UERRA-C3 templates for the digitalisation of hourly climate data

Centre for Climate Change
University Rovira i Virgili
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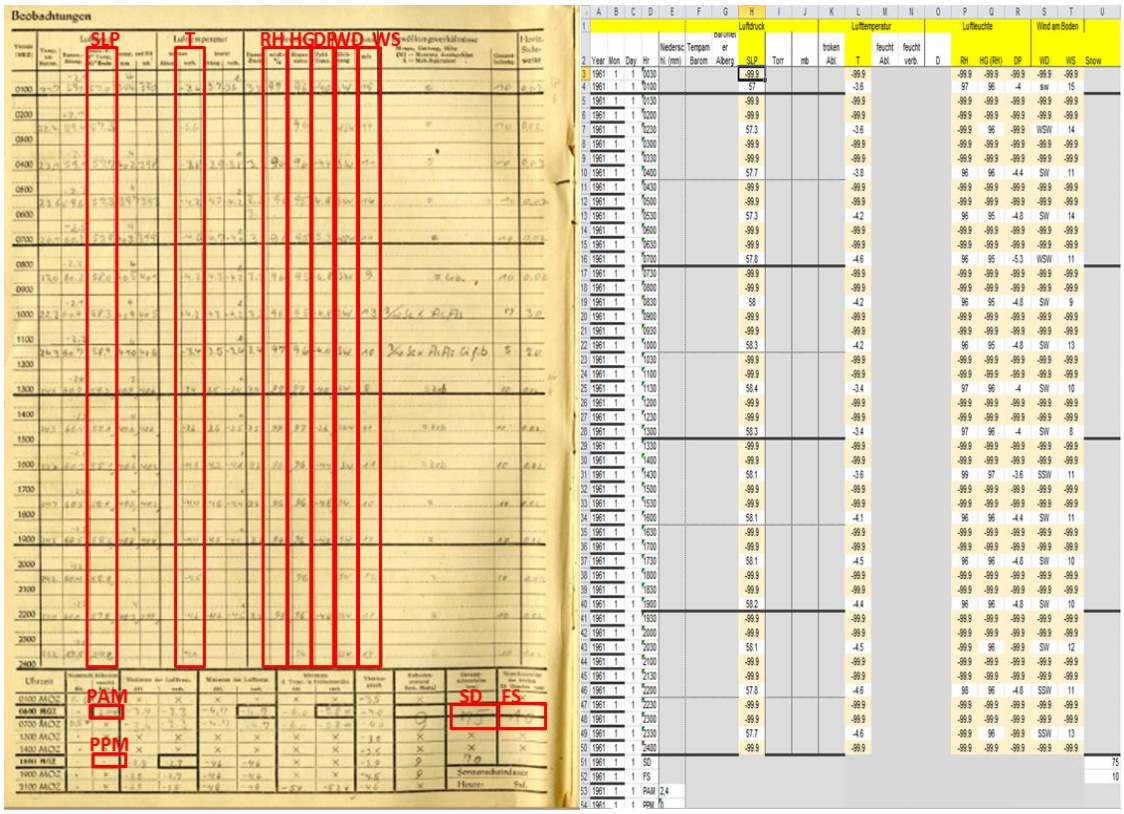
A set of Microsoft Excel templates were developed for different data source of three countries (Germany, Slovenia and Spain), that were as close as possible in format to the original data source. Borders and shading within the files were used to help the digitiser keep track of their work (data to be digitised), and date columns were pre-filled to reduce the occurrence of errors associated with leap years.

- Program language and operating system: Excel, all operating systems
- Input/Output file type: Excel files
- Output data structure: depends on the data source structure

1. Germany

- Data source name: Deutscher Wetterdienst, provided by Deutscher Wetterdienst.
- Data source structure: each sheet contains daily and hourly data of one station and one calendar day
- Example of Data source and template used in digitalisation. Cells in grey indicate data that does not have to be digitalised.



