csv KielceSukow_12570.csv Klodzko_12520.csv Kolo_12345.csv Koszalin_12105.csv Kozienice_12488.csv KrakowBalice_12566.csv Krosno_12670.csv Leba_12120.csv Lebork_12125.csv Legnica_12415.csv Lesko_12690.csv LesznoStrzyzewice_12418.csv LodzLublinek_12465.csv LublinRadawiec_12495.csv Mlawa_12270.csv NowySacz_12660.csv Olsztyn_12272.csv Opole_12530.csv Pila_12230.csv PlockTrzepowo_12360.csv Poznan_12330.csv RaciborzStudzienna_12540.csv RzeszowJasionka_12580.csv Sandomierz_12585.csv Siedlce_12385.csv Slubice_12310.csv Sniezka_12510.csv Sulejow_12469.csv Suwalki_12195.csv Swinoujscie_12200.csv SzczecinDabie_12205.csv

	Tarnow_12575.csv Terespol_12399.csv Torun_12250.csv Ustka_12115.csv WarszawaOkecie_12375.csv Wielun_12455.csv Wlodawa_12497.csv Wroclaw_12424.csv Zakopane_12625.csv ZielonaGora_12400.csv

Bosnia and Herzegovina, Republic of Srpska, 1991-2020 Climatological Normals

The WMO Member provided data for 12 stations in a single Excel file with multiple spreadsheets. NCEI converted the Excel file spreadsheets to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

Users are asked to note that the Mean Vapor Pressure annual value for two stations (Banjaluka and Bijeljina) were provided as sums of the monthly values rather than an average. NCEI recomputed the annual values and included them in the CSV files (Banjaluka_14542.csv and Bijeljina_14562.csv).

The original Excel file is provided along with the CSV files.

Excel Files	**CSV Files**
Srpska_WMO_Normals_9120.xlsx	Banjaluka_14542.csv Bijeljina_14562.csv Bileca_14667.csv Cemerno_14656.csv Doboj_14551.csv Han_Pijesak_14565.csv Novi_Grad_14535.csv Prijedor_14536.csv Sokolac_14658.csv Srbac_14538.csv Trebinje_14668.csv Visegrad_14662.csv

Romania, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 26 stations in individual CSV files.

Users are asked to note that the original files had latitude displayed as longitude and vice versa. NCEI corrected the latitude/longitude in each file before publishing.

Excel Files	CSV Files
N/A	Arad_15200.csv Bacau_15150.csv Bistrita_15085.csv Botosani_15020.csv BucurestiBaneasa_15420.csv Buzau_15350.csv Calarasi_15460.csv Caransebes_15292.csv CeahlauToaca_15108.csv ClujNapoca_15120.csv Constanta_15480.csv Craiova_15450.csv Deva_15230.csv DrobetaTurnuSeverin_15410.csv Galati_15310.csv Iasi_15090.csv MiercureaCiuc_15170.csv OcnaSugatag_15015.csv RamnicuValcea_15346.csv RosiorideVede_15470.csv Sibiu_15260.csv Suceava_15023.csv Sulina_15360.csv Timisoara_15247.csv Tulcea_15335.csv VarfuOmu_15280.csv

Russian Federation Europe, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 53 stations in individual CSV files.

Excel Files	CSV Files
N/A	AleksandrovGaj_34391.csv ArhangelSk_22550.csv Armavir_37031.csv Astrahan_34880.csv Cimljansk_34646.csv ElatMa_27648.csv Elista_34861.csv Feodosiia_33976.csv Gridino_22422.csv Gudermes_37244.csv Kaliningrad_26702.csv KamennajaStep_34139.csv KamenskSahtinskij_34535.csv Kandalaksha_22217.csv KaninNos_22165.csv Kazan_27595.csv KemPort_22520.csv Kerch_33983.csv Kirov_27199.csv Kojnas_22583.csv Kostroma_27333.csv Kotlas_22887.csv Kursk_34009.csv Mahachkala_37472.csv MineralNyeVody_37054.csv Moskva_27612.csv Murmansk_22113.csv NizhnijNovgor_27459.csv Novgorod_26179.csv OktyabrskyGorodok_34163.csv Onega_22641.csv Pavelets_27823.csv Petrozavodsk_22820.csv PrimorskoAhtarsk_34824.csv Pskov_26258.csv Reboly_22602.csv Roslavl_26882.csv RostovNaDonu_34630.csv Saratov_34178.csv Simferopol_33946.csv Smolensk_26781.csv

	Sortavala_22802.csv Sotchi_37099.csv StPetersburg_26063.csv Tambov_27947.csv TotMa_27051.csv Tuapse_37018.csv VelikieLuki_26477.csv Vologda_27037.csv Voronez_34123.csv VysnijVolocek_26393.csv Vytegra_22837.csv Yashkul_34866.csv

Serbia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for three (3) stations in individual Excel files. NCEI converted the Excel files to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel files are provided along with the CSV files.

Excel Files	CSV Files
Beograd_13274.xls	Beograd_13274.csv
Nis_13388.xls	Nis_13388.csv
NoviSad_13168.xls	NoviSad_13168.csv

Slovakia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 23 stations in a single Excel file with multiple spreadsheets. NCEI converted the Excel file spreadsheets to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel file is provided along with the CSV files.

