

ANNUAL CLIMATOLOGICAL REPORT 2017



**METEOROLOGICAL
SERVICE
SINGAPORE**
Centre for Climate Research Singapore

Table of Contents

1. Introduction	1
2. Climate of Singapore.....	1
3. Meteorological Stations	2
3.1. Upper Air Observatory	3
3.2. Manned Meteorological Stations.....	3
3.3. Automatic Weather Stations	4
4. Monthly Records of Changi Climate Station	8
5. Daily Records of Changi Climate Station.....	14
6. Isohyets	21
7. Monthly Observation of Weather Parameters.....	26
8. Weather Parameter Observation by Months.....	35
8.1. Jan to Apr	36
8.2. May to Aug	41
8.3. Sep to Dec.....	46
9. Weather Statistics for Manned Meteorological Station	51
9.1. Monthly Observation.....	52
9.2. Hourly Observation	58
10. Weather Statistics for Automatic Weather Station	69
10.1. Monthly Observation.....	70
10.2. Hourly Observation	88
11. Wind Rose	123
11.1. Annual Wind Rose of All Stations	124
11.2. Monthly Wind Rose of Changi Climate Station.....	128
12. Upper Air Data	131
13. Soil Data	140
Annex 1 Instruments of the Manned Meteorological Station.....	142
Annex 2 Instruments of the Manual Rainfall Station	144
Annex 3 Instruments of the Automatic Weather Station	147

1. Introduction

The annual climatological report of the Meteorological Service Singapore (MSS) contains climate statistics for 53 automatic weather stations (AWSs), 5 manned meteorological stations and 1 upper air observatory (UAO). Among these AWSs island-wide, there are 37 rainfall-only stations and 17 full-stations, recording rainfall, temperature, relative humidity, wind and pressure.

The meteorological station that is located in the aerodrome of the Changi International Airport also serves as the climate station for Singapore. According to World Meteorological Organization guidelines, a climate station monitors the climate over a long term period to provide data that enables detection of climate change signals at the national level. It should minimally have 30 years of rainfall and minimum/maximum temperature data and be located relatively far from large urban centres. Changi climate station meets these requirements with 34 years of meteorological records spanning 1984 to 2017.

Singapore's climate station has been located at 8 different sites (twice to Kallang) in the past 140 years.(see Table 1). Some of these stations have been decommissioned at various points in the past due to changes of local land use in the vicinity of the site.

	Period of service	Location
1	Jan 1869 – Dec 1874	Convict Prison (Outram)
2	Jan 1875 – Dec 1928	Kandang Kerbau Hospital
3	Jan 1929 – May 1934	Mount Faber
4	Jun 1934 – Dec 1941	Kallang
5	Jan 1942 – Dec 1947	Botanic Gardens
6	Jan 1948 – Aug 1955	Kallang
7	Sep 1955 – Dec 1983	Paya Lebar
8	Jan 1984 – present	Changi

Table 1: Period of service and the location of the Climate Station of Singapore

Prior to the installing of the AWSs, MSS had been operating 30 manual rainfall gauges with some dating back as early as 1960s, see Annex 2. With the completion of the AWSs in 2011, these manual instruments have all been replaced with electronic tipping bucket rain gauges.

2. Climate of Singapore

In general, the climate of Singapore is relatively uniform throughout the year and large variations in seasonal weather do not occur. The main features of Singapore's climate are uniform temperature, high humidity and abundant rainfall throughout the year due to maritime influence and the island's close proximity to the Equator.

The diurnal temperature variation is small, with highs of 31°C to 33°C during the day and lows of 23°C to 25°C during the night. Based on climate station records from 1929, the highest temperature observed is 36.0°C, recorded in 1998 and the lowest is 19.4°C, recorded in 1934.

The relative humidity is high all year round and varies daily from more than 90% in the morning just before sunrise and falling to around 60% in the afternoon on days when there is no rain. Relative humidity reaches 100% frequently during periods of rain. The average annual relative humidity is 84% and the lowest relative humidity observed is 33%, recorded in 1966.

Although there are seasonal variations in the amount of rainfall, there are no distinct wet or dry seasons as rain falls every month of the year. The annual average rainfall between 1981 and 2010 is 2,165.9 mm. Based on climate station records from 1869, the maximum monthly rainfall is 818.6 mm, recorded in Jan 1893 and the minimum is 0.2 mm recorded in Feb 2014. The highest rainfall recorded in a day is 512.4 mm, recorded in Dec 1978.

Monsoon seasons are defined by the prevailing winds dominant at the time of the year. The two main seasons are the Northeast Monsoon which lasts from Dec to Mar and the Southwest Monsoon from Jun to Sep. The Northeast Monsoon season is wetter and accounts for about half of the annual rainfall while the Southwest Monsoon season is relatively drier and accounts for about a third.

The Northeast Monsoon season can be divided into a wet and a dry phase. The wet phase of the Northeast Monsoon usually occurs in Dec and Jan while the later part of the season is in the dry phase where days are generally fair and occasionally windy with little or no rain. The Northeast Monsoon winds are generally cooler and constant in direction; and spells of wet weather associated with surges in the monsoon flow may persist for several days at a time. The wet spells are more frequent during the first two months of the northeast monsoon season. Dry spells occur during the second half of the northeast monsoon season.

The main feature of the Southwest Monsoon season is the incidence of morning squalls which develop over Sumatra and move eastwards towards Singapore. These squalls can bring gusts which are occasionally strong, and are often accompanied by heavy rain and thunder with associated drops in temperature. More intense features of the storm seldom last for more than 1 hour. Sumatra squalls occur on an average of 3 to 4 times a month throughout the season.

During the Inter-Monsoon periods of Apr to May and Oct to Nov, when the winds are generally light and variable in direction, sea breeze induced thunderstorms are common. The sea breeze carries humidity inland and mixes with the rising warm land air and, in unstable conditions, form rain clouds in the afternoon. In the Inter-Monsoon periods, afternoon and evening thunderstorms and convective showers are thus more frequent.

3. Meteorological Stations

MSS currently operates 1 upper air station, 5 manned meteorological stations, and 53 automatic weather stations. The locations of these stations are shown in Figure 1.

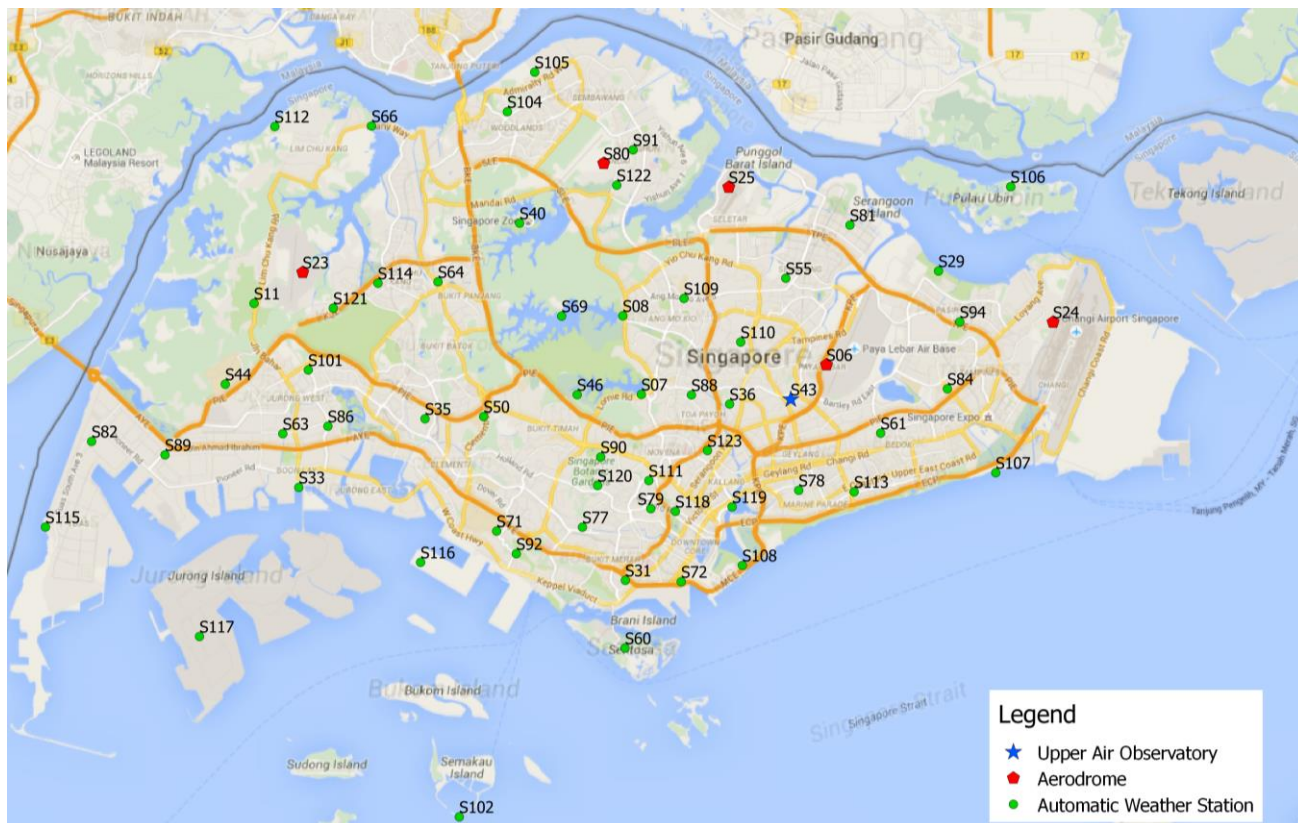


Figure 1: Locations of UAO, Manned Meteorological Stations and AWSs

3.1. Upper Air Observatory

The UAO, which has been operational since the 1950s, gathers meteorological observations of the atmosphere that are essential for weather monitoring and forecasting. It is part of a global network of about 1,300 upper-air stations world-wide.

Twice daily measurements are carried out at the UAO through the release of balloon-borne meteorological sensors which measure temperature, humidity, wind and pressure up to heights of 30 km. The upper air station is equipped with a sounding system and an automated sliding hatch in the roof enabling the weather balloon to be released from within the observatory. Helium gas is used to ensure safety in the balloon-filling operations.

In addition to the twice daily soundings using radiosondes, vertical profile measurements of ozone concentration are carried out once a month. This is done through attaching an ozonesonde together with the radiosonde to the weather balloon.

3.2. Manned Meteorological Stations

Since 1984, the meteorological station serving the Changi International Airport has been designated as the climate station of Singapore. The locations of the other 4 other manned meteorological stations are at Paya Lebar, Tengah, Seletar, and Sembawang.

The Changi station operates 24 hours a day, while the other 4 meteorological stations perform manual observations only from 5 am to 11 pm. The locations of these stations, given in decimal degree, are listed in Table 2, and the details of their instruments and starting operational dates are given in Table 3. A more detailed listing of the instruments can be found in the Annex 1.

ID	Station	Position		Elevation above mean sea-level (m)
		Lat. (N)	Long. (E)	
24	Changi Climate Station	1.3678	103.9826	15
06	Paya Lebar Meteorological Station	1.3524	103.9007	34
23	Tengah Meteorological Station	1.3858	103.7114	17
25	Seletar Meteorological Station	1.4166	103.8654	17
80	Sembawang Meteorological Station	1.4252	103.8202	26

Table 2: Locations of the manned stations

ID	Station	Instruments							Operational Date
		Hellmann Rain Gauge	Thermometer	Hygrometer	Barometer	Sunshine Recorder	Soil Thermometer	Evaporation Tank	
24	Changi Climate Station	1	1	1	1	1	1	1	01/01/1972
06	Paya Lebar Meteorological Station	1	1	1	1				01/08/1955
23	Tengah Meteorological Station	1	1	1	1				01/01/1950
25	Seletar Meteorological Station	1	1	1	1				01/04/1970
80	Sembawang Meteorological Station	1	1	1	1				01/04/1986

Table 3: Types and numbers of instruments at the manned stations

3.3. Automatic Weather Stations

The network of 53 automatic weather stations, are distributed across the island to measure rain, temperature, relative humidity, wind and pressure. All these measured meteorological readings are transmitted in real time to the Central Forecast Office located at the terminal building of the Changi International Airport. The locations of the AWSs are given in Table 5, and the instruments and operational start dates are listed in Table 6.

ID	Station	Position		Elevation above mean sea-level (m)
		Lat. (N)	Long. (E)	
07	Macritchie Reservoir	1.3417	103.8338	25
08	Lower Peirce Reservoir	1.3701	103.8271	9
11	Choa Chu Kang (West)	1.3746	103.6938	22
24	Changi Climate Station	1.3678	103.9826	15
29	Pasir Ris (West)	1.3863	103.9412	10
33	Jurong Pier	1.3081	103.7100	6
35	Ulu Pandan	1.3329	103.7556	13
36	Serangoon	1.3382	103.8657	9
40	Mandai	1.4036	103.7898	38
43	Tai Seng	1.3399	103.8878	36
44	Jurong (West)	1.3455	103.6806	84
46	Upper Thomson	1.3416	103.8106	34

ID	Station	Position		Elevation above mean sea-level (m)
		Lat. (N)	Long. (E)	
50	Clementi	1.3337	103.7768	69
55	Buangkok	1.3837	103.8860	29
60	Sentosa Island	1.2500	103.8279	37
61	Chai Chee	1.3277	103.9203	24
63	Boon Lay (West)	1.3275	103.7042	11
64	Bukit Panjang	1.3824	103.7603	32
66	Kranji Reservoir	1.4387	103.7363	9
69	Upper Peirce Reservoir	1.3700	103.8050	45
71	Kent Ridge	1.2923	103.7815	72
77	Queenstown	1.2937	103.8125	24
78	Tanjong Katong	1.3070	103.8907	6
79	Somerset (Road)	1.3004	103.8372	67
81	Punggol	1.4029	103.9092	25
82	Tuas West	1.3247	103.6351	45
84	Simei	1.3437	103.9444	19
88	Toa Payoh	1.3415	103.8519	29
89	Tuas	1.3199	103.6616	25
90	Bukit Timah	1.3191	103.8191	21
91	Yishun	1.4301	103.8308	43
92	Buona Vista	1.2841	103.7886	38
94	Pasir Ris (Central)	1.3679	103.9489	23
101	Jurong (North)	1.3505	103.7134	18
102	Semakau Island	1.1890	103.7680	6
104	Admiralty	1.4439	103.7854	27
106	Pulau Ubin	1.4168	103.9673	27
107	East Coast Parkway	1.3134	103.9619	9
108	Marina Barrage	1.2799	103.8703	15
109	Ang Mo Kio	1.3764	103.8492	53
111	Newton	1.3106	103.8365	115
112	Lim Chu Kang	1.4385	103.7013	6
113	Marine Parade	1.3065	103.9107	25
114	Choa Chu Kang (Central)	1.3819	103.7386	25
115	Tuas South	1.2938	103.6184	6
116	Pasir Panjang	1.2810	103.7540	26
117	Jurong Island	1.2542	103.6741	22
118	Dhoby Ghaut	1.2994	103.8461	21
119	Nicoll Highway	1.3011	103.8666	26
120	Botanic Garden	1.3087	103.8180	39
121	Choa Chu Kang (South)	1.3729	103.7224	38
122	Khatib	1.4173	103.8249	26
123	Whampoa	1.3214	103.8577	31

Table 4: Locations of the AWSs

ID	Station	Wind Sensor (10m)	Wind Sensor (5m)	Wind Sensor (2m)	Tipping Bucket	Thermometer	Hygrometer	Barometer	Solar Radiation	Broadband UV	Total UV	Soil Thermometer	Ceilmeter	Visibility Sensor	Evaporation Tank	Doppler Rain sensor	Operational Date
07	Macritchie Reservoir				2												12/02/2009
08	Lower Peirce Reservoir				2												29/01/2010
11	Choa Chu Kang (West)				2												05/03/2009
24	Changi Climate Station	1			1	1	1	1	1	1	1	1	1	1	1	1	28/05/2009
29	Pasir Ris (West)				2												05/05/2010
33	Jurong Pier				2												03/02/2010
35	Ulu Pandan				2												27/02/2009
36	Serangoon				2												09/07/2009
40	Mandai				2												11/12/2009
43	Tai Seng		1		2	1	1	1									28/04/2011
44	Jurong (West)			1	2	1	1										17/03/2009
46	Upper Thomson				2												21/01/2010
50	Clementi			1	2	1	1										14/04/2010
55	Buangkok				2												06/11/2008
60	Sentosa Island		1		2	1	1	1	1								04/03/2010
61	Chai Chee				2												15/12/2009
63	Boon Lay (West)				2												24/03/2009
64	Bukit Panjang				2												07/12/2009
66	Kranji Reservoir				2												23/10/2008
69	Upper Peirce Reservoir				2												04/02/2010
71	Kent Ridge				2												24/03/2009
77	Queenstown				2												23/11/2009
78	Tanjong Katong				2												24/09/2008
79	Somerset (Road)				1												24/03/2011
81	Punggol				2												04/06/2009
82	Tuas West				2												03/03/2009
84	Simei				2												15/06/2009
88	Toa Payoh				2												16/03/2010
89	Tuas				2												02/10/2008
90	Bukit Timah				2												03/03/2009
91	Yishun				2												19/05/2009
92	Buona Vista				2												02/03/2009
94	Pasir Ris (Central)				2												18/03/2010
101	Jurong (North)				2												10/09/2008
102	Semakau Island	1			2	1	1	1	1								31/10/2008
104	Admiralty		1		2	1	1										16/10/2008
106	Pulau Ubin	1			2	1	1	1									05/01/2009
107	East Coast Parkway			1	2	1	1	1									10/06/2009
108	Marina Barrage		1		2	1	1	1									08/07/2010
109	Ang Mo Kio			1	2	1	1	1									02/09/2009
111	Newton		1		2	1	1										15/10/2009
112	Lim Chu Kang				2												29/01/2010
113	Marine Parade				2												13/05/2009
114	Choa Chu Kang (Central)				2												15/12/2009
115	Tuas South	1			2	1	1	1									30/03/2011

ID	Station	Wind Sensor (10m)	Wind Sensor (5m)	Wind Sensor (2m)	Tipping Bucket	Thermometer	Hygrometer	Barometer	Solar Radiation	Broadband UV	Total UV	Soil Thermometer	Ceilmeter	Visibility Sensor	Evaporation Tank	Doppler Rain sensor	Operational Date
116	Pasir Panjang			1	2	1	1	1									24/02/2010
117	Jurong Island			1	2	1	1	1									05/08/2011
118	Dhoby Ghaut				2												03/09/2010
119	Nicoll Highway				2												17/09/2010
120	Botanic Garden				2												23/09/2010
121	Choa Chu Kang (South)		1		2	1	1	1	1								08/03/2011
122	Khatib	1			2	1	1	1	1	1							11/10/2010
123	Whampoa				2												09/09/2011

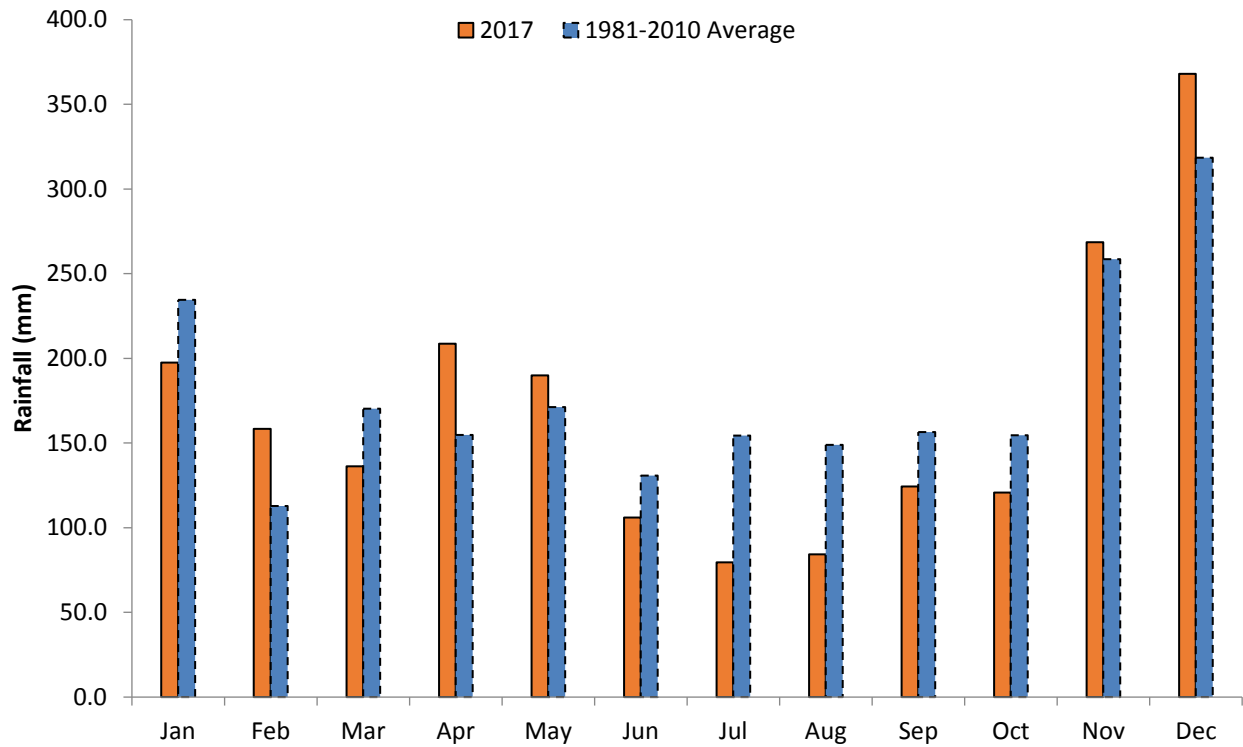
Table 5: Types and numbers of instruments at the AWSs

4. Monthly Records of Changi Climate Station

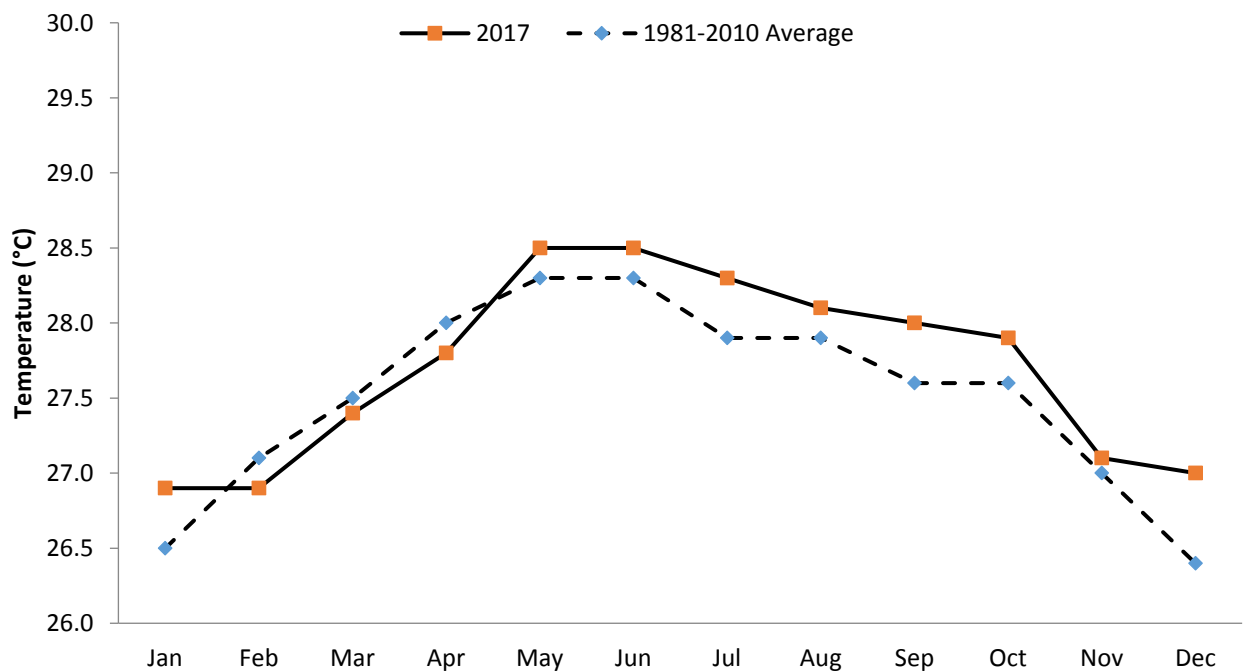
Climate Statistics of Changi Climate Station for 2017

			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	Monthly Total	2017	197.6	158.4	136.2	208.6	190.0	106.0	79.6	84.2	124.4	120.8	268.6	368.0
		1981-2010 Average	234.6	112.8	170.3	154.8	171.2	130.7	154.4	148.9	156.5	154.6	258.5	318.6
	Raindays	2017	21	15	11	21	15	10	9	18	19	18	24	23
		1981-2010 Average	13	8	13	14	14	12	14	14	13	15	18	18
Temperature (°C)	Monthly Average of Daily Maximum	2017	30.7	30.7	31.1	31.8	31.4	31.6	31.0	31.0	31.2	31.6	30.8	30.8
		1981-2010 Average	30.4	31.7	32.0	32.3	32.2	32.0	31.3	31.4	31.4	31.7	31.1	30.2
	Monthly Average of Daily Minimum	2017	24.7	24.7	24.9	25.0	25.9	25.9	26.0	25.9	25.4	25.3	24.6	24.6
		1981-2010 Average	23.9	24.3	24.6	25.0	25.4	25.4	25.0	25.0	24.8	24.7	24.3	24.0
	Monthly 24-hr Average	2017	26.9	26.9	27.4	27.8	28.5	28.5	28.3	28.1	28.0	27.9	27.1	27.0
		1981-2010 Average	26.5	27.1	27.5	28.0	28.3	28.3	27.9	27.9	27.6	27.6	27.0	26.4
Relative Humidity (%)	Monthly Average of Daily Maximum	2017	96	94	94	97	95	93	91	91	93	96	98	97
		1981-2010 Average	95	95	96	97	96	95	95	94	96	96	97	96
	Monthly Average of Daily Minimum	2017	66	67	66	65	69	63	66	65	64	64	69	67
		1981-2010 Average	67	62	63	63	65	64	65	64	64	63	66	69
	Monthly 24-hr Average	2017	84	82	82	83	83	80	80	80	81	82	86	84
		1981-2010 Average	84	82	83	84	84	82	82	82	83	83	86	87
Wind (m/s)	Monthly 24-hr Average	2017	2.2	2.9	2.5	1.8	2.3	2.4	2.8	3.0	2.4	1.8	1.8	2.3
		1981-2010 Average	2.9	3.0	2.3	1.6	1.7	2.0	2.4	2.5	2.0	1.6	1.5	2.2

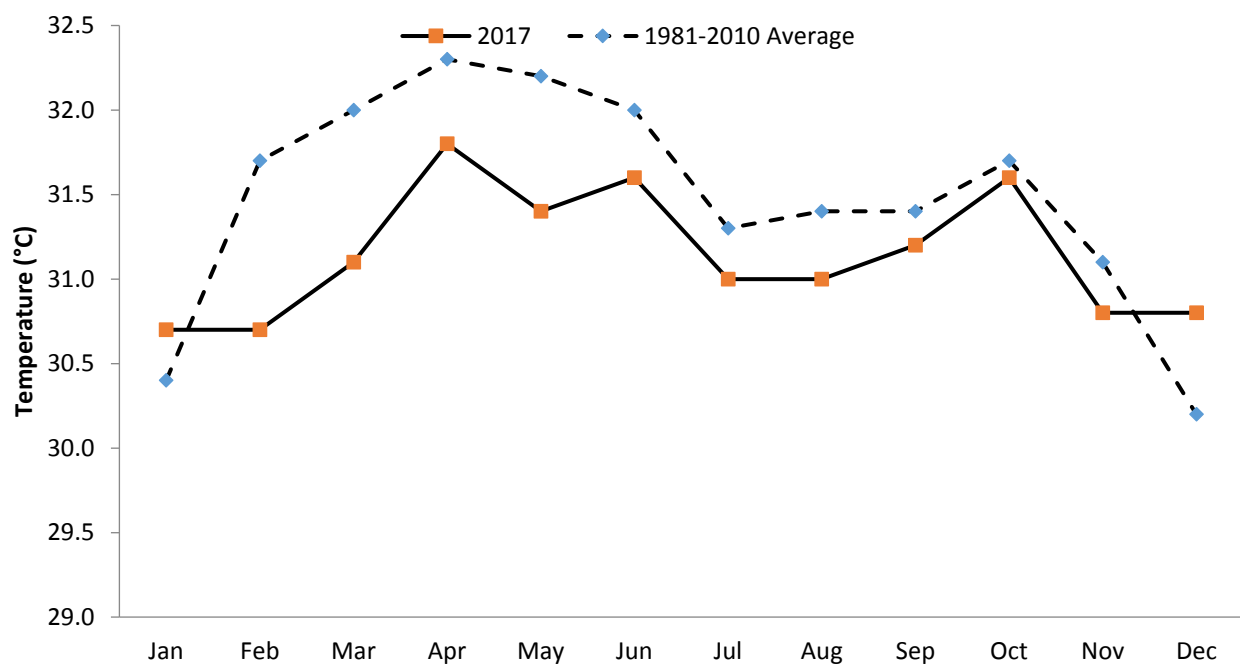
Rainfall Amount at Changi Climate Station



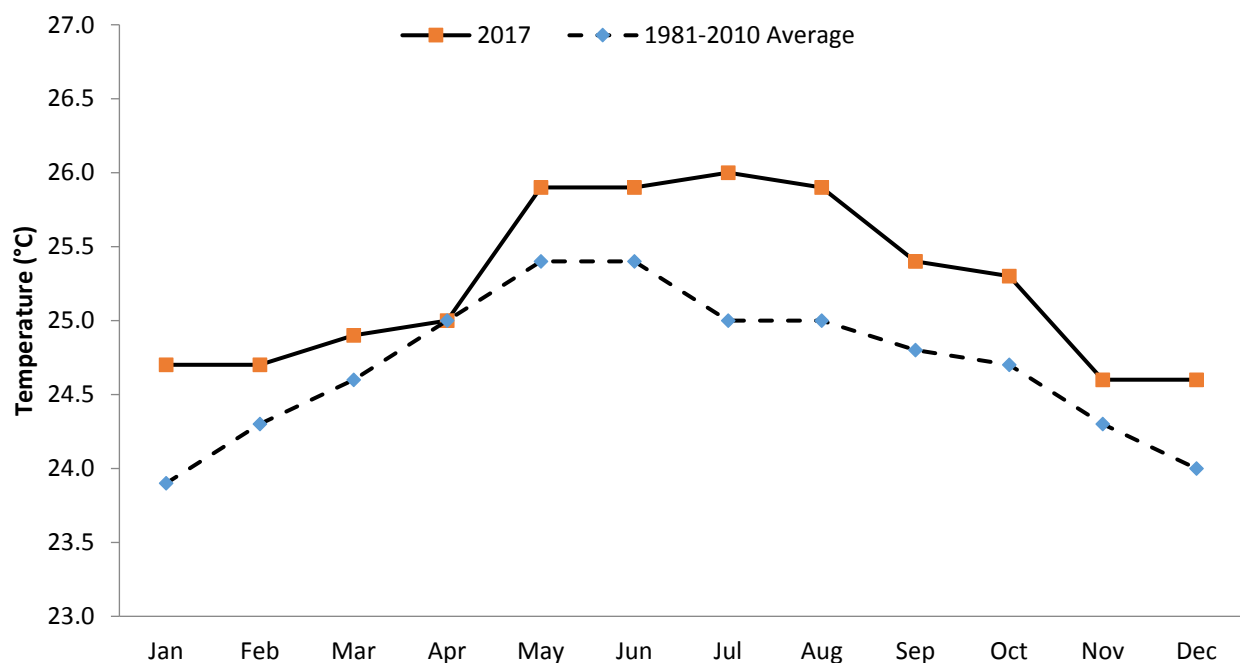
Monthly Average Temperature at Changi Climate Station



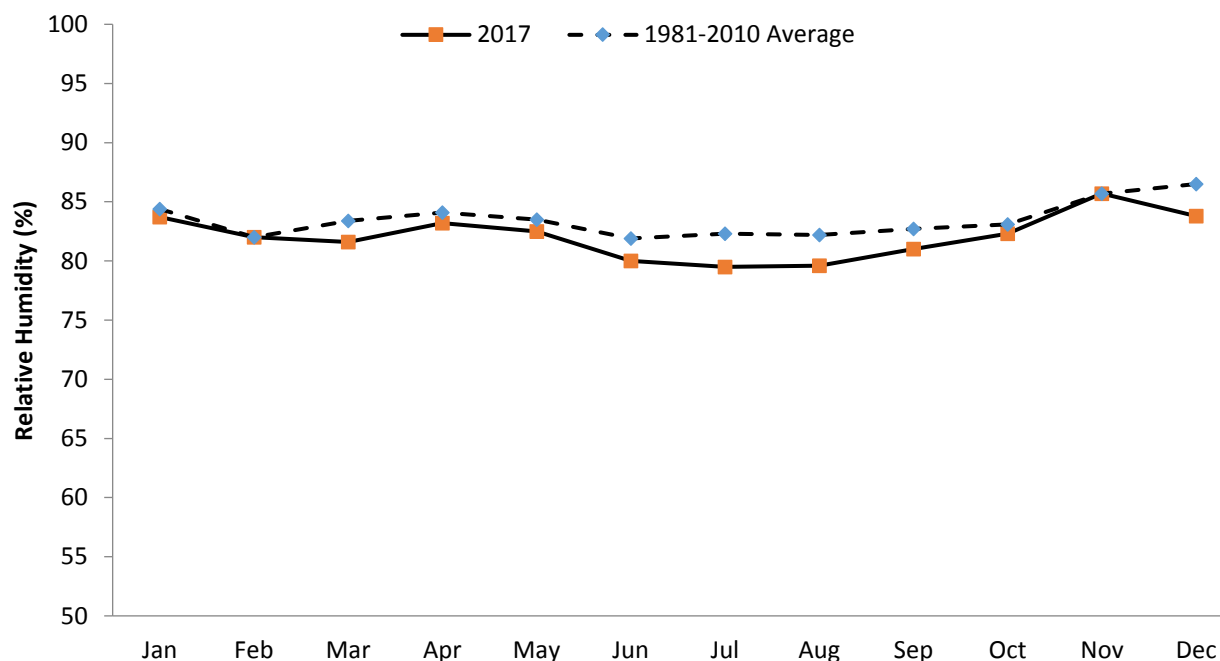
Monthly Average of Daily Maximum Temperature at Changi Climate Station