1.1. Brocken

- Data digitalised with this template: hourly dew point, wind strength and wind direction, fresh snow and snow depth, relative humidity, precipitation, station pressure and atmospheric temperature.
- Templates into the folder:

10453_Brocken_1961_template	Excel file. One sheet for each month
10453_Brocken_1961_template	Excel file. One sheet for each month
10453_Brocken_1961_template	Excel file. One sheet for each month
10453_Brocken_1961_template	Excel file. One sheet for each month
10453_Brocken_1961_template	Excel file. One sheet for each month
10453_Brocken_1961_template	Excel file. One sheet for each month
10453_Brocken_19610101_DS	Example of the data source

1.2. Dresden

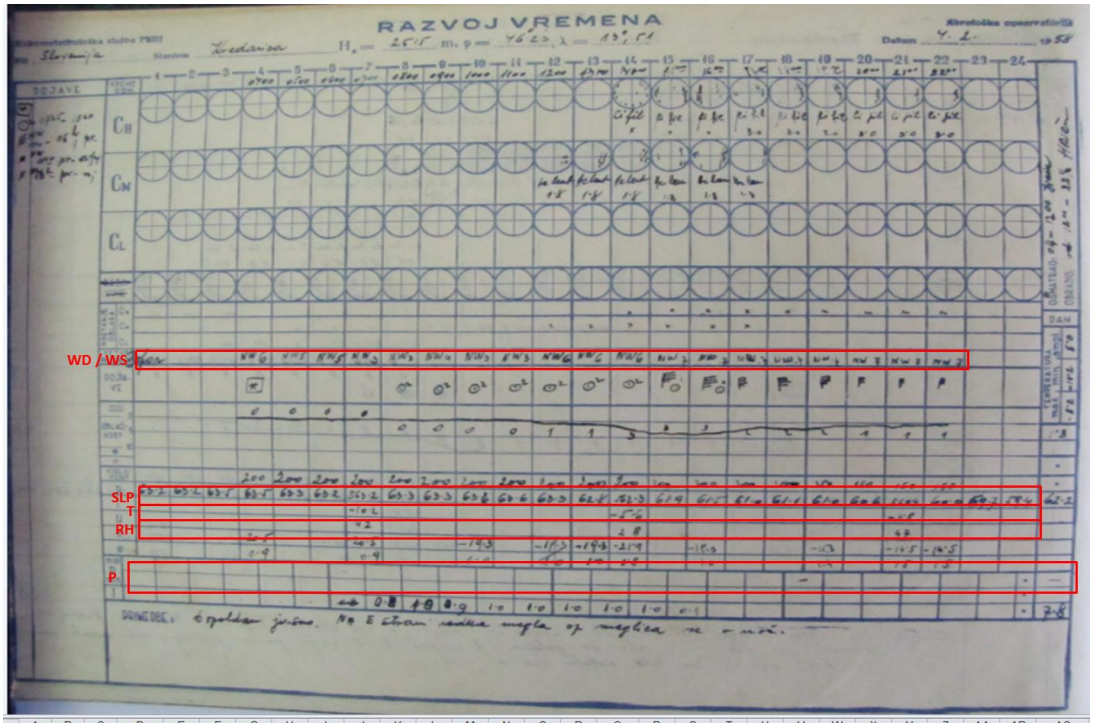
- Data digitalised with this template: hourly wind strength and wind direction, relative humidity, sea level pressure, atmospheric temperature and wet bulb temperature.

- Templates into the folder:

3386_Dresden_1961_template	Excel file. One sheet for each month
3386_Dresden_1962_template	Excel file. One sheet for each month
3386_Dresden_1963_template	Excel file. One sheet for each month
3386_Dresden_1964_template	Excel file. One sheet for each month
3386_Dresden_1965_template	Excel file. One sheet for each month
3386_Dresden_1966_template	Excel file. One sheet for each month
3386_Dresden_19610101_DS	Example of the data source