Excel Files	CSV Files
Slovakia_WMO_Normals_9120.xlsx	BOLKOVCE_11927.csv BRATISLAVA_AIRPORT_11816.csv BRATISLAVA_KOLIBA_11813.csv CHOPOK_11916.csv DOLNY_HRICOV_11841.csv DUDINCE_11880.csv GANOVCE_11952.csv HURBANOVO_11858.csv JASLOVSKE_BOHUNICE_11819.csv KAMENICA_NAD_CIROCHOU_11993.csv KOSICE_AIRPORT_11968.csv LIESEK_11918.csv LOMNICKY_STIT_11930.csv MILHOSTOV_11978.csv NITRA_VELKE_JANIKOVCE_11855.csv PIESTANY_11826.csv POPRAD_11934.csv PRESOV_VOJSKO_11955.csv PRIEVIDZA_11867.csv SLIAC_11903.csv STRBSKE_PLESO_11933.csv TELGART_11938.csv TISINEC_11976.csv

Slovenia, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for nine (9) stations in individual CSV files.

Additional information from the WMO Member is included below.

Excel Files	CSV Files
N/A	Celje_14023.csv Kredarica_14008.csv LjubljanaBezigrad_14015.csv MariborSlivnica_14026.csv MurskaSobota_14031.csv NovaGorica_14106.csv Novomesto_14121.csv Ratece_14007.csv SlovenjGradec_14021.csv

Additional Explanatory Information provided by the WMO Member

Normals 1991-2020

Precipitation total
Observation day: from 7.00 local solar time of the previous day to 7.00 solar time of the day of measurement.

Temperature
Observation day: three measurements of temperature daily, at 7.00, 14.00 (2 P. M.) and 21.00 (9 P. M.): T7, T14 and T21. Mean daily temperature is defined as weighted average: (T7 + T14 + 2*T21)/4.
Maximum and minumum temperature from maximum and minimum termometer, time interval from 21 (9 P. M.) previous day to 21.00 (9 P. M.) of the day of measurement. On automatic weather stations the same measurement interval, minimum and maximum temperature in this interval (21.00 previous day to 21.00 of the day of measurement).

Sea-level pressure
Daily values are calculated as the mean of three daily measurements, at 7.00, 14.00 (2 P. M.) and 21.00 (9 P. M.) solar time.

Vapour pressure
Daily values are calculated as the mean of three daily values, at 7.00, 14.00 (2 P. M.) and 21.00 (9 P. M.) solar time.

Spain, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 83 stations in individual CSV files.

Excel Files	CSV Files
N/A	ACORUNA_8001.csv ACORUNAALVEDRO_8002.csv ALBACETELOSLLANOS_8280.csv ALICANTE_8359.csv ALICANTEELCHEAEROPUERTO_8360.csv ALMERIAAEROPUERTO_8487.csv ASTURIASAVILES_8011.csv AVILA_8210.csv BADAJOZTALAVERALAREAL_8330.csv BARCELONAAEROPUERTO_08181.csv BILBAOAEROPUERTO_8025.csv BURGOSVILLAFRIA_8075.csv CACERES_8261.csv CADIZOBS_8452.csv CASTELLONALMASSORA_8286.csv CIUDADREAL_8348.csv COLMENARVIEJOFAMET_8219.csv CORDOBAAEROPUERTO_8410.csv CUENCA_8231.csv DAROCA_8157.csv FORONDATXOKIZA_8080.csv FUERTEVENTURAAEROPUERTO_60035.csv GIRONACOSTABRAVA_08184.csv GRANADAAEROPUERTO_8419.csv GRANADABASEAEREA_8420.csv GRANCANARIAAEROPUERTO_60030.csv HIERROAEROPUERTO_60001.csv HONDARRIBIAMALKARROA_8029.csv HUELVARONDAESTE_8383.csv HUESCAAEROPUERTO_8094.csv IBIZAESCODOLA_8373.csv IZANA_60010.csv JAEN_8417.csv JEREZDELAFRONTERAAEROPUERTO_8451.csv LANZAROTEAEROPUERTO_60040.csv LAPALMAAEROPUERTO_60005.csv LEONVIRGENDELCAMINO_8055.csv LLEIDA_8171.csv LOGRONOAEROPUERTO_8084.csv LUGOROZAS_8008.csv MADRIDBARAJAS_8221.csv