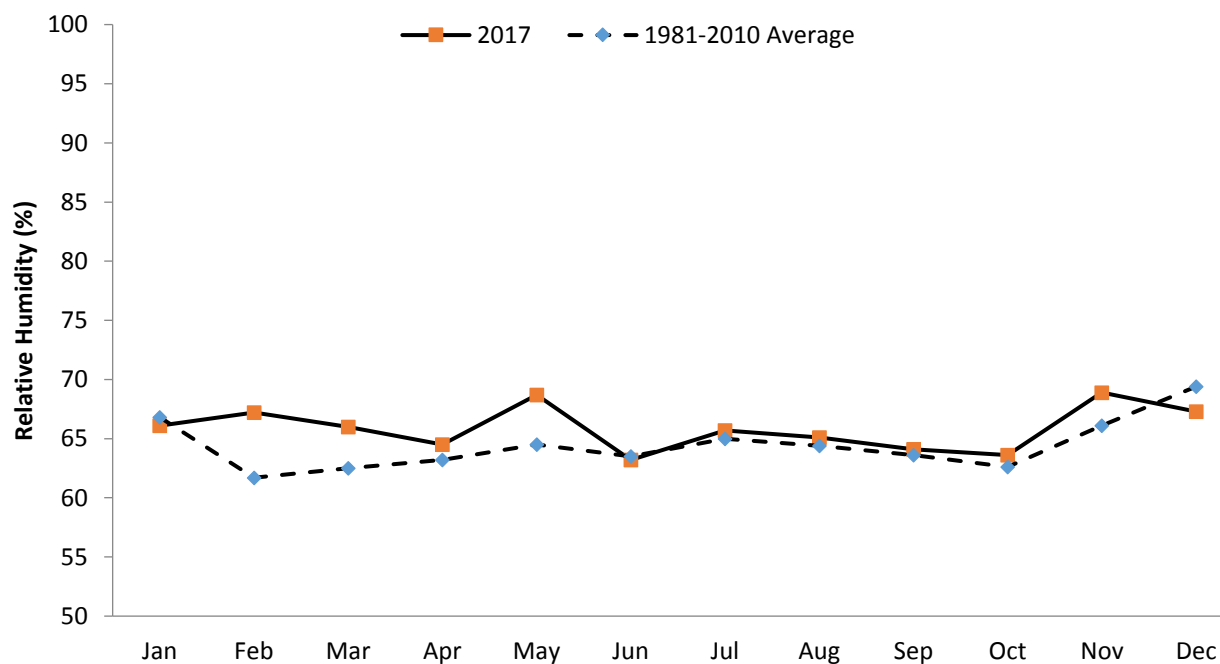
Monthly Average of Daily Minimum Temperature at Changi Climate Station



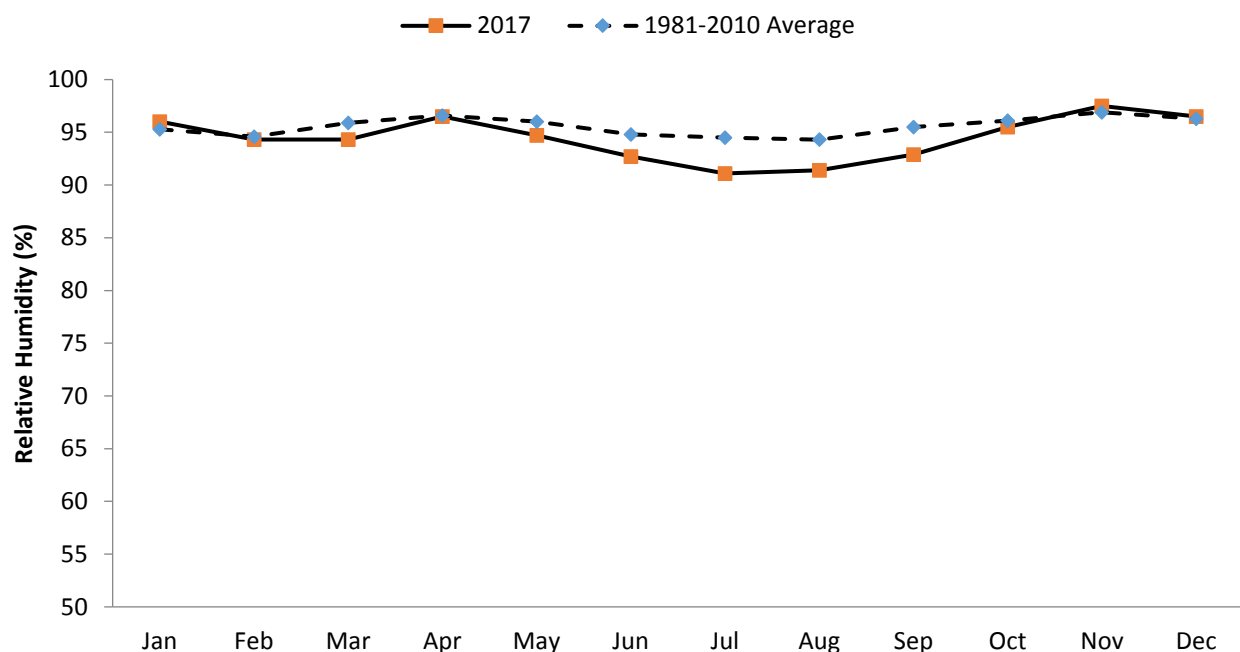
Monthly Average Relative Humidity at Changi Climate Station



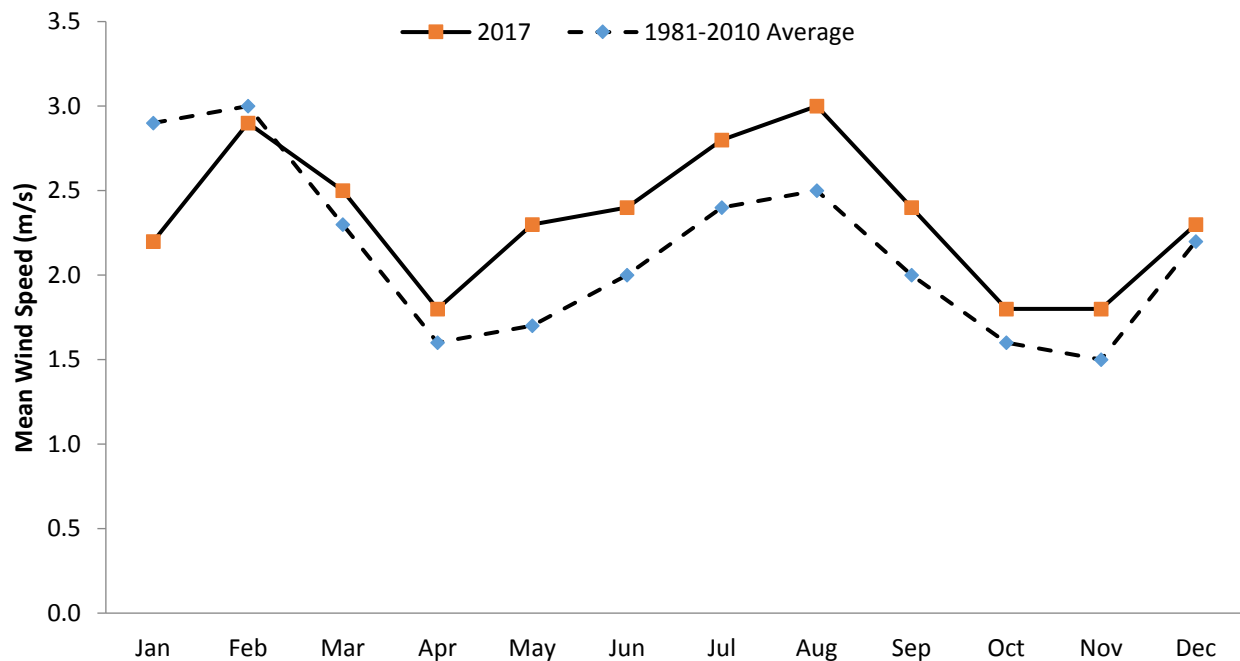
Monthly Average of Daily Minimum Relative Humidity at Changi Climate Station



Monthly Average of Daily Maximum Relative Humidity at Changi Climate Station



Monthly Average Wind Speed at Changi Climate Station



5. Daily Records³ of Changi Climate Station

³ All daily records are defined as records from midnight to midnight Singapore local time, on that calendar date

Daily Average Relative Humidity (%), Changi, Singapore 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	85.2	79.6	—	90.0	80.0	—	75.7	80.0	77.4	87.0	84.8	81.8
2	88.9	79.8	84.1	85.5	82.1	77.0	83.1	73.2	76.9	—	82.8	84.7
3	88.4	84.4	87.0	82.3	78.5	77.3	81.1	70.8	76.5	88.0	79.2	85.1
4	85.2	—	—	77.0	79.8	79.0	77.9	73.2	78.7	87.4	—	91.5
5	76.1	—	82.8	72.7	82.8	79.5	85.6	75.5	82.1	79.8	—	88.5
6	80.7	84.5	83.4	77.5	83.1	78.8	81.1	75.8	88.0	80.5	91.0	84.0
7	77.9	91.7	80.9	84.6	84.0	78.8	74.7	82.6	81.0	83.1	90.8	90.6
8	77.9	—	79.2	85.3	79.8	78.6	81.5	82.9	81.8	88.8	82.8	83.4
9	82.6	74.6	77.7	87.2	77.5	77.8	83.5	81.3	79.8	82.3	—	87.1
10	83.9	78.1	80.1	87.8	—	79.7	77.5	78.7	85.7	—	91.5	82.8
11	—	76.8	78.8	81.9	81.0	81.6	—	84.0	86.1	80.4	—	85.3
12	79.7	83.5	81.7	85.3	82.2	76.2	87.6	81.7	82.4	85.7	—	92.8
13	85.4	84.3	83.3	86.5	84.0	78.2	85.0	83.2	77.4	—	—	91.4
14	82.3	81.8	83.7	—	81.3	76.8	87.8	80.7	77.5	71.4	91.4	88.7
15	86.6	—	75.9	78.8	85.5	77.0	82.4	80.4	81.2	78.8	83.3	89.7
16	82.7	80.0	79.7	79.9	81.3	81.9	77.1	76.3	79.1	80.1	85.4	—
17	83.6	78.8	84.1	78.7	79.1	78.4	74.2	—	80.0	71.7	86.7	79.0
18	85.1	83.3	79.1	85.9	83.0	85.7	77.5	—	85.8	77.9	—	77.0
19	—	81.1	78.6	79.9	80.4	80.7	76.6	82.4	88.2	73.8	—	83.5
20	87.0	81.5	—	81.9	78.8	78.0	79.0	80.3	84.1	76.5	88.3	81.7
21	85.5	81.0	79.4	—	83.6	82.2	79.5	79.4	79.4	80.2	—	76.2
22	87.5	82.5	79.1	80.8	86.1	83.0	78.0	81.4	76.4	80.8	83.2	80.4
23	—	84.5	77.5	85.7	79.5	85.6	78.9	75.4	78.6	82.7	88.1	84.6
24	—	—	78.3	89.0	90.2	76.2	75.5	79.5	77.8	86.7	87.8	85.7
25	83.8	84.2	81.2	—	86.3	85.9	77.5	81.1	77.3	—	82.0	87.1
26	84.5	83.3	78.3	87.2	88.6	81.0	80.8	78.0	82.2	86.8	86.4	87.5
27	82.1	83.1	80.2	82.0	87.5	86.3	74.6	82.8	83.9	87.4	89.3	—
28	82.9	84.0	88.8	—	82.6	—	74.9	80.2	82.2	80.1	82.4	—
29	84.4	—	85.5	87.1	80.0	80.2	77.3	85.4	82.7	87.8	84.6	85.2
30	87.9		90.5	81.5	89.3	77.8	79.6	82.0	79.8	86.8	77.3	89.4
31	82.0		87.2		78.1		78.6	80.3		90.3		99.3
Monthly Average	83.7	82.0	81.6	83.2	82.5	80.0	79.5	79.6	81.0	82.3	85.7	85.9

■ No Data

— Defective Data

Daily Average Temperature (°C), Changi, Singapore 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	27.4	26.9	25.2	26.4	28.9	27.5	29.3	29.2	29.0	27.1	27.3	28.0
2	26.6	27.1	27.0	27.0	28.3	29.0	28.4	29.3	29.1	27.9	27.6	28.1
3	26.4	27.1	26.5	27.5	29.0	29.6	27.3	29.2	29.0	27.2	28.1	28.3
4	26.6	26.7	25.6	28.6	28.9	29.9	28.4	29.3	28.6	26.0	27.4	27.0
5	28.0	26.8	27.3	29.0	28.4	29.8	27.3	29.5	28.2	27.8	28.0	27.7
6	28.3	27.1	27.1	28.7	28.1	29.6	27.7	29.2	26.6	28.7	26.5	27.9
7	28.9	25.8	27.1	27.5	27.8	29.6	28.5	28.4	28.0	27.7	26.6	26.4
8	28.9	26.3	27.3	26.8	28.4	29.4	27.8	27.5	27.9	26.6	27.4	26.8
9	28.4	27.5	27.1	27.5	29.5	29.7	27.4	27.2	27.9	27.8	26.2	26.0
10	28.0	27.4	27.0	27.3	27.0	29.0	28.6	28.2	27.7	27.6	25.7	27.5
11	26.8	27.4	27.7	28.5	28.1	28.1	27.3	27.5	26.9	28.2	25.7	27.1
12	28.0	26.2	26.8	27.7	28.2	29.2	26.2	27.0	28.5	27.3	27.3	26.0
13	27.1	26.5	27.7	27.0	28.6	29.1	26.9	27.0	29.1	27.2	27.6	26.1
14	27.5	26.7	26.9	27.9	29.1	28.2	26.2	27.8	28.6	29.2	25.7	26.8
15	26.9	25.7	28.6	28.6	28.3	29.1	27.2	27.3	28.2	29.4	27.3	26.8
16	26.9	26.6	28.2	28.5	28.7	28.2	28.3	28.1	27.7	28.5	27.9	—
17	27.1	27.1	27.3	29.1	29.7	28.9	28.5	27.3	28.4	29.7	26.9	27.6
18	26.4	27.0	28.4	27.4	29.0	27.1	28.5	27.3	26.9	29.7	27.5	27.6
19	26.5	27.7	28.4	28.0	29.1	27.8	28.4	28.1	26.3	29.7	28.0	26.3
20	26.3	27.6	26.6	28.1	29.5	28.9	28.6	28.8	27.0	29.3	27.0	26.9
21	26.9	27.7	27.6	27.9	28.4	28.1	28.9	28.9	26.8	28.9	25.8	27.5
22	26.5	27.5	28.0	28.2	28.1	28.5	29.1	27.2	28.7	28.3	27.9	27.4
23	25.1	27.1	28.7	28.0	29.4	26.5	29.1	29.0	28.8	28.0	26.5	27.4
24	24.0	25.0	28.3	27.6	26.6	28.1	29.3	28.8	28.0	27.7	26.5	26.3
25	26.0	26.9	28.1	26.9	28.0	27.3	29.1	27.8	28.8	27.6	28.0	26.6
26	27.0	27.5	29.2	27.2	27.5	27.9	28.4	28.5	27.5	27.5	27.1	26.6
27	27.3	27.3	28.5	28.0	28.2	25.9	29.1	27.5	27.3	26.7	25.9	—
28	26.2	27.1	26.4	26.8	29.1	27.6	29.3	28.1	28.0	27.9	27.3	—
29	26.3	—	26.9	27.5	29.4	27.9	29.4	26.8	27.5	26.4	27.1	27.7
30	26.0		25.6	28.6	26.6	28.5	29.1	27.7	27.8	26.8	27.9	26.8
31	26.8		27.0		28.6		29.1	28.4		25.9		25.1
Monthly Average	26.9	26.9	27.4	27.8	28.5	28.5	28.3	28.1	28.0	27.9	27.1	27.0

■ No Data

— Defective Data

Daily Maximum Temperature (°C), Changi, Singapore 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	31.2	30.6	27.6	31.2	31.5	31.2	32.0	31.9	32.0	30.6	31.7	33.5
2	30.2	30.2	30.5	32.5	30.7	32.1	31.6	32.2	32.2	32.3	31.8	32.0
3	29.0	32.1	29.6	30.6	31.6	32.3	28.8	32.0	31.7	31.3	31.4	31.7
4	30.4	31.7	27.9	33.7	31.9	32.2	31.1	32.4	31.8	28.4	31.7	31.9
5	32.6	32.4	30.9	32.9	31.9	32.3	31.6	33.0	31.4	31.8	31.6	31.4
6	32.3	31.9	31.2	33.2	31.3	32.5	30.2	32.2	28.5	32.0	29.7	32.2
7	32.9	29.7	31.3	34.4	31.0	32.2	31.3	30.5	31.0	33.2	29.7	30.4
8	33.7	30.6	31.1	28.9	31.5	32.7	30.6	29.9	31.8	30.2	31.2	30.0
9	32.6	31.2	30.8	32.4	32.4	32.6	29.2	29.6	30.9	32.5	31.0	27.4
10	31.8	31.1	30.0	29.9	30.0	32.7	31.8	31.5	31.2	31.7	31.0	31.3
11	31.9	30.4	31.6	31.9	31.2	30.8	30.1	30.7	30.1	31.7	31.1	31.1
12	32.6	29.4	30.8	31.0	30.4	32.1	27.9	29.7	31.4	30.0	31.5	30.2
13	31.3	29.6	31.2	29.1	31.7	31.9	29.8	29.4	32.4	31.1	31.4	31.7
14	31.0	29.8	30.2	32.0	31.7	32.7	29.4	30.9	31.5	32.7	27.3	31.9
15	32.3	30.3	33.3	32.4	31.4	32.8	30.7	30.5	30.4	32.3	31.0	31.4
16	31.2	30.1	32.2	32.5	31.3	31.9	31.0	31.6	31.1	31.2	32.3	31.1
17	31.3	30.5	31.7	32.9	32.5	33.0	31.4	32.0	32.0	32.9	30.3	32.2
18	32.0	30.2	32.7	32.4	31.5	30.5	30.9	30.8	30.3	34.6	32.1	30.3
19	31.1	31.1	32.0	32.4	31.5	30.5	30.8	31.6	30.3	33.2	32.5	30.8
20	29.1	31.0	28.9	32.3	32.0	32.3	31.0	31.8	31.6	32.8	31.0	30.2
21	30.7	31.2	32.8	32.4	32.2	31.6	31.5	32.0	30.5	33.2	27.9	31.2
22	29.9	31.3	32.0	30.9	30.7	30.7	31.9	28.8	31.5	31.2	32.3	32.4
23	28.0	31.6	32.2	31.8	31.9	28.4	32.0	31.6	32.1	31.5	29.4	31.4
24	24.7	28.7	31.2	32.1	29.7	31.2	32.2	31.3	31.6	31.0	30.1	28.3
25	29.6	31.6	32.4	32.0	31.9	30.2	32.1	30.5	31.5	32.8	32.0	30.6
26	30.8	30.8	33.3	29.7	31.0	31.5	30.5	31.0	31.9	32.0	29.9	30.9
27	30.7	30.5	32.2	32.1	31.9	27.8	31.8	29.7	31.3	29.6	27.2	—
28	29.6	30.5	28.0	30.6	31.0	32.0	32.3	30.8	31.1	33.8	31.6	31.2
29	28.5	—	32.0	30.1	32.1	30.6	31.8	29.6	31.0	31.0	31.3	30.8
30	29.0		31.0	32.7	28.8	31.5	32.0	31.1	30.7	28.5	32.0	29.3
31	30.3		31.8		32.8		32.4	31.6		27.0		25.7
Monthly Average	30.7	30.7	31.1	31.8	31.4	31.6	31.0	31.0	31.2	31.6	30.8	30.8

■ No Data

— Defective Data

Daily Minimum Temperature (°C), Changi, Singapore 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	25.2	24.6	22.9	24.4	26.4	24.6	27.5	27.5	27.1	25.7	24.7	25.3
2	25.0	25.2	24.6	24.9	26.7	27.0	26.0	27.6	27.1	25.3	25.3	25.1
3	24.9	25.1	23.6	24.8	26.2	27.5	24.8	27.3	27.3	25.2	24.5	26.1
4	23.5	24.5	23.9	24.7	26.8	28.0	25.2	27.1	26.3	24.5	24.9	24.8
5	24.9	24.2	24.6	26.1	24.8	28.2	23.5	27.8	25.1	24.7	24.7	25.6
6	25.8	24.8	24.6	26.2	26.1	28.0	25.1	27.6	24.4	25.9	23.1	24.9
7	26.1	23.5	24.5	22.9	24.8	27.9	26.3	26.4	26.0	25.0	25.2	23.4
8	26.0	24.4	25.1	25.7	25.9	28.0	24.8	25.0	26.4	24.7	24.8	25.3
9	26.5	25.0	24.7	25.1	27.3	27.6	24.4	24.3	24.7	23.6	23.8	24.4
10	26.1	24.7	24.9	25.7	24.9	26.4	26.0	25.7	25.9	24.5	23.4	24.8
11	21.8	25.4	25.2	25.2	25.3	25.8	23.7	25.5	24.2	24.0	24.4	25.1
12	25.0	24.6	24.8	23.1	25.9	27.0	23.7	24.4	25.6	23.5	24.2	24.2
13	25.3	24.6	25.3	24.0	27.0	25.4	25.0	24.9	26.2	24.1	24.5	23.2
14	25.0	24.0	24.5	25.0	27.1	26.3	23.8	25.6	27.3	26.7	23.1	24.2
15	25.2	22.6	25.1	25.5	26.7	26.7	24.6	25.3	26.5	26.1	24.7	23.9
16	24.4	24.8	25.9	26.0	26.8	25.7	26.7	25.7	22.3	26.8	25.5	24.7
17	24.9	25.0	25.4	26.7	27.7	26.2	26.2	23.7	26.3	27.2	23.8	24.9
18	24.0	25.4	25.6	23.8	25.6	24.1	26.7	24.1	23.7	27.0	24.6	25.8
19	23.5	25.8	25.7	24.5	27.2	24.7	26.3	25.2	24.8	27.0	25.6	24.6
20	24.0	25.3	24.1	26.0	28.1	25.8	26.6	27.2	24.3	26.4	24.5	24.6
21	24.8	25.4	25.4	23.6	24.1	23.0	27.1	27.0	23.7	26.9	23.3	25.2
22	23.9	25.3	25.2	25.6	23.6	26.4	27.4	25.0	26.1	26.2	24.7	23.5
23	23.5	24.7	26.0	26.1	27.0	22.2	27.1	26.8	24.8	24.4	24.5	23.8
24	23.5	23.6	26.5	23.9	24.0	24.7	27.4	27.3	23.8	26.2	24.9	25.4
25	23.0	23.6	25.7	25.2	25.5	23.5	27.2	24.5	27.0	25.2	25.0	24.0
26	24.4	25.4	26.2	25.2	24.3	25.1	24.9	27.2	24.8	24.6	25.9	23.8
27	25.4	24.8	24.5	24.3	26.1	24.1	26.8	25.6	24.9	24.9	24.6	—
28	24.7	25.7	23.7	22.8	27.2	25.1	27.6	25.7	26.1	24.7	25.2	25.0
29	24.5	—	25.1	25.8	27.8	26.2	27.6	25.8	23.8	23.7	24.9	25.6
30	24.7		23.6	25.8	23.6	26.1	27.5	25.4	25.9	24.7	25.7	25.6
31	25.0		24.7		23.7		27.2	25.9		23.5		23.3
Monthly Average	24.7	24.7	24.9	25.0	25.9	25.9	26.0	25.9	25.4	25.3	24.6	24.7

■ No Data

— Defective Data

Daily Total Radiation (MJ/m²), Changi, Singapore 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	15.1	18.2	8.7	9.6	22.2	10.2	18.4	19.3	23.6	9.0	15.1	19.0
2	7.8	11.6	19.7	17.0	15.0	15.8	15.0	21.5	25.2	22.4	14.8	18.1
3	12.0	17.5	16.1	15.2	19.5	22.6	15.3	21.2	20.4	15.2	18.0	12.8
4	12.4	15.8	4.4	20.5	16.0	17.9	23.4	22.3	18.6	8.9	19.7	9.0
5	17.2	15.9	22.0	18.0	20.6	15.2	13.9	20.4	19.1	18.5	22.6	15.5
6	16.4	17.9	18.0	17.2	15.5	13.8	13.5	21.0	9.8	22.5	10.3	18.7
7	19.2	9.8	17.1	21.7	14.2	19.3	20.6	10.5	17.4	17.8	7.6	9.1
8	21.0	13.0	25.0	7.7	14.7	20.0	14.0	12.2	18.6	10.9	14.9	11.6
9	18.7	17.4	24.4	18.8	20.0	21.1	17.3	12.6	13.8	16.3	10.1	6.8
10	16.1	22.8	18.5	14.2	4.7	16.6	22.2	19.9	11.2	19.9	12.7	18.1
11	16.2	20.3	24.9	23.5	17.5	14.6	9.0	15.6	13.9	19.8	9.0	17.1
12	17.2	14.2	13.2	14.2	14.0	18.4	7.8	12.3	21.5	8.4	15.9	10.5
13	15.0	15.3	17.9	10.9	14.1	16.6	10.6	8.3	20.6	13.4	16.4	13.8
14	12.7	18.7	12.4	15.0	16.5	17.8	6.6	18.7	15.7	19.5	5.7	17.0
15	14.2	16.8	23.1	21.2	13.8	22.0	14.2	12.5	16.7	22.0	16.6	14.2
16	14.3	20.0	21.4	19.4	17.4	13.6	22.6	17.5	17.8	17.3	18.0	14.7
17	17.4	25.6	18.0	19.7	21.6	22.0	18.4	12.7	20.8	23.3	16.1	21.6
18	19.1	17.5	23.5	14.5	15.9	11.4	17.6	17.5	10.3	18.9	15.6	18.2
19	17.5	26.6	16.2	21.2	17.7	13.5	20.4	14.9	10.6	19.4	19.2	17.2
20	10.7	24.7	9.3	15.4	22.0	20.6	14.8	21.5	12.9	17.0	8.1	17.2
21	16.5	18.3	20.4	16.2	19.8	11.9	14.8	21.2	16.5	14.7	5.7	20.2
22	14.1	20.1	20.2	12.4	11.5	12.6	16.2	12.2	21.1	22.4	22.0	15.0
23	7.0	19.9	22.0	9.8	22.3	5.0	19.3	21.4	19.1	9.1	5.5	16.0
24	2.4	5.0	16.4	12.7	4.2	17.4	23.0	18.7	20.3	9.9	9.4	6.5
25	14.3	20.5	18.8	10.3	20.1	12.1	18.6	19.1	16.8	16.0	18.8	15.4
26	20.4	17.0	26.2	12.8	7.6	16.9	10.6	16.7	16.2	16.7	10.6	15.7
27	22.3	17.9	17.2	14.1	10.7	4.9	20.9	9.6	13.6	8.2	4.6	8.9
28	12.6	16.6	8.2	11.8	14.4	19.6	17.3	18.4	11.1	18.2	16.3	14.6
29	8.9	—	16.4	9.4	14.7	13.4	23.5	9.2	17.0	12.1	13.4	19.9
30	12.2		10.0	22.1	6.9	22.0	15.3	19.5	17.1	10.1	18.5	10.6
31	16.2		16.2		18.5		19.3	19.0		5.7		2.0
Monthly Average	14.8	17.7	17.6	15.6	15.6	16.0	16.6	16.7	16.9	15.6	13.7	14.3

■ No Data

— Defective Data

Daily Total Rainfall (mm), Changi, Singapore 2017

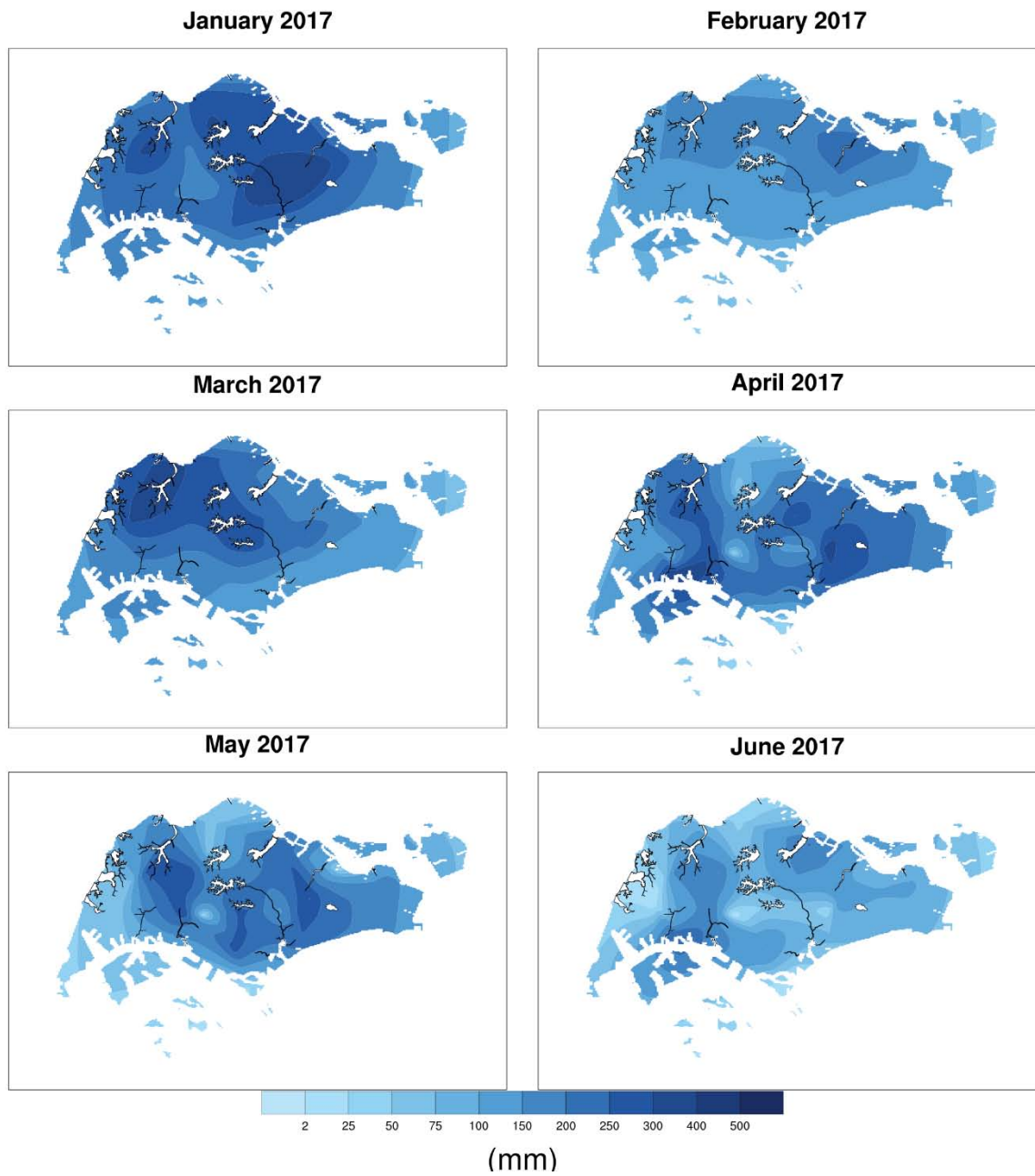
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.8	0.0	22.0	7.6	0.0	8.2	0.0	1.6	0.0	2.2	0.4	0.0
2	0.0	1.4	0.4	2.6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.0
3	0.6	25.4	10.4	1.4	0.0	0.0	0.0	0.0	0.0	3.2	1.4	0.6
4	2.8	14.8	14.6	2.0	2.4	0.0	0.0	0.0	0.4	7.8	6.4	14.2
5	0.6	23.4	0.0	0.0	8.0	0.0	23.2	0.0	10.4	0.0	0.8	3.4
6	0.0	5.4	0.0	0.6	8.0	0.0	0.0	0.0	20.2	0.0	42.6	3.8
7	0.0	21.0	0.0	37.8	11.8	0.0	0.0	7.2	0.0	2.0	1.8	32.4
8	0.6	4.4	0.0	1.6	0.0	0.0	8.8	7.0	0.0	16.8	0.2	0.0
9	0.0	0.0	0.0	6.2	0.0	0.0	0.6	2.0	2.6	31.2	31.4	0.6
10	3.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	3.8	7.0	21.8	8.6
11	26.4	0.0	0.0	11.8	0.0	0.2	30.2	1.2	14.0	2.2	10.6	9.2
12	0.0	5.2	0.0	20.6	0.8	0.0	4.6	3.0	0.0	11.6	19.6	31.6
13	0.0	1.4	0.0	0.6	0.0	0.2	6.4	1.2	0.0	1.0	4.2	70.0
14	0.4	0.2	0.0	0.2	0.0	0.0	3.2	0.2	0.0	0.0	45.2	0.8
15	10.8	16.4	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.0	19.2
16	3.0	0.8	0.0	0.0	4.0	8.0	0.0	0.0	19.0	0.0	18.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	3.0	0.0	3.2	0.0
18	6.0	0.0	0.0	11.6	4.0	13.8	0.0	29.4	16.8	0.0	11.4	0.4
19	16.6	0.0	0.0	0.0	0.0	0.0	0.0	4.8	3.6	0.0	0.2	0.4
20	4.6	0.0	21.4	0.0	0.0	0.0	0.0	0.0	4.0	0.0	11.2	0.0
21	5.6	0.0	0.0	18.0	27.2	20.2	0.0	0.0	3.2	0.2	13.8	0.0
22	31.4	0.0	0.4	0.4	9.6	0.0	0.0	5.2	0.0	0.4	0.0	51.6
23	60.6	3.6	0.0	7.6	0.0	29.6	0.0	0.0	8.8	0.0	6.0	4.0
24	17.4	31.0	0.0	30.4	11.0	0.0	0.0	0.0	3.2	8.2	1.0	0.0
25	0.0	0.0	0.0	2.4	0.0	22.8	0.0	1.2	0.0	0.8	0.0	23.0
26	1.8	0.0	0.0	2.2	24.8	1.6	2.4	0.0	1.0	10.6	0.0	5.2
27	0.0	0.0	4.8	0.2	0.0	1.4	0.0	1.6	1.6	4.0	3.2	15.6
28	1.4	4.0	30.2	42.8	0.0	0.0	0.0	3.2	0.2	0.0	0.4	9.0
29	0.6	—	2.4	0.0	0.0	0.0	0.0	0.6	8.2	8.2	13.8	0.0
30	2.6		19.2	0.0	13.8	0.0	0.0	0.6	0.4	0.0	0.0	4.4
31	0.0		10.4		44.8		0.0	0.0		3.4		63.6
Monthly Average	6.4	5.7	4.4	7.0	6.1	3.5	2.6	2.7	4.1	3.9	9.0	12.0

