

Supplementary Material 2

1 Supplementary Data

Table S2.1 Overview of precipitation events, within sampling date 30.04.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals. Event numbers start with 18 as former events took place in the uncovered period.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
24/04/2019 21:00	2.80	event 18	0.00	13.70
24/04/2019 22:00	2.40	event 18	0.00	9.03
26/04/2019 16:00	1.00	event 19	28.00	7.87
26/04/2019 17:00	5.20	event 19	3.83	7.50
26/04/2019 18:00	4.80	event 19	9.50	7.10
26/04/2019 19:00	0.20	event 19	1.83	7.05
27/04/2019 14:00	0.20	event 20	232.67	9.93
27/04/2019 15:00	0.80	event 20	111.50	9.65
27/04/2019 16:00	0.20	event 20	116.83	9.33
27/04/2019 17:00	0.80	event 20	30.67	7.70
27/04/2019 18:00	0.60	event 20	38.00	6.36
27/04/2019 23:00	1.00	event 20	0.00	5.13
28/04/2019 00:00	0.80	event 20	0.00	5.19
28/04/2019 01:00	0.60	event 20	0.00	5.18
28/04/2019 03:00	0.20	event 20	0.00	4.94
28/04/2019 04:00	0.40	event 20	0.00	4.83

Table S2.1 Continued

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm⁻²)	Air Temperature (°C)
28/04/2019 05:00	0.60	event 20	1.33	4.68
29/04/2019 06:00	0.20	event 21	33.33	3.89
29/04/2019 12:00	0.60	event 21	64.33	7.74
29/04/2019 13:00	3.40	event 21	71.17	7.11
29/04/2019 14:00	1.60	event 21	32.33	6.73
29/04/2019 19:00	0.20	event 21	0.00	7.48
30/04/2019 04:00	0.20	event 22	0.00	2.34

Table S2.2 Overview of precipitation events, within sampling date 07.05.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm⁻²)	Air Temperature (°C)
03/05/2019 09:00	0.20	event 23	653.33	7.39
04/05/2019 02:00	1.00	event 24	0.00	3.70
04/05/2019 03:00	1.40	event 24	0.00	2.98
04/05/2019 04:00	2.40	event 24	0.00	1.17
04/05/2019 05:00	0.40	event 24	0.00	0.51
04/05/2019 06:00	0.20	event 24	10.67	0.25
04/05/2019 07:00	0.20	event 24	15.83	0.23
04/05/2019 08:00	0.20	event 24	27.17	0.29
04/05/2019 09:00	0.20	event 24	77.67	0.77
04/05/2019 10:00	0.40	event 24	197.17	1.44
04/05/2019 12:00	1.60	event 24	409.83	3.98
04/05/2019 13:00	2.20	event 24	569.50	5.61
04/05/2019 14:00	1.00	event 24	487.50	4.78
04/05/2019 17:00	0.20	event 24	88.17	3.79
07/05/2019 00:00	0.20	event 25	0.00	3.62
07/05/2019 05:00	0.20	event 25	2.67	3.50

Table S2.3 Overview of precipitation events, within sampling date 15.05.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
08/05/2019 11:00	0.60	event 26	197.17	8.66
08/05/2019 12:00	0.80	event 26	154.33	8.99
08/05/2019 18:00	0.40	event 26	22.17	10.45
08/05/2019 19:00	1.00	event 26	0.00	9.77
08/05/2019 20:00	0.20	event 26	0.00	9.66
08/05/2019 21:00	2.80	event 26	0.00	9.57
08/05/2019 22:00	3.20	event 26	0.00	9.52
09/05/2019 15:00	0.40	event 27	153.17	11.57
11/05/2019 04:00	0.20	event 28	0.00	6.30
11/05/2019 05:00	0.40	event 28	5.00	6.38
11/05/2019 06:00	0.40	event 28	23.67	6.61
11/05/2019 07:00	0.60	event 28	66.83	7.00
11/05/2019 08:00	0.60	event 28	45.33	7.19
11/05/2019 09:00	2.40	event 28	46.83	7.51
11/05/2019 10:00	1.60	event 28	71.50	8.14
11/05/2019 11:00	2.60	event 28	50.17	8.20
11/05/2019 12:00	3.00	event 28	40.83	8.13
11/05/2019 13:00	2.20	event 28	55.00	8.09
11/05/2019 14:00	2.80	event 28	54.67	8.11
11/05/2019 15:00	0.80	event 28	61.17	7.88
11/05/2019 16:00	0.60	event 28	64.00	7.43

Table S2.3 Continued

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
11/05/2019 17:00	1.20	event 28	38.83	7.05
11/05/2019 18:00	0.40	event 28	12.50	6.72
11/05/2019 19:00	2.00	event 28	0.00	6.38
11/05/2019 20:00	1.40	event 28	0.00	5.53
11/05/2019 21:00	0.40	event 28	0.00	5.27
11/05/2019 22:00	0.20	event 28	0.00	5.20
12/05/2019 07:00	0.20	event 29	74.00	3.91