	MADRIDCUATROVIENTOS_8223.csv MADRIDGETAFE_8224.csv MADRIDRETIRO_8222.csv MADRIDTORREJON_8227.csv MALAGAAEROPUERTO_8482.csv MELILLA_60338.csv MENORCAAEROPUERTO_8314.csv MOLINADEARAGON_8232.csv MORONDELAFRONTERA_8397.csv MURCIA_8430.csv MURCIAALCANTARILLA_8429.csv MURCIASANJAVIER_8433.csv NAVACERRADAPUERTO_8215.csv OURENSE_8048.csv OVIEDO_8015.csv PALMADEMALLORCASONSANJUAN_8306.csv PALMAPUERTO_8301.csv PAMPLONAAEROPUERTO_8085.csv PONFERRADA_8053.csv PONTEVEDRA_8044.csv REUSAEROPUERTO_08175.csv ROTABNOBSERVATORIO_8449.csv SALAMANCAMATACAN_8202.csv SANSEBASTIANIGUELDO_8027.csv SANTANDERPARAYAS_8021.csv SANTIAGODECOMPOSTELALABACOLLA_8042.csv SEGOVIA_8213.csv SEVILLASANPABLO_8391.csv SORIA_8148.csv STACRUZDETENERIFE_60020.csv TENERIFELOSRODEOS_60015.csv TENERIFESUR_60025.csv TERUEL_8235.csv TOLEDO_8272.csv TORTOSA_8238.csv VALENCIA_8285.csv VALENCIAAEROPUERTO_8284.csv VALLADOLID_8141.csv VALLADOLIDVILLANUBLA_8140.csv VIGOPEINADOR_8045.csv ZAMORA_8130.csv ZARAGOZAAEROPUERTO_8160.csv

Sweden, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 406 stations in individual CSV files.

Excel Files	CSV Files
N/A	Abelvattnet_Aut_02105.csv Abisko_Aut_02022.csv Abraur_02144.csv Adelso_A_02486.csv Akershus_02530.csv Allgunnen_02568.csv Almagrundet_A_02499.csv Aluokta_02026.csv Alvdalen_2_02328.csv Alvdalen_A_02321.csv Alvhem_02522.csv Alvsbyn_A_02173.csv Amal_02409.csv Amot_A_02440.csv Angelholm_Barkakra_Flygplats_02607.csv Are_Bjornange_V_02217.csv Areskutan_Aut_02215.csv Arjeplog_A_02124.csv Arvidsjaur_A_02149.csv Arvika_02404.csv Arvika_A_02411.csv Asbracka_Torpabron_V_02515.csv Asele_A_02254.csv Asphyttan_02422.csv Atorp_02428.csv Axstal_02545.csv Backa_02430.csv Bastorp_02502.csv Berga_02489.csv Bjuroklubb_02296.csv Bjuroklubb_A_02297.csv Blahammaren_A_02210.csv Blomskog_02406.csv Blomskog_A_02408.csv Boden_02171.csv Borgunda_02534.csv Borlange_Flygplats_02435.csv Borlange_Sol_02437.csv Bortnan_A_02319.csv Bramon_A_02368.csv Brattmon_V_02413.csv

	Bredbyn_D_02266.csv Buresjon_A_02135.csv Daglosen_A_02429.csv Delsbo_02346.csv Delsbo_A_02347.csv Dikanas_02118.csv Dravagen_A_02317.csv Dunker_02448.csv Edevik_02200.csv Edsbyn_02336.csv Edsbyn_A_02338.csv Eftra_Broen_V_02603.csv Eggegrund_A_02450.csv Enkoping_02443.csv Erikstad_Bergarud_V_02521.csv Eskilstuna_02447.csv Eskilstuna_A_02449.csv Esrange_02043.csv Fagre_D_02543.csv Fallfors_02158.csv Fallfors_02159.csv Falsterbo_02616.csv Falsterbo_A_02615.csv Falun_Lugnet_02433.csv Faro_D_02588.csv Farosund_Ar_A_02587.csv Farstugrunden_Aut_02189.csv Fellingsbro_Finnaker_02439.csv Film_A_02456.csv Finneby_02334.csv Fjallnas_02300.csv Flatruet_V_02303.csv Floda_A_02476.csv Flotningen_02304.csv Folkarna_02444.csv Follinge_A_02231.csv Follinge_Vagskalet_02224.csv Fransta_2_02342.csv Fredrika_02264.csv Fredrika_A_02263.csv Furuogrund_02290.csv Gaddede_02222.csv Gaddede_A_02219.csv Gallivare_A_02049.csv Gardsjo_A_02546.csv Gavle_A_02453.csv Gielas_A_02110.csv Gladhammar_A_02559.csv

	Glommen_02600.csv Goteborg_A_02513.csv Goteborg_Landvetter_Flygplats_02526.csv Goteborg_Sol_02531.csv Gotska_Sandon_02584.csv Gotska_Sandon_A_02589.csv Grundkallen_02471.csv Gubbhogen_A_02230.csv Gunnarn_02128.csv Gunnarn_A_02126.csv Gustaf_Dalen_A_02583.csv Gustavsfors_02412.csv Gustavsfors_A_02426.csv Hagshult_02556.csv Hallands_Vadero_A_02605.csv Hallhaxasen_A_02236.csv Hallum_A_02542.csv Halmstad_flygplats_02604.csv Hamra_A_02329.csv Hangstad_02402.csv Hano_A_02628.csv Haparanda_A_02197.csv Haparanda_D_02196.csv Harnosand_02361.csv Harstena_02586.csv Harstena_A_02563.csv Hastveda_02629.csv Helsingborg_A_02611.csv Hemavan_Flygplats_02101.csv Hemavan_Gierevarto_A_02103.csv Hemling_A_02265.csv Herrvik_D_02596.csv Hestra_D_02538.csv Hoburg_A_02679.csv Hoburg_D_02680.csv Hoburg_Sol_02678.csv Hokmarksberget_V_02292.csv Holmogadd_A_02288.csv Holmon_A_02287.csv Horby_A_02623.csv Horn_A_02557.csv Hoting_A_02242.csv Hud_V_02507.csv Hunge_02330.csv Hunge_A_02331.csv Hunnestorp_V_02602.csv Idre_Fjall_A_02307.csv Idvattnet_02252.csv