■ No Data

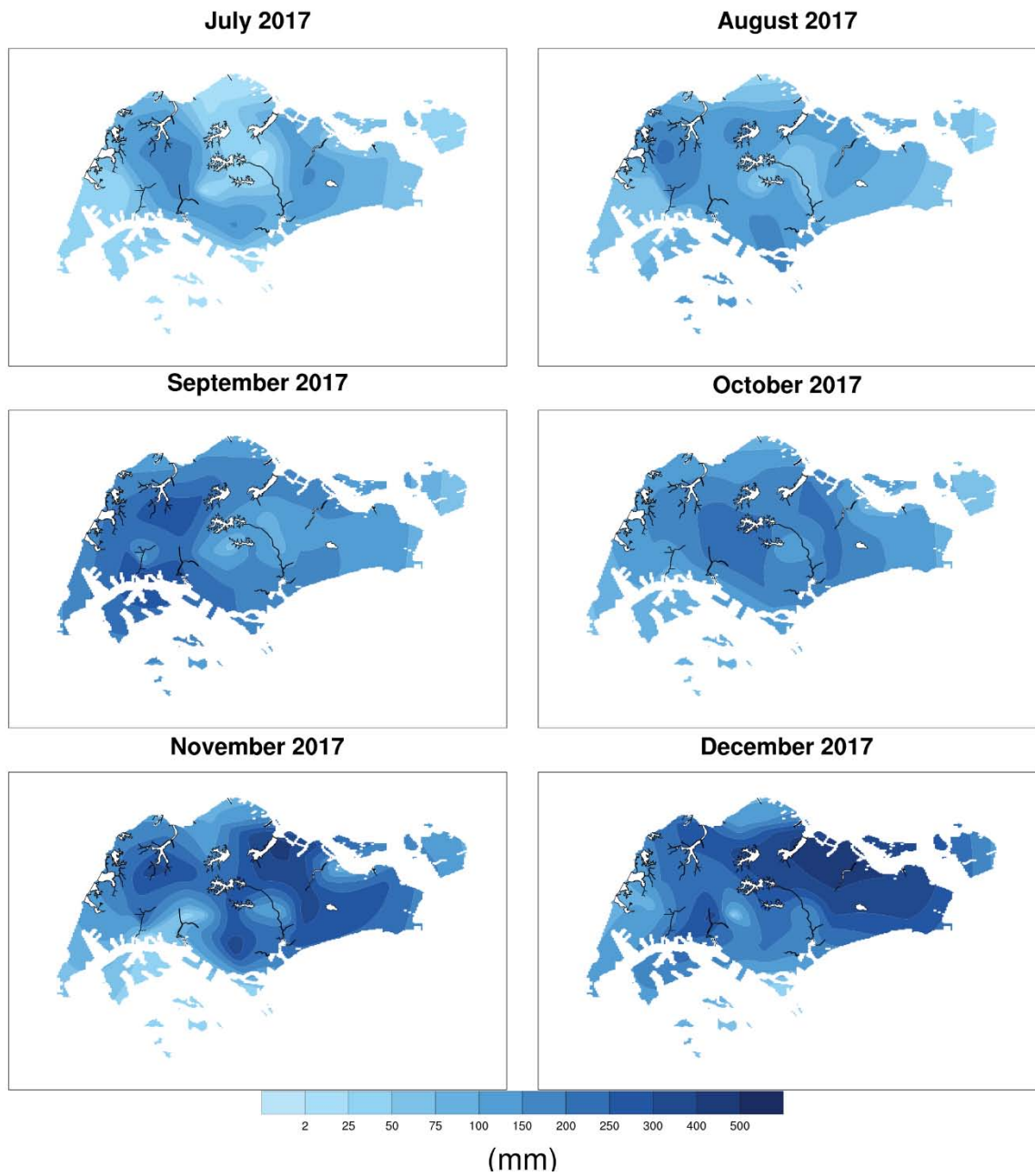
— Defective Data

6. Isohyets

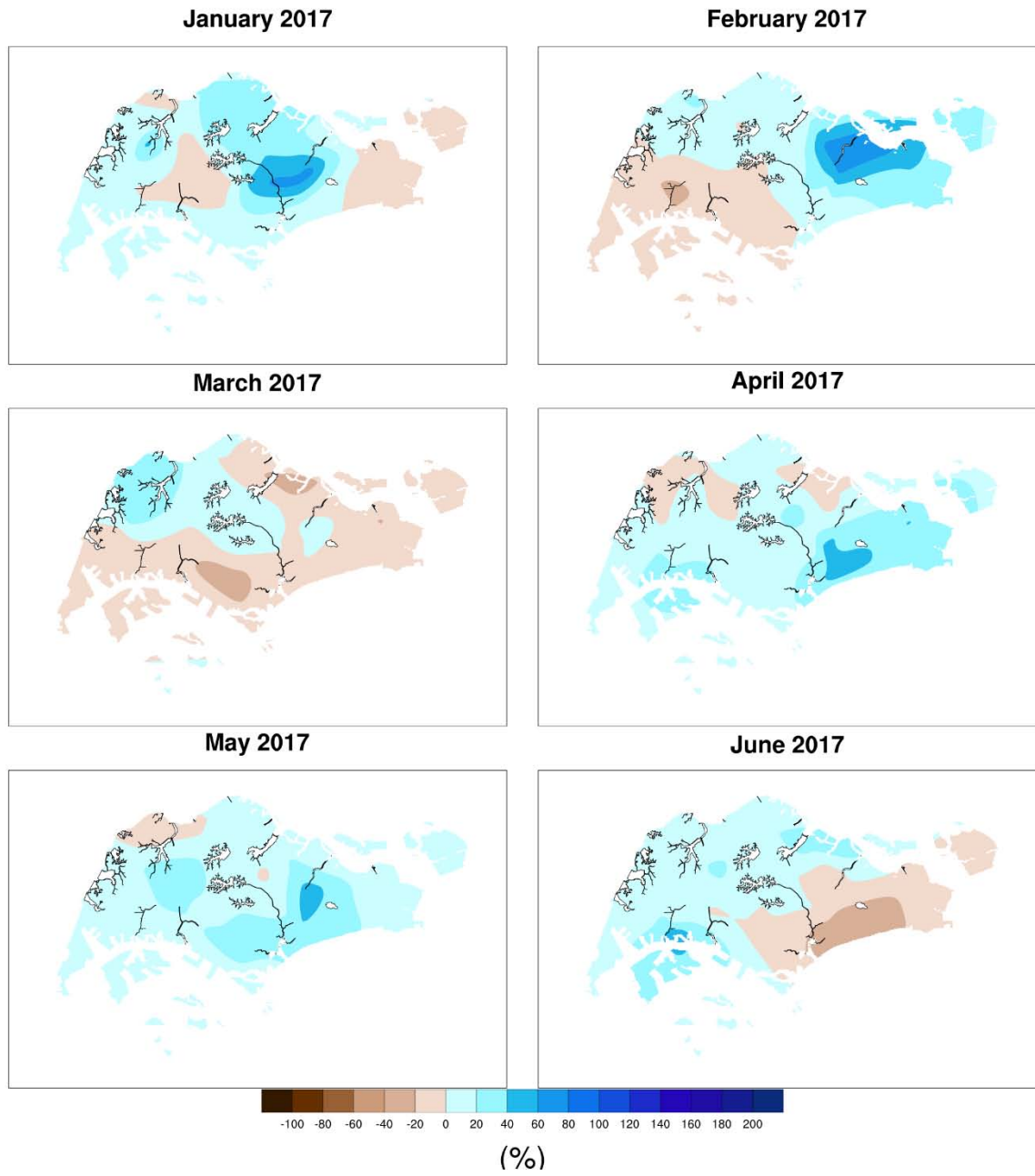
Rainfall Jan-Jun 2017



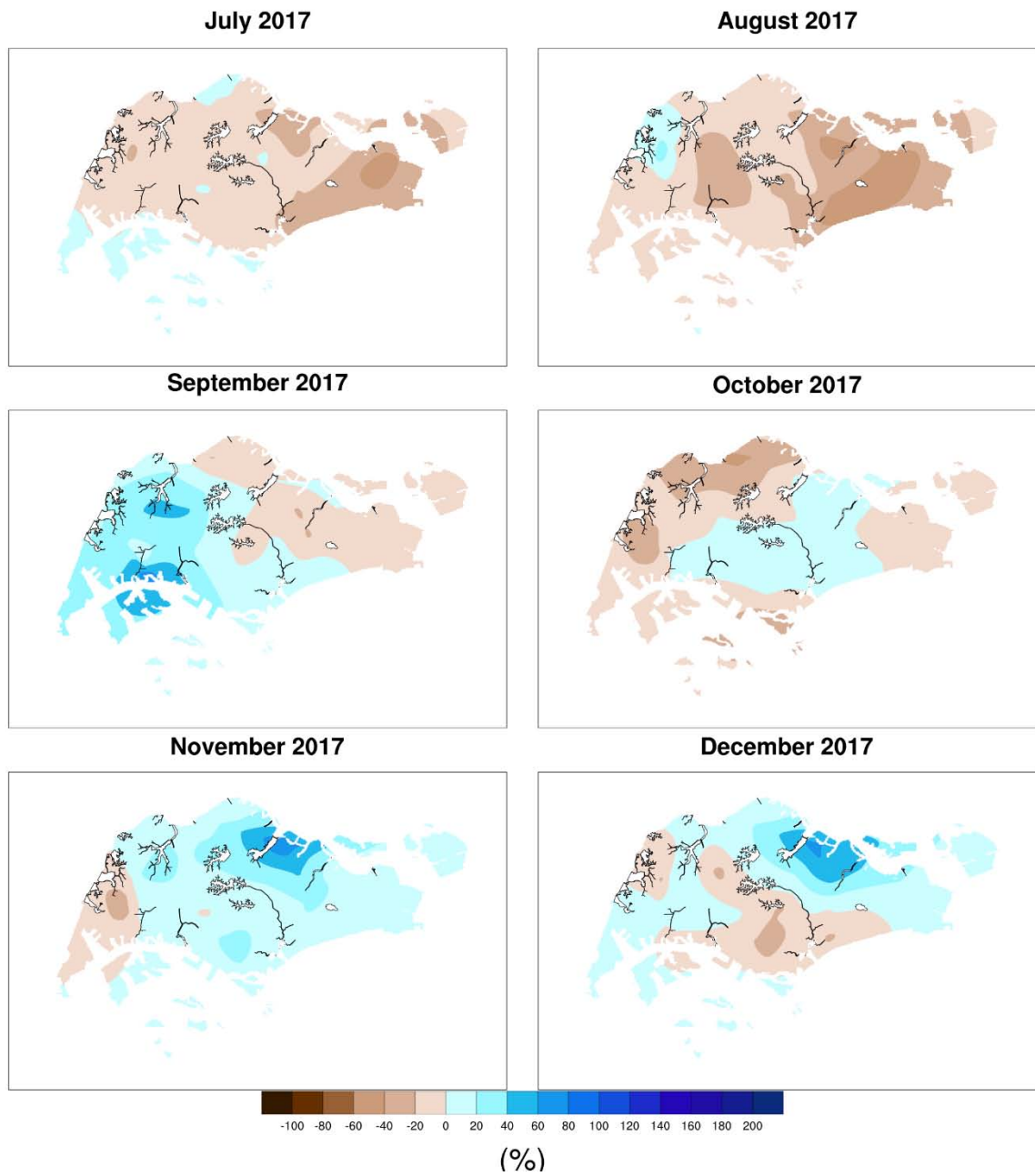
Rainfall Jul-Dec 2017



Rainfall Anomaly Jan-Jun 2017



Rainfall Anomaly Jul-Dec 2017



7. Monthly Observation of Weather Parameters

7.1. 2017 Monthly Average Temperature (°C)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manned Meteorological Stations												
Changi	26.9	26.9	27.4	27.8	28.5	28.5	28.3	28.1	28.0	27.9	27.1	27.0
Paya Lebar	—	—	—	—	—	—	—	—	28.9	28.9	27.9	27.9
Tengah	26.9	26.8	27.1	27.5	28.0	28.1	28.2	28.3	—	—	—	—
Seletar	27.6	27.3	27.8	28.2	29.0	29.1	29.1	28.7	28.5	28.6	27.6	27.6
Sembawang	26.9	26.9	27.2	27.3	28.0	28.0	28.1	27.9	—	—	—	—
Automatic Meteorological Stations												
Tai Seng	27.5	27.4	27.8	28.4	29.2	29.3	29.0	28.8	28.7	28.7	27.7	27.7
Jurong (West)	26.8	26.6	26.9	27.3	28.0	28.6	28.7	27.8	27.4	27.7	26.7	26.5
Clementi	—	26.1	27.3	27.6	28.2	28.5	28.1	27.9	27.9	28.0	27.0	27.1
Sentosa Island	28.2	—	—	28.0	28.4	28.5	28.2	28.0	28.0	28.3	27.4	27.9
Semakau Island	27.7	27.4	27.8	28.3	28.8	29.0	28.6	28.4	28.2	28.5	27.9	—
Admiralty	27.0	26.7	27.1	27.6	28.3	28.7	28.3	28.0	27.8	27.9	27.0	—
Pulau Ubin	26.5	26.5	26.9	27.1	28.0	28.2	27.8	27.5	27.3	27.3	27.2	26.6
East Coast Parkway	27.4	27.4	27.7	28.2	28.9	29.0	28.7	28.5	28.4	28.3	27.7	27.7
Marina Barrage	27.8	27.5	28.0	28.6	29.0	29.4	29.0	28.9	28.8	28.9	27.7	28.0
Ang Mo Kio	27.0	26.7	27.3	27.8	28.6	28.7	28.5	28.2	28.1	28.2	27.1	27.0
Newton	26.9	26.7	27.0	27.3	28.2	28.5	—	27.6	27.8	28.0	27.0	27.1
Tuas South	27.6	27.3	27.6	28.1	28.7	29.1	28.9	28.7	28.3	28.5	27.6	27.7
Pasir Panjang	27.7	27.5	27.8	28.3	29.0	29.2	28.9	28.6	28.4	28.5	27.5	27.7
Jurong Island	28.1	27.8	27.9	28.4	28.8	28.9	28.6	28.4	28.3	28.7	27.9	28.1
Choa Chu Kang (South)	27.3	26.9	27.2	27.7	28.0	28.8	28.5	28.0	27.7	28.1	27.0	27.4
Khatib	26.9	27.2	27.3	27.5	28.1	28.2	28.1	27.9	27.6	27.8	26.8	27.1
Monthly Average	27.3	27.0	27.4	27.9	28.5	28.7	28.5	28.2	28.1	28.3	27.4	27.4

■ No Data

— Defective Data

7.2. 2017 Monthly Maximum Temperature (°C)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manned Meteorological Stations												
Changi	33.7	32.4	33.3	34.4	32.8	33.0	32.4	33.0	32.4	34.6	32.5	33.5
Paya Lebar	35.3	34.1	35.0	35.1	34.9	34.3	33.2	33.0	33.3	35.6	34.7	35.5
Tengah	35.2	33.8	34.8	34.8	35.0	34.9	34.3	34.2	34.4	35.3	34.5	34.8
Seletar	35.7	34.1	35.2	35.8	35.3	35.7	35.0	35.3	34.5	36.9	34.3	35.4
Sembawang	34.7	33.5	34.3	33.8	34.0	34.3	33.6	33.7	33.2	34.8	33.8	34.3
Automatic Meteorological Stations												
Tai Seng	34.5	33.3	33.7	34.4	34.1	34.4	33.0	33.2	34.0	35.2	33.8	35.1
Jurong (West)	33.8	33.4	35.7	33.6	32.7	33.4	32.7	32.4	33.9	33.9	32.8	32.8
Clementi	—	34.0	35.4	35.2	33.4	34.8	32.8	32.8	33.2	35.5	34.2	34.4
Sentosa Island	33.8	—	—	33.4	33.4	33.1	32.9	32.7	32.9	34.9	32.4	33.8
Semakau Island	32.1	31.4	31.6	31.7	32.0	32.2	31.9	31.3	31.2	31.7	31.2	—
Admiralty	34.7	33.4	34.8	34.5	34.7	34.4	33.8	33.7	34.3	35.3	34.5	—
Pulau Ubin	34.0	32.4	34.3	33.7	33.8	34.1	33.6	33.4	33.6	34.9	33.7	33.4
East Coast Parkway	31.9	32.7	32.4	32.5	32.7	32.2	31.1	31.2	31.3	32.2	31.9	32.2
Marina Barrage	33.9	33.3	33.7	34.6	34.0	34.4	34.5	34.4	34.9	34.9	34.4	34.7
Ang Mo Kio	34.5	33.6	35.2	34.8	34.6	34.4	33.4	33.4	33.5	35.2	33.9	34.6
Newton	33.6	33.1	33.5	32.7	33.7	33.6	—	32.5	33.2	34.3	33.9	34.3
Tuas South	32.9	33.0	32.9	32.9	32.8	33.1	32.8	32.7	33.1	33.6	32.5	33.2
Pasir Panjang	33.0	32.9	33.9	33.3	33.2	33.1	33.0	32.2	32.8	33.6	32.2	32.8
Jurong Island	34.2	33.9	33.3	33.1	33.1	32.9	32.7	32.7	32.6	34.5	33.0	33.6
Choa Chu Kang (South)	34.5	33.3	35.0	33.5	33.6	34.6	33.3	33.1	33.8	35.0	33.7	34.7
Khatib	35.1	33.9	35.2	34.7	34.5	34.5	33.7	34.0	34.1	35.2	33.5	33.9
Monthly Average	34.1	33.3	34.2	33.9	33.8	33.9	33.2	33.1	33.4	34.6	33.4	34.1

■ No Data

— Defective Data

7.3. 2017 Monthly Average Relative Humidity (%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manned Meteorological Stations												
Changi	83.7	82.0	81.6	83.2	82.5	80.0	79.5	79.6	81.0	82.3	85.7	83.8
Paya Lebar	—	—	—	—	—	—	—	—	77.0	77.5	81.3	79.5
Tengah	82.3	83.1	83.9	86.0	84.7	82.3	80.4	81.5	—	—	—	—
Seletar	78.2	77.6	78.4	79.8	77.9	75.0	72.8	74.0	75.5	75.4	80.1	77.6
Sembawang	83.7	83.5	82.2	86.0	83.6	81.9	81.2	81.2	—	—	—	—
Automatic Meteorological Stations												
Tai Seng	81.0	79.7	79.5	79.8	79.4	75.8	75.6	76.5	76.7	78.3	82.1	81.3
Jurong (West)	75.8	72.0	74.5	—	78.6	69.5	72.1	70.5	72.3	68.5	—	67.2
Clementi	—	—	81.8	83.5	82.9	79.0	79.0	79.0	79.4	79.4	85.0	81.3
Sentosa Island	71.7	—	—	76.9	77.7	69.8	—	—	—	—	83.6	77.5
Semakau Island	82.2	81.2	82.5	84.1	83.9	81.2	82.3	82.5	82.8	82.5	85.3	—
Admiralty	87.1	89.4	88.3	89.7	87.2	83.8	82.0	84.6	86.0	85.7	90.4	—
Pulau Ubin	91.3	89.4	89.3	91.0	91.0	87.5	88.1	88.7	89.9	89.7	90.4	90.3
East Coast Parkway	84.3	82.4	82.6	83.6	83.6	80.8	81.1	81.4	81.8	83.3	85.5	83.5
Marina Barrage	79.9	78.8	80.1	79.3	82.0	76.8	77.0	77.3	77.8	77.1	82.5	78.0
Ang Mo Kio	81.3	80.8	80.2	81.0	79.4	75.9	74.9	76.4	77.7	78.4	85.8	83.8
Newton	79.3	76.3	77.7	—	81.2	77.0	—	79.1	78.9	77.3	82.1	78.8
Tuas South	78.4	78.4	78.2	79.9	79.6	75.5	75.5	75.5	77.9	77.3	81.6	77.9
Pasir Panjang	84.7	84.5	85.5	86.6	86.4	83.1	83.3	83.8	84.7	85.0	89.4	85.5
Jurong Island	75.8	74.3	75.8	78.4	79.7	76.2	76.6	76.9	78.2	76.4	80.7	75.8
Choa Chu Kang (South)	80.6	80.8	—	80.4	85.2	77.8	76.5	78.4	80.6	79.1	84.6	72.0
Khatib	—	—	—	—	—	—	76.9	72.8	75.6	—	—	76.7
Monthly Average	81.0	80.8	81.3	82.9	82.4	78.3	78.5	78.9	79.6	79.4	84.4	79.2

■ No Data

— Defective Data

7.4. 2017 Monthly Minimum Relative Humidity (%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manned Meteorological Stations												
Changi	44.0	59.0	52.0	50.0	57.0	51.0	57.0	54.0	55.0	45.0	60.0	51.0
Paya Lebar	—	—	—	—	—	—	—	—	—	—	—	—
Tengah	—	—	—	—	—	—	—	—	—	—	—	—
Seletar	—	—	—	—	—	—	—	—	—	—	—	—
Sembawang	—	—	—	—	—	—	—	—	—	—	—	—
Automatic Meteorological Stations												
Tai Seng	39.5	50.0	48.0	44.9	50.0	43.6	48.3	50.0	44.9	32.5	51.6	40.6
Jurong (West)	54.7	46.1	48.5	—	55.5	41.6	45.8	38.2	50.8	33.4	—	46.1
Clementi	—	—	41.6	48.6	53.5	42.5	53.4	50.5	49.4	30.8	48.8	41.9
Sentosa Island	35.4	—	—	33.6	41.6	36.7	—	—	—	—	57.0	45.6
Semakau Island	54.6	53.1	53.1	64.4	61.7	55.2	59.7	61.1	57.3	54.7	65.4	—
Admiralty	38.7	50.4	42.3	48.9	50.6	43.6	50.5	48.1	45.6	35.4	50.6	—
Pulau Ubin	44.8	60.4	50.4	52.8	61.7	48.8	58.1	55.6	57.2	38.0	54.3	58.7
East Coast Parkway	51.8	55.5	60.7	52.7	58.9	56.9	61.4	59.1	61.4	54.6	59.5	56.0
Marina Barrage	38.7	47.7	47.7	43.1	58.4	46.5	48.6	49.6	47.1	38.8	47.0	39.5
Ang Mo Kio	34.5	46.3	38.9	42.2	46.5	39.4	45.0	44.1	44.7	32.5	47.7	39.5
Newton	52.5	51.3	45.3	48.8	51.0	42.2	—	49.5	50.1	35.8	50.0	43.8
Tuas South	52.5	50.2	52.9	54.1	53.1	51.9	54.1	49.9	54.1	48.8	56.7	46.9
Pasir Panjang	46.5	50.6	51.7	55.9	58.4	54.1	51.8	53.8	51.5	41.3	55.9	45.7
Jurong Island	42.6	42.8	45.3	47.3	50.7	47.7	51.8	47.3	48.6	41.2	49.6	42.2
Choa Chu Kang (South)	46.2	53.0	49.2	54.9	59.4	45.8	46.5	48.1	47.4	35.3	50.2	48.8
Khatib	—	53.5	53.4	—	—	51.4	51.2	44.9	51.9	48.6	—	47.2
Monthly Average	45.2	50.8	48.6	49.4	54.1	46.7	51.9	50.0	50.8	40.1	53.2	45.9

■ No Data

— Defective Data

7.5. 2017 Monthly Average Wind Speed (m/s)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manned Meteorological Stations												
Changi	2.2	2.9	2.5	1.8	2.3	2.4	2.8	3.0	2.4	1.8	1.8	2.3
Paya Lebar	2.5	2.8	2.8	2.2	2.5	2.5	3.1	3.0	2.4	2.1	1.9	3.0
Tengah	2.5	3.2	2.3	1.9	2.2	2.2	2.9	2.8	2.6	2.3	2.5	3.6
Seletar	2.8	4.1	3.0	2.2	2.6	2.6	3.4	3.2	2.4	2.1	2.1	2.9
Sembawang	2.9	3.5	2.7	2.0	2.3	2.4	2.8	3.0	2.8	2.2	3.1	3.2
Automatic Meteorological Stations												
Tai Seng	2.0	2.7	1.9	1.3	1.6	1.6	2.0	1.8	1.6	1.4	1.5	2.1
Jurong (West)	2.0	2.2	1.8	1.7	1.8	2.0	2.6	2.4	2.0	1.8	2.0	2.1
Clementi	2.8	2.4	1.8	1.6	2.0	2.1	2.7	2.3	1.8	1.5	1.6	1.8
Sentosa Island	1.7	—	—	—	—	—	2.2	1.8	1.6	1.4	1.4	1.5
Semakau Island	6.1	7.1	5.6	6.6	5.0	4.3	4.4	4.1	4.0	4.0	4.4	4.4
Admiralty	2.5	3.2	2.5	1.9	1.7	1.8	1.9	1.9	1.8	1.9	1.8	—
Pulau Ubin	2.3	2.6	2.3	2.0	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.6
East Coast Parkway	2.4	3.1	2.5	2.4	3.2	3.2	4.1	3.9	3.3	3.0	3.0	3.1
Marina Barrage	4.5	5.0	3.8	3.5	2.5	2.0	2.2	1.5	1.4	1.6	1.8	2.4
Ang Mo Kio	1.6	1.9	1.6	1.3	1.5	1.5	1.8	1.8	1.6	1.4	1.4	1.6
Newton	1.7	1.9	1.6	1.5	2.1	2.2	—	2.4	2.0	1.5	1.6	1.7
Tuas South	1.7	1.8	1.4	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.8	1.8
Pasir Panjang	2.9	3.4	2.5	2.4	2.5	2.7	2.9	2.8	2.7	2.7	2.9	3.3
Jurong Island	1.7	1.8	1.8	1.7	2.6	2.7	3.2	3.3	2.6	1.9	1.7	1.8
Choa Chu Kang (South)	1.6	2.0	1.4	1.3	1.1	1.3	1.6	1.5	1.2	1.2	1.2	1.6
Khatib	1.3	1.5	1.3	1.0	1.1	1.1	1.4	1.4	1.1	0.9	0.9	1.4
Monthly Average	2.5	3.0	2.3	2.1	2.2	2.2	2.6	2.4	2.1	1.9	2.0	2.4

■ No Data

— Defective Data

7.6. 2017 Monthly Maximum Gust (m/s)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manned Meteorological Stations												
Changi	12.8	13.4	12.8	10.4	12.3	16.0	14.4	12.3	14.0	15.3	13.5	12.7
Paya Lebar	12.9	10.8	12.9	10.8	11.3	13.9	12.3	11.8	14.9	16.5	10.8	14.9
Tengah	19.5	13.9	16.5	14.9	15.9	15.4	11.8	13.9	14.9	10.8	14.9	15.4
Seletar	14.4	19.0	16.5	12.9	17.0	17.5	18.0	12.9	14.9	15.4	18.0	19.5
Sembawang	17.0	17.5	17.0	17.0	18.5	24.2	15.9	17.0	14.9	21.1	17.5	14.9
Automatic Meteorological Stations												
Tai Seng	13.6	15.4	11.3	24.9	12.6	10.7	22.1	25.6	12.5	15.2	12.9	14.1
Jurong (West)	12.1	14.5	13.2	14.7	16.3	18.0	10.7	13.4	15.0	12.8	16.6	12.4
Clementi	12.8	13.9	12.0	12.1	15.8	12.7	10.7	14.6	38.5	11.0	15.3	13.0
Sentosa Island	9.4	—	—	—	—	—	6.7	11.2	12.4	10.3	14.5	9.6
Semakau Island	22.6	21.1	19.5	22.7	21.8	24.2	23.8	18.4	21.6	20.1	21.1	13.1
Admiralty	14.1	16.5	16.2	14.9	14.8	18.7	15.1	15.8	16.9	14.8	12.4	—
Pulau Ubin	11.4	12.0	10.5	10.4	10.6	9.0	10.2	10.0	13.4	11.2	13.6	20.8
East Coast Parkway	17.3	16.2	12.4	20.0	17.9	18.9	15.5	13.3	19.2	14.7	15.1	14.8
Marina Barrage	15.3	18.7	19.1	14.1	15.9	11.9	18.5	10.7	14.4	10.7	13.3	12.7
Ang Mo Kio	15.8	14.7	11.3	11.6	12.9	13.3	12.9	10.6	12.8	16.0	15.2	12.4
Newton	13.6	14.0	11.4	13.1	15.2	18.8	—	14.4	16.0	11.6	13.2	13.7
Tuas South	11.5	11.7	11.6	15.8	14.8	14.7	10.4	13.9	20.1	12.1	13.8	13.2
Pasir Panjang	15.1	15.7	17.1	20.1	21.7	24.9	14.9	18.4	25.0	18.1	19.6	15.9
Jurong Island	15.5	12.8	13.5	14.9	13.0	12.8	12.9	16.6	16.0	13.3	17.1	11.5
Choa Chu Kang (South)	16.9	12.5	22.8	30.8	22.9	14.8	11.0	33.1	13.7	9.6	27.3	11.9
Khatib	10.6	10.0	10.7	10.1	11.9	14.2	9.3	11.7	10.3	10.2	9.5	11.6
Monthly Average	14.6	14.8	14.5	16.1	15.8	16.2	13.8	15.4	16.9	13.8	15.6	14.0

■ No Data

— Defective Data

7.7. 2017 Monthly Total Rainfall (mm)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Total
Manned Meteorological Stations													
Changi	197.6	158.4	136.2	208.6	190.0	106.0	79.6	84.2	124.4	120.8	268.6	368.0	2042.4
Paya Lebar	389.4	201.7	254.0	278.3	303.6	126.8	170.7	124.9	131.5	203.6	341.6	363.9	2890.0
Tengah	342.6	163.1	332.5	280.2	287.9	189.4	183.0	188.0	302.6	178.2	333.2	—	—
Seletar	276.6	185.0	166.0	205.2	238.7	206.6	114.8	129.6	192.2	206.0	467.2	502.4	2890.3
Sembawang	368.5	202.4	194.0	213.0	219.8	102.6	122.5	—	202.0	239.9	606.0	443.4	—
Automatic Meteorological Stations													
Tai Seng	372.8	155.2	194.4	358.4	267.4	—	143.6	119.2	147.4	238.6	294.0	301.6	—
Jurong (West)	246.0	140.6	198.6	—	—	—	—	—	247.2	150.0	178.2	—	—
Clementi	177.6	129.0	197.6	—	—	—	—	117.8	—	244.0	—	—	—
Sentosa Island	—	—	—	—	—	—	—	165.8	188.2	108.8	—	—	—
Semakau Island	276.2	73.8	75.2	—	—	82.4	110.0	124.4	204.4	156.4	—	—	—
Admiralty	294.8	153.8	261.4	—	—	—	—	—	160.2	114.8	—	—	—
Pulau Ubin	247.4	233.0	146.0	—	—	—	—	130.6	147.8	—	—	—	—
East Coast Parkway	179.2	219.8	145.0	230.8	—	55.4	86.0	83.0	142.8	83.0	372.2	352.2	—
Marina Barrage	194.4	164.0	168.4	—	—	—	—	—	—	—	—	—	—
Ang Mo Kio	295.8	152.2	248.6	305.0	210.4	145.8	—	—	—	198.2	320.4	346.4	—
Newton	250.0	123.4	218.0	—	—	—	—	—	—	245.0	—	222.0	—
Tuas South	188.2	189.4	113.8	302.2	—	—	—	—	327.2	154.8	234.0	160.6	—
Pasir Panjang	158.8	76.6	122.4	329.0	276.2	157.8	76.2	94.0	149.0	168.6	259.8	211.2	2079.6
Jurong Island	276.8	173.6	121.2	288.6	261.4	140.8	92.2	153.0	205.4	201.4	195.6	216.8	2326.8
Choa Chu Kang (South)	240.6	147.4	294.6	—	—	—	—	176.6	239.2	179.2	299.8	207.2	—
Khatib	312.1	—	175.4	180.0	—	100.1	119.0	—	195.0	217.6	—	—	—
Monthly Average	267.8	160.2	190.9	270.1	258.2	130.8	121.8	133.9	198.9	182.7	325.2	302.5	2542.9