Table S2.4 Overview of precipitation events, within sampling date 22.05.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
16/05/2019 10:00	0.80	event 30	135.17	6.32
16/05/2019 13:00	0.20	event 30	103.67	6.33
16/05/2019 14:00	0.20	event 30	91.83	6.44
16/05/2019 16:00	0.20	event 30	37.50	6.20
16/05/2019 19:00	0.20	event 30	0.00	5.89
16/05/2019 23:00	0.40	event 30	0.00	5.80
17/05/2019 00:00	0.20	event 30	0.00	5.87
19/05/2019 15:00	1.60	event 31	20.67	15.20
19/05/2019 16:00	1.20	event 31	135.00	15.18
20/05/2019 13:00	6.20	event 32	205.17	17.00
20/05/2019 14:00	0.20	event 32	152.33	15.20

Table S2.4 *Continued*

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
20/05/2019 15:00	0.20	event 32	50.33	16.39
20/05/2019 16:00	7.80	event 32	12.50	13.19
20/05/2019 17:00	0.40	event 32	34.00	13.06
20/05/2019 18:00	0.40	event 32	10.17	12.89
20/05/2019 19:00	2.00	event 32	0.00	13.09
20/05/2019 20:00	0.20	event 32	0.00	13.10
20/05/2019 21:00	1.80	event 32	0.00	12.92
20/05/2019 22:00	1.60	event 32	0.00	12.70
20/05/2019 23:00	3.00	event 32	0.00	12.40
21/05/2019 00:00	3.80	event 32	0.00	12.32
21/05/2019 01:00	0.20	event 32	0.00	12.42
21/05/2019 03:00	2.20	event 32	0.00	13.13
21/05/2019 15:00	0.20	event 33	97.67	13.48
22/05/2019 04:00	0.20	event 34	0.00	10.57
22/05/2019 05:00	0.20	event 34	3.00	10.29

Table S2.5 Overview of precipitation events, within sampling date 29.05.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
27/05/2019 14:00	0.40	event 35	174.17	14.93
27/05/2019 15:00	0.40	event 35	115.33	13.77
27/05/2019 16:00	0.80	event 35	62.83	13.86

Table S2.5 *Continued*

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
27/05/2019 17:00	0.40	event 35	60.33	13.33
27/05/2019 19:00	0.40	event 35	9.67	12.60
27/05/2019 20:00	0.20	event 35	0.00	12.29
28/05/2019 11:00	0.20	event 36	232.00	12.70
28/05/2019 15:00	0.40	event 36	130.67	11.27
28/05/2019 16:00	0.40	event 36	73.17	11.14
28/05/2019 17:00	2.60	event 36	34.00	9.85
28/05/2019 18:00	0.20	event 36	52.67	9.88
29/05/2019 02:00	0.20	event 37	0.00	7.90
29/05/2019 03:00	0.40	event 37	0.00	7.12

Table S2.6 Overview of precipitation events, within sampling date 04.06.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
03/06/2019 16:00	0.20	event 38	2.17	18.91
03/06/2019 18:00	0.80	event 38	6.50	16.23
04/06/2019 03:00	0.20	event 39	0.00	13.04

Table S2.7 Overview of precipitation events, within sampling date 13.06.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
06/06/2019 12:00	0.20	event 40	94.00	12.46
06/06/2019 21:00	0.20	event 41	0.00	10.90
07/06/2019 21:00	0.20	event 42	0.00	15.87
07/06/2019 22:00	1.40	event 42	0.00	12.32
07/06/2019 23:00	0.80	event 42	0.00	11.02
08/06/2019 00:00	0.40	event 42	0.00	10.57
08/06/2019 01:00	0.20	event 42	0.00	10.57
08/06/2019 07:00	0.40	event 42	154.83	11.89
10/06/2019 04:00	0.20	event 43	2.00	14.23
10/06/2019 18:00	0.80	event 44	15.83	18.68
10/06/2019 19:00	1.00	event 44	13.00	15.93
10/06/2019 21:00	0.20	event 44	0.00	15.34
11/06/2019 03:00	1.60	event 44	0.00	13.52
11/06/2019 04:00	0.20	event 44	0.00	13.78
11/06/2019 06:00	3.80	event 44	4.17	13.66
11/06/2019 07:00	1.40	event 44	41.50	13.66
11/06/2019 21:00	19.20	event 45	0.00	13.03
11/06/2019 22:00	13.20	event 45	0.00	13.07
11/06/2019 23:00	0.40	event 45	0.00	13.08
12/06/2019 03:00	0.20	event 45	0.00	11.87
12/06/2019 13:00	1.60	event 46	114.17	16.52

Table S2.7 Continued

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
12/06/2019 14:00	1.40	event 46	104.50	14.70
12/06/2019 15:00	0.20	event 46	84.83	13.25
12/06/2019 16:00	0.20	event 46	76.67	12.75
12/06/2019 23:00	0.20	event 46	0.00	11.96