	Jarnasklubb_A_02284.csv Jokkmokk_02142.csv Jokkmokk_Flygplats_02151.csv Jonkoping_02551.csv Jonkoping_Axamos_Flygplats_02550.csv Junsele_02244.csv Junsele_A_02243.csv Kalmar_flygplats_02670.csv Karats_02131.csv Karesuando_02080.csv Karesuando_A_02081.csv Karlsborg_02544.csv Karlskrona_Soderstjerna_02667.csv Karlskrona_Sol_02665.csv Karlstad_Aut_02415.csv Karlstad_Flygplats_02418.csv Karlstad_Sol_02419.csv Katterjakk_02020.csv Katterjakk_A_02019.csv Kerstinbo_A_02482.csv Kettstaka_A_02554.csv Kilsbergen_Suttarboda_A_02452.csv Kiruna_Flygplats_02044.csv Kiruna_Sol_02045.csv Klimpfjall_02108.csv Kloten_A_02431.csv Klovsjo_02323.csv Klovsjohojden_A_02325.csv Kolmarden_Stromsfors_A_02558.csv Kompelusvaara_02088.csv Korpilombolo_M_02190.csv Korsvattnet_A_02221.csv Kosta_02661.csv Kramfors_Gistgardson_02259.csv Krangede_A_02247.csv Kristianstad_02649.csv Kristianstad_Everod_02651.csv Kroppefjall_Granan_A_02540.csv Kuggoren_A_02355.csv Kullen_02606.csv Kvarn_02561.csv Kvarnberg_D_02326.csv Kvikkjokk_Arrenjarka_02120.csv Kvikkjokk_Arrenjarka_A_02119.csv Kymbo_V_02553.csv Lainio_02086.csv Lakatrask_A_02174.csv Landsort_02582.csv

	Landsort_A_02567.csv Lannavaara_D_02084.csv Latnivaara_A_02038.csv Lillviken_Roparudden_V_02130.csv Linkoping_Malmslatt_02562.csv Ljungby_A_02622.csv Ljungbyhed_02630.csv Ljungskile_02510.csv Lofsdalen_02314.csv Lulea_Kallax_Flygplats_02186.csv Lulea_Sol_02183.csv Lund_02631.csv Lund_LTH_02627.csv Lund_Sol_02633.csv Lungo_A_02382.csv Lycksele_A_02261.csv Mala_Brannan_A_02147.csv Malexander_02564.csv Malexander_A_02552.csv Malilla_02566.csv Malilla_A_02565.csv Malmberget_02048.csv Malmo_A_02635.csv Malmo_Sturup_Flygplats_02636.csv Malung_02410.csv Malung_A_02407.csv Markaryd_02624.csv Maseskar_02508.csv Maseskar_A_02505.csv Mattmar_V_02216.csv Mierkenis_A_02121.csv Mierkenis_Aut_02007.csv Mockfjard_02420.csv Molkom_02416.csv Molla_02524.csv Mora_A_02441.csv Morsil_02218.csv Mosekalla_02104.csv Mossen_02577.csv Muodoslompolo_02092.csv Myrheden_02156.csv Naimakka_02060.csv Naimakka_A_02055.csv Nassjo_02555.csv Nasudden_Aut_02599.csv Nattavaara_A_02161.csv Nattavaara_by_02160.csv Naven_A_02403.csv

	Nedre_Soppero_V_02054.csv Nidingen_A_02518.csv Nikkaluokta_A_02036.csv Nordkoster_A_02500.csv Nordkoster_Sol_02503.csv Nordmaling_02276.csv Norraker_D_02232.csv Norrberg_Norrhog_V_02337.csv Norrkoping_Kungsangen_02571.csv Norrkoping_SMHI_02574.csv Norrkoping_Sol_02071.csv Norrkoping_Sorby_02570.csv Norrtalje_Vasby_02480.csv Norsjo_02270.csv Norsjo_A_02271.csv Nykopings_Flygplats_02572.csv Olandsbron_V_02646.csv Olands_norra_udde_02592.csv Olands_norra_udde_A_02575.csv Olands_sodra_grund_Aut_02685.csv Olands_sodra_udde_02676.csv Olands_sodra_udde_A_02644.csv Orby_02528.csv Orebro_D_02436.csv Orebro_Flygplats_02432.csv Orja_Aut_02610.csv Ornskoldsviks_Flygplats_02267.csv Orskar_A_02488.csv Osby_02626.csv Oskarsgrundet_Aut_02614.csv Ostergarnsholm_A_02598.csv Ostersund_02227.csv Ostersund_Froson_Flygplats_02226.csv Ostersund_Sol_02229.csv Ostmark_Lambacken_02400.csv Overkalix_Svartbyn_02182.csv Overkalix_Svartbyn_A_02181.csv Paharova_A_02184.csv Pajala_02096.csv Pajala_A_02095.csv Palkem_M_02164.csv Parkalompolo_A_02072.csv Petistrask_A_02282.csv Pite_Ronnskar_A_02176.csv Rangedala_A_02536.csv Rensjon_A_02031.csv Riddarhyttan_02434.csv Ringhals_Aut_02519.csv