■ No Data

— Defective Data

7.7. 2017 Monthly Total Rainfall (mm)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly Total
Precipitation Stations													
Macritchie Reservoir	353.0	154.4	272.2	—	249.6	—	—	135.2	167.0	—	—	233.2	—
Lower Peirce Reservoir	286.8	143.4	234.6	224.6	280.6	—	—	165.0	174.0	199.2	339.8	297.0	—
Choa Chu Kang (West)	264.8	153.6	321.0	230.6	—	—	131.4	255.8	238.4	188.2	250.8	209.4	—
Pasir Ris (West)	240.2	223.2	156.4	224.4	—	—	—	106.0	167.6	—	—	422.1	—
Jurong Pier	223.8	123.9	190.9	361.0	—	255.0	—	—	320.2	—	—	266.8	—
Ulu Pandan	191.2	127.4	194.4	304.0	276.8	167.6	193.4	127.2	244.8	235.2	—	329.2	—
Serangoon	387.4	158.2	221.8	—	—	—	—	—	—	—	—	—	—
Mandai	307.0	150.8	277.6	—	—	—	—	200.0	242.8	158.0	—	335.2	—
Upper Thomson	216.0	132.2	265.4	243.2	250.6	—	—	—	—	248.2	290.8	261.8	—
Buangkok	290.0	221.2	174.0	212.2	259.0	138.4	122.2	92.6	138.8	221.4	362.4	481.8	2714.0
Chai Chee	347.6	191.0	149.2	265.4	236.0	88.6	136.6	110.2	161.6	226.0	371.8	299.4	2583.4
Boon Lay (West)	204.0	99.8	201.2	—	—	—	—	176.4	—	—	268.7	—	—
Bukit Panjang	185.4	170.2	269.6	227.0	297.4	201.6	170.6	127.2	290.8	224.4	299.6	211.6	2675.4
Kranji Reservoir	208.4	183.4	324.8	243.2	172.2	—	—	—	—	132.6	—	292.4	—
Upp Peirce Reservoir	283.8	152.4	295.8	—	—	167.6	115.8	152.6	199.4	298.6	577.8	396.4	—
Kent Ridge	187.8	116.2	155.4	376.8	—	—	121.0	—	228.0	229.4	—	247.8	—
Queenstown	257.0	119.2	140.2	252.4	275.0	155.6	163.8	173.8	200.6	203.2	357.6	212.8	2511.2
Tanjong Katong	228.4	123.4	—	293.0	246.2	81.6	111.0	83.8	182.6	210.2	290.4	220.4	—
Somerset (Road)	256.2	154.4	201.2	262.4	265.6	94.2	156.2	135.2	184.6	192.4	259.0	208.6	2370.0
Punggol	292.8	197.2	175.6	294.6	212.0	92.0	119.2	108.2	130.6	230.2	370.0	422.4	2644.8
Simei	295.2	223.0	128.8	195.2	237.4	—	—	97.0	167.8	130.0	288.4	426.8	—
Toa Payoh	375.2	148.2	204.8	—	215.0	—	210.4	130.0	142.4	271.8	231.2	250.4	—
Tuas	288.0	—	149.2	352.8	279.8	158.4	145.8	234.8	304.0	190.2	177.8	188.6	—
Bukit Timah	243.2	128.4	185.2	—	—	—	187.2	132.6	210.8	337.2	337.2	253.8	—
Yishun	341.8	220.0	138.0	—	—	—	97.0	173.8	207.4	217.4	476.8	456.2	—
Buona Vista	229.4	117.0	135.8	366.2	276.6	—	—	—	235.4	203.0	—	258.0	—
Pasir Ris (Central)	252.4	254.6	127.4	187.6	226.0	116.0	106.6	95.4	154.0	166.0	345.4	430.6	2462.0
Jurong (North)	157.4	120.2	251.8	—	261.0	224.0	119.4	165.4	253.2	230.0	266.4	—	—
Admiralty West	294.8	153.8	261.4	—	—	—	—	—	160.2	114.8	—	—	—
Serangoon North	335.0	172.2	—	—	—	—	—	—	—	—	—	—	—
Lim Chu Kang	208.6	—	272.0	—	—	—	—	—	242.0	—	246.6	253.8	—
Marine Parade	250.2	123.6	—	280.2	222.0	74.6	123.5	99.0	—	152.4	255.8	215.8	—
Choa Chu Kang (Central)	196.4	195.2	271.6	—	302.8	175.0	141.6	160.4	248.0	167.6	—	193.4	—
Dhoby Ghaut	—	158.2	—	—	—	—	—	150.2	190.0	228.2	—	—	—
Nicoll Highway	217.0	170.2	211.4	328.4	—	61.6	—	107.6	214.8	225.0	293.2	246.8	—
Botanic Garden	252.8	154.2	154.0	307.4	348.0	179.0	202.2	140.6	226.6	244.2	363.8	252.0	2824.8
Whampoa	340.4	113.2	191.2	291.6	192.6	132.8	159.2	102.8	122.0	199.2	269.0	222.8	2336.8
Monthly Average	261.4	159.8	209.8	274.2	256.6	143.0	143.7	142.1	207.6	209.5	318.3	292.5	2618.6

— No Data

— Defective Data

8. Weather Parameter Observation by Months

8.1. Jan to Apr

January 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	197.6	21.8	26.9	33.7	83.7	12.8	2.2	NNW	1010.0
Paya Lebar	389.4	22.1	—	35.3	—	12.9	2.5	NE	1009.6
Tengah	342.6	22.2	26.9	35.2	82.3	19.5	2.5	N	1009.5
Seletar	276.6	22.9	27.6	35.7	78.2	14.4	2.8	N	1009.5
Sembawang	368.5	22.3	26.9	34.7	83.7	17.0	2.9	N	1009.6
Automatic Meteorological Stations									
Tai Seng	372.8	21.7	27.5	34.5	81.0	13.6	2.0	ENE	1010.5
Jurong (West)	246.0	22.4	26.8	33.8	75.8	12.1	2.0	N	
Clementi	177.6	—	—	—	—	12.8	2.8	NW	
Sentosa Island	—	24.1	28.2	33.8	71.7	9.4	1.7	SSW	1009.8
Semakau Island	276.2	23.7	27.7	32.1	82.2	22.6	6.1	N	1009.9
Admiralty	294.8	22.7	27.0	34.7	87.1	14.1	2.5	N	
Pulau Ubin	247.4	21.7	26.5	34.0	91.3	11.4	2.3	NNE	1010.4
East Coast Parkway	179.2	23.6	27.4	31.9	84.3	17.3	2.4	N	1010.5
Marina Barrage	194.4	23.4	27.8	33.9	79.9	15.3	4.5	N	1010.3
Ang Mo Kio	295.8	22.4	27.0	34.5	81.3	15.8	1.6	W	1010.5
Newton	250.0	22.4	26.9	33.6	79.3	13.6	1.7	N	
Tuas South	188.2	23.0	27.6	32.9	78.4	11.5	1.7	NE	1010.4
Pasir Panjang	158.8	23.3	27.7	33.0	84.7	15.1	2.9	NE	1010.1
Jurong Island	276.8	23.0	28.1	34.2	75.8	15.5	1.7	NNW	1010.0
Choa Chu Kang (South)	240.6	22.9	27.3	34.5	80.6	16.9	1.6	NNE	1010.4
Khatib	312.1	22.3	26.9	35.1	—	10.6	1.3	NNW	1010.7

■ No Data

— Defective Data

February 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total	Min	Average	Max	Average	Max	Average	Prevailing	Average
	mm	°C	°C	°C	%	m/s	m/s	Direction	hPa
Manned Meteorological Stations									
Changi	158.4	22.6	26.9	32.4	82.0	13.4	2.9	NE	1011.4
Paya Lebar	201.7	22.8	—	34.1	—	10.8	2.8	NE	1010.9
Tengah	163.1	22.5	26.8	33.8	83.1	13.9	3.2	N	1010.7
Seletar	185.0	23.2	27.3	34.1	77.6	19.0	4.1	N	1010.8
Sembawang	202.4	22.8	26.9	33.5	83.5	17.5	3.5	NNE	1010.9
Automatic Meteorological Stations									
Tai Seng	155.2	22.9	27.4	33.3	79.7	15.4	2.7	ENE	1011.8
Jurong (West)	140.6	22.6	26.6	33.4	72.0	14.5	2.2	N	
Clementi	129.0	23.5	26.1	34.0	—	13.9	2.4	N	
Sentosa Island	—	—	—	—	—	—	—	—	1011.7
Semakau Island	73.8	23.9	27.4	31.4	81.2	21.1	7.1	N	1011.1
Admiralty	153.8	22.6	26.7	33.4	89.4	16.5	3.2	N	
Pulau Ubin	233.0	22.5	26.5	32.4	89.4	12.0	2.6	NNE	1011.7
East Coast Parkway	219.8	23.3	27.4	32.7	82.4	16.2	3.1	NNE	1011.9
Marina Barrage	164.0	22.7	27.5	33.3	78.8	18.7	5.0	NNE	1011.6
Ang Mo Kio	152.2	22.6	26.7	33.6	80.8	14.7	1.9	NNE	1011.9
Newton	123.4	22.5	26.7	33.1	76.3	14.0	1.9	N	
Tuas South	189.4	23.2	27.3	33.0	78.4	11.7	1.8	NE	1011.7
Pasir Panjang	76.6	23.6	27.5	32.9	84.5	15.7	3.4	NE	1011.4
Jurong Island	173.6	23.0	27.8	33.9	74.3	12.8	1.8	N	1011.3
Choa Chu Kang (South)	147.4	23.0	26.9	33.3	80.8	12.5	2.0	NNE	1011.7
Khatib	—	23.1	27.2	33.9	—	10.0	1.5	NNE	1011.9

■ No Data

— Defective Data

March 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total	Min	Average	Max	Average	Max	Average	Prevailing	Average
	mm	°C	°C	°C	%	m/s	m/s	Direction	hPa
Manned Meteorological Stations									
Changi	136.2	22.9	27.4	33.3	81.6	12.8	2.5	NE	1010.5
Paya Lebar	254.0	23.5	—	35.0	—	12.9	2.8	NE	1010.1
Tengah	332.5	23.0	27.1	34.8	83.9	16.5	2.3	N	1010.0
Seletar	166.0	23.6	27.8	35.2	78.4	16.5	3.0	N	1010.0
Sembawang	194.0	22.9	27.2	34.3	82.2	17.0	2.7	NE	1010.1
Automatic Meteorological Stations									
Tai Seng	194.4	23.7	27.8	33.7	79.5	11.3	1.9	ENE	1011.0
Jurong (West)	198.6	22.9	26.9	35.7	74.5	13.2	1.8	N	
Clementi	197.6	22.1	27.3	35.4	81.8	12.0	1.8	NE	
Sentosa Island	—	—	—	—	—	—	—	—	1010.5
Semakau Island	75.2	23.8	27.8	31.6	82.5	19.5	5.6	N	1010.4
Admiralty	261.4	23.3	27.1	34.8	88.3	16.2	2.5	NE	
Pulau Ubin	146.0	23.2	26.9	34.3	89.3	10.5	2.3	NE	1011.0
East Coast Parkway	145.0	23.5	27.7	32.4	82.6	12.4	2.5	NNE	1011.1
Marina Barrage	168.4	23.4	28.0	33.7	80.1	19.1	3.8	N	1010.9
Ang Mo Kio	248.6	23.1	27.3	35.2	80.2	11.3	1.6	ENE	1011.1
Newton	218.0	23.2	27.0	33.5	77.7	11.4	1.6	E	
Tuas South	113.8	23.2	27.6	32.9	78.2	11.6	1.4	NE	1010.9
Pasir Panjang	122.4	23.3	27.8	33.9	85.5	17.1	2.5	NE	1010.7
Jurong Island	121.2	23.1	27.9	33.3	75.8	13.5	1.8	N	1010.6
Choa Chu Kang (South)	294.6	23.2	27.2	35.0	—	22.8	1.4	NNE	1010.9
Khatib	175.4	23.7	27.3	35.2	—	10.7	1.3	NE	1011.3

■ No Data

— Defective Data

April 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	208.6	22.8	27.8	34.4	83.2	10.4	1.8	NW	1010.3
Paya Lebar	278.3	23.5	—	35.1	—	10.8	2.2	W	1009.9
Tengah	280.2	22.5	27.5	34.8	86.0	14.9	1.9	N	1009.8
Seletar	205.2	24.0	28.2	35.8	79.8	12.9	2.2	WSW	1009.8
Sembawang	213.0	22.3	27.3	33.8	86.0	17.0	2.0	W	1009.8
Automatic Meteorological Stations									
Tai Seng	358.4	23.8	28.4	34.4	79.8	24.9	1.3	E	1010.8
Jurong (West)	—	22.6	27.3	33.6	—	14.7	1.7	WNW	
Clementi	—	23.1	27.6	35.2	83.5	12.1	1.6	NW	
Sentosa Island	—	23.1	28.0	33.4	76.9	—	—	—	1010.7
Semakau Island	—	23.5	28.3	31.7	84.1	22.7	6.6	W	1010.6
Admiralty	—	23.3	27.6	34.5	89.7	14.9	1.9	N	
Pulau Ubin	—	22.3	27.1	33.7	91.0	10.4	2.0	NE	1010.7
East Coast Parkway	230.8	23.7	28.2	32.5	83.6	20.0	2.4	N	1010.8
Marina Barrage	—	23.0	28.6	34.6	79.3	14.1	3.5	NNW	1010.5
Ang Mo Kio	305.0	23.4	27.8	34.8	81.0	11.6	1.3	W	1010.8
Newton	—	22.8	27.3	32.7	—	13.1	1.5	NW	
Tuas South	302.2	23.5	28.1	32.9	79.9	15.8	1.7	NNE	1010.8
Pasir Panjang	329.0	23.3	28.3	33.3	86.6	20.1	2.4	NE	1010.5
Jurong Island	288.6	22.3	28.4	33.1	78.4	14.9	1.7	WSW	1010.4
Choa Chu Kang (South)	—	23.2	27.7	33.5	80.4	30.8	1.3	N	1010.5
Khatib	180.0	23.3	27.5	34.7	—	10.1	1.0	W	1011.1

■ No Data

— Defective Data

8.2. May to Aug

May 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	190.0	23.6	28.5	32.8	82.5	12.3	2.3	S	1009.5
Paya Lebar	303.6	23.3	—	34.9	—	11.3	2.5	S	1009.1
Tengah	287.9	22.2	28.0	35.0	84.7	15.9	2.2	SSE	1008.9
Seletar	238.7	23.0	29.0	35.3	77.9	17.0	2.6	S	1009.0
Sembawang	219.8	22.7	28.0	34.0	83.6	18.5	2.3	S	1009.0
Automatic Meteorological Stations									
Tai Seng	267.4	23.5	29.2	34.1	79.4	12.6	1.6	SSW	1010.0
Jurong (West)	—	22.9	28.0	32.7	78.6	16.3	1.8	SE	
Clementi	—	22.2	28.2	33.4	82.9	15.8	2.0	SSE	
Sentosa Island	—	23.4	28.4	33.4	77.7	—	—	—	1010.1
Semakau Island	—	24.7	28.8	32.0	83.9	21.8	5.0	SE	1009.5
Admiralty	—	23.0	28.3	34.7	87.2	14.8	1.7	S	
Pulau Ubin	—	22.9	28.0	33.8	91.0	10.6	2.1	SE	1009.7
East Coast Parkway	—	24.0	28.9	32.7	83.6	17.9	3.2	SE	1010.0
Marina Barrage	—	23.9	29.0	34.0	82.0	15.9	2.5	E	1009.7
Ang Mo Kio	210.4	22.6	28.6	34.6	79.4	12.9	1.5	E	1010.0
Newton	—	22.8	28.2	33.7	81.2	15.2	2.1	ESE	
Tuas South	—	22.6	28.7	32.8	79.6	14.8	1.7	SSW	1010.0
Pasir Panjang	276.2	23.1	29.0	33.2	86.4	21.7	2.5	ESE	1009.7
Jurong Island	261.4	23.3	28.8	33.1	79.7	13.0	2.6	SE	1009.6
Choa Chu Kang (South)	—	22.6	28.0	33.6	85.2	22.9	1.1	SSE	1009.8
Khatib	—	23.0	28.1	34.5	—	11.9	1.1	S	1010.2

■ No Data

— Defective Data

June 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	106.0	22.2	28.5	33.0	80.0	16.0	2.4	S	1010.1
Paya Lebar	126.8	23.0	—	34.3	—	13.9	2.5	S	1009.7
Tengah	189.4	23.0	28.1	34.9	82.3	15.4	2.2	SSE	1009.5
Seletar	206.6	23.5	29.1	35.7	75.0	17.5	2.6	SSE	1009.6
Sembawang	102.6	22.6	28.0	34.3	81.9	24.2	2.4	S	1009.6
Automatic Meteorological Stations									
Tai Seng	—	22.9	29.3	34.4	75.8	10.7	1.6	SSW	1010.6
Jurong (West)	—	23.0	28.6	33.4	69.5	18.0	2.0	S	
Clementi	—	23.5	28.5	34.8	79.0	12.7	2.1	S	
Sentosa Island	—	23.0	28.5	33.1	69.8	—	—	—	1010.7
Semakau Island	82.4	23.8	29.0	32.2	81.2	24.2	4.3	SE	1010.0
Admiralty	—	23.0	28.7	34.4	83.8	18.7	1.8	S	
Pulau Ubin	—	23.8	28.2	34.1	87.5	9.0	2.0	SE	1010.5
East Coast Parkway	55.4	22.8	29.0	32.2	80.8	18.9	3.2	ESE	1010.7
Marina Barrage	—	23.1	29.4	34.4	76.8	11.9	2.0	E	1010.3
Ang Mo Kio	145.8	23.2	28.7	34.4	75.9	13.3	1.5	E	1010.6
Newton	—	21.8	28.5	33.6	77.0	18.8	2.2	ESE	
Tuas South	—	23.9	29.1	33.1	75.5	14.7	1.7	SSW	1010.5
Pasir Panjang	157.8	22.9	29.2	33.1	83.1	24.9	2.7	ESE	1010.3
Jurong Island	140.8	23.7	28.9	32.9	76.2	12.8	2.7	SE	—
Choa Chu Kang (South)	—	24.1	28.8	34.6	77.8	14.8	1.3	SSE	1010.6
Khatib	100.1	23.6	28.2	34.5	—	14.2	1.1	S	1010.8

■ No Data

— Defective Data

July 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	79.6	23.5	28.3	32.4	79.5	14.4	2.8	S	1010.4
Paya Lebar	170.7	22.3	—	33.2	—	12.3	3.1	S	1010.0
Tengah	183.0	22.4	28.2	34.3	80.4	11.8	2.9	SSE	1009.8
Seletar	114.8	23.5	29.1	35.0	72.8	18.0	3.4	S	1009.9
Sembawang	122.5	22.4	28.1	33.6	81.2	15.9	2.8	S	1009.9
Automatic Meteorological Stations									
Tai Seng	143.6	23.4	29.0	33.0	75.6	22.1	2.0	SSW	1010.9
Jurong (West)	—	22.3	28.7	32.7	72.1	10.7	2.6	SE	
Clementi	—	22.4	28.1	32.8	79.0	10.7	2.7	SSE	
Sentosa Island	—	23.0	28.2	32.9	—	6.7	2.2	ENE	1011.1
Semakau Island	110.0	24.2	28.6	31.9	82.3	23.8	4.4	S	1010.4
Admiralty	—	22.9	28.3	33.8	82.0	15.1	1.9	S	
Pulau Ubin	—	22.9	27.8	33.6	88.1	10.2	2.0	SE	1010.8
East Coast Parkway	86.0	24.3	28.7	31.1	81.1	15.5	4.1	S	1011.0
Marina Barrage	—	23.6	29.0	34.5	77.0	18.5	2.2	S	1011.0
Ang Mo Kio	—	22.9	28.5	33.4	74.9	12.9	1.8	SE	1010.9
Newton	—	—	—	—	—	—	—	—	
Tuas South	—	23.6	28.9	32.8	75.5	10.4	1.8	SSW	1010.9
Pasir Panjang	76.2	23.7	28.9	33.0	83.3	14.9	2.9	SE	1010.6
Jurong Island	92.2	23.7	28.6	32.7	76.6	12.9	3.2	SE	1010.5
Choa Chu Kang (South)	—	22.7	28.5	33.3	76.5	11.0	1.6	SSE	1010.7
Khatib	119.0	22.7	28.1	33.7	76.9	9.3	1.4	S	1011.1

■ No Data

— Defective Data

August 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total	Min	Average	Max	Average	Max	Average	Prevailing	Average
	mm	°C	°C	°C	%	m/s	m/s	Direction	hPa
Manned Meteorological Stations									
Changi	84.2	23.7	28.1	33.0	79.6	12.3	3.0	S	1009.9
Paya Lebar	124.9	23.0	—	33.0	—	11.8	3.0	S	1009.5
Tengah	188.0	22.6	28.3	34.2	81.5	13.9	2.8	SSE	1009.3
Seletar	129.6	23.8	28.7	35.3	74.0	12.9	3.2	ESE	1009.4
Sembawang	—	23.2	27.9	33.7	81.2	17.0	3.0	S	1009.5
Automatic Meteorological Stations									
Tai Seng	119.2	23.5	28.8	33.2	76.5	25.6	1.8	SSW	1010.4
Jurong (West)	—	22.4	27.8	32.4	70.5	13.4	2.4	SE	
Clementi	117.8	22.5	27.9	32.8	79.0	14.6	2.3	SSE	
Sentosa Island	165.8	23.1	28.0	32.7	—	11.2	1.8	E	1010.6
Semakau Island	124.4	23.1	28.4	31.3	82.5	18.4	4.1	SE	1009.8
Admiralty	—	23.0	28.0	33.7	84.6	15.8	1.9	S	
Pulau Ubin	130.6	23.3	27.5	33.4	88.7	10.0	2.0	SE	1010.3
East Coast Parkway	83.0	24.2	28.5	31.2	81.4	13.3	3.9	S	1010.5
Marina Barrage	—	23.8	28.9	34.4	77.3	10.7	1.5	SE	1010.2
Ang Mo Kio	—	23.1	28.2	33.4	76.4	10.6	1.8	E	1010.4
Newton	—	22.5	27.6	32.5	79.1	14.4	2.4	ESE	
Tuas South	—	21.7	28.7	32.7	75.5	13.9	1.7	S	1010.3
Pasir Panjang	94.0	23.2	28.6	32.2	83.8	18.4	2.8	SE	1010.1
Jurong Island	153.0	22.1	28.4	32.7	76.9	16.6	3.3	SE	1010.0
Choa Chu Kang (South)	176.6	22.4	28.0	33.1	78.4	33.1	1.5	SSE	1010.3
Khatib	—	22.7	27.9	34.0	72.8	11.7	1.4	S	1010.7

■ No Data

— Defective Data

8.3. Sep to Dec

September 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	124.4	22.3	28.0	32.4	81.0	14.0	2.4	SE	1010.4
Paya Lebar	131.5	22.4	28.9	33.3	77.0	14.9	2.4	S	1010.1
Tengah	302.6	22.5	—	34.4	—	14.9	2.6	S	1009.8
Seletar	192.2	23.4	28.5	34.5	75.5	14.9	2.4	WSW	1010.0
Sembawang	202.0	22.8	—	33.2	—	14.9	2.8	S	1009.8
Automatic Meteorological Stations									
Tai Seng	147.4	23.4	28.7	34.0	76.7	12.5	1.6	SSW	1010.9
Jurong (West)	247.2	22.5	27.4	33.9	72.3	15.0	2.0	SE	
Clementi	—	23.0	27.9	33.2	79.4	38.5	1.8	SSE	
Sentosa Island	188.2	23.2	28.0	32.9	—	12.4	1.6	S	1011.0
Semakau Island	204.4	23.8	28.2	31.2	82.8	21.6	4.0	SE	1010.3
Admiralty	160.2	22.1	27.8	34.3	86.0	16.9	1.8	S	
Pulau Ubin	147.8	21.9	27.3	33.6	89.9	13.4	1.9	NE	1010.8
East Coast Parkway	142.8	22.6	28.4	31.3	81.8	19.2	3.3	ESE	1010.9
Marina Barrage	—	23.4	28.8	34.9	77.8	14.4	1.4	S	1010.8
Ang Mo Kio	—	22.9	28.1	33.5	77.7	12.8	1.6	E	1010.9
Newton	—	23.0	27.8	33.2	78.9	16.0	2.0	ESE	
Tuas South	327.2	23.5	28.3	33.1	77.9	20.1	1.6	SSW	1010.9
Pasir Panjang	149.0	23.7	28.4	32.8	84.7	25.0	2.7	ESE	1010.6
Jurong Island	205.4	22.6	28.3	32.6	78.2	16.0	2.6	ESE	1010.5
Choa Chu Kang (South)	239.2	22.8	27.7	33.8	80.6	13.7	1.2	N	1010.8
Khatib	195.0	23.1	27.6	34.1	75.6	10.3	1.1	S	1011.1

■ No Data

— Defective Data

October 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	120.8	23.5	27.9	34.6	82.3	15.3	1.8	SSW	1009.8
Paya Lebar	203.6	23.4	28.9	35.6	77.5	16.5	2.1	W	1009.5
Tengah	178.2	22.9	—	35.3	—	10.8	2.3	W	1009.2
Seletar	206.0	23.6	28.6	36.9	75.4	15.4	2.1	WSW	1009.4
Sembawang	239.9	22.5	—	34.8	—	21.1	2.2	W	1009.3
Automatic Meteorological Stations									
Tai Seng	238.6	23.0	28.7	35.2	78.3	15.2	1.4	E	1010.3
Jurong (West)	150.0	22.8	27.7	33.9	68.5	12.8	1.8	N	
Clementi	244.0	22.9	28.0	35.5	79.4	11.0	1.5	NNW	
Sentosa Island	108.8	23.8	28.3	34.9	—	10.3	1.4	S	1010.4
Semakau Island	156.4	22.9	28.5	31.7	82.5	20.1	4.0	W	1009.7
Admiralty	114.8	22.9	27.9	35.3	85.7	14.8	1.9	N	
Pulau Ubin	—	23.0	27.3	34.9	89.7	11.2	2.0	NE	1010.2
East Coast Parkway	83.0	24.2	28.3	32.2	83.3	14.7	3.0	N	1010.4
Marina Barrage	—	23.8	28.9	34.9	77.1	10.7	1.6	S	1010.1
Ang Mo Kio	198.2	22.8	28.2	35.2	78.4	16.0	1.4	W	1010.4
Newton	245.0	22.8	28.0	34.3	77.3	11.6	1.5	NW	
Tuas South	154.8	23.6	28.5	33.6	77.3	12.1	1.7	NNE	1010.3
Pasir Panjang	168.6	23.7	28.5	33.6	85.0	18.1	2.7	NE	1010.0
Jurong Island	201.4	22.6	28.7	34.5	76.4	13.3	1.9	WSW	1009.9
Choa Chu Kang (South)	179.2	23.1	28.1	35.0	79.1	9.6	1.2	N	1010.2
Khatib	217.6	23.0	27.8	35.2	—	10.2	0.9	W	1010.5

■ No Data

— Defective Data

November 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total mm	Min °C	Average °C	Max °C	Average %	Max m/s	Average m/s	Prevailing Direction	Average hPa
Manned Meteorological Stations									
Changi	268.6	23.1	27.1	32.5	85.7	13.5	1.8	NNW	1008.3
Paya Lebar	341.6	23.3	27.9	34.7	81.3	10.8	1.9	N	1008.0
Tengah	333.2	22.8	—	34.5	—	14.9	2.5	N	1007.7
Seletar	467.2	23.1	27.6	34.3	80.1	18.0	2.1	WSW	1007.9
Sembawang	606.0	23.1	—	33.8	—	17.5	3.1	N	1007.8
Automatic Meteorological Stations									
Tai Seng	294.0	23.3	27.7	33.8	82.1	12.9	1.5	NNE	1008.8
Jurong (West)	178.2	22.5	26.7	32.8	—	16.6	2.0	N	
Clementi	—	22.9	27.0	34.2	85.0	15.3	1.6	NNW	
Sentosa Island	—	22.7	27.4	32.4	83.6	14.5	1.4	W	1009.0
Semakau Island	—	22.9	27.9	31.2	85.3	21.1	4.4	N	1008.4
Admiralty	—	22.7	27.0	34.5	90.4	12.4	1.8	N	
Pulau Ubin	—	22.8	27.2	33.7	90.4	13.6	2.0	NNE	1008.8
East Coast Parkway	372.2	23.1	27.7	31.9	85.5	15.1	3.0	NW	1008.9
Marina Barrage	—	22.9	27.7	34.4	82.5	13.3	1.8	NW	1008.6
Ang Mo Kio	320.4	22.9	27.1	33.9	85.8	15.2	1.4	W	1008.9
Newton	—	22.5	27.0	33.9	82.1	13.2	1.6	NW	
Tuas South	234.0	24.0	27.6	32.5	81.6	13.8	1.8	NNE	1008.8
Pasir Panjang	259.8	22.6	27.5	32.2	89.4	19.6	2.9	NE	1008.5
Jurong Island	195.6	22.3	27.9	33.0	80.7	17.1	1.7	WSW	1008.4
Choa Chu Kang (South)	299.8	22.6	27.0	33.7	84.6	27.3	1.2	N	1008.8
Khatib	—	23.2	26.8	33.5	—	9.5	0.9	W	1009.0

■ No Data

— Defective Data

December 2017

Station	Rain	Air Temperature			RH	Wind			Pressure
	Total	Min	Average	Max	Average	Max	Average	Prevailing	Average
	mm	°C	°C	°C	%	m/s	m/s	Direction	hPa
Manned Meteorological Stations									
Changi	368.0	23.2	27.0	33.5	83.8	12.7	2.3	N	1010.0
Paya Lebar	363.9	23.8	27.9	35.5	79.5	14.9	3.0	NNE	1009.7
Tengah	—	22.9	—	34.8	—	15.4	3.6	N	1009.3
Seletar	502.4	23.4	27.6	35.4	77.6	19.5	2.9	N	1009.6
Sembawang	443.4	22.3	—	34.3	—	14.9	3.2	N	1009.7
Automatic Meteorological Stations									
Tai Seng	301.6	23.6	27.7	35.1	81.3	14.1	2.1	ENE	1010.5
Jurong (West)	—	23.4	26.5	32.8	67.2	12.4	2.1	N	
Clementi	—	23.4	27.1	34.4	81.3	13.0	1.8	NE	
Sentosa Island	—	23.5	27.9	33.8	77.5	9.6	1.5	N	1010.5
Semakau Island	—	—	—	—	—	13.1	4.4	N	—
Admiralty	—	—	—	—	—	—	—	—	
Pulau Ubin	—	22.7	26.6	33.4	90.3	20.8	2.6	NNE	1010.4
East Coast Parkway	352.2	23.6	27.7	32.2	83.5	14.8	3.1	N	1010.5
Marina Barrage	—	23.5	28.0	34.7	78.0	12.7	2.4	N	1010.3
Ang Mo Kio	346.4	23.3	27.0	34.6	83.8	12.4	1.6	NNE	1010.5
Newton	222.0	23.0	27.1	34.3	78.8	13.7	1.7	N	
Tuas South	160.6	23.4	27.7	33.2	77.9	13.2	1.8	NE	1010.4
Pasir Panjang	211.2	24.0	27.7	32.8	85.5	15.9	3.3	NE	1010.1
Jurong Island	216.8	23.7	28.1	33.6	75.8	11.5	1.8	N	1010.0
Choa Chu Kang (South)	207.2	22.7	27.4	34.7	72.0	11.9	1.6	N	1010.4
Khatib	—	23.7	27.1	33.9	76.7	11.6	1.4	NNW	—

■ No Data

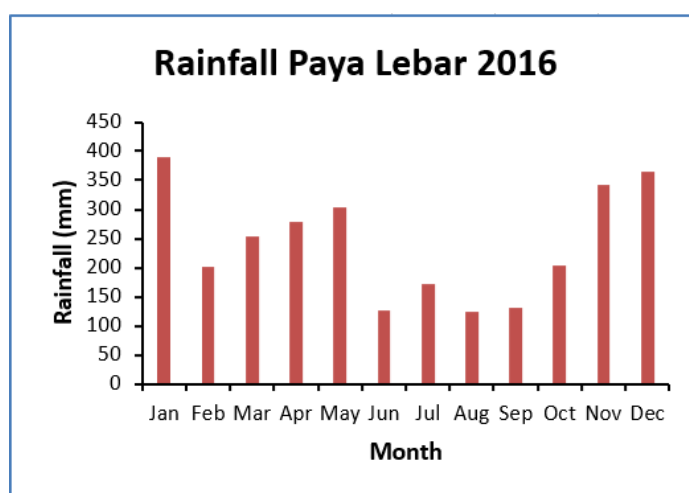
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9. Weather Statistics for Manned Meteorological Station