Table S2.8 Overview of precipitation events, within sampling date 18.06.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
13/06/2019 18:00	0.20	event 47	99.67	14.94
14/06/2019 04:00	0.20	event 48	3.83	8.85
16/06/2019 08:00	0.20	event 49	77.33	14.27
16/06/2019 09:00	0.20	event 49	125.17	15.26

Table S2.9 Overview of precipitation events, within sampling date 26.06.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
19/06/2019 19:00	0.40	event 50	91.00	19.57
20/06/2019 04:00	1.80	event 51	0.00	15.81
20/06/2019 05:00	0.20	event 51	43.67	15.94

Table S2.10 Overview of precipitation events, within sampling date 24.07.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm^{-2})	Air Temperature ($^{\circ}\text{C}$)
18/07/2019 04:00	0.20	event 58	1.17	10.13
19/07/2019 04:00	0.20	event 59	0.00	15.18
19/07/2019 08:00	0.60	event 59	101.17	15.36
19/07/2019 14:00	0.80	event 59	107.67	17.86
20/07/2019 18:00	2.20	event 60	2.33	20.48
20/07/2019 19:00	4.20	event 60	10.83	16.43
20/07/2019 20:00	0.80	event 60	1.67	16.29
21/07/2019 03:00	0.20	event 60	0.00	15.40

Table S2.11 Overview of precipitation events, within sampling date 30.07.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm^{-2})	Air Temperature ($^{\circ}\text{C}$)
28/07/2019 18:00	0.60	event 61	32.17	22.80
28/07/2019 19:00	1.40	event 61	0.00	19.74
29/07/2019 03:00	3.60	event 62	0.00	17.47
29/07/2019 04:00	1.60	event 62	0.00	17.13
29/07/2019 05:00	2.60	event 62	3.17	16.94
29/07/2019 06:00	1.80	event 62	30.67	16.93

Table S2.12 Overview of precipitation events, within sampling date 08.08.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
31/07/2019 12:00	7.60	event 63	228.83	18.03
02/08/2019 14:00	0.20	event 64	135.67	18.15
03/08/2019 01:00	0.20	event 65	0.00	14.58
03/08/2019 02:00	0.20	event 65	0.00	14.36
03/08/2019 04:00	0.20	event 65	0.00	13.93
03/08/2019 21:00	2.20	event 66	0.00	15.65
04/08/2019 00:00	0.20	event 66	0.00	13.12
05/08/2019 18:00	4.60	event 67	41.00	16.90
07/08/2019 06:00	1.40	event 68	18.50	16.00
07/08/2019 07:00	1.40	event 68	22.00	16.00
07/08/2019 08:00	4.00	event 68	26.50	16.24
07/08/2019 09:00	0.80	event 68	104.00	16.44

Table S2.13 Overview of precipitation events, within sampling date 14.08.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
09/08/2019 19:00	4.80	event 69	0.00	18.67
09/08/2019 20:00	0.60	event 69	0.00	17.90
09/08/2019 21:00	6.40	event 69	0.00	17.94
09/08/2019 22:00	1.00	event 69	0.00	17.89
09/08/2019 23:00	0.20	event 69	0.00	18.07
10/08/2019 00:00	0.20	event 69	0.00	18.10
11/08/2019 21:00	0.80	event 70	0.00	15.50
11/08/2019 22:00	1.20	event 70	0.00	13.57
11/08/2019 23:00	0.60	event 70	0.00	12.86
12/08/2019 00:00	0.60	event 70	0.00	12.49
12/08/2019 01:00	0.80	event 70	0.00	12.33
12/08/2019 03:00	0.20	event 70	0.00	12.12
12/08/2019 21:00	0.20	event 71	0.00	12.85
13/08/2019 01:00	0.20	event 71	0.00	11.69

Table S2.14 Overview of precipitation events, within sampling date 21.08.2019, during covered period together with average solar radiation, air temperature data which was recorded at nearby weather station (Reckenbuel) data based on 10 minutes temporal resolution. The data is upscaled to hourly intervals.

Date and Time	Precipitation (mm)	Event number	Solar Radiation (Wmm ⁻²)	Air Temperature (°C)
15/08/2019 05:00	0.40	event 72	2.83	13.15
15/08/2019 07:00	0.20	event 72	92.50	13.92
15/08/2019 17:00	0.40	event 73	80.67	17.00
15/08/2019 18:00	2.20	event 73	40.00	15.19
15/08/2019 20:00	0.20	event 73	0.00	14.18
16/08/2019 00:00	0.40	event 73	0.00	13.67
16/08/2019 01:00	0.20	event 73	0.00	13.36
16/08/2019 04:00	0.20	event 73	0.00	12.87
18/08/2019 03:00	0.20	event 74	0.00	15.44
18/08/2019 04:00	0.20	event 74	0.00	15.45
18/08/2019 05:00	1.80	event 74	1.67	15.36
18/08/2019 06:00	1.40	event 74	11.17	15.29
18/08/2019 07:00	0.40	event 74	20.17	15.36
18/08/2019 08:00	0.40	event 74	46.67	15.93