2. Slovenia

- Data source name: Slovenian Environmental Agency.
- Data source structure: each sheet contains daily and hourly data of one station and one calendar day.
- Example of Data source and template used in digitalisation. Cells in grey indicate data that does not have to be digitalised.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Year	Mon	Day	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily total
8	1958	2	4	WD				NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW			
9	1958	2	4	WS				6	5	5	3	3	4	3	3	6	6	6	7	7	7	7	7	7	7	7			
10	1958	2	4	SLP	63.2	63.2	63.5	63.5	63.3	63.2	63.2	63.2	63.2	63.6	63.6	63.3	62.8	62.3	61.9	61.5	61	61	61	60.6	60.4	60	69.7	59.4	
11	1958	2	4	T							-10.2							-5.6							-4.8				
12	1958	2	4	RH							42							28							47				
13	1958	2	4	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2.1. Kredarica

- Data digitalised with this template: hourly dew point, wind strength and wind direction, fresh snow and snow depth, relative humidity, precipitation, station pressure and atmospheric temperature.
- Templates into the folder:

48_kredarica_1958_template	Excel file. In one sheet all the year
48_kredarica_1959-1960_template	Excel file. In one sheet all the year
48_kredarica_1961_template	Excel file. In one sheet all the year
48_kredarica_1962_template	Excel file. In one sheet all the year
48_kredarica_1963_template	Excel file. In one sheet all the year
48_kredarica_1964_template	Excel file. In one sheet all the year
48_kredarica_1965_template	Excel file. In one sheet all the year
48_kredarica_1966_template	Excel file. In one sheet all the year
48_kredarica_1967_template	Excel file. In one sheet all the year
48_kredarica_1968_template	Excel file. In one sheet all the year
48_kredarica_1969_template	Excel file. In one sheet all the year
48_kredarica_1970_template	Excel file. In one sheet all the year
48_kredarica_1971_template	Excel file. In one sheet all the year
48_kredarica_1972_template	Excel file. In one sheet all the year
48_kredarica_1973_template	Excel file. In one sheet all the year
48_kredarica_1974_template	Excel file. In one sheet all the year
48_kredarica_1975_template	Excel file. In one sheet all the year
48_kredarica_1976_template	Excel file. In one sheet all the year
48_kredarica_1977_template	Excel file. In one sheet all the year
48_kredarica_1978_template	Excel file. In one sheet all the year
48_kredarica_19580204_DS	Example of the data source 1
48_kredarica_19750101_DS	Example of the data source 2

2.2. Ljubljana

- Data digitalised with this template: hourly wind strength and wind direction, fresh snow and snow depth, relative humidity, precipitation, station pressure and atmospheric temperature.

- Templates into the folder:

192_ljubljana_1950-1951_template	Excel file. In one sheet all the year
192_Ljubljana_1952_template	Excel file. In one sheet all the year
192_Ljubljana_1953_template	Excel file. In one sheet all the year
192_Ljubljana_1954_template	Excel file. In one sheet all the year
192_Ljubljana_1955_template	Excel file. In one sheet all the year
192_Ljubljana_1956_template	Excel file. In one sheet all the year
192_Ljubljana_1957_template	Excel file. In one sheet all the year
192_Ljubljana_1958_template	Excel file. In one sheet all the year
192_Ljubljana_1959-1960_template	Excel file. In one sheet all the year
192_Ljubljana_1961_template	Excel file. In one sheet all the year
192_Ljubljana_1962_template	Excel file. In one sheet all the year
192_Ljubljana_1963_template	Excel file. In one sheet all the year
192_ljubljana_19600101_DS	Example of the data source