9.1. Monthly Observation

S06 Paya Lebar 2017

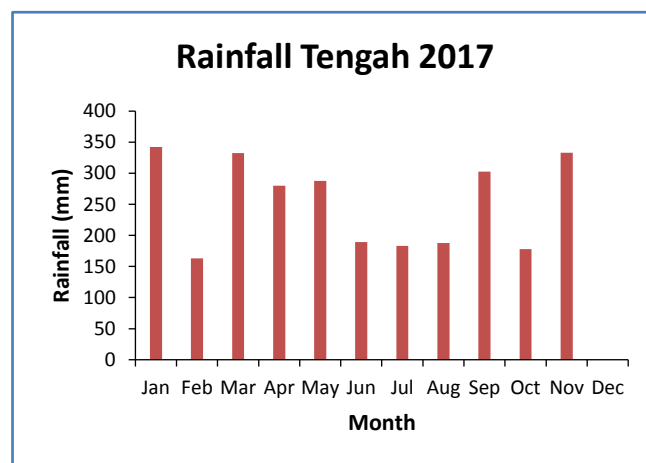
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.1	22.8	23.5	23.5	23.3	23.0	22.3	23.0	22.4	23.4	23.3	23.8
Average Daily Min Temperature (°C)	24.9	24.8	25.1	25.2	26.2	26.5	26.1	26.3	25.6	25.4	24.7	25.1
Average Temperature (°C)	—	—	—	—	—	—	—	—	28.9	28.9	27.9	27.9
Average Daily Max Temperature (°C)	31.8	31.9	32.4	32.9	32.3	32.5	31.7	31.6	32.1	32.7	31.7	32.1
Max Temperature	35.3	34.1	35.0	35.1	34.9	34.3	33.2	33.0	33.3	35.6	34.7	35.5
Average Dew Point Temperature (°C)	—	—	—	—	—	—	—	24.1	24.3	24.2	24.3	23.8
Min Relative Humidity (%)	—	—	—	—	—	—	—	—	—	—	—	—
Average Relative Humidity (%)	—	—	—	—	—	—	—	—	77.0	77.5	81.3	79.5
Average Wind Speed (m/s)	2.5	2.8	2.8	2.2	2.5	2.5	3.1	3.0	2.4	2.1	1.9	3.0
Prevailing Wind Direction	NE	NE	NE	W	S	S	S	S	S	W	N	NNE
Maximum Gust (m/s)	12.9	10.8	12.9	10.8	11.3	13.9	12.3	11.8	14.9	16.5	10.8	14.9
Total Rainfall (mm)	389.4	201.7	254.0	278.3	303.6	126.8	170.7	124.9	131.5	203.6	341.6	363.9
Highest Daily Rainfall (mm)	73.9	70.6	45.1	55.8	65.2	52.2	68.9	68.8	25.0	42.6	69.6	75.5



- No Data
- Defective Data

S23 Tengah 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.2	22.6	23.4	22.8	23.0	23.3	23.2	23.4	23.0	23.0	23.5	23.9
Average Daily Min Temperature (°C)	23.5	23.5	23.8	23.8	24.6	24.6	24.4	24.5	23.9	24.1	23.8	24.0
Average Temperature (°C)	26.9	26.8	27.1	27.5	28.0	28.1	28.2	28.3	—	—	—	—
Average Daily Max Temperature (°C)	32.0	31.9	32.1	32.2	32.4	33.0	32.2	32.2	32.0	32.6	31.6	32.0
Max Temperature	34.1	32.9	34.3	34.4	34.4	34.9	34.7	34.2	33.7	35.3	34.6	34.6
Average Dew Point Temperature (°C)	23.5	23.5	24.0	24.8	25.1	24.6	24.3	24.6	—	—	—	—
Min Relative Humidity (%)	—	—	—	—	—	—	—	—	—	—	—	—
Average Relative Humidity (%)	82.3	83.1	83.9	86.0	84.7	82.3	80.4	81.5	—	—	—	—
Average Wind Speed (m/s)	2.5	3.2	2.3	1.9	2.2	2.2	2.9	2.8	2.6	2.3	2.5	3.6
Prevailing Wind Direction	N	N	N	N	SSE	SSE	SSE	SSE	S	W	N	N
Maximum Gust (m/s)	19.5	13.9	16.5	14.9	15.9	15.4	11.8	13.9	14.9	10.8	14.9	15.4
Total Rainfall (mm)	342.6	163.1	332.5	280.2	287.9	189.4	183.0	188.0	302.6	178.2	333.2	—
Highest Daily Rainfall (mm)	93.5	39.5	57.3	51.4	84.0	38.8	66.5	49.8	86.0	43.8	59.2	30.1

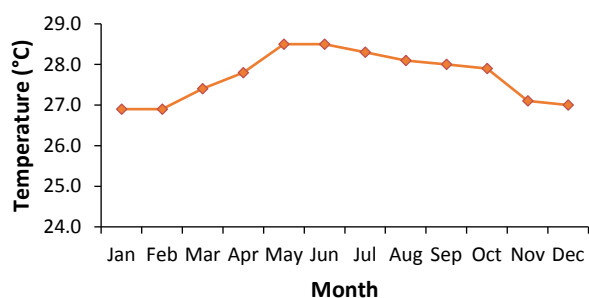


■ No Data
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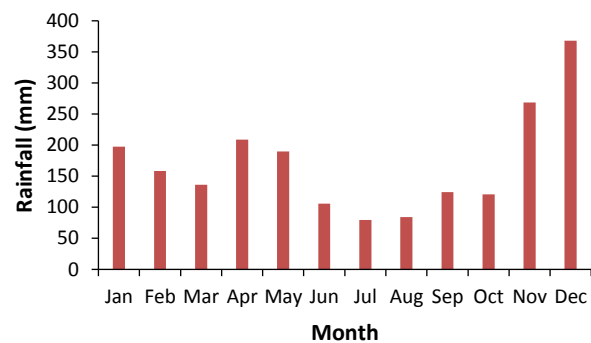
S24 Changi 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	21.8	22.6	22.9	22.8	23.6	22.2	23.5	23.7	22.3	23.5	23.1	23.2
Average Daily Min Temperature (°C)	24.7	24.7	24.9	25.0	25.9	25.9	26.0	25.9	25.4	25.3	24.6	24.6
Average Temperature (°C)	26.9	26.9	27.4	27.8	28.5	28.5	28.3	28.1	28.0	27.9	27.1	27.0
Average Daily Max Temperature (°C)	30.7	30.7	31.1	31.8	31.4	31.6	31.0	31.0	31.2	31.6	30.8	30.8
Max Temperature	33.7	32.4	33.3	34.4	32.8	33.0	32.4	33.0	32.4	34.6	32.5	33.5
Average Dew Point Temperature (°C)	24.0	23.7	24.0	24.6	25.2	24.6	24.3	24.2	24.3	24.5	24.4	24.2
Min Relative Humidity (%)	44.0	59.0	52.0	50.0	57.0	51.0	57.0	54.0	55.0	45.0	60.0	51.0
Average Relative Humidity (%)	83.7	82.0	81.6	83.2	82.5	80.0	79.5	79.6	81.0	82.3	85.7	83.8
Average Wind Speed (m/s)	2.2	2.9	2.5	1.8	2.3	2.4	2.8	3.0	2.4	1.8	1.8	2.3
Prevailing Wind Direction	NNW	NE	NE	NW	S	S	S	S	SE	SSW	NNW	N
Maximum Gust (m/s)	12.8	13.4	12.8	10.4	12.3	16.0	14.4	12.3	14.0	15.3	13.5	12.7
Total Rainfall (mm)	197.6	158.4	136.2	208.6	190.0	106.0	79.6	84.2	124.4	120.8	268.6	368.0
Highest Daily Rainfall (mm)	60.6	31.0	30.2	42.8	44.8	29.6	30.2	29.4	20.2	31.2	45.2	69.8

**Average Temperature Changi
2017**



Rainfall Changi 2017

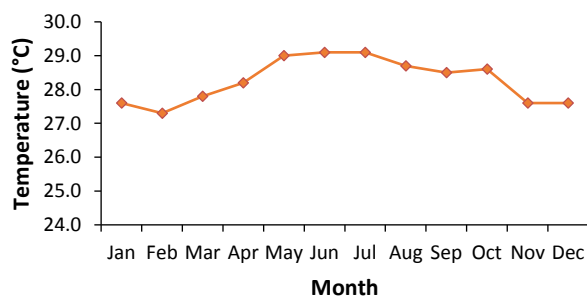


■ No Data
— Defective Data

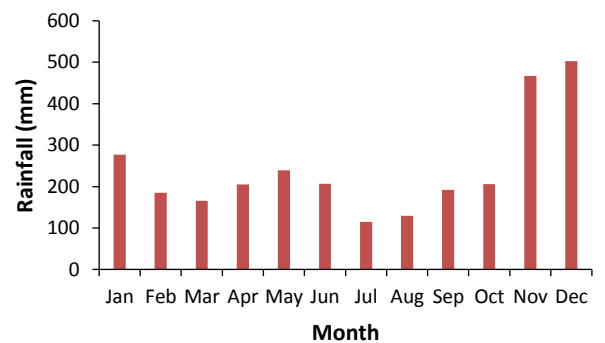
S25 Seletar 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.9	23.2	23.6	24.0	23.0	23.5	23.5	23.8	23.4	23.6	23.1	23.4
Average Daily Min Temperature (°C)	25.0	24.8	25.1	25.1	26.2	26.1	26.3	26.2	25.6	25.5	24.8	25.1
Average Temperature (°C)	27.6	27.3	27.8	28.2	29.0	29.1	29.1	28.7	28.5	28.6	27.6	27.6
Average Daily Max Temperature (°C)	32.0	31.7	32.4	33.1	33.4	33.6	33.2	32.7	32.9	33.5	32.2	32.1
Max Temperature	35.7	34.1	35.2	35.8	35.3	35.7	35.0	35.3	34.5	36.9	34.3	35.4
Average Dew Point Temperature (°C)	23.2	22.9	23.5	24.2	24.6	23.9	23.5	23.4	23.5	23.5	23.6	23.1
Min Relative Humidity (%)	—	—	—	—	—	—	—	—	—	—	—	—
Average Relative Humidity (%)	78.2	77.6	78.4	79.8	77.9	75.0	72.8	74.0	75.5	75.4	80.1	77.6
Average Wind Speed (m/s)	2.8	4.1	3.0	2.2	2.6	2.6	3.4	3.2	2.4	2.1	2.1	2.9
Prevailing Wind Direction	N	N	N	WSW	S	SSE	S	ESE	WSW	WSW	WSW	N
Maximum Gust (m/s)	14.4	19.0	16.5	12.9	17.0	17.5	18.0	12.9	14.9	15.4	18.0	19.5
Total Rainfall (mm)	276.6	185.0	166.0	205.2	238.7	206.6	114.8	129.6	192.2	206.0	467.2	502.4
Highest Daily Rainfall (mm)	55.0	46.8	49.6	52.0	45.8	52.2	37.4	46.2	57.6	48.0	88.0	88.6

**Average Temperature Seletar
2017**



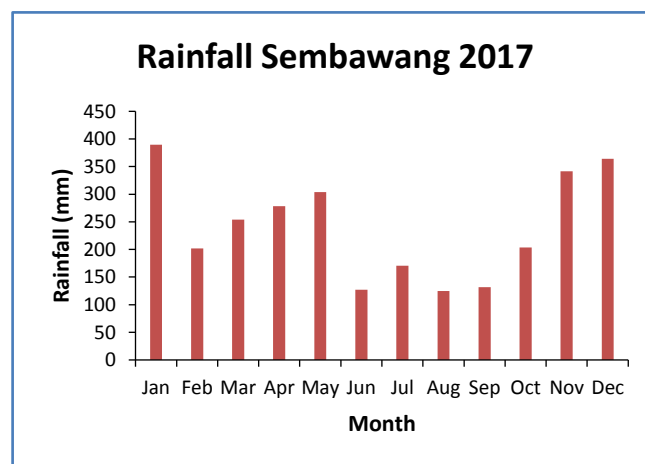
Rainfall Seletar 2017



- No Data
- Defective Data

S80 Sembawang 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.0	23.2	23.4	22.9	23.4	23.2	23.1	23.6	23.7	23.4	23.7	23.0
Average Daily Min Temperature (°C)	23.8	23.9	23.7	23.9	24.6	24.4	24.3	24.8	24.1	24.0	23.9	24.2
Average Temperature (°C)	26.9	26.9	27.2	27.3	28.0	28.0	28.1	27.9	—	—	—	—
Average Daily Max Temperature (°C)	31.5	31.5	31.9	32.3	32.2	32.5	32.0	32.0	31.6	32.2	31.3	32.1
Max Temperature	34.1	33.3	34.0	33.5	33.6	33.9	33.0	33.0	32.6	34.4	33.0	34.1
Average Dew Point Temperature (°C)	23.6	23.7	23.7	24.6	24.8	24.4	24.3	24.1	—	—	—	—
Min Relative Humidity (%)	—	—	—	—	—	—	—	—	—	—	—	—
Average Relative Humidity (%)	83.7	83.5	82.2	86.0	83.6	81.9	81.2	81.2	—	—	—	—
Average Wind Speed (m/s)	2.9	3.5	2.7	2.0	2.3	2.4	2.8	3.0	2.8	2.2	3.1	3.2
Prevailing Wind Direction	N	NNE	NE	W	S	S	S	S	S	W	N	N
Maximum Gust (m/s)	17.0	17.5	17.0	17.0	18.5	24.2	15.9	17.0	14.9	21.1	17.5	14.9
Total Rainfall (mm)	368.5	202.4	194.0	213.0	219.8	102.6	122.5	—	202.0	239.9	606.0	443.4
Highest Daily Rainfall (mm)	77.3	49.5	53.0	61.7	35.0	46.7	66.4	68.9	50.1	72.6	105.6	86.5

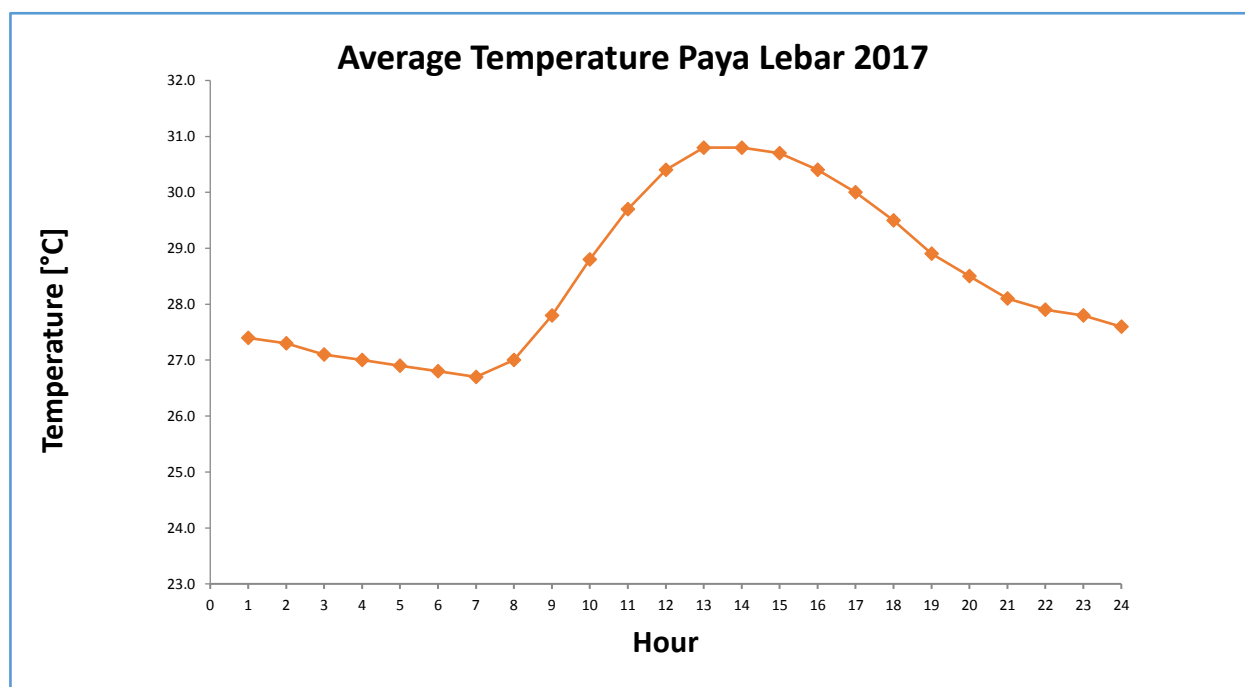


- No Data
- Defective Data

9.2. Hourly Observation

S06 Paya Lebar 2017

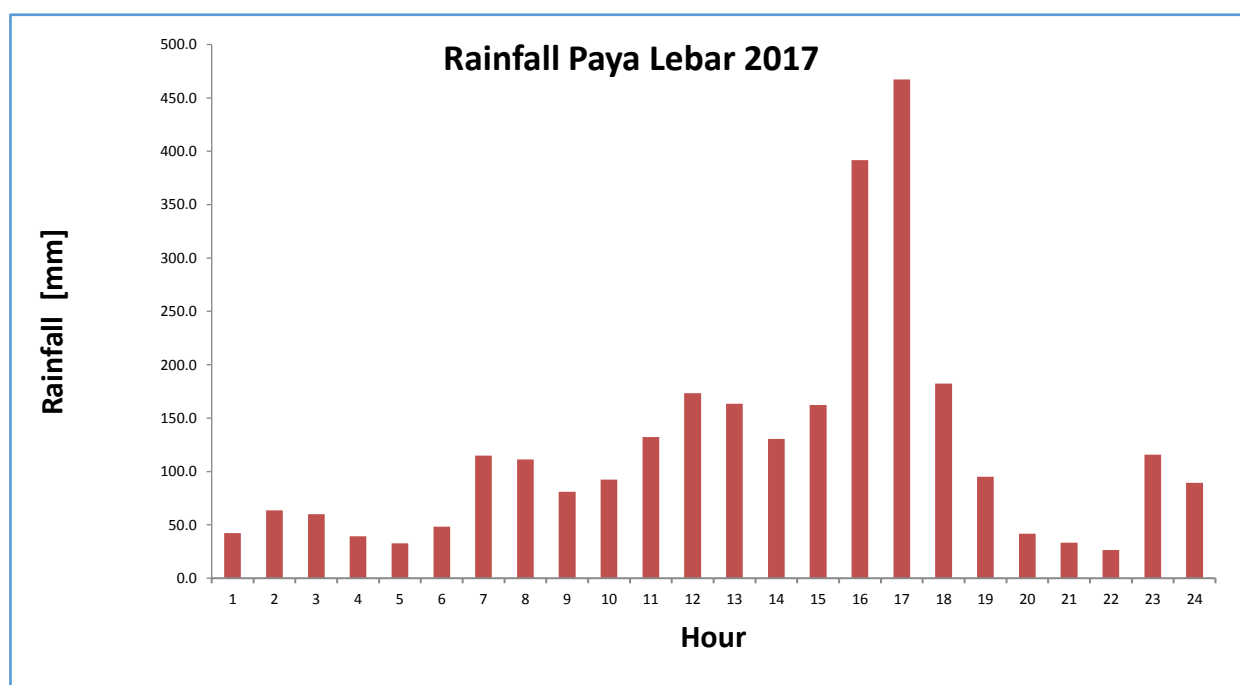
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	24.3	24.2	24.5	24.6	23.7	23.6	23.5	23.4	23.9	23.8	24.0	23.9
Max Dry Bulb Temperature (°C)	29.9	29.5	29.2	29.1	29.4	29.4	29.4	29.7	30.4	31.8	33.2	33.9
Average Dry Bulb Temperature (°C)	27.4	27.3	27.1	27.0	26.9	26.8	26.7	27.0	27.8	28.8	29.7	30.4
Average Dew Point Temperature (°C)	24.5	24.4	24.4	24.4	24.4	24.4	24.3	24.4	24.4	24.2	24.1	23.9
Average Relative Humidity (%)	84.7	85.3	85.8	86.2	86.3	86.7	86.9	85.9	81.7	76.4	72.2	68.9
Average Wind Speed (m/s)	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.8	2.3	2.7	2.9	3.2
Max Gust (m/s)	7.7	9.8	9.3	8.7	10.8	9.8	9.3	10.8	10.3	12.3	13.9	12.9
Rainfall (mm)	42.2	63.5	59.9	39.4	32.8	48.3	114.8	111.2	81.1	92.4	132.3	173.3



- No Data
- Defective Data

S06 Paya Lebar 2017

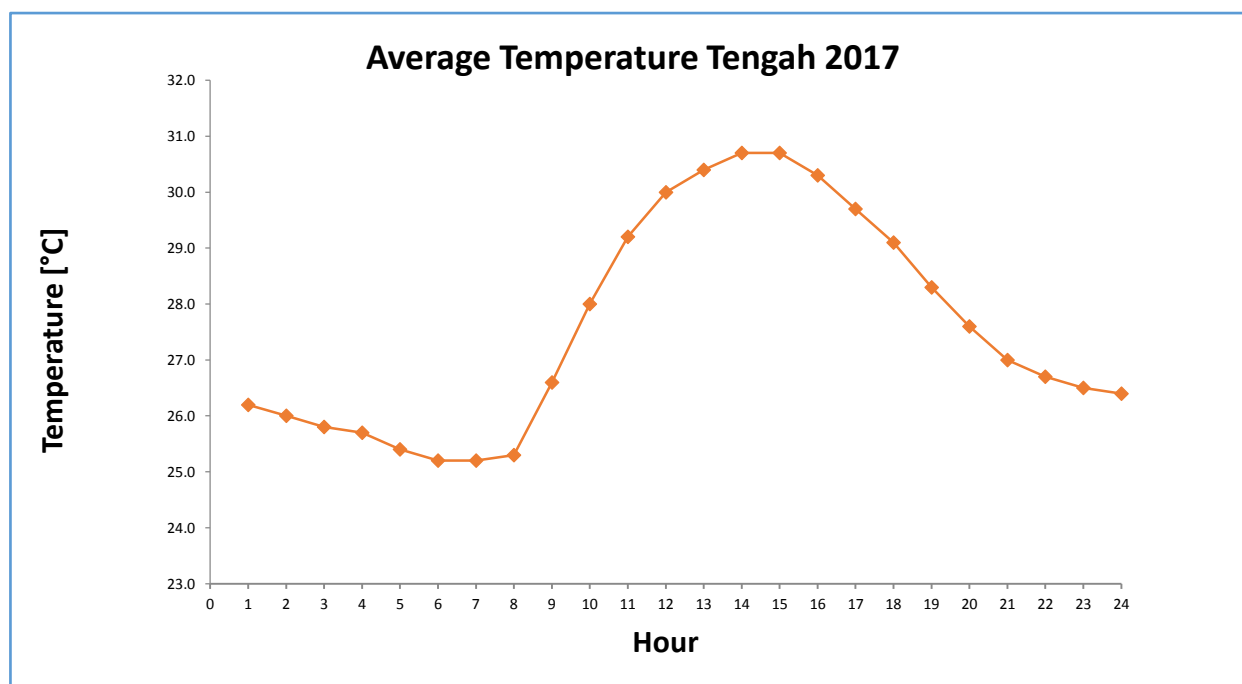
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	24.1	24.3	24.4	23.6	23.0	24.4	24.6	24.6	24.5	24.4	24.2	24.2
Max Dry Bulb Temperature (°C)	34.7	34.6	35.2	35.3	35.0	35.3	33.4	32.1	31.8	30.9	30.4	30.0
Average Dry Bulb Temperature (°C)	30.8	30.8	30.7	30.4	30.0	29.5	28.9	28.5	28.1	27.9	27.8	27.6
Average Dew Point Temperature (°C)	23.8	23.8	23.8	23.7	23.7	23.8	23.9	24.1	24.2	24.3	24.4	24.5
Average Relative Humidity (%)	67.1	66.6	67.5	68.5	70.4	72.4	75.1	77.6	79.7	81.1	82.2	84.0
Average Wind Speed (m/s)	3.3	3.3	3.4	3.5	3.1	2.9	2.6	2.3	2.2	2.1	2.0	1.9
Max Gust (m/s)	11.8	11.3	11.8	12.9	12.9	12.3	12.3	9.8	9.8	8.7	11.3	12.9
Rainfall (mm)	163.5	130.4	162.2	391.6	467.1	182.3	95.0	41.7	33.3	26.4	115.8	89.5



- No Data
- Defective Data

S23 Tengah 2017

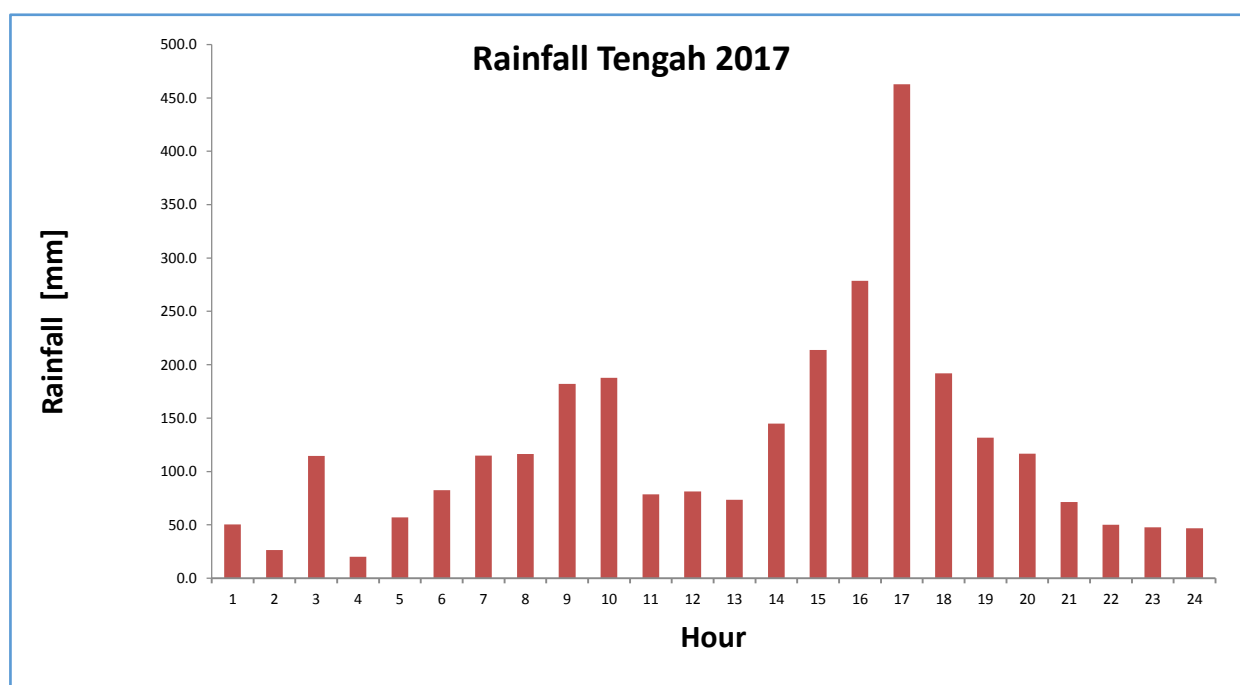
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.5	23.3	22.7	22.8	22.6	22.4	22.7	22.2	22.9	23.2	23.4	23.4
Max Dry Bulb Temperature (°C)	30.0	29.7	29.4	29.1	28.8	28.6	28.3	29.1	30.5	32.1	33.6	34.0
Average Dry Bulb Temperature (°C)	26.2	26.0	25.8	25.7	25.4	25.2	25.2	25.3	26.6	28.0	29.2	30.0
Average Dew Point Temperature (°C)	24.5	24.5	24.4	24.4	24.1	24.0	24.0	24.2	24.8	24.8	24.7	24.6
Average Relative Humidity (%)	90.5	91.4	92.0	92.6	92.5	92.9	93.5	93.9	90.0	83.0	77.3	73.7
Average Wind Speed (m/s)	—	—	—	—	1.3	1.4	1.4	1.4	1.9	2.7	3.0	3.2
Max Gust (m/s)	—	—	—	—	12.9	9.8	12.3	12.9	12.3	15.4	13.4	13.9
Rainfall (mm)	50.3	26.4	114.5	20.2	57.0	82.6	115.0	116.5	181.9	187.6	78.6	81.3



- No Data
- Defective Data

S23 Tengah 2017

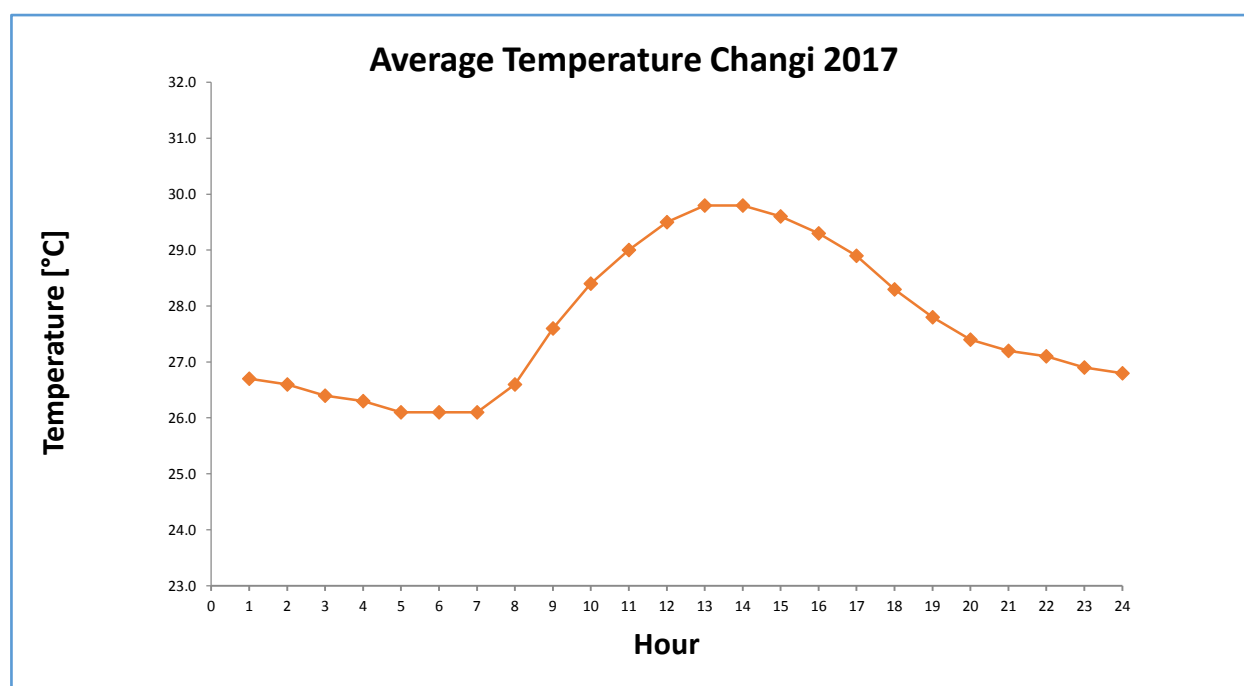
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	24.0	24.0	23.5	24.0	23.7	23.7	23.0	23.3	23.5	23.1	23.1	22.9
Max Dry Bulb Temperature (°C)	34.3	34.5	34.6	34.9	34.6	34.0	32.8	31.6	31.5	30.5	30.3	30.7
Average Dry Bulb Temperature (°C)	30.4	30.7	30.7	30.3	29.7	29.1	28.3	27.6	27.0	26.7	26.5	26.4
Average Dew Point Temperature (°C)	24.5	24.4	24.4	24.3	24.2	24.2	24.2	24.1	24.2	24.2	24.2	24.6
Average Relative Humidity (%)	71.4	70.2	70.4	71.6	73.5	75.9	79.2	82.2	84.9	86.5	87.5	89.5
Average Wind Speed (m/s)	3.3	3.5	3.5	3.4	3.1	2.7	2.3	1.9	1.8	1.8	1.6	—
Max Gust (m/s)	15.9	14.9	14.9	19.5	18.0	14.4	13.9	12.3	10.8	10.3	8.7	—
Rainfall (mm)	73.5	144.9	213.9	278.6	462.8	192.0	131.5	116.6	71.4	50.1	47.8	46.7



■ No Data
 — Defective Data

S24 Changi 2017

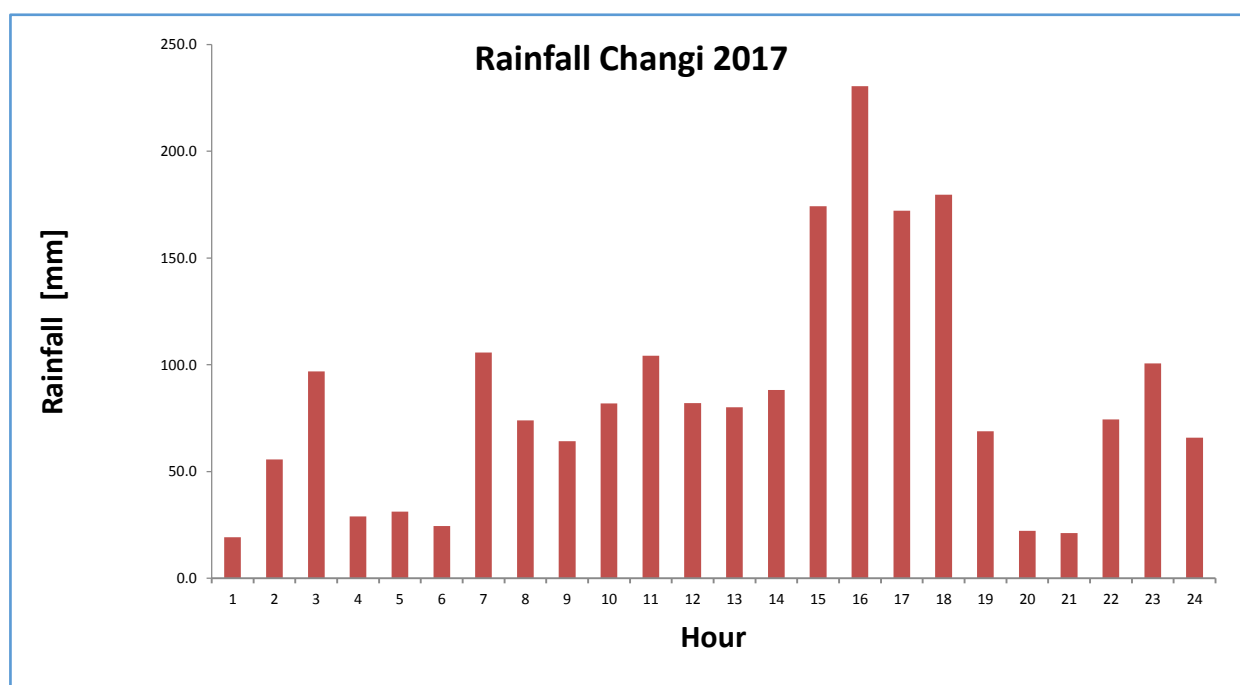
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.9	22.9	23.2	23.2	23.1	23.1	22.4	23.1	23.7	23.7	22.8	23.6
Max Dry Bulb Temperature (°C)	29.2	29.0	28.8	28.8	28.8	28.9	29.0	29.2	30.4	31.7	31.8	32.5
Average Dry Bulb Temperature (°C)	26.7	26.6	26.4	26.3	26.1	26.1	26.1	26.6	27.6	28.4	29.0	29.5
Average Dew Point Temperature (°C)	24.5	24.5	24.4	24.5	24.4	24.4	24.4	24.6	24.6	24.5	24.5	24.4
Average Relative Humidity (%)	87.6	88.3	89.0	89.8	90.2	90.7	90.7	88.5	83.9	79.6	76.7	74.1
Average Wind Speed (m/s)	1.8	1.7	1.6	1.5	1.6	1.6	1.6	1.8	2.3	2.7	2.9	3.0
Max Gust (m/s)	11.3	9.9	10.7	9.5	10.1	12.3	13.5	10.8	10.4	11.5	16.0	14.4
Rainfall (mm)	19.2	55.6	96.8	29.0	31.2	24.4	105.7	73.9	64.2	81.8	104.2	82.0