	Ristrask_V_02256.csv Ritsem_02012.csv Ritsem_A_02013.csv Rodkallen_A_02188.csv Roma_Aut_02597.csv Roma_V_02595.csv Ronneby_Bredakra_02664.csv Rorbacksnas_02306.csv Rynge_V_02609.csv Saittarova_A_02064.csv Sala_A_02481.csv Salen_Hogfjallet_V_02311.csv Sandhammaren_02656.csv Sarna_A_02316.csv Satenas_02520.csv Satis_02025.csv Save_02512.csv Saxnas_V_02233.csv Sillre_V_02349.csv Singo_02474.csv Skagsudde_02278.csv Skagsudde_A_02269.csv Skara_02533.csv Skarpo_A_02487.csv Skelleftea_02291.csv Skelleftea_Flygplats_02293.csv Skeppsmora_V_02472.csv Skillinge_A_02625.csv Smogen_02506.csv Smygehuk_02638.csv Snavlunda_D_02541.csv Soderarm_A_02493.csv Soderhamn_A_02378.csv Stabbo_02580.csv Stalldalen_02424.csv Staloluokta_02006.csv Stekenjokk_A_02102.csv Stensele_02127.csv Stenshuvud_02654.csv Stenudden_02122.csv Stockholm_Arlanda_Flygplats_02460.csv Stockholm_Bromma_Flygplats_02464.csv Stockholm_Observatoriekullen_02485.csv Stockholm_Observatoriekullen_A_02484.csv Stockholm_Sol_02483.csv Stora_Karlso_02594.csv Stora_Sjofallet_A_02024.csv Stora_Spansberget_A_02468.csv

	Stora_Stensjon_Aut_02223.csv Storberg_02136.csv Storbo_V_02302.csv Storlien_Storvallen_02206.csv Storlien_Storvallen_A_02207.csv Storlien_Visjovalen_Sol_02205.csv Storohamn_02198.csv Storon_A_02191.csv Storsjo_Kapell_02310.csv Stromsund_02234.csv Sudok_02152.csv Sundsvall_02369.csv Sundsvall_Rasta_V_02354.csv Sundsvall_Timra_Flygplats_02366.csv Sunne_A_02423.csv Svanberga_A_02490.csv Svarteborg_02504.csv Sveg_A_02327.csv Sveg_Eggarna_02324.csv Svenska_Bjorn_Aut_02495.csv Svenska_Hogarna_02496.csv Svenska_Hogarna_A_02498.csv Svenska_Hogarna_Sol_02492.csv Sydostbrotten_Aut_02289.csv Sylarna_A_02209.csv Tandadalen_Aut_02318.csv Tannas_A_02308.csv Tarfala_A_02029.csv Tarfala_Sol_02028.csv Tjakaape_02141.csv Tomtabacken_A_02549.csv Tornehamn_Aut_02023.csv Tornetrask_02032.csv Torpshammar_A_02343.csv Torslanda_02514.csv Torup_02620.csv Torup_A_02618.csv Trollhattans_Flygplats_02523.csv Trubaduren_Aut_02517.csv Tullinge_A_02469.csv Ullared_A_02539.csv Umea_Flygplats_02286.csv Umea_Sol_02283.csv Understen_02473.csv Ungskar_02666.csv Uppsala_Aut_02462.csv Uppsala_Flygplats_02458.csv Utklippan_A_02632.csv

	Uto_02581.csv Utvalnas_Aut_02454.csv Vaderoarna_A_02501.csv Vajmat_V_02146.csv Varberg_02529.csv Vasteras_Hasslo_02446.csv Vasterplana_02532.csv Vastervik_02576.csv Vastmarkum_A_02260.csv Vastra_Banken_Aut_02451.csv Vaxjo_A_02648.csv Vaxjo_D_02640.csv Vaxjo_Kronoberg_02641.csv Vaxjo_Sol_02643.csv Vidsel_02154.csv Vilhelmina_A_02245.csv Villingsberg_02425.csv Vindel_Bjorkheden_02116.csv Vindeln_Sunnansjonas_02274.csv Vinga_A_02516.csv Vingaker_D_02438.csv Vintjarn_02442.csv Visby_Flygplats_02590.csv Visby_Sol_02091.csv Visingso_A_02548.csv Vuoggatjalme_02112.csv Ylinenjarvi_A_02199.csv Ystad_02639.csv Zinkgruvan_02560.csv

Switzerland, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 85 stations in individual CSV files. Additional information from the WMO Member is provided below the table.