2.3. Novo Mesto

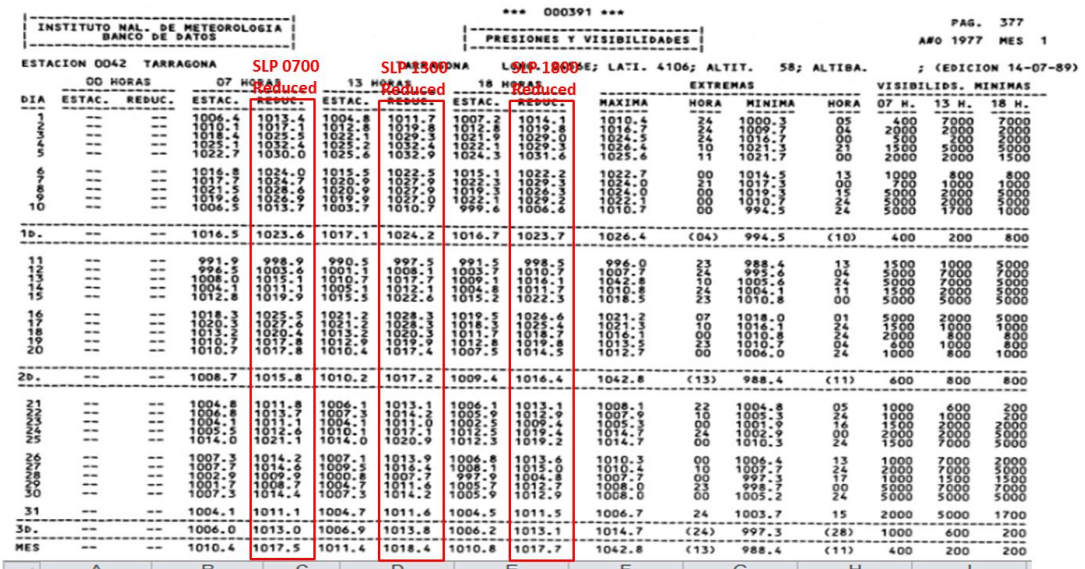
- Data digitalised with this template: hourly dew point, wind strength and wind direction, fresh snow and snow depth, relative humidity, precipitation, station pressure and atmospheric temperature.
- Templates into the folder:

249_Novo_mesto_1955_template	Excel file. In one sheet all the year
249_Novo_mesto_1956_template	Excel file. In one sheet all the year
249_Novo_mesto_1957_template	Excel file. In one sheet all the year
249_Novo_mesto_1958_template	Excel file. In one sheet all the year
249_Novo_mesto_1959_template	Excel file. In one sheet all the year
249_Novo_mesto_1960_template	Excel file. In one sheet all the year
249_Novo_mesto_1961_template	Excel file. In one sheet all the year
249_Novo_mesto_1962_template	Excel file. In one sheet all the year
249_Novo_mesto_1963_template	Excel file. In one sheet all the year
249_Novo_mesto_1964_template	Excel file. In one sheet all the year
249_Novo_mesto_1965_template	Excel file. In one sheet all the year
249_Novo_mesto_1966_template	Excel file. In one sheet all the year

249_Novo_mesto_1967_template	Excel file. In one sheet all the year
249_Novo_mesto_1968_template	Excel file. In one sheet all the year
249_Novo_mesto_1969_template	Excel file. In one sheet all the year
249_Novo_mesto_1970_template	Excel file. In one sheet all the year
249_Novo_mesto_1971_template	Excel file. In one sheet all the year
249_Novo_mesto_1972_template	Excel file. In one sheet all the year
249_Novo_mesto_1973_template	Excel file. In one sheet all the year
249_Novo_mesto_1974_template	Excel file. In one sheet all the year
249_Novo_mesto_1975_template	Excel file. In one sheet all the year
249_Novo_mesto_1976_template	Excel file. In one sheet all the year
249_Novo_mesto_1977_template	Excel file. In one sheet all the year
249_Novo-mesto_19550101_DS	Example of the data source 1
249_Novo-mesto_19700101_DS	Example of the data source 2

3. Spain

- Data source name: Instituto Nacional de Meteorología Banco de Datos, provided by Catalan Meteorological Service.
- Data source structure: each sheet contains daily and hourly data of one station and one climate variable.
- Example of Data source and template used in digitalisation. Cells in grey indicate data that does not have to be digitalised.