- No Data
- Defective Data

S24 Changi 2017

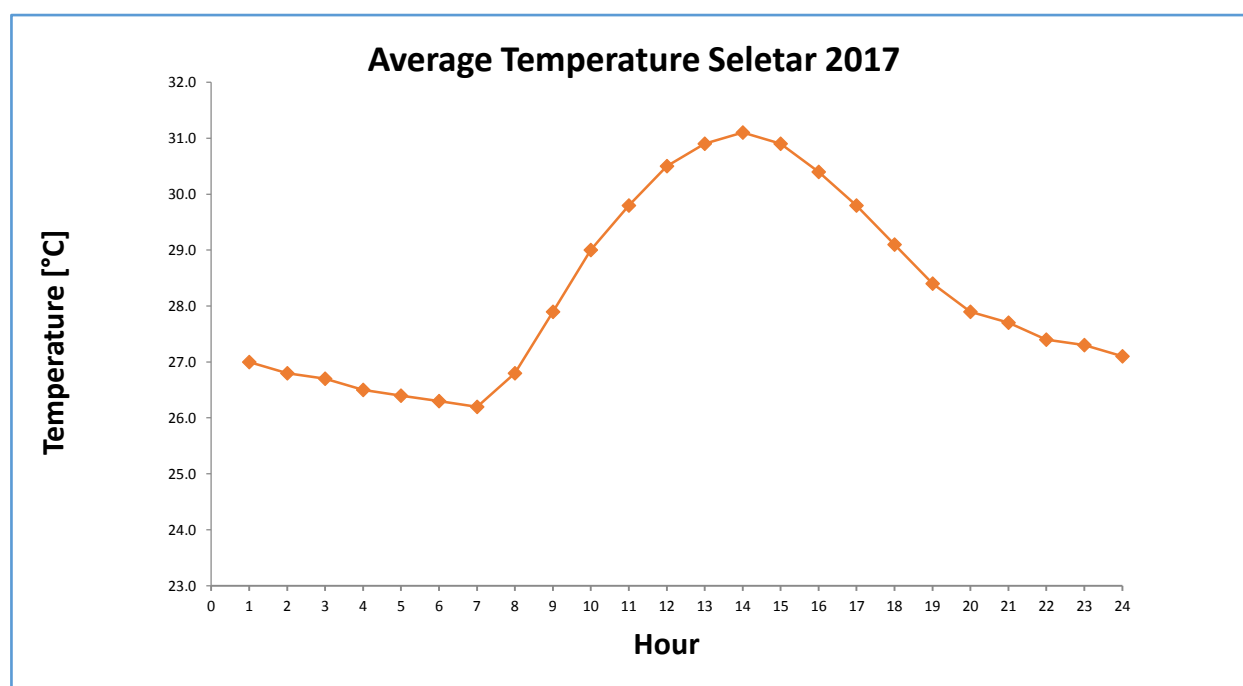
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.7	23.7	23.9	23.7	21.9	23.5	23.9	23.7	23.9	23.8	23.7	23.7
Max Dry Bulb Temperature (°C)	32.3	32.9	33.1	33.3	33.7	33.1	31.7	31.0	29.9	29.5	29.3	29.3
Average Dry Bulb Temperature (°C)	29.8	29.8	29.6	29.3	28.9	28.3	27.8	27.4	27.2	27.1	26.9	26.8
Average Dew Point Temperature (°C)	24.2	24.2	24.2	24.1	24.0	24.0	24.0	24.1	24.3	24.4	24.4	24.4
Average Relative Humidity (%)	72.5	72.2	73.5	73.9	75.3	77.7	80.3	82.7	84.4	85.4	86.2	87.0
Average Wind Speed (m/s)	3.1	3.2	3.4	3.4	3.2	2.8	2.5	2.3	2.2	2.0	2.0	1.8
Max Gust (m/s)	12.8	13.1	14.0	13.4	12.4	11.8	12.2	10.2	9.2	10.9	15.3	10.5
Rainfall (mm)	80.0	88.2	174.2	230.4	172.2	179.6	68.8	22.2	21.2	74.4	100.6	65.8



- No Data
- Defective Data

S25 Seletar 2017

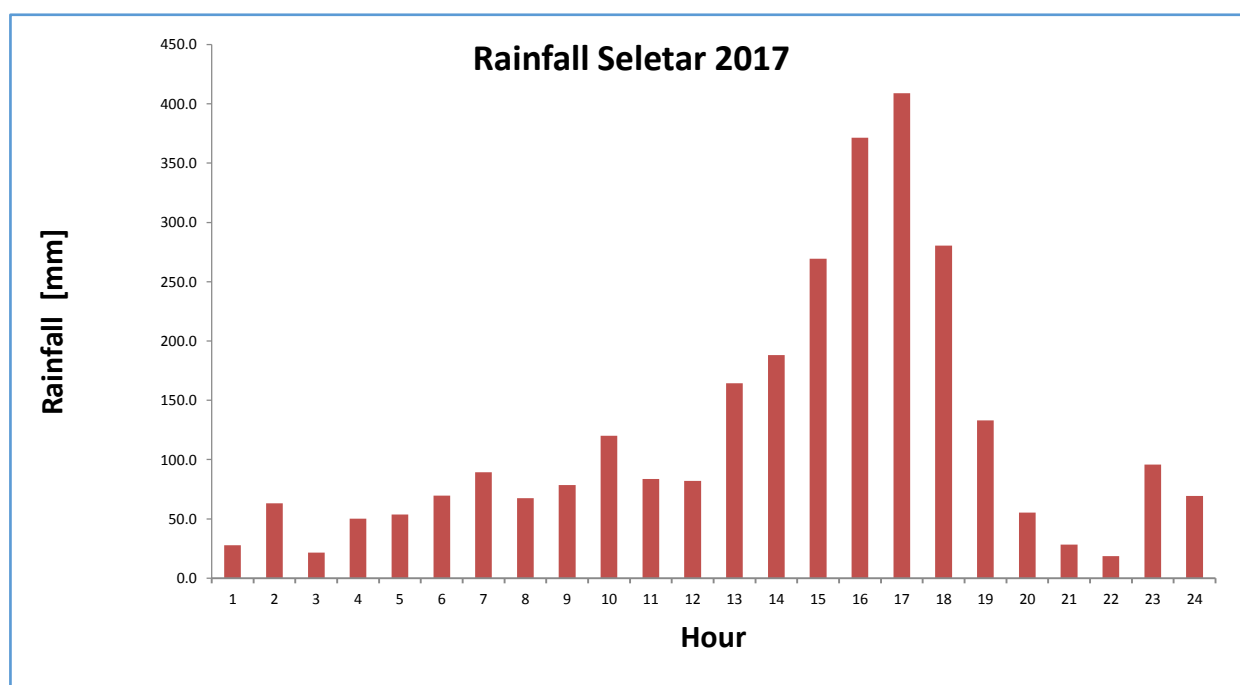
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	24.1	23.3	23.5	23.6	23.8	23.5	23.5	23.1	23.9	23.5	24.0	24.0
Max Dry Bulb Temperature (°C)	29.7	29.6	29.4	29.4	29.3	29.3	29.3	29.8	31.5	32.4	34.5	34.5
Average Dry Bulb Temperature (°C)	27.0	26.8	26.7	26.5	26.4	26.3	26.2	26.8	27.9	29.0	29.8	30.5
Average Dew Point Temperature (°C)	24.0	24.0	24.0	24.0	23.9	23.9	23.9	24.0	24.0	23.7	23.4	23.1
Average Relative Humidity (%)	83.9	84.7	85.3	86.0	86.3	86.9	87.1	84.9	79.3	73.6	68.9	65.5
Average Wind Speed (m/s)	1.7	1.6	1.7	1.6	1.7	1.8	1.6	1.8	2.3	2.9	3.2	3.3
Max Gust (m/s)	10.3	7.7	10.3	9.3	9.3	12.3	9.8	11.8	11.3	15.4	15.4	14.9
Rainfall (mm)	27.8	63.2	21.6	50.2	53.6	69.6	89.4	67.6	78.6	120.0	83.6	82.0



- No Data
- Defective Data

S25 Seletar 2017

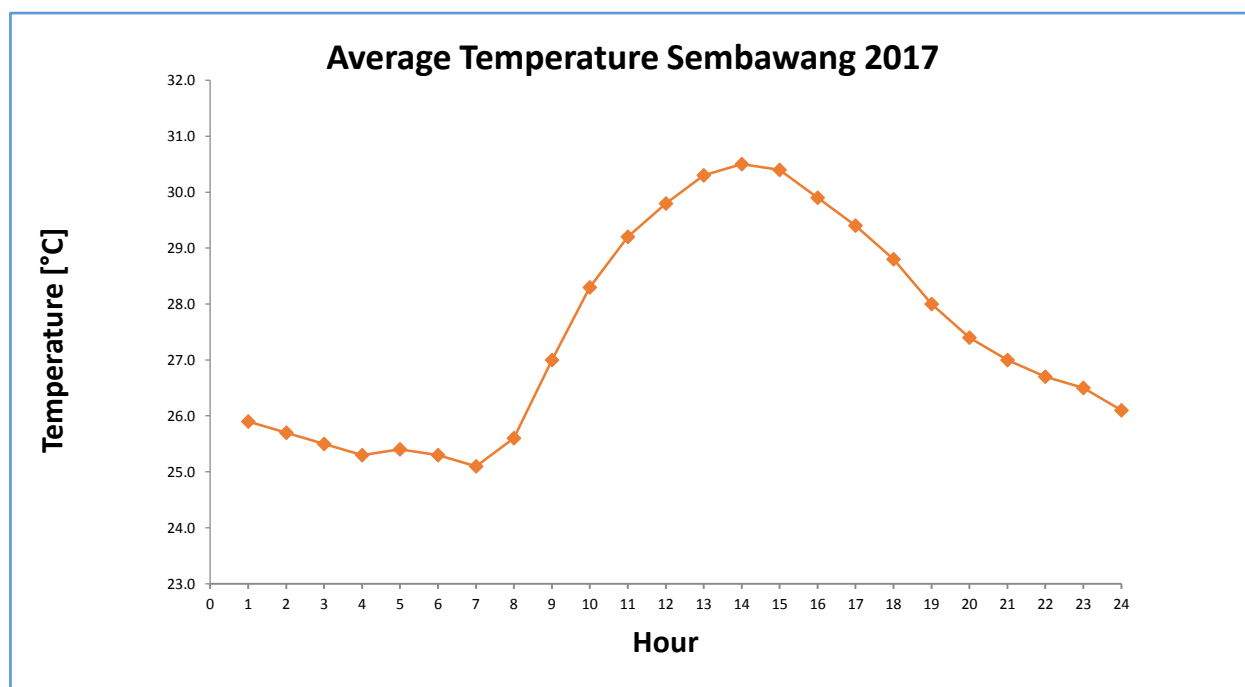
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.7	24.1	24.1	23.8	23.2	24.1	23.7	24.5	24.5	24.3	23.7	24.1
Max Dry Bulb Temperature (°C)	35.8	35.6	36.2	35.8	35.1	34.7	33.1	31.5	30.8	30.2	30.0	29.8
Average Dry Bulb Temperature (°C)	30.9	31.1	30.9	30.4	29.8	29.1	28.4	27.9	27.7	27.4	27.3	27.1
Average Dew Point Temperature (°C)	23.0	22.8	22.8	22.9	23.0	23.1	23.3	23.4	23.7	23.9	23.9	23.9
Average Relative Humidity (%)	63.7	62.6	63.7	65.7	68.2	71.1	74.5	77.3	79.5	81.1	82.0	82.9
Average Wind Speed (m/s)	3.4	3.6	3.7	3.7	3.6	3.3	3.0	2.7	2.6	2.4	2.1	2.0
Max Gust (m/s)	17.0	19.0	15.4	15.9	14.4	14.9	15.4	11.8	11.3	11.8	13.9	13.9
Rainfall (mm)	164.4	188.2	269.4	371.4	409.0	280.4	133.0	55.2	28.4	18.5	95.8	69.4



- No Data
- Defective Data

S80 Sembawang 2017

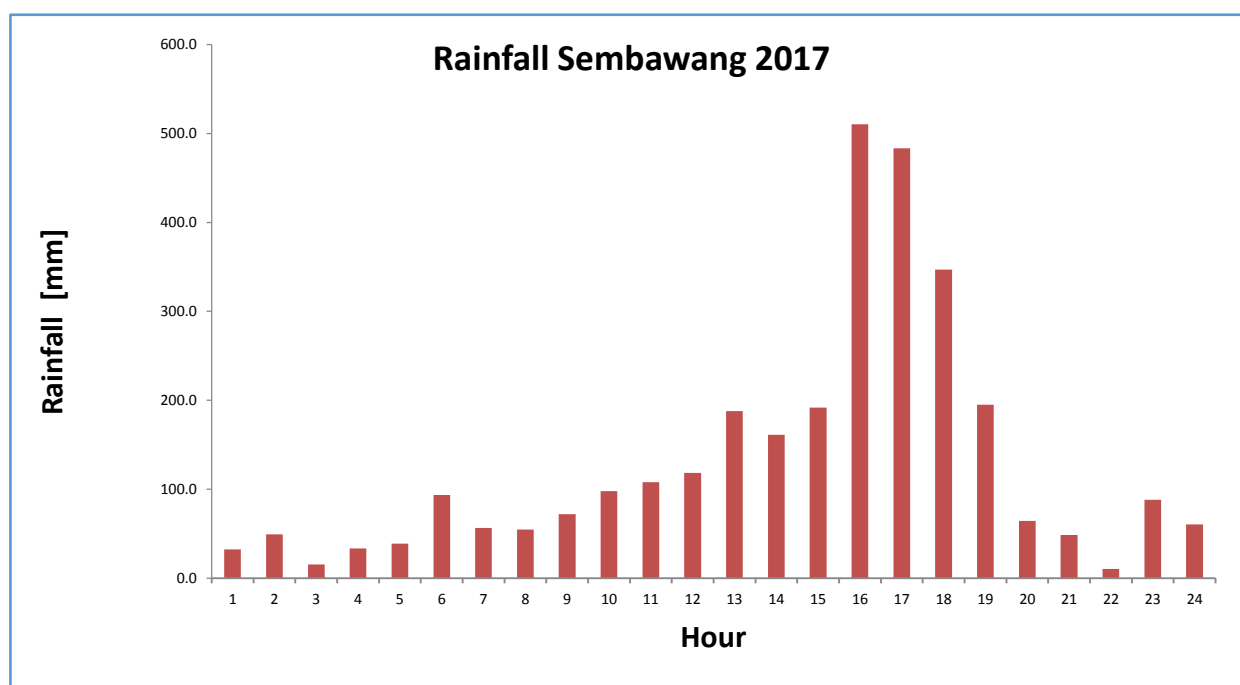
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.6	23.3	23.1	23.1	23.2	23.0	22.9	23.0	23.7	23.5	23.8	24.0
Max Dry Bulb Temperature (°C)	29.5	29.3	29.0	28.9	28.8	28.7	28.8	29.2	30.2	31.0	32.3	33.1
Average Dry Bulb Temperature (°C)	25.9	25.7	25.5	25.3	25.4	25.3	25.1	25.6	27.0	28.3	29.2	29.8
Average Dew Point Temperature (°C)	24.2	24.0	23.9	23.7	23.9	23.8	23.9	24.4	25.2	25.0	24.6	24.2
Average Relative Humidity (%)	90.3	90.5	90.7	90.8	91.6	92.1	92.8	93.4	89.6	82.9	76.9	72.8
Average Wind Speed (m/s)	—	—	—	—	1.4	1.5	1.5	1.6	2.2	3.0	3.3	3.4
Max Gust (m/s)	—	—	—	—	11.3	15.9	15.4	17.0	18.5	24.2	17.0	17.0
Rainfall (mm)	32.4	49.3	15.6	33.4	38.7	93.7	56.4	54.7	71.8	98.0	108.0	118.4



- No Data
- Defective Data

S80 Sembawang 2017

Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.4	23.7	24.1	23.6	23.7	23.0	23.4	23.7	23.9	23.8	23.7	23.7
Max Dry Bulb Temperature (°C)	33.6	34.4	34.2	34.1	34.1	33.4	31.9	30.3	30.2	29.7	29.6	29.4
Average Dry Bulb Temperature (°C)	30.3	30.5	30.4	29.9	29.4	28.8	28.0	27.4	27.0	26.7	26.5	26.1
Average Dew Point Temperature (°C)	23.9	23.7	23.6	23.6	23.8	23.9	24.2	24.3	24.4	24.6	24.6	24.3
Average Relative Humidity (%)	69.4	68.0	68.4	70.7	73.0	76.1	80.6	83.9	86.4	88.5	89.5	90.0
Average Wind Speed (m/s)	3.5	3.7	3.8	3.8	3.4	3.1	2.6	2.2	2.0	1.8	1.9	—
Max Gust (m/s)	18.5	17.5	15.9	21.1	17.0	17.5	17.0	17.0	11.8	10.3	9.8	—
Rainfall (mm)	187.9	161.1	191.8	510.3	483.2	347.1	195.2	64.3	48.4	10.3	88.1	60.6



■ No Data
 — Defective Data

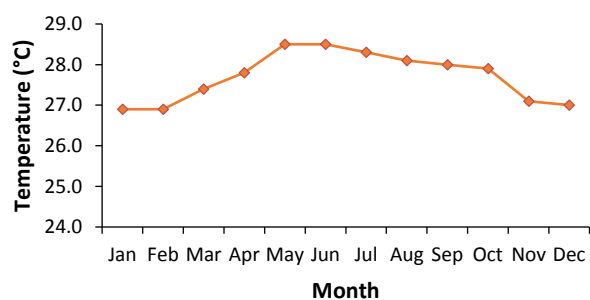
10. Weather Statistics for Automatic Weather Station

10.1. Monthly Observation

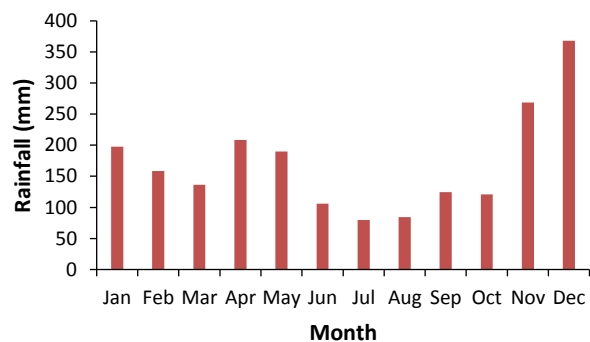
S24 Changi 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	21.8	22.6	22.9	22.8	23.6	22.2	23.5	23.7	22.3	23.5	23.1	23.2
Average Daily Min Temperature (°C)	24.7	24.7	24.9	25.0	25.9	25.9	26.0	25.9	25.4	25.3	24.6	24.6
Average Temperature (°C)	26.9	26.9	27.4	27.8	28.5	28.5	28.3	28.1	28.0	27.9	27.1	27.0
Average Daily Max Temperature (°C)	30.7	30.7	31.1	31.8	31.4	31.6	31.0	31.0	31.2	31.6	30.8	30.8
Max Temperature	33.7	32.4	33.3	34.4	32.8	33.0	32.4	33.0	32.4	34.6	32.5	33.5
Average Dew Point Temperature (°C)	24.0	23.7	24.0	24.6	25.2	24.6	24.3	24.2	24.3	24.5	24.4	24.2
Min Relative Humidity (%)	44.0	59.0	52.0	50.0	57.0	51.0	57.0	54.0	55.0	45.0	60.0	51.0
Average Relative Humidity (%)	83.7	82.0	81.6	83.2	82.5	80.0	79.5	79.6	81.0	82.3	85.7	83.8
Average Wind Speed (m/s)	2.2	2.9	2.5	1.8	2.3	2.4	2.8	3.0	2.4	1.8	1.8	2.3
Prevailing Wind Direction	NNW	NE	NE	NW	S	S	S	S	SE	SSW	NNW	N
Maximum Gust (m/s)	12.8	13.4	12.8	10.4	12.3	16.0	14.4	12.3	14.0	15.3	13.5	12.7
Total Rainfall (mm)	197.6	158.4	136.2	208.6	190.0	106.0	79.6	84.2	124.4	120.8	268.6	368.0
Highest Daily Rainfall (mm)	60.6	31.0	30.2	42.8	44.8	29.6	30.2	29.4	20.2	31.2	45.2	69.8

**Average Temperature Changi
2017**



Rainfall Changi 2017

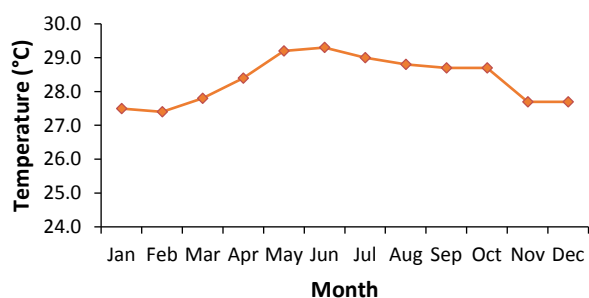


■ No Data
— Defective Data

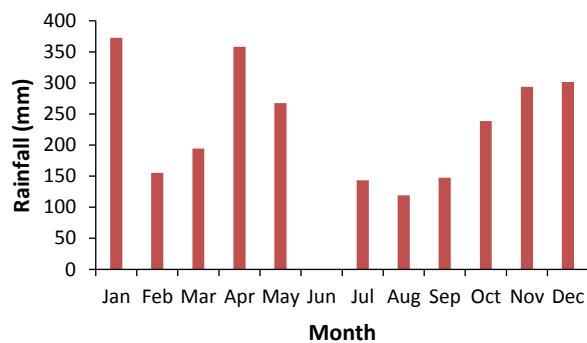
S43 Tai Seng 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	21.7	22.9	23.7	23.8	23.5	22.9	23.4	23.5	23.4	23.0	23.3	23.6
Average Daily Min Temperature (°C)	25.1	25.3	25.5	25.5	26.6	26.8	26.7	26.7	26.1	26.0	25.2	25.4
Average Temperature (°C)	27.5	27.4	27.8	28.4	29.2	29.3	29.0	28.8	28.7	28.7	27.7	27.7
Average Daily Max Temperature (°C)	31.0	30.9	31.5	32.4	32.2	32.5	31.7	31.8	32.1	32.4	31.4	31.5
Max Temperature	34.5	33.3	33.7	34.4	34.1	34.4	33.0	33.2	34.0	35.2	33.8	35.1
Average Dew Point Temperature (°C)	23.7	23.4	23.8	24.4	25.1	24.4	24.2	24.1	24.1	24.2	24.4	24.0
Min Relative Humidity (%)	39.5	50.0	48.0	44.9	50.0	43.6	48.3	50.0	44.9	32.5	51.6	40.6
Average Relative Humidity (%)	81.0	79.7	79.5	79.8	79.4	75.8	75.6	76.5	76.7	78.3	82.1	81.3
Average Wind Speed (m/s)	2.0	2.7	1.9	1.3	1.6	1.6	2.0	1.8	1.6	1.4	1.5	2.1
Prevailing Wind Direction	ENE	ENE	ENE	E	SSW	SSW	SSW	SSW	SSW	E	NNE	ENE
Maximum Gust (m/s)	13.6	15.4	11.3	24.9	12.6	10.7	22.1	25.6	12.5	15.2	12.9	14.1
Total Rainfall (mm)	372.8	155.2	194.4	358.4	267.4	—	143.6	119.2	147.4	238.6	294.0	301.6
Highest Daily Rainfall (mm)	70.6	30.4	36.2	78.8	51.2	47.0	58.0	53.2	42.4	73.2	62.6	61.6

**Average Temperature Tai Seng
2017**



Rainfall Tai Seng 2017

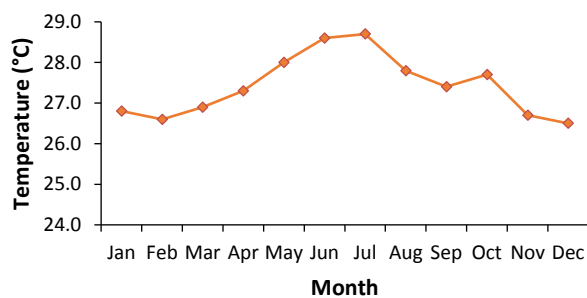


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— Defective Data

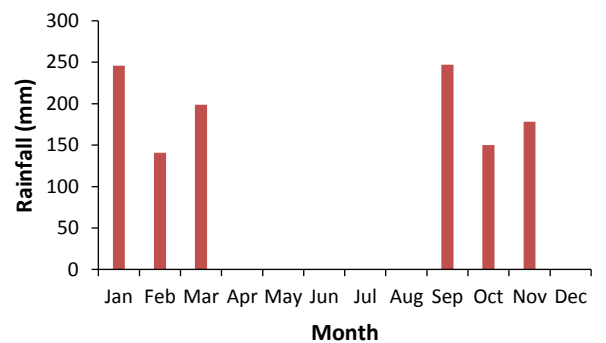
S44 Jurong (West) 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.4	22.6	22.9	22.6	22.9	23.0	22.3	22.4	22.5	22.8	22.5	23.4
Average Daily Min Temperature (°C)	24.4	24.1	24.3	24.5	25.4	26.2	26.5	25.6	24.7	25.1	24.3	24.3
Average Temperature (°C)	26.8	26.6	26.9	27.3	28.0	28.6	28.7	27.8	27.4	27.7	26.7	26.5
Average Daily Max Temperature (°C)	30.7	31.1	31.6	31.2	31.1	32.1	31.3	30.7	31.0	31.1	30.5	30.4
Max Temperature	33.8	33.4	35.7	33.6	32.7	33.4	32.7	32.4	33.9	33.9	32.8	32.8
Average Dew Point Temperature (°C)	22.6	21.3	22.4	—	24.5	23.1	23.2	22.9	23.1	22.2	—	20.3
Min Relative Humidity (%)	54.7	46.1	48.5	—	55.5	41.6	45.8	38.2	50.8	33.4	—	46.1
Average Relative Humidity (%)	75.8	72.0	74.5	—	78.6	69.5	72.1	70.5	72.3	68.5	—	67.2
Average Wind Speed (m/s)	2.0	2.2	1.8	1.7	1.8	2.0	2.6	2.4	2.0	1.8	2.0	2.1
Prevailing Wind Direction	N	N	N	WNW	SE	S	SE	SE	SE	N	N	N
Maximum Gust (m/s)	12.1	14.5	13.2	14.7	16.3	18.0	10.7	13.4	15.0	12.8	16.6	12.4
Total Rainfall (mm)	246.0	140.6	198.6	—	—	—	—	—	247.2	150.0	178.2	—
Highest Daily Rainfall (mm)	59.0	34.6	39.8	42.6	25.2	50.0	26.6	67.0	78.8	47.0	34.0	60.2

Average Temperature Jurong (West) 2017



Rainfall Jurong (West) 2017

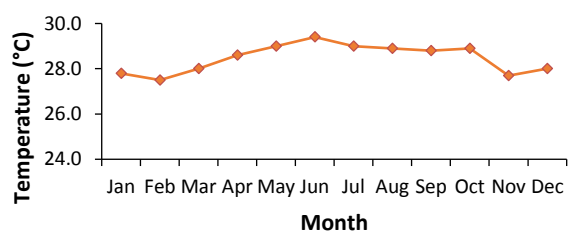


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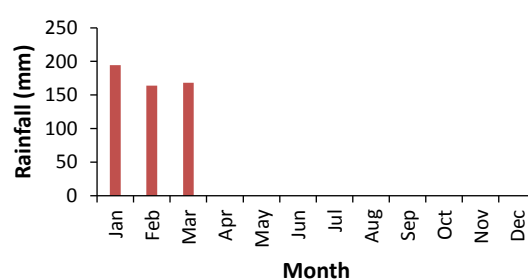
S50 Clementi 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	—	23.5	22.1	23.1	22.2	23.5	22.4	22.5	23.0	22.9	22.9	23.4
Average Daily Min Temperature (°C)	—	24.3	24.5	24.4	25.5	26.0	25.8	25.7	25.0	25.2	24.3	24.6
Average Temperature (°C)	—	26.1	27.3	27.6	28.2	28.5	28.1	27.9	27.9	28.0	27.0	27.1
Average Daily Max Temperature (°C)	—	30.7	32.1	32.5	31.6	32.3	31.1	31.1	31.5	32.2	31.5	31.8
Max Temperature	—	34.0	35.4	35.2	33.4	34.8	32.8	32.8	33.2	35.5	34.2	34.4
Average Dew Point Temperature (°C)	—	—	23.7	24.3	24.9	24.3	24.0	23.8	23.8	23.8	24.1	23.4
Min Relative Humidity (%)	—	—	41.6	48.6	53.5	42.5	53.4	50.5	49.4	30.8	48.8	41.9
Average Relative Humidity (%)	—	—	81.8	83.5	82.9	79.0	79.0	79.0	79.4	79.4	85.0	81.3
Average Wind Speed (m/s)	2.8	2.4	1.8	1.6	2.0	2.1	2.7	2.3	1.8	1.5	1.6	1.8
Prevailing Wind Direction	NW	N	NE	NW	SSE	S	SSE	SSE	SSE	NNW	NNW	NE
Maximum Gust (m/s)	12.8	13.9	12.0	12.1	15.8	12.7	10.7	14.6	38.5	11.0	15.3	13.0
Total Rainfall (mm)	177.6	129.0	197.6	—	—	—	—	117.8	—	244.0	—	—
Highest Daily Rainfall (mm)	78.2	37.4	43.6	53.0	41.6	34.8	40.2	35.2	27.4	37.0	44.6	80.0

**Average Temperature Clementi
2017**



Rainfall Clementi 2017

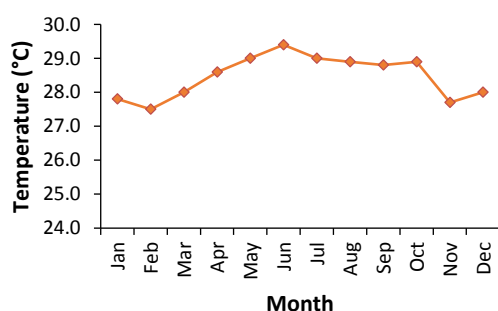


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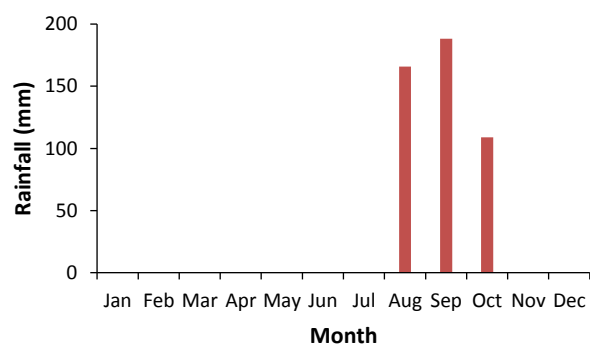
S60 Sentosa Island 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)				23.1	23.4	23.0	23.0	23.1	23.2	23.8	22.7	23.5
Average Daily Min Temperature (°C)				25.4	26.0	26.4	25.9	25.8	25.5	25.9	24.6	25.6
Average Temperature (°C)				28.0	28.4	28.5	28.2	28.0	28.0	28.3	27.4	27.9
Average Daily Max Temperature (°C)				31.1	31.3	31.4	31.1	30.9	31.0	31.4	31.0	31.8
Max Temperature				33.4	33.4	33.1	32.9	32.7	32.9	34.9	32.4	33.8
Average Dew Point Temperature (°C)				23.3	23.9	22.2	—	—	—	—	24.3	24.5
Min Relative Humidity (%)				33.6	41.6	36.7	—	—	—	—	57.0	45.6
Average Relative Humidity (%)				76.9	77.7	69.8	—	—	—	—	83.6	77.5
Average Wind Speed (m/s)				—	—	—	2.2	1.8	1.6	1.4	1.4	1.5
Prevailing Wind Direction				—	—	—	ENE	E	S	S	W	N
Maximum Gust (m/s)				—	—	—	6.7	11.2	12.4	10.3	14.5	9.6
Total Rainfall (mm)				—	—	—	—	165.8	188.2	108.8	—	—
Highest Daily Rainfall (mm)				62.2	84.4	41.0	72.0	47.8	35.2	32.6	45.4	38.8