Excel Files	CSV Files
N/A	AadorfTaenikon_06679.csv AcquarossaComprovasco_06756.csv Adelboden_06735.csv Aigle_06712.csv Altdorf_06672.csv Andermatt_06695.csv Arosa_06785.csv BadRagaz_06686.csv BaselBinningen_06601.csv BernZollikofen_06631.csv BlattenLoetschental_06725.csv BuchsAarau_06633.csv Buffalora_06778.csv BulletLaFretaz_06619.csv Chasseral_06605.csv ChateaudOex_06627.csv Chaumont_06608.csv Chur_06786.csv Cimetta_06759.csv ColduGrandStBernard_06717.csv Davos_06784.csv Delemont_06602.csv Disentis_06782.csv EbnatKappel_06693.csv Einsiedeln_06675.csv Elm_06682.csv Engelberg_06655.csv EvoleneVilla_06722.csv Fahy_06616.csv FribourgGrangeneuve_06625.csv GeneveCointrin_06700.csv Glarus_06685.csv Graechen_06728.csv GrimselHospiz_06744.csv Grono_06758.csv GuetschAndermatt_06750.csv Guettingen_06621.csv Hallau_06624.csv Hoernli_06689.csv Interlaken_06734.csv

	Jungfraujoch_06730.csv Koppigen_06635.csv LaBrevine_06617.csv LaChauxdeFonds_06612.csv LaDole_06702.csv LangnauiE_06638.csv LeMoleson_06609.csv LocarnoMonti_06760.csv Lugano_06770.csv Luzern_06650.csv MagadinoCadenazzo_06762.csv Meiringen_06637.csv Montana_06724.csv Napf_06639.csv Neuchatel_06604.csv NyonChangins_06705.csv Payerne_06610.csv Pilatus_06659.csv Piotta_06753.csv PizCorvatsch_06791.csv Plaffeien_06628.csv PoschiavoRobbia_06794.csv Pully_06711.csv Ruenenberg_06645.csv Saentis_06680.csv SalenReutenen_06623.csv Samedan_06792.csv SBernardino_06783.csv Schaffhausen_06620.csv Scuol_06798.csv SeglMaria_06779.csv Sion_06720.csv Stabio_06771.csv StaMariaValMuestair_06796.csv StGallen_06681.csv Ulrichen_06745.csv Vaduz_06990.csv Visp_06727.csv Waedenswil_06673.csv Weissfluhjoch_06780.csv Wynau_06643.csv Zermatt_06748.csv ZuerichAffoltern_06664.csv ZuerichFluntern_06660.csv ZuerichKloten_06670.csv

Explanatory Notes WMO Climate Normals 1991-2020 Switzerland

1. The calculation of the climate normals is based on *WMO Guidelines on the Calculation of Climate Normals, WMO-Nr. 1203 (2017)*. Data completeness and calculation methods are in accordance with the guidelines and normals are only available if the data completeness criteria of the underlying series have been met.

2. The meteorological measurement data of MeteoSwiss are subjected to a routine and thorough data quality control. Erroneous data are corrected and smaller measurement gaps are filled by established interpolation methods following the *WMO Guide to Climatological Practices (2011)*.

3. Homogenization was conducted for temperature, precipitation, sunshine duration, air pressure, vapour pressure and wind speed series. The homogenization ensures the comparability of historical values based on 3 observations per day and the values of the automated measuring network based on 10-minute measurements. Therefore, homogeneous data series were available for the calculation of the climate normals 1991-2020 for most of the WMO parameters. However, non-homogenized measurement series had to be used for the following parameters:

    a. Relative_Humidity_%
    b. Snowfall_cm
    c. Number_of_Days_with_Snow_Depth_>_X_cm
    d. Number_of_Days_with_Wind_Speed_>=_X_m/s
    e. Number_of_Days_with_Visibility_<_X_m

The homogenization method used at MeteoSwiss is described and published in *Begert M, Schlegel T, Kirchhofer W. 2005. Homogeneous temperature and precipitation series of Switzerland from 1864 to 2000. Int. J. Climatol. 25: 65-80.*

4. Normals of Mean_Sea_Level_Pressure_hPa were derived from the normals of Mean_Station-Level_Pressure_hPa, as only air pressure series on station level are homogenized. Differences between these reduced normals are small compared to normals calculated from reduced air pressure series and are mostly less than 0.1 hPa.

5. Since all meteorological stations of MeteoSwiss are automated today, the daily values are generally calculated as means/sums of the 10-minute values between 00 and 00 UTC. However, for historical reasons and for comparison with manual observations still in operation, the daily values of precipitation and snowfall are sums between 6 UTC and 6 UTC of the following day.

6. Vapour pressure (e; hPa) is calculated on the basis of 10-minute values from relative humidity (U; %) and temperature (T; 0.1°C) using the formula

where a=17.368, b=2388.3 and c=0.06107 if $T \geq 0°C$ and a=17.856, b=2455.2 and c=0.06108 if $T < 0°C$.

Syria, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for five (5) stations in individual Excel files. NCEI converted the Excel files to Comma Separated Values (CSV) files to aid in quality control, mapping, and comparison to Normals from other countries.

The original Excel files are provided along with the CSV files.

Excel Files	CSV Files
AleppoIntAeroport_40007.xls	AleppointAeroport_40007.csv
BaselAssadIntAirport_40025.xls	BaselAssadIntAirport_40025.csv
DamaskusIntAirport_40080.xls	DamaskusIntAirport_40080.csv
KAMISHLI_40001.xls	KAMISHLI_40001.csv
SALAMYA_40029.xls	SALAMYA_40029.csv

Turkiye, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 213 stations in individual CSV files.