INSTITUTO NAL. DE METEOROLOGIA
BANCO DE DATOS

*** 000391 ***

PRESIONES Y VISIBILIDADES

PAG. 377
AÑO 1977 MES 1

ESTACION 0042 TARRAGONA LONG. 1606; LATI. 4106; ALTIT. 58; ALTIBA. ; (EDICION 14-07-89)

SLP 0700 Reduced | SLP 1300 Reduced | SLP 1800 Reduced

DIA	00 HORAS ESTAC.	00 HORAS REDUC.	07 HORAS ESTAC.	07 HORAS REDUC.	13 HORAS ESTAC.	13 HORAS REDUC.	18 HORAS ESTAC.	18 HORAS REDUC.	EXTREMAS MAXIMA	EXTREMAS HORA	EXTREMAS MINIMA	EXTREMAS HORA	VISIBILIDS. MINIMAS 07 H.	VISIBILIDS. MINIMAS 13 H.	VISIBILIDS. MINIMAS 18 H.
1	--	--	1006.4	1013.4	1004.8	1011.7	1007.2	1014.1	1010.4	24	1000.3	05	400	7000	7000
2	--	--	1010.1	1017.1	1012.8	1019.8	1012.8	1019.8	1016.7	24	1009.7	04	2000	2000	2000
3	--	--	1018.4	1025.5	1025.1	1029.3	1021.9	1029.0	1024.5	24	1016.7	00	500	500	2000
4	--	--	1025.1	1032.4	1025.2	1032.4	1022.1	1029.3	1026.4	10	1021.3	21	1500	5000	5000
5	--	--	1022.7	1030.0	1025.6	1032.9	1024.3	1031.6	1025.6	11	1021.7	00	2000	2000	1500
6	--	--	1016.8	1024.0	1015.5	1022.5	1015.1	1022.2	1022.7	00	1014.5	13	1000	800	800
7	--	--	1017.7	1024.7	1020.9	1027.9	1020.3	1029.3	1024.0	21	1017.3	00	700	1000	1000
8	--	--	1021.5	1028.6	1020.9	1027.9	1019.5	1026.5	1024.0	00	1019.5	15	5000	2000	5000
9	--	--	1019.6	1026.9	1019.9	1027.0	1022.1	1029.2	1022.1	00	1010.7	24	2000	2000	2000
10	--	--	1006.5	1013.7	1003.7	1010.7	999.6	1006.6	1010.7	00	994.5	24	5000	1700	1000
1D.	--	--	1016.5	1023.6	1017.1	1024.2	1016.7	1023.7	1026.4	(04)	994.5	(10)	400	200	800
11	--	--	991.9	998.9	990.5	997.5	991.5	998.5	996.0	23	988.4	13	1500	1000	5000
12	--	--	996.5	1003.6	1001.1	1008.1	1003.7	1010.7	1007.9	24	995.6	04	5000	7000	7000
13	--	--	1008.0	1015.1	1010.7	1017.7	1009.1	1016.1	1042.8	10	1005.6	24	5000	7000	5000
14	--	--	1004.1	1011.1	1005.1	1012.1	1004.8	1011.7	1010.8	24	1004.1	11	1500	5000	5000
15	--	--	1012.8	1019.9	1015.5	1022.6	1015.2	1022.3	1018.5	23	1010.8	00	5000	5000	5000
16	--	--	1018.3	1025.5	1021.2	1028.3	1019.5	1026.6	1021.2	07	1018.0	01	5000	2000	5000
17	--	--	1020.3	1027.6	1021.2	1028.3	1018.3	1025.4	1021.3	10	1016.1	24	1500	1000	1000
18	--	--	1013.2	1020.4	1013.2	1020.3	1011.7	1018.7	1016.1	00	1010.8	24	2000	800	800
19	--	--	1010.7	1017.8	1012.9	1019.9	1012.8	1019.8	1013.1	23	1010.7	04	400	1000	1000
20	--	--	1010.7	1017.8	1010.4	1017.4	1007.5	1014.5	1012.7	00	1006.0	24	1000	800	1000
2D.	--	--	1008.7	1015.8	1010.2	1017.2	1009.4	1016.4	1042.8	(13)	988.4	(11)	600	800	800
21	--	--	1004.8	1011.8	1006.1	1013.1	1006.1	1013.1	1008.1	22	1004.8	05	1000	600	200
22	--	--	1006.8	1013.7	1007.1	1014.2	1005.9	1012.9	1007.9	10	1005.3	24	1000	1000	200
23	--	--	1004.1	1011.1	1004.1	1011.0	1002.5	1009.4	1005.3	00	1001.9	16	1500	2000	2000
24	--	--	1005.5	1012.6	1010.1	1017.1	1012.3	1019.2	1014.7	24	1002.9	00	2000	2000	5000
25	--	--	1014.0	1021.1	1014.0	1020.9	1013.3	1020.2	1014.7	00	1010.3	24	1500	7000	5000
26	--	--	1007.3	1014.2	1007.1	1013.9	1006.8	1013.6	1010.3	00	1006.4	13	1000	7000	2000
27	--	--	1007.7	1014.6	1009.5	1016.4	1008.1	1015.0	1010.4	10	1007.7	24	2000	7000	5000
28	--	--	1002.9	1009.9	1000.8	1007.7	997.9	1004.8	1007.7	00	997.3	17	1000	1500	1500
29	--	--	1001.7	1008.7	1004.7	1011.6	1005.7	1012.7	1008.0	13	998.7	00	5000	7000	7000
30	--	--	1007.5	1014.4	1007.3	1014.2	1005.9	1012.9	1008.0	00	1005.2	24	5000	5000	5000
31	--	--	1004.1	1011.1	1004.7	1011.6	1004.5	1011.5	1006.7	24	1003.7	15	2000	5000	1700
3D.	--	--	1006.0	1013.0	1006.9	1013.8	1006.2	1013.1	1014.7	(24)	997.3	(28)	1000	600	200
MES	--	--	1010.4	1017.5	1011.4	1018.4	1010.8	1017.7	1042.8	(13)	988.4	(11)	400	200	200