**Average Temperature
Sentosa Island 2017**



Rainfall Sentosa Island 2017

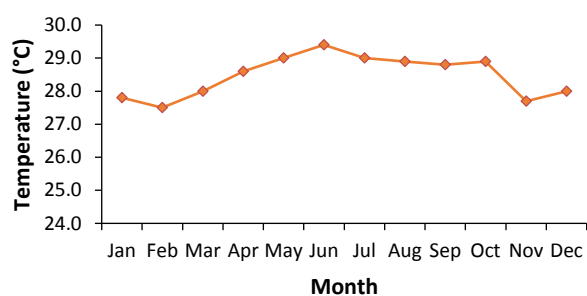


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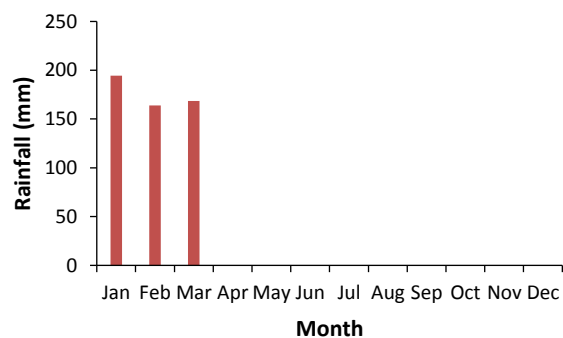
S102 Semakau Island 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.7	23.9	23.8	23.5	24.7	23.8	24.2	23.1	23.8	22.9	22.9	
Average Daily Min Temperature (°C)	26.1	25.8	26.2	26.1	27.1	27.3	27.1	26.7	26.0	26.5	25.5	
Average Temperature (°C)	27.7	27.4	27.8	28.3	28.8	29.0	28.6	28.4	28.2	28.5	27.9	
Average Daily Max Temperature (°C)	29.9	29.8	29.9	30.0	30.4	30.6	30.0	30.0	29.9	29.9	29.6	
Max Temperature	32.1	31.4	31.6	31.7	32.0	32.2	31.9	31.3	31.2	31.7	31.2	
Average Dew Point Temperature (°C)	24.3	23.9	24.5	25.4	25.8	25.4	25.2	25.0	25.0	25.2	25.1	
Min Relative Humidity (%)	54.6	53.1	53.1	64.4	61.7	55.2	59.7	61.1	57.3	54.7	65.4	
Average Relative Humidity (%)	82.2	81.2	82.5	84.1	83.9	81.2	82.3	82.5	82.8	82.5	85.3	
Average Wind Speed (m/s)	6.1	7.1	5.6	6.6	5.0	4.3	4.4	4.1	4.0	4.0	4.4	
Prevailing Wind Direction	N	N	N	W	SE	SE	S	SE	SE	W	N	
Maximum Gust (m/s)	22.6	21.1	19.5	22.7	21.8	24.2	23.8	18.4	21.6	20.1	21.1	
Total Rainfall (mm)	276.2	73.8	75.2	—	—	82.4	110.0	124.4	204.4	156.4	—	
Highest Daily Rainfall (mm)	105.4	16.2	25.4	60.4	76.6	25.2	68.4	33.0	33.2	59.6	64.4	

Average Temperature Semakau Island 2017



Rainfall Clementi 2017

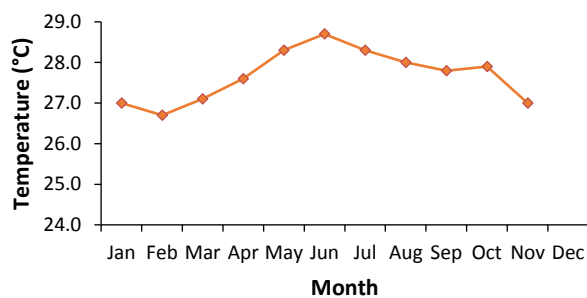


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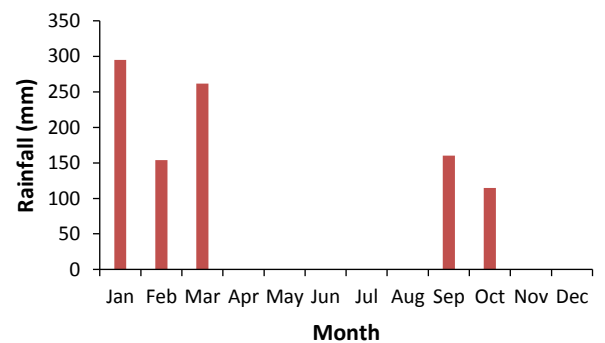
S104 Admiralty 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.7	22.6	23.3	23.3	23.0	23.0	22.9	23.0	22.1	22.9	22.7	
Average Daily Min Temperature (°C)	24.6	24.4	24.5	24.8	25.7	25.9	25.8	25.4	24.9	25.2	24.3	
Average Temperature (°C)	27.0	26.7	27.1	27.6	28.3	28.7	28.3	28.0	27.8	27.9	27.0	
Average Daily Max Temperature (°C)	31.0	30.8	31.6	32.0	32.2	32.9	31.5	31.5	31.7	32.0	31.4	
Max Temperature	34.7	33.4	34.8	34.5	34.7	34.4	33.8	33.7	34.3	35.3	34.5	
Average Dew Point Temperature (°C)	24.7	24.8	25.0	25.7	26.1	25.5	25.0	25.1	25.2	25.2	25.5	
Min Relative Humidity (%)	38.7	50.4	42.3	48.9	50.6	43.6	50.5	48.1	45.6	35.4	50.6	
Average Relative Humidity (%)	87.1	89.4	88.3	89.7	87.2	83.8	82.0	84.6	86.0	85.7	90.4	
Average Wind Speed (m/s)	2.5	3.2	2.5	1.9	1.7	1.8	1.9	1.9	1.8	1.9	1.8	
Prevailing Wind Direction	N	N	NE	N	S	S	S	S	S	N	N	
Maximum Gust (m/s)	14.1	16.5	16.2	14.9	14.8	18.7	15.1	15.8	16.9	14.8	12.4	
Total Rainfall (mm)	294.8	153.8	261.4	—	—	—	—	—	160.2	114.8	—	
Highest Daily Rainfall (mm)	57.6	25.6	46.4	41.6	42.0	24.0	35.0	66.2	37.4	23.2	62.2	

Average Temperature Admiralty 2017



Rainfall Admiralty 2017

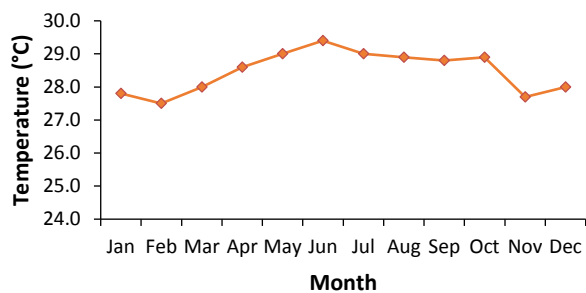


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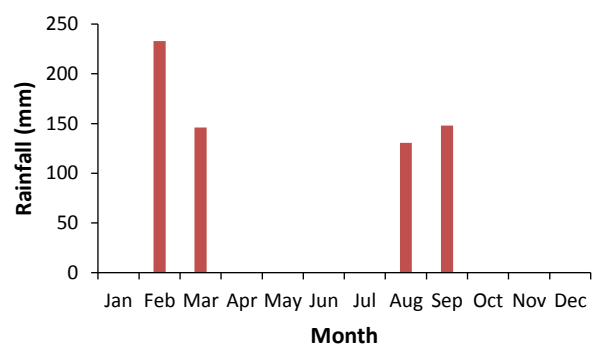
S106 Pulau Ubin 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	21.7	22.5	23.2	22.3	22.9	23.8	22.9	23.3	21.9	23.0	22.8	22.7
Average Daily Min Temperature (°C)	24.1	23.9	24.1	24.2	25.2	25.2	25.0	25.0	24.6	24.4	24.1	24.1
Average Temperature (°C)	26.5	26.5	26.9	27.1	28.0	28.2	27.8	27.5	27.3	27.3	27.2	26.6
Average Daily Max Temperature (°C)	30.7	30.7	31.3	32.2	32.6	32.7	32.0	31.7	32.0	32.4	31.3	31.0
Max Temperature	34.0	32.4	34.3	33.7	33.8	34.1	33.6	33.4	33.6	34.9	33.7	33.4
Average Dew Point Temperature (°C)	24.8	24.4	24.8	25.4	26.2	25.7	25.5	25.3	25.3	25.3	25.3	24.8
Min Relative Humidity (%)	44.8	60.4	50.4	52.8	61.7	48.8	58.1	55.6	57.2	38.0	54.3	58.7
Average Relative Humidity (%)	91.3	89.4	89.3	91.0	91.0	87.5	88.1	88.7	89.9	89.7	90.4	90.3
Average Wind Speed (m/s)	2.3	2.6	2.3	2.0	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.6
Prevailing Wind Direction	NNE	NNE	NE	NE	SE	SE	SE	SE	NE	NE	NNE	NNE
Maximum Gust (m/s)	11.4	12.0	10.5	10.4	10.6	9.0	10.2	10.0	13.4	11.2	13.6	20.8
Total Rainfall (mm)	247.4	233.0	146.0	—	—	—	—	130.6	147.8	—	—	—
Highest Daily Rainfall (mm)	84.0	62.2	37.4	47.0	36.8	21.4	27.4	54.2	34.2	32.0	79.8	103.6

Average Temperature Pulau Ubin 2017



Rainfall Pulau Ubin 2017

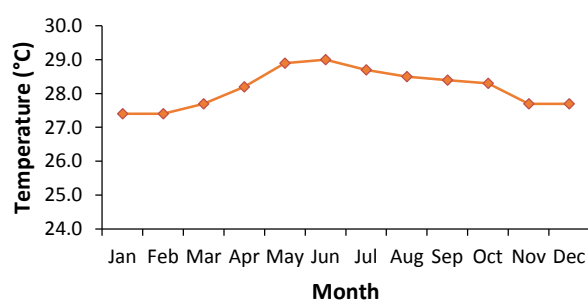


■ No Data
 — Defective Data

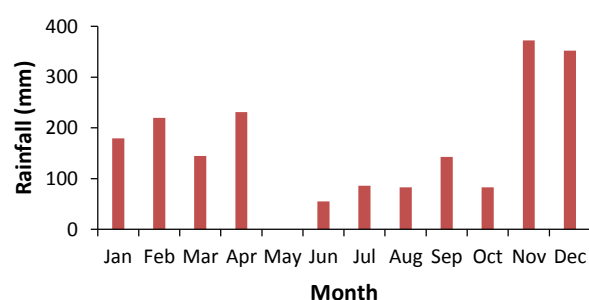
S107 East Coast Parkway 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.6	23.3	23.5	23.7	24.0	22.8	24.3	24.2	22.6	24.2	23.1	23.6
Average Daily Min Temperature (°C)	25.5	25.4	25.6	25.9	26.8	27.1	26.9	26.7	26.1	26.3	25.5	25.6
Average Temperature (°C)	27.4	27.4	27.7	28.2	28.9	29.0	28.7	28.5	28.4	28.3	27.7	27.7
Average Daily Max Temperature (°C)	30.1	30.3	30.2	30.4	30.5	30.5	30.0	29.8	30.0	30.1	30.1	30.6
Max Temperature	31.9	32.7	32.4	32.5	32.7	32.2	31.1	31.2	31.3	32.2	31.9	32.2
Average Dew Point Temperature (°C)	24.4	24.0	24.4	25.1	25.8	25.3	25.1	24.9	25.0	25.2	25.1	24.6
Min Relative Humidity (%)	51.8	55.5	60.7	52.7	58.9	56.9	61.4	59.1	61.4	54.6	59.5	56.0
Average Relative Humidity (%)	84.3	82.4	82.6	83.6	83.6	80.8	81.1	81.4	81.8	83.3	85.5	83.5
Average Wind Speed (m/s)	2.4	3.1	2.5	2.4	3.2	3.2	4.1	3.9	3.3	3.0	3.0	3.1
Prevailing Wind Direction	N	NNE	NNE	N	SE	ESE	S	S	ESE	N	NW	N
Maximum Gust (m/s)	17.3	16.2	12.4	20.0	17.9	18.9	15.5	13.3	19.2	14.7	15.1	14.8
Total Rainfall (mm)	179.2	219.8	145.0	230.8	—	55.4	86.0	83.0	142.8	83.0	372.2	352.2
Highest Daily Rainfall (mm)	55.8	53.4	43.8	39.0	69.6	22.0	43.6	30.4	29.0	22.2	130.6	64.4

Average Temperature East Coast Parkway 2017



Rainfall East Coast Parkway 2017

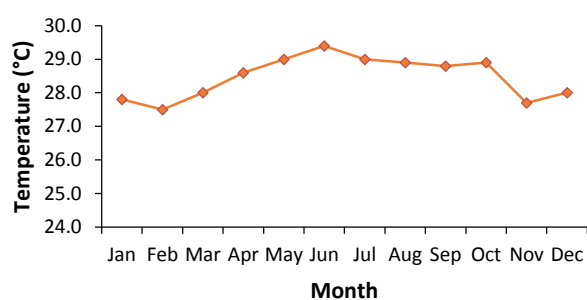


■ No Data
— Defective Data

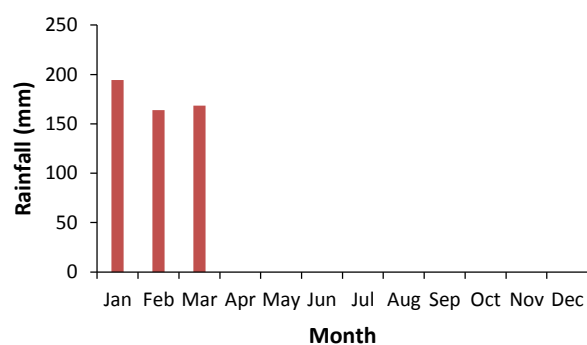
S108 Marina Barrage 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.4	22.7	23.4	23.0	23.9	23.1	23.6	23.8	23.4	23.8	22.9	23.5
Average Daily Min Temperature (°C)	25.7	25.4	25.5	25.8	26.4	26.4	26.6	26.3	26.0	26.3	25.2	25.7
Average Temperature (°C)	27.8	27.5	28.0	28.6	29.0	29.4	29.0	28.9	28.8	28.9	27.7	28.0
Average Daily Max Temperature (°C)	31.4	31.3	31.8	32.4	32.6	32.8	32.3	32.6	32.7	32.2	31.5	32.3
Max Temperature	33.9	33.3	33.7	34.6	34.0	34.4	34.5	34.4	34.9	34.9	34.4	34.7
Average Dew Point Temperature (°C)	23.8	23.3	24.1	24.5	25.5	24.7	24.4	24.4	24.4	24.2	24.4	23.6
Min Relative Humidity (%)	38.7	47.7	47.7	43.1	58.4	46.5	48.6	49.6	47.1	38.8	47.0	39.5
Average Relative Humidity (%)	79.9	78.8	80.1	79.3	82.0	76.8	77.0	77.3	77.8	77.1	82.5	78.0
Average Wind Speed (m/s)	4.5	5.0	3.8	3.5	2.5	2.0	2.2	1.5	1.4	1.6	1.8	2.4
Prevailing Wind Direction	N	NNE	N	NNW	E	E	S	SE	S	S	NW	N
Maximum Gust (m/s)	15.3	18.7	19.1	14.1	15.9	11.9	18.5	10.7	14.4	10.7	13.3	12.7
Total Rainfall (mm)	194.4	164.0	168.4	—	—	—	—	—	—	—	—	—
Highest Daily Rainfall (mm)	97.6	53.2	31.4	58.2	35.6	25.0	48.0	29.2	46.6	56.8	77.2	29.4

Average Temperature Marina Barrage 2017



Rainfall Marina Barrage 2017

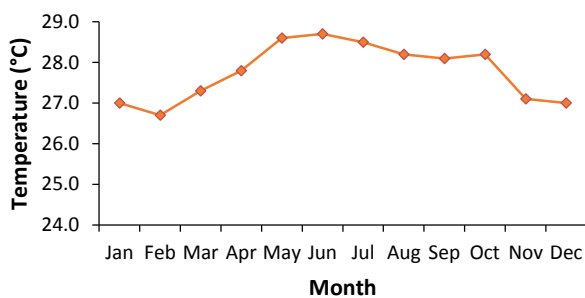


■ No Data
 — Defective Data

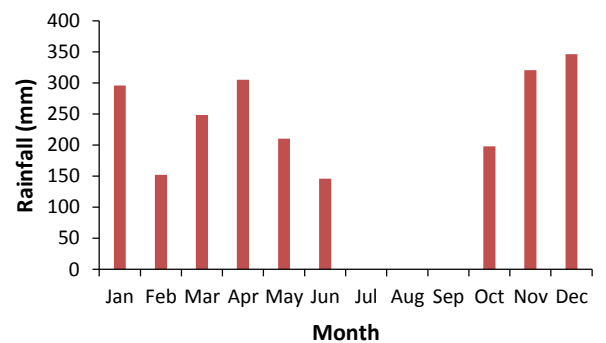
S109 Ang Mo Kio 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.4	22.6	23.1	23.4	22.6	23.2	22.9	23.1	22.9	22.8	22.9	23.3
Average Daily Min Temperature (°C)	24.5	24.5	24.7	24.8	25.9	25.9	26.1	26.0	25.4	25.3	24.4	24.6
Average Temperature (°C)	27.0	26.7	27.3	27.8	28.6	28.7	28.5	28.2	28.1	28.2	27.1	27.0
Average Daily Max Temperature (°C)	31.2	31.0	31.8	32.2	32.2	32.5	31.7	31.4	31.7	32.3	31.2	31.3
Max Temperature	34.5	33.6	35.2	34.8	34.6	34.4	33.4	33.4	33.5	35.2	33.9	34.6
Average Dew Point Temperature (°C)	23.2	23.0	23.3	24.0	24.5	23.7	23.4	23.4	23.6	23.7	24.2	23.7
Min Relative Humidity (%)	34.5	46.3	38.9	42.2	46.5	39.4	45.0	44.1	44.7	32.5	47.7	39.5
Average Relative Humidity (%)	81.3	80.8	80.2	81.0	79.4	75.9	74.9	76.4	77.7	78.4	85.8	83.8
Average Wind Speed (m/s)	1.6	1.9	1.6	1.3	1.5	1.5	1.8	1.8	1.6	1.4	1.4	1.6
Prevailing Wind Direction	W	NNE	ENE	W	E	E	SE	E	E	W	W	NNE
Maximum Gust (m/s)	15.8	14.7	11.3	11.6	12.9	13.3	12.9	10.6	12.8	16.0	15.2	12.4
Total Rainfall (mm)	295.8	152.2	248.6	305.0	210.4	145.8	—	—	—	198.2	320.4	346.4
Highest Daily Rainfall (mm)	60.6	41.4	39.4	93.2	32.6	31.2	37.6	33.6	32.2	45.8	45.8	83.4

Average Temperature Ang Mo Kio 2017



Rainfall Ang Mo Kio 2017

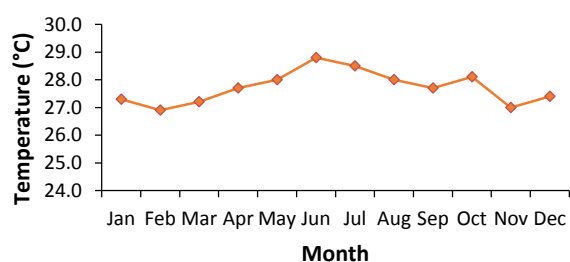


■ No Data
— Defective Data

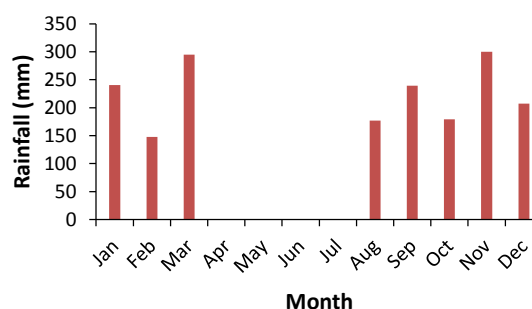
S111 Newton 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.4	22.5	23.2	22.8	22.8	21.8		22.5	23.0	22.8	22.5	23.0
Average Daily Min Temperature (°C)	24.6	24.5	24.8	24.6	25.7	26.0		25.4	25.2	25.3	24.4	24.7
Average Temperature (°C)	26.9	26.7	27.0	27.3	28.2	28.5		27.6	27.8	28.0	27.0	27.1
Average Daily Max Temperature (°C)	30.5	30.6	31.0	31.0	31.5	32.0		30.7	31.4	31.8	31.1	31.6
Max Temperature	33.6	33.1	33.5	32.7	33.7	33.6		32.5	33.2	34.3	33.9	34.3
Average Dew Point Temperature (°C)	22.7	22.0	22.8	—	24.5	23.9		23.5	23.7	23.4	23.5	22.9
Min Relative Humidity (%)	52.5	51.3	45.3	48.8	51.0	42.2		49.5	50.1	35.8	50.0	43.8
Average Relative Humidity (%)	79.3	76.3	77.7	—	81.2	77.0		79.1	78.9	77.3	82.1	78.8
Average Wind Speed (m/s)	1.7	1.9	1.6	1.5	2.1	2.2		2.4	2.0	1.5	1.6	1.7
Prevailing Wind Direction	N	N	E	NW	ESE	ESE		ESE	ESE	NW	NW	N
Maximum Gust (m/s)	13.6	14.0	11.4	13.1	15.2	18.8		14.4	16.0	11.6	13.2	13.7
Total Rainfall (mm)	250.0	123.4	218.0	—	—	—		—	—	245.0	—	222.0
Highest Daily Rainfall (mm)	86.2	62.6	41.6	22.6	52.6	29.0		43.6	26.0	59.4	53.8	66.6

**Average Temperature Newton
2017**



Rainfall Newton 2017

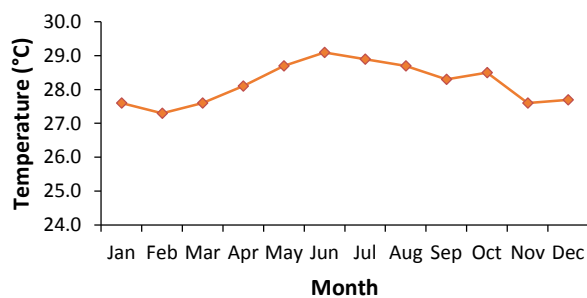


■ No Data
— Defective Data

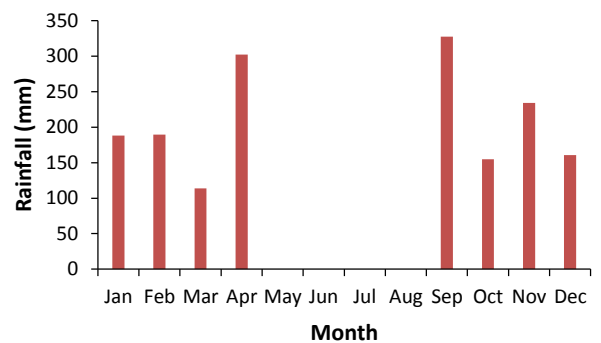
S115 Tuas South 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.0	23.2	23.2	23.5	22.6	23.9	23.6	21.7	23.5	23.6	24.0	23.4
Average Daily Min Temperature (°C)	25.5	25.0	25.4	25.5	26.2	26.7	26.9	26.7	25.7	26.2	25.4	25.4
Average Temperature (°C)	27.6	27.3	27.6	28.1	28.7	29.1	28.9	28.7	28.3	28.5	27.6	27.7
Average Daily Max Temperature (°C)	30.8	31.0	30.7	31.0	31.4	31.6	31.2	31.1	30.9	30.9	30.4	31.1
Max Temperature	32.9	33.0	32.9	32.9	32.8	33.1	32.8	32.7	33.1	33.6	32.5	33.2
Average Dew Point Temperature (°C)	23.4	23.1	23.3	24.2	24.8	24.2	24.1	23.8	24.0	24.1	24.1	23.4
Min Relative Humidity (%)	52.5	50.2	52.9	54.1	53.1	51.9	54.1	49.9	54.1	48.8	56.7	46.9
Average Relative Humidity (%)	78.4	78.4	78.2	79.9	79.6	75.5	75.5	75.5	77.9	77.3	81.6	77.9
Average Wind Speed (m/s)	1.7	1.8	1.4	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.8	1.8
Prevailing Wind Direction	NE	NE	NE	NNE	SSW	SSW	SSW	S	SSW	NNE	NNE	NE
Maximum Gust (m/s)	11.5	11.7	11.6	15.8	14.8	14.7	10.4	13.9	20.1	12.1	13.8	13.2
Total Rainfall (mm)	188.2	189.4	113.8	302.2	—	—	—	—	327.2	154.8	234.0	160.6
Highest Daily Rainfall (mm)	61.6	32.6	29.6	102.0	50.2	99.6	37.6	42.4	78.6	92.8	68.6	26.0

Average Temperature Tuas South 2017



Rainfall Tuas South 2017

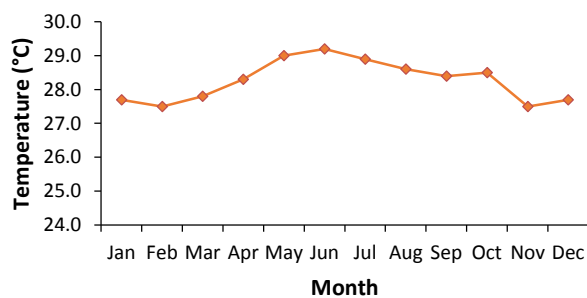


■ No Data
— Defective Data

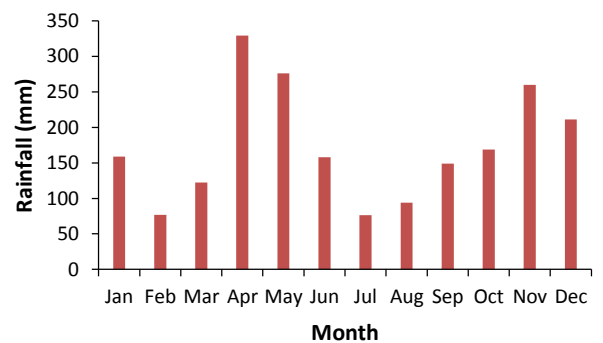
S116 Pasir Panjang 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.3	23.6	23.3	23.3	23.1	22.9	23.7	23.2	23.7	23.7	22.6	24.0
Average Daily Min Temperature (°C)	25.8	25.4	25.7	25.6	26.6	27.0	27.0	26.7	25.9	26.2	25.1	25.6
Average Temperature (°C)	27.7	27.5	27.8	28.3	29.0	29.2	28.9	28.6	28.4	28.5	27.5	27.7
Average Daily Max Temperature (°C)	30.7	31.1	31.1	31.0	31.3	31.5	31.0	30.8	30.7	30.7	30.2	30.9
Max Temperature	33.0	32.9	33.9	33.3	33.2	33.1	33.0	32.2	32.8	33.6	32.2	32.8
Average Dew Point Temperature (°C)	24.7	24.5	25.0	25.8	26.4	25.9	25.7	25.5	25.5	25.6	25.6	24.9
Min Relative Humidity (%)	46.5	50.6	51.7	55.9	58.4	54.1	51.8	53.8	51.5	41.3	55.9	45.7
Average Relative Humidity (%)	84.7	84.5	85.5	86.6	86.4	83.1	83.3	83.8	84.7	85.0	89.4	85.5
Average Wind Speed (m/s)	2.9	3.4	2.5	2.4	2.5	2.7	2.9	2.8	2.7	2.7	2.9	3.3
Prevailing Wind Direction	NE	NE	NE	NE	ESE	ESE	SE	SE	ESE	NE	NE	NE
Maximum Gust (m/s)	15.1	15.7	17.1	20.1	21.7	24.9	14.9	18.4	25.0	18.1	19.6	15.9
Total Rainfall (mm)	158.8	76.6	122.4	329.0	276.2	157.8	76.2	94.0	149.0	168.6	259.8	211.2
Highest Daily Rainfall (mm)	85.8	23.6	36.6	58.0	76.2	80.0	19.0	28.0	37.4	39.8	58.2	109.8

Average Temperature Pasir Panjang 2017



Rainfall Pasir Panjang 2017

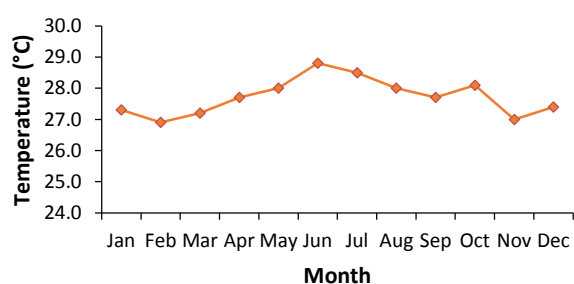


■ No Data
— Defective Data

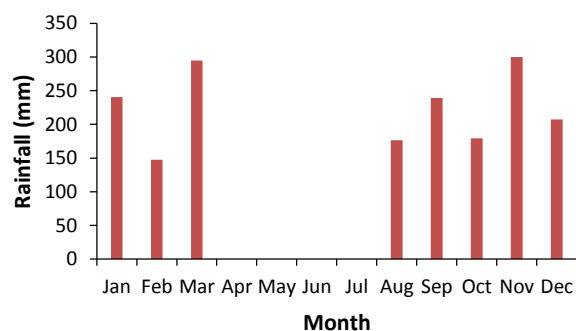
S117 Jurong Island 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	23.0	23.0	23.1	22.3	23.3	23.7	23.7	22.1	22.6	22.6	22.3	23.7
Average Daily Min Temperature (°C)	25.4	25.2	25.6	25.5	26.2	26.6	26.6	26.4	25.5	26.0	25.0	25.5
Average Temperature (°C)	28.1	27.8	27.9	28.4	28.8	28.9	28.6	28.4	28.3	28.7	27.9	28.1
Average Daily Max Temperature (°C)	31.2	31.5	31.2	31.3	31.4	31.5	31.1	31.0	31.1	31.6	31.0	31.6
Max Temperature	34.2	33.9	33.3	33.1	33.1	32.9	32.7	32.7	32.6	34.5	33.0	33.6
Average Dew Point Temperature (°C)	23.1	22.6	23.1	24.1	24.8	24.2	24.0	23.9	24.0	24.0	24.1	23.2
Min Relative Humidity (%)	42.6	42.8	45.3	47.3	50.7	47.7	51.8	47.3	48.6	41.2	49.6	42.2
Average Relative Humidity (%)	75.8	74.3	75.8	78.4	79.7	76.2	76.6	76.9	78.2	76.4	80.7	75.8
Average Wind Speed (m/s)	1.7	1.8	1.8	1.7	2.6	2.7	3.2	3.3	2.6	1.9	1.7	1.8
Prevailing Wind Direction	NNW	N	N	WSW	SE	SE	SE	SE	ESE	WSW	WSW	N
Maximum Gust (m/s)	15.5	12.8	13.5	14.9	13.0	12.8	12.9	16.6	16.0	13.3	17.1	11.5
Total Rainfall (mm)	276.8	173.6	121.2	288.6	261.4	140.8	92.2	153.0	205.4	201.4	195.6	216.8
Highest Daily Rainfall (mm)	74.0	38.4	16.8	56.4	66.8	44.0	57.4	49.8	37.6	53.4	30.2	66.6

Average Temperature Jurong Island 2017



Rainfall Jurong Island 2017

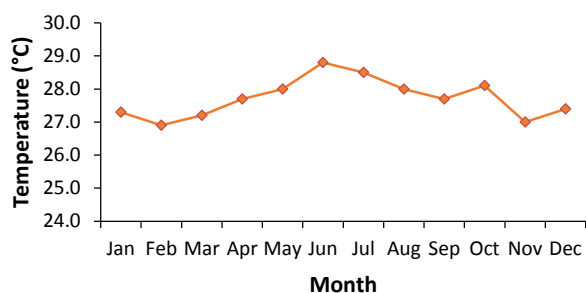


■ No Data
— Defective Data

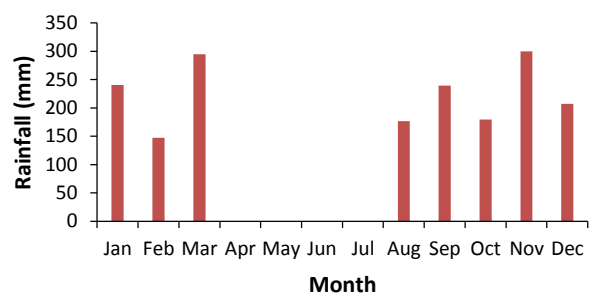
S121 Choa Chu Kang (South) 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.9	23.0	23.2	23.2	22.6	24.1	22.7	22.4	22.8	23.1	22.6	22.7
Average Daily Min Temperature (°C)	24.7	24.5	24.5	24.8	25.1	25.9	25.9	25.5	24.7	25.2	24.4	24.8
Average Temperature (°C)	27.3	26.9	27.2	27.7	28.0	28.8	28.5	28.0	27.7	28.1	27.0	27.4
Average Daily Max Temperature (°C)	31.4	31.2	32.0	31.8	31.7	32.6	31.6	31.5	31.7	32.3	31.4	32.0
Max Temperature	34.5	33.3	35.0	33.5	33.6	34.6	33.3	33.1	33.8	35.0	33.7	34.7
Average Dew Point Temperature (°C)	24.2	23.6	—	23.7	25.1	24.3	23.8	23.7	23.8	23.9	24.2	21.6
Min Relative Humidity (%)	46.2	53.0	49.2	54.9	59.4	45.8	46.5	48.1	47.4	35.3	50.2	48.8
Average Relative Humidity (%)	80.6	80.8	—	80.4	85.2	77.8	76.5	78.4	80.6	79.1	84.6	72.0
Average Wind Speed (m/s)	1.6	2.0	1.4	1.3	1.1	1.3	1.6	1.5	1.2	1.2	1.2	1.6
Prevailing Wind Direction	NNE	NNE	NNE	N	SSE	SSE	SSE	SSE	N	N	N	N
Maximum Gust (m/s)	16.9	12.5	22.8	30.8	22.9	14.8	11.0	33.1	13.7	9.6	27.3	11.9
Total Rainfall (mm)	240.6	147.4	294.6	—	—	—	—	176.6	239.2	179.2	299.8	207.2
Highest Daily Rainfall (mm)	74.0	37.2	50.2	27.0	74.2	43.0	48.0	46.4	52.6	34.6	44.0	45.2