Excel Files	CSV Files
N/A	Acipayam_17890.csv Adana_Bolge_17351.csv Adiyaman_17265.csv Afyonkarahisar_Bolge_17190.csv Agri_17099.csv Ahlat_17810.csv Akcakale_17980.csv Akcakoca_17015.csv Akhisar_17184.csv Aksaray_17192.csv Aksehir_17239.csv Alanya_17310.csv Amasya_17085.csv Anamur_17320.csv Ankara_Bolge_17130.csv Antakya_17372.csv AntalyaHavalimani_17300.csv Arapgir_17764.csv Ardahan_17046.csv Artvin_17045.csv Aydin_17234.csv Ayvalik_17175.csv Bafra_17622.csv BalikesirGonen_17674.csv BalikesirHavalimani_17150.csv Bandirma_17114.csv Bartin_17020.csv Baskale_17880.csv Baskil_17843.csv Batman_17282.csv Bayburt_17089.csv Bergama_17742.csv Beypazari_17680.csv Beysehir_17242.csv Bilecik_17120.csv Bingol_17203.csv Birecik_17966.csv Bitlis_17208.csv Bodrum_17290.csv Bogazliyan_17760.csv Bolu_17070.csv

	Bozcaada_17111.csv Burdur_17238.csv Burhaniye_17722.csv Bursa_17116.csv Canakkale_17112.csv Cankiri_17080.csv Cemisgezek_17768.csv Cermik_17874.csv Cesme_17221.csv Ceyhan_17960.csv CeylanpinarTigem_17968.csv Cicekdagi_17732.csv Cide_17604.csv Cihanbeyli_17191.csv Cizre_17950.csv Corlu_17054.csv Corum_17084.csv Cumra_17900.csv Dalaman_17294.csv Datca_17297.csv Denizli_17237.csv Dikili_17180.csv Dinar_17862.csv Divrigi_17734.csv DiyarbakirHavalimani_17280.csv Dogansehir_17872.csv Dogubeyazit_17720.csv Dortyol_17962.csv Dursunbey_17700.csv Duzce_17072.csv Edirne_17050.csv Edremit_17145.csv Egirdir_17882.csv Elazig_Bolge_17201.csv Elbistan_17870.csv Elmali_17952.csv Emirdag_17752.csv Ercis_17784.csv Erdemli_17958.csv Eregli_17248.csv Ergani_17847.csv Erzincan_17094.csv ErzurumHavalimani_17096.csv Eskisehir_Bolge_17126.csv Fethiye_17296.csv Finike_17375.csv Florya_17636.csv Gaziantep_17261.csv

	Gazipasa_17974.csv Gediz_17750.csv Gemerek_17162.csv Geyve_17662.csv Giresun_17034.csv Gokceada_17110.csv Goksun_17866.csv Gumushane_17088.csv Guney_17824.csv Hakkari_17285.csv Hinis_17740.csv Hopa_17042.csv Horasan_17690.csv Igdir_17100.csv Ilgin_17832.csv Inebolu_17024.csv Ipsala_17632.csv Iskenderun_17370.csv Islahiye_17965.csv Isparta_17240.csv Ispir_17666.csv Izmir_Bolge_17220.csv Kahramanmaras_17255.csv Kahta_17910.csv KaleDemre_17970.csv Kaman_17756.csv Kangal_17762.csv Karabuk_17077.csv Karaisali_17936.csv Karakocan_17774.csv Karaman_17246.csv Karapinar_17902.csv Karatas_17981.csv Kars_17097.csv Kas_17380.csv Kastamonu_17074.csv Kayseri_Bolge_17196.csv Kilis_17262.csv Kirikkale_17135.csv Kirklareli_17052.csv Kirsehir_17160.csv Kizilcahamam_17664.csv Kocaeli_17066.csv KonyaHavalimani_17244.csv Korkuteli_17926.csv Koycegiz_17924.csv Kozan_17908.csv Kulu_17754.csv

	Kusadasi_17232.csv Kutahya_17155.csv LuleburgazTigem_17631.csv Malatya_17199.csv Malazgirt_17780.csv Malkara_17634.csv Manavgat_17954.csv Manisa_17186.csv Mardin_17275.csv Marmaris_17298.csv Mersin_17340.csv Merzifon_17083.csv Milas_17884.csv Mugla_17292.csv MuradiyeVan_17786.csv Mus_17204.csv Mut_17956.csv Nallihan_17679.csv Nazilli_17860.csv Nevsehir_17193.csv Nigde_17250.csv Odemis_17822.csv Oltu_17668.csv Ordu_17033.csv Osmancik_17652.csv Osmaniye_17355.csv Ozalp_17812.csv Palu_17806.csv Polatli_17728.csv Rize_17040.csv RizePazar_17628.csv Sakarya_17069.csv Salihli_17792.csv Samandag_17986.csv Samsun_Bolge_17030.csv Sanliurfa_17270.csv Sarikamis_17692.csv Sariyer_17061.csv SariyerKumkoyKilyos_17059.csv Sariz_17840.csv Sebinkarahisar_17682.csv Seferihisar_17820.csv Selcuk_17854.csv Senirkent_17826.csv Seydisehir_17898.csv Siirt_17210.csv Sile_17610.csv Silifke_17330.csv

	Simav_17748.csv Sinop_17026.csv Sivas_17090.csv Siverek_17912.csv Solhan_17776.csv Tavsanli_17704.csv Tefenni_17892.csv Tekirdag_17056.csv Tercan_17718.csv Tokat_17086.csv Tortum_17688.csv Tosya_17650.csv Trabzon_Bolge_17037.csv Tunceli_17165.csv Ulukisla_17906.csv Unye_17624.csv Usak_17188.csv Uzunkopru_17608.csv Van_Bolge_17172.csv Yalova_17119.csv Yatagan_17886.csv Yozgat_17140.csv Yuksekova_17920.csv Yumurtalik_17979.csv Yunak_17798.csv Zara_17716.csv Zile_17681.csv Zonguldak_17022.csv

UK, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 95 stations in individual CSV files.