	A	B	C	D	E	F	G	H	I
1	Year	Month	Day	SLP0700 Station	SLP0700 Reduced	SLP1300 Station	SLP1300 Reduced	SLP1800 Station	SLP1800 Reduced
2	1977	1	1		1013.4		1011.7		1014.1
3	1977	1	2		1017.1		1019.8		1019.8
4	1977	1	3		1025.5		1029.3		1029
5	1977	1	4		1032.4		1032.4		1029.3
6	1977	1	5		1030		1032.9		1031.6
7	1977	1	6		1024		1022.5		1022.2
8	1977	1	7		1024.7		1027.9		1029.3
9	1977	1	8		1028.6		1027.9		1026.3
10	1977	1	9		1026.9		1027		1029.2
11	1977	1	10		1013.7		1010.7		1006.6
12			1D		1023.6		1024.2		1023.7

3.1. Lleida

- Data digitalised with this template: hourly dew point, wind strength and wind direction, relative humidity, sea level pressure and atmospheric temperature.
- Templates into the folder:

9771_Lleida_SLP_template	Excel file. In one sheet all the period digitised, SLP
9771_Lleida_temp_template	Excel file. In one sheet all the period digitised, DP, RH and TT
9771_Lleida_wind_template	Excel file. In one sheet all the period digitised, WD and WS
9771_Lleida_195403_temp_DS	Example of the data source 1
9771_Lleida_195911_slp_DS	Example of the data source 2
9771_Lleida_195911_wind_DS	Example of the data source 3

3.2. Tarragona

- Data digitalised with this template: hourly dew point, wind strength and wind direction, relative humidity, sea level pressure and atmospheric temperature.

- Templates into the folder:

0042_Tarragona_SLP_template	Excel file. In one sheet all the period digitised, SLP
0042_Tarragona_Temp_template	Excel file. In one sheet all the period digitised, DP, RH and TT
0042_Tarragona_Wind_template	Excel file. In one sheet all the period digitised, WD and WS
0042_Tarragona_197701_slp_DS	Example of the data source 1
0042_Tarragona_197701_temp_DS	Example of the data source 2
0042_Tarragona_197701_wind_DS	Example of the data source 3