Users are asked to note that station latitude and longitude were provided in decimal degrees. To match the prescribed WMO format NCEI converted the values to degrees, minutes and seconds.

Excel Files	CSV Files
N/A	Aberdaron_03405.csv Aberporth_03502.csv Aldergrove_03917.csv AultbeaNo2_03034.csv Aviemore_03063.csv Bala_03409.csv BallypatrickForest_03916.csv BaltasoundNo2_03002.csv Benson_03658.csv Bingley_03344.csv Blackpool_03318.csv BoscombeDown_03746.csv Boulmer_03240.csv BridlingtonMrsc_03292.csv BrizeNorton_03649.csv Camborne_03808.csv Carlisle_03220.csv Charterhall_03158.csv Chivenor_03707.csv ChurchLawford_03544.csv Coningsby_03391.csv Cranwell_03379.csv Crosby_03316.csv Culdrose_03809.csv Drumalbin_03155.csv Dundrennan_03153.csv DunkeswellAerodrome_03840.csv Dyce_03091.csv EastMalling_03790.csv Eskdalemuir_03162.csv FairIsle_03008.csv Fylingdales_03281.csv GlenanneNo2_03923.csv HawardenAirport_03321.csv Heathrow_03772.csv Herstmonceux_03882.csv HolbeachNo2_03469.csv

	Hurn_03862.csv IsleOfPortland_03857.csv KenleyAirfield_03781.csv Keswick_03212.csv Kinloss_03066.csv Kirkwall_03017.csv Larkhill_03743.csv Leconfield_03382.csv Leeming_03257.csv Lerwick_03005.csv Leuchars_03171.csv LintonOnOuse_03266.csv London_03770.csv Lossiemouth_03068.csv LoughFea_03911.csv Lyneham_03740.csv Machrihanish_03111.csv Manston_03797.csv Marham_03482.csv MiddleWallop_03749.csv MilfordHavenConservancyBoard_03604.csv MumblesHead_03609.csv Northolt_03672.csv Nottingham_03354.csv Odiham_03761.csv PembreySands_03605.csv Plymouth_03827.csv Portglenone_03915.csv Prestwick_03136.csv RhylNo2_03313.csv Ronaldsway_03204.csv Rothamsted_03680.csv ScillyStMarysAirport_03803.csv Shap_03225.csv Shawbury_03414.csv ShobdonAirfield_03520.csv Shoeburyness_03693.csv SouthFarnborough_03768.csv SpadeadamNo2_03224.csv StBeesHeadNo2_03210.csv StornowayAirport_03026.csv StrathallanAirfield_03144.csv TainRange_03062.csv ThorneyIsland_03872.csv Tiree_03100.csv Trawsgoed_03503.csv TullochBridge_03047.csv Valley_03302.csv

	Waddington_03377.csv WalneyIsland_03214.csv WarcopRange_03226.csv Wattisham_03590.csv WestFreugh_03132.csv Weybourne_03488.csv WickAirport_03075.csv WightStCatherinesPoint_03866.csv Wittering_03462.csv Yeovilton_03853.csv

Ukraine, 1991-2020 Climatological Normals

Explanatory Information

The WMO Member provided data for 47 stations in individual CSV files.

Excel Files	CSV Files
N/A	Ai_Petri_33998.csv Askaniia_Nova_33915.csv Chernihiv_33135.csv Chernivtsi_33658.csv Dnipro_34504.csv Donetsk_34519.csv Feodosiia_33976.csv Haivoron_33686.csv Henichesk_33910.csv Ivano_Frankivsk_33526.csv Izmail_33889.csv Kharkiv_34300.csv Kherson_33902.csv Khmelnytskyi_33429.csv Klepynine_33939.csv Komisarivka_33723.csv Kovel_33173.csv Kropyvnytskyi_33711.csv Kryvyi_Rih_33791.csv Kyiv_33345.csv Kyrylivka_34609.csv Lozova_34409.csv Lubashivka_33761.csv Lubny_33377.csv Luhansk_34523.csv Lutsk_33187.csv Lviv_33393.csv Nikopol_33805.csv Odesa_33837.csv Ovruch_33213.csv Poltava_33506.csv Rivne_33301.csv Romny_33268.csv Rozdilna_33834.csv Sarata_33896.csv Sarny_33088.csv Simferopol_33955.csv Sumny_33275.csv Ternopil_33415.csv Uman_33587.csv Uzhhorod_33631.csv

	Vinnytsia_33562.csv Yalta_33990.csv Zaporizhzhia_34601.csv Zhytomyr_33325.csv Znamianka_33609.csv Zolotonosha_33484.csv