Average Temperature Choa Chu Kang (South) 2017



Rainfall Choa Chu Kang (South) 2017

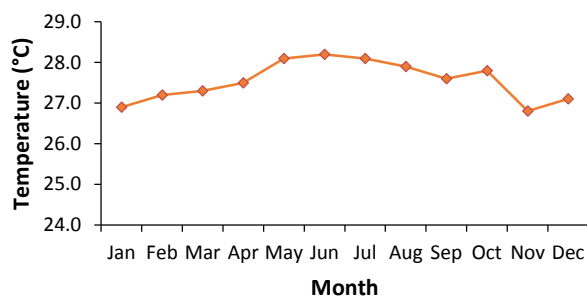


■ No Data
 — Defective Data

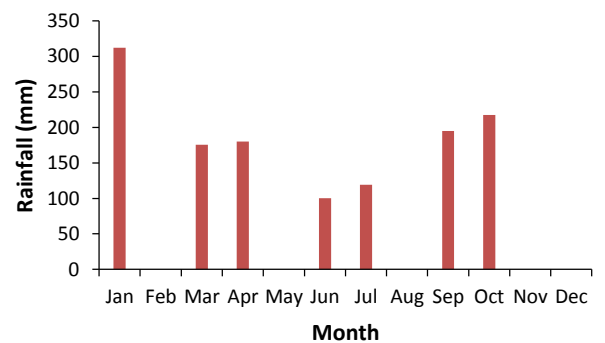
S122 Khatib 2017

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Temperature (°C)	22.3	23.1	23.7	23.3	23.0	23.6	22.7	22.7	23.1	23.0	23.2	23.7
Average Daily Min Temperature (°C)	24.4	24.5	24.5	24.6	25.3	25.2	25.1	25.2	24.7	24.7	23.9	24.5
Average Temperature (°C)	26.9	27.2	27.3	27.5	28.1	28.2	28.1	27.9	27.6	27.8	26.8	27.1
Average Daily Max Temperature (°C)	31.8	31.9	32.3	32.7	32.3	32.9	31.9	32.0	32.0	32.8	32.1	31.8
Max Temperature	35.1	33.9	35.2	34.7	34.5	34.5	33.7	34.0	34.1	35.2	33.5	33.9
Average Dew Point Temperature (°C)	—	—	—	—	—	—	24.4	23.9	24.3	—	—	23.0
Min Relative Humidity (%)	—	53.5	53.4	—	—	51.4	51.2	44.9	51.9	48.6	—	47.2
Average Relative Humidity (%)	—	—	—	—	—	—	76.9	72.8	75.6	—	—	76.7
Average Wind Speed (m/s)	1.3	1.5	1.3	1.0	1.1	1.1	1.4	1.4	1.1	0.9	0.9	1.4
Prevailing Wind Direction	NNW	NNE	NE	W	S	S	S	S	S	W	W	NNW
Maximum Gust (m/s)	10.6	10.0	10.7	10.1	11.9	14.2	9.3	11.7	10.3	10.2	9.5	11.6
Total Rainfall (mm)	312.1	—	175.4	180.0	—	100.1	119.0	—	195.0	217.6	—	—
Highest Daily Rainfall (mm)	53.5	47.8	54.8	47.8	35.2	47.8	63.0	58.4	39.8	72.6	93.0	111.8

**Average Temperature Khatib
2017**



Rainfall Khatib 2017

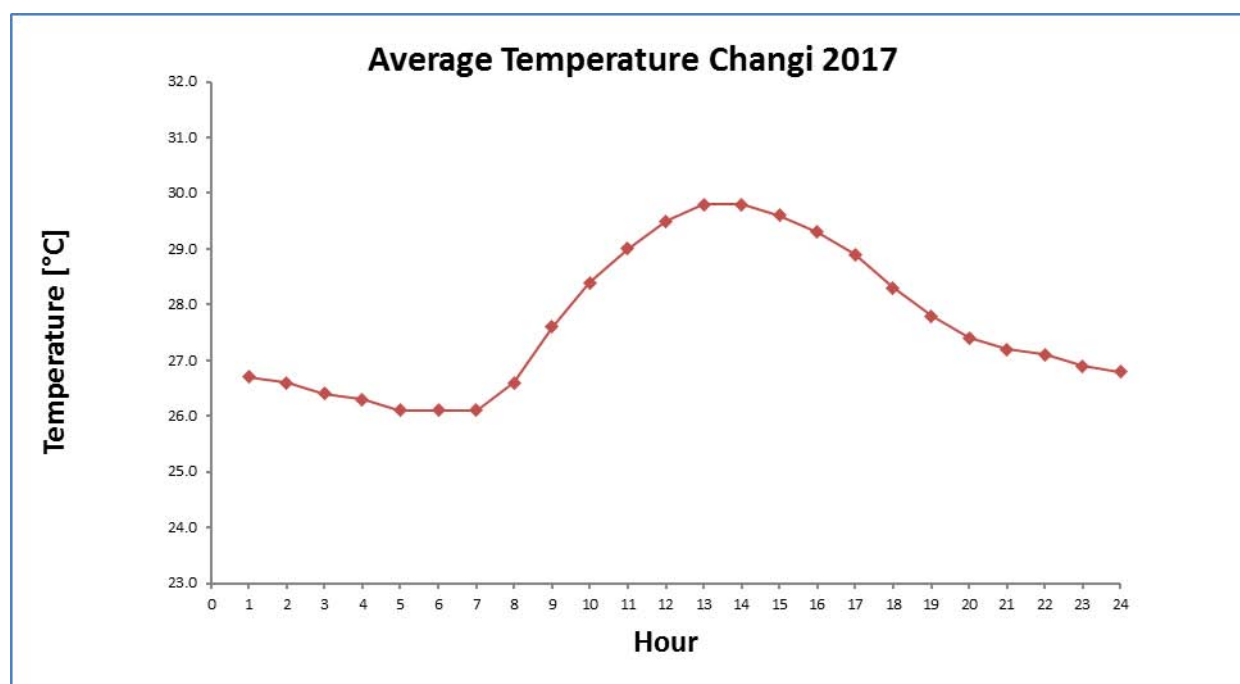


■ No Data
— Defective Data

10.2. Hourly Observation

S24 Changi 2017

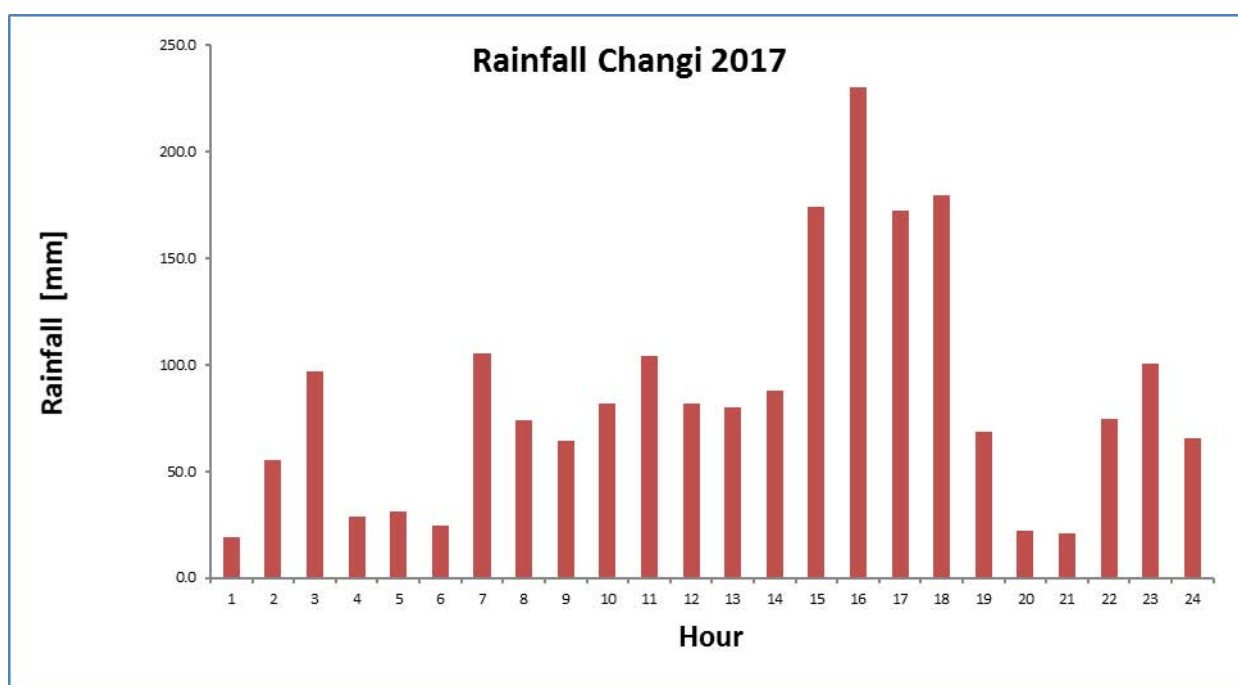
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.9	22.9	23.2	23.2	23.1	23.1	22.4	23.1	23.7	23.7	22.8	23.6
Max Dry Bulb Temperature (°C)	29.2	29.0	28.8	28.8	28.8	28.9	29.0	29.2	30.4	31.7	31.8	32.5
Average Dry Bulb Temperature (°C)	26.7	26.6	26.4	26.3	26.1	26.1	26.1	26.6	27.6	28.4	29.0	29.5
Average Dew Point Temperature (°C)	24.5	24.5	24.4	24.5	24.4	24.4	24.4	24.6	24.6	24.5	24.5	24.4
Average Relative Humidity (%)	87.6	88.3	89.0	89.8	90.2	90.7	90.7	88.5	83.9	79.6	76.7	74.1
Average Wind Speed (m/s)	1.8	1.7	1.6	1.5	1.6	1.6	1.6	1.8	2.3	2.7	2.9	3.0
Max Gust (m/s)	11.3	9.9	10.7	9.5	10.1	12.3	13.5	10.8	10.4	11.5	16.0	14.4
Rainfall (mm)	19.2	55.6	96.8	29.0	31.2	24.4	105.7	73.9	64.2	81.8	104.2	82.0



- No Data
- Defective Data

S24 Changi 2017

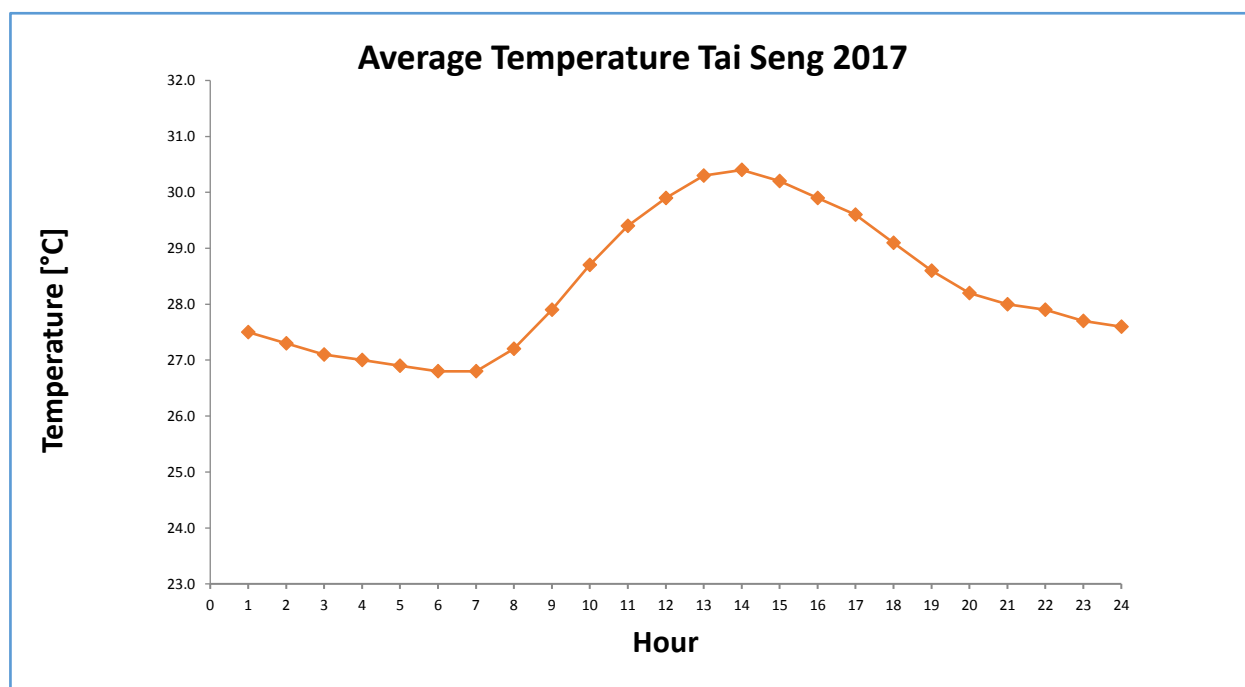
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.7	23.7	23.9	23.7	21.9	23.5	23.9	23.7	23.9	23.8	23.7	23.7
Max Dry Bulb Temperature (°C)	32.3	32.9	33.1	33.3	33.7	33.1	31.7	31.0	29.9	29.5	29.3	29.3
Average Dry Bulb Temperature (°C)	29.8	29.8	29.6	29.3	28.9	28.3	27.8	27.4	27.2	27.1	26.9	26.8
Average Dew Point Temperature (°C)	24.2	24.2	24.2	24.1	24.0	24.0	24.0	24.1	24.3	24.4	24.4	24.4
Average Relative Humidity (%)	72.5	72.2	73.5	73.9	75.3	77.7	80.3	82.7	84.4	85.4	86.2	87.0
Average Wind Speed (m/s)	3.1	3.2	3.4	3.4	3.2	2.8	2.5	2.3	2.2	2.0	2.0	1.8
Max Gust (m/s)	12.8	13.1	14.0	13.4	12.4	11.8	12.2	10.2	9.2	10.9	15.3	10.5
Rainfall (mm)	80.0	88.2	174.2	230.4	172.2	179.6	68.8	22.2	21.2	74.4	100.6	65.8



- No Data
- Defective Data

S43 Tai Seng 2017

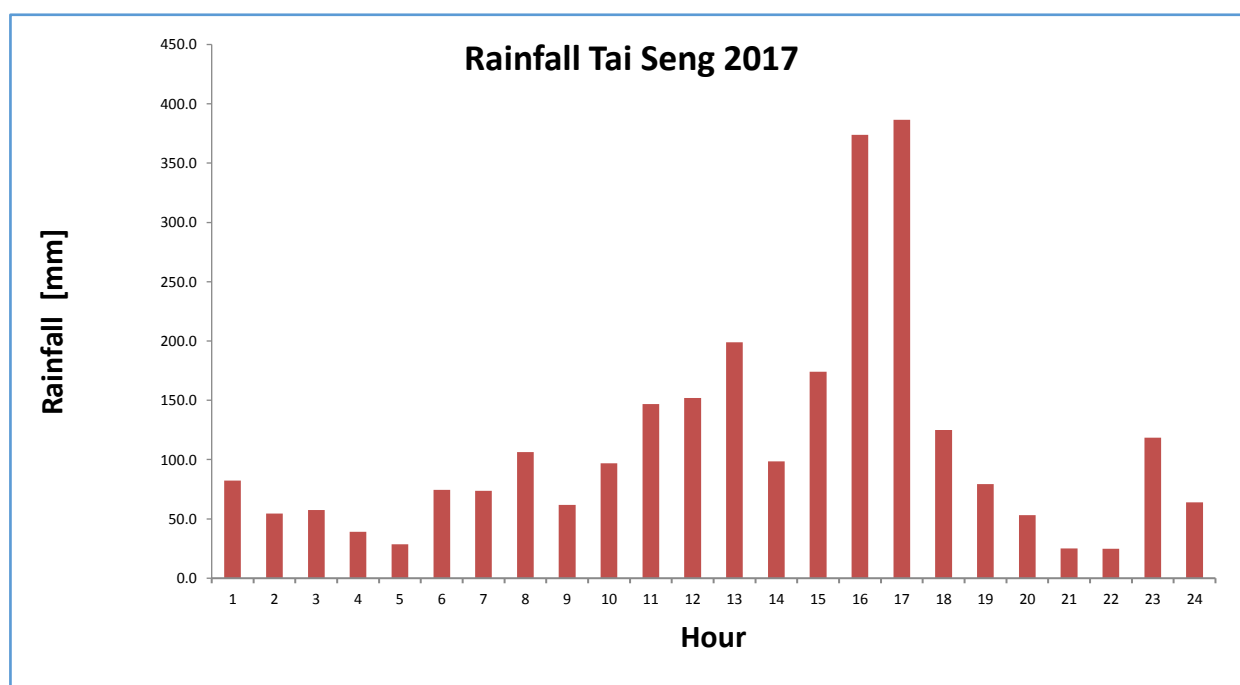
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.8	23.3	23.4	23.4	23.5	23.4	23.5	22.9	23.6	23.5	22.9	23.6
Max Dry Bulb Temperature (°C)	29.9	29.9	29.7	29.5	29.5	29.5	29.5	29.8	30.9	31.8	33.0	33.7
Average Dry Bulb Temperature (°C)	27.5	27.3	27.1	27.0	26.9	26.8	26.8	27.2	27.9	28.7	29.4	29.9
Average Dew Point Temperature (°C)	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.2	23.9	23.7
Average Relative Humidity (%)	84.5	85.3	86.0	86.6	87.0	87.6	87.7	86.0	82.0	77.1	72.8	69.8
Average Wind Speed (m/s)	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.4	1.8	2.1	2.3	2.4
Max Gust (m/s)	17.1	10.3	10.4	10.0	9.2	22.1	8.9	10.7	8.7	12.5	11.0	12.6
Rainfall (mm)	82.4	54.6	57.4	39.0	28.6	74.4	73.6	106.4	61.8	97.0	146.8	152.0



- No Data
- Defective Data

S43 Tai Seng 2017

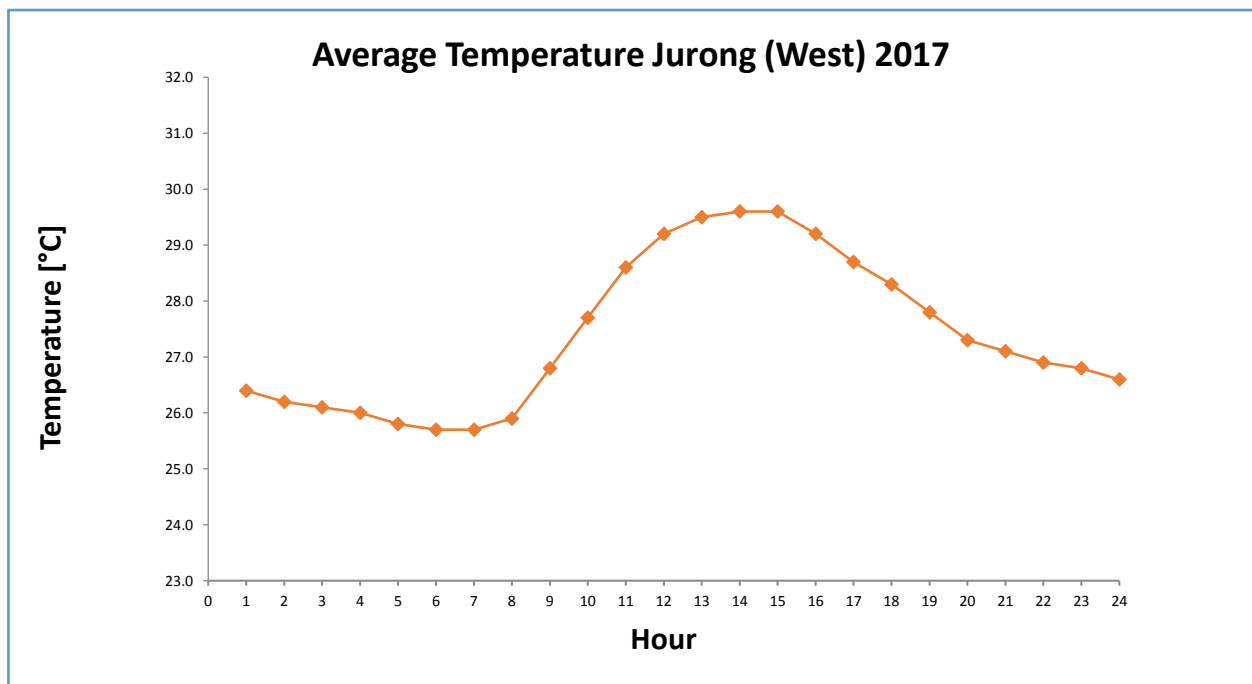
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.4	24.2	23.9	22.1	21.7	23.4	23.7	23.6	24.2	24.6	24.2	24.1
Max Dry Bulb Temperature (°C)	33.8	34.7	35.1	35.2	35.1	34.8	34.5	32.5	31.8	31.4	30.9	30.1
Average Dry Bulb Temperature (°C)	30.3	30.4	30.2	29.9	29.6	29.1	28.6	28.2	28.0	27.9	27.7	27.6
Average Dew Point Temperature (°C)	23.5	23.5	23.5	23.5	23.5	23.6	23.8	24.0	24.3	24.4	24.5	24.5
Average Relative Humidity (%)	67.7	67.5	68.3	69.6	71.1	73.3	76.1	78.5	80.6	81.9	83.1	83.6
Average Wind Speed (m/s)	2.5	2.5	2.6	2.5	2.3	2.1	2.0	1.8	1.7	1.6	1.5	1.4
Max Gust (m/s)	12.3	25.6	14.1	24.9	13.6	11.9	12.3	11.4	9.5	9.1	10.6	12.2
Rainfall (mm)	198.8	98.6	174.2	373.8	386.4	125.0	79.4	53.2	25.0	24.8	118.6	64.0



- No Data
- Defective Data

S44 Jurong (West) 2017

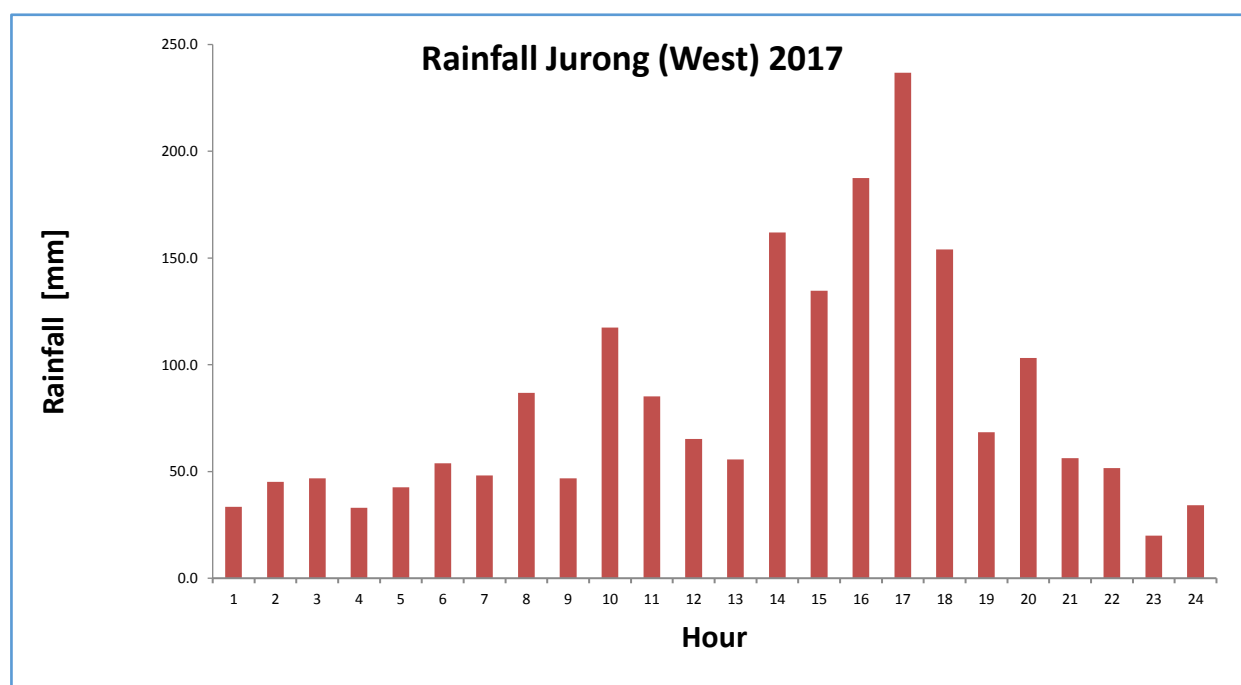
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	22.7	22.5	22.6	22.4	22.4	22.3	22.4	22.6	22.5	22.5	22.4	23.3
Max Dry Bulb Temperature (°C)	29.2	29.1	28.9	28.9	28.8	28.5	28.6	29.5	30.1	31.2	32.6	33.1
Average Dry Bulb Temperature (°C)	26.4	26.2	26.1	26.0	25.8	25.7	25.7	25.9	26.8	27.7	28.6	29.2
Average Dew Point Temperature (°C)	23.8	23.9	23.8	23.8	24.1	23.9	23.9	23.9	23.9	23.3	22.9	22.6
Average Relative Humidity (%)	82.7	83.6	84.1	83.5	85.7	84.1	83.7	82.8	80.6	74.9	69.8	66.7
Average Wind Speed (m/s)	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	2.0	2.4	2.5	2.6
Max Gust (m/s)	11.7	14.7	11.7	11.0	15.2	14.2	11.3	12.5	15.0	18.0	14.2	11.7
Rainfall (mm)	33.4	45.2	46.8	33.0	42.6	53.8	48.2	86.8	46.8	117.4	85.2	65.2



- No Data
- Defective Data

S44 Jurong (West) 2017

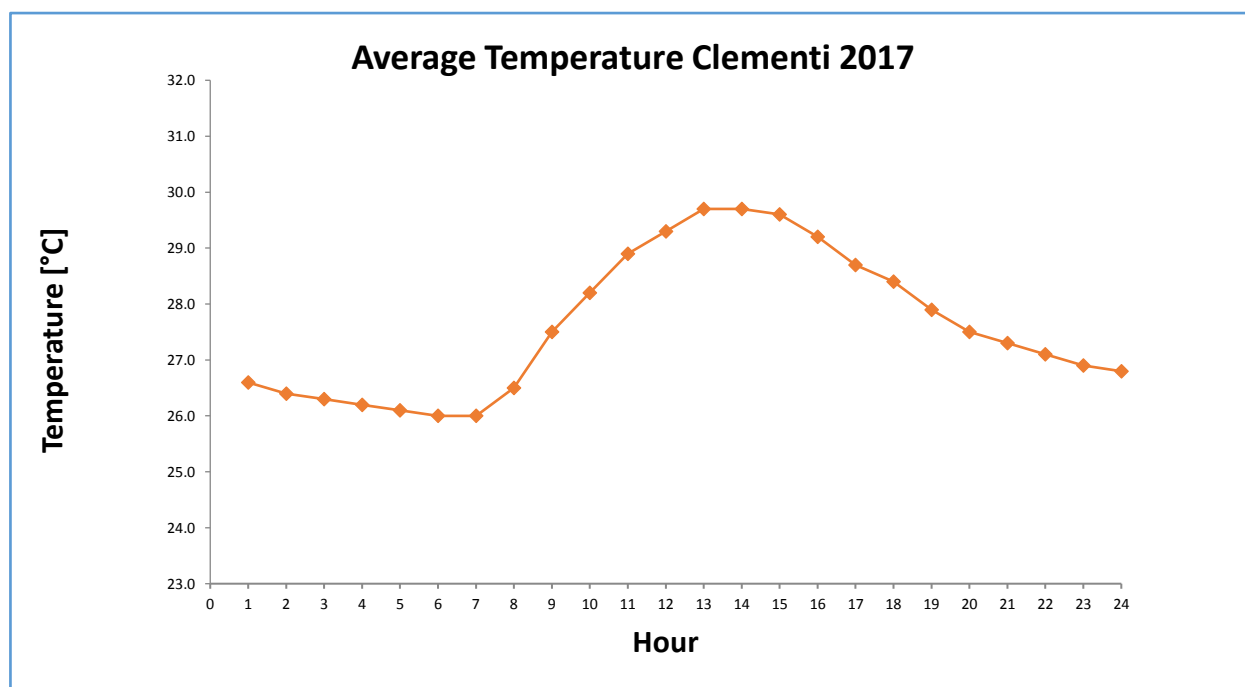
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.3	23.4	23.4	23.2	23.1	22.5	23.2	23.5	23.3	23.2	23.0	22.9
Max Dry Bulb Temperature (°C)	33.4	33.9	33.9	34.4	35.7	33.2	32.6	31.2	30.8	30.2	30.0	29.5
Average Dry Bulb Temperature (°C)	29.5	29.6	29.6	29.2	28.7	28.3	27.8	27.3	27.1	26.9	26.8	26.6
Average Dew Point Temperature (°C)	22.4	22.3	22.4	22.4	22.5	22.6	22.8	23.0	23.3	23.5	23.7	23.8
Average Relative Humidity (%)	65.4	63.9	64.9	65.6	67.2	69.1	72.5	75.2	77.3	79.4	81.0	82.2
Average Wind Speed (m/s)	2.6	2.7	2.7	2.7	2.5	2.3	2.0	1.9	1.8	1.8	1.8	1.7
Max Gust (m/s)	16.3	14.5	13.4	12.4	16.6	12.8	13.2	10.1	10.2	10.1	9.6	14.2
Rainfall (mm)	55.6	162.0	134.6	187.4	236.8	154.0	68.4	103.2	56.2	51.6	20.0	34.2



■ No Data
— Defective Data

S50 Clementi 2017

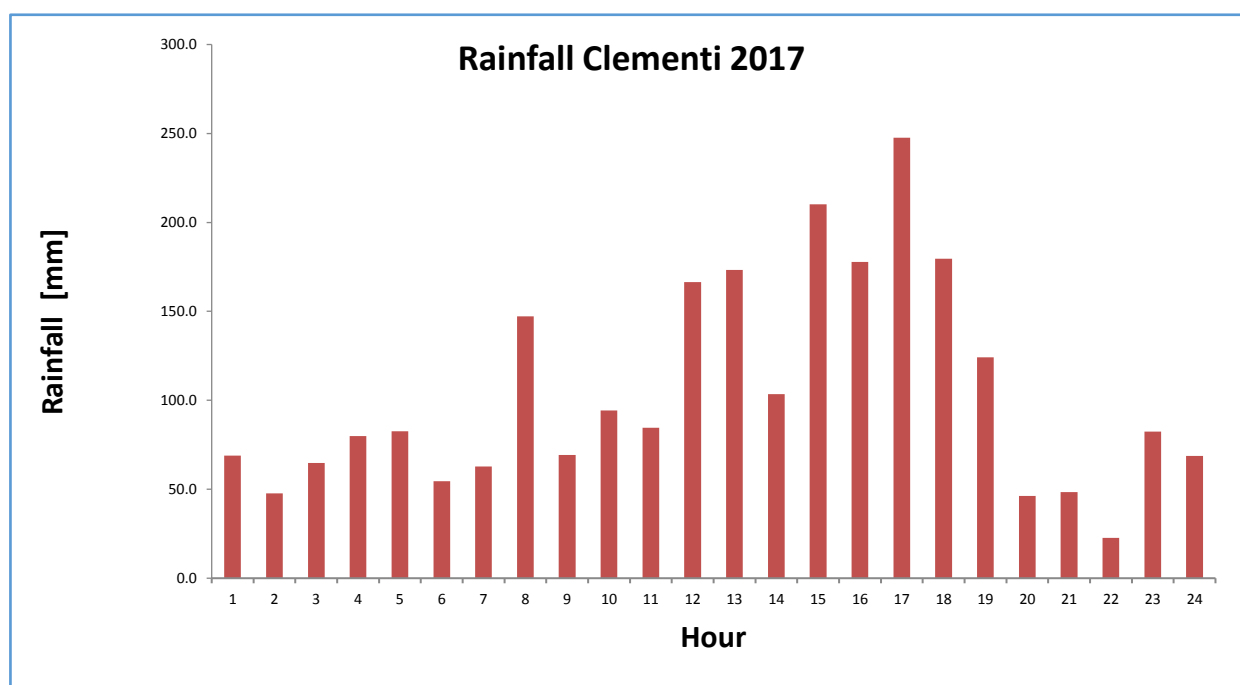
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.3	22.3	22.5	22.9	22.9	22.8	23.1	22.2	23.1	23.0	22.5	23.3
Max Dry Bulb Temperature (°C)	29.3	29.0	28.9	28.7	28.6	28.6	28.7	29.5	31.5	32.9	33.6	34.4
Average Dry Bulb Temperature (°C)	26.6	26.4	26.3	26.2	26.1	26.0	26.0	26.5	27.5	28.2	28.9	29.3
Average Dew Point Temperature (°C)	24.3	24.3	24.3	24.3	24.2	24.3	24.2	24.3	24.3	24.0	23.8	23.7
Average Relative Humidity (%)	86.9	87.6	88.2	88.9	89.2	89.8	90.0	87.6	82.5	78.1	73.8	71.9
Average Wind Speed (m/s)	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6	2.1	2.5	2.7	2.8
Max Gust (m/s)	9.2	12.4	10.9	9.2	10.9	12.3	12.4	15.8	12.5	38.5	14.8	13.3
Rainfall (mm)	69.0	47.6	64.8	79.8	82.6	54.6	62.8	147.2	69.2	94.2	84.6	166.4



- No Data
- Defective Data

S50 Clementi 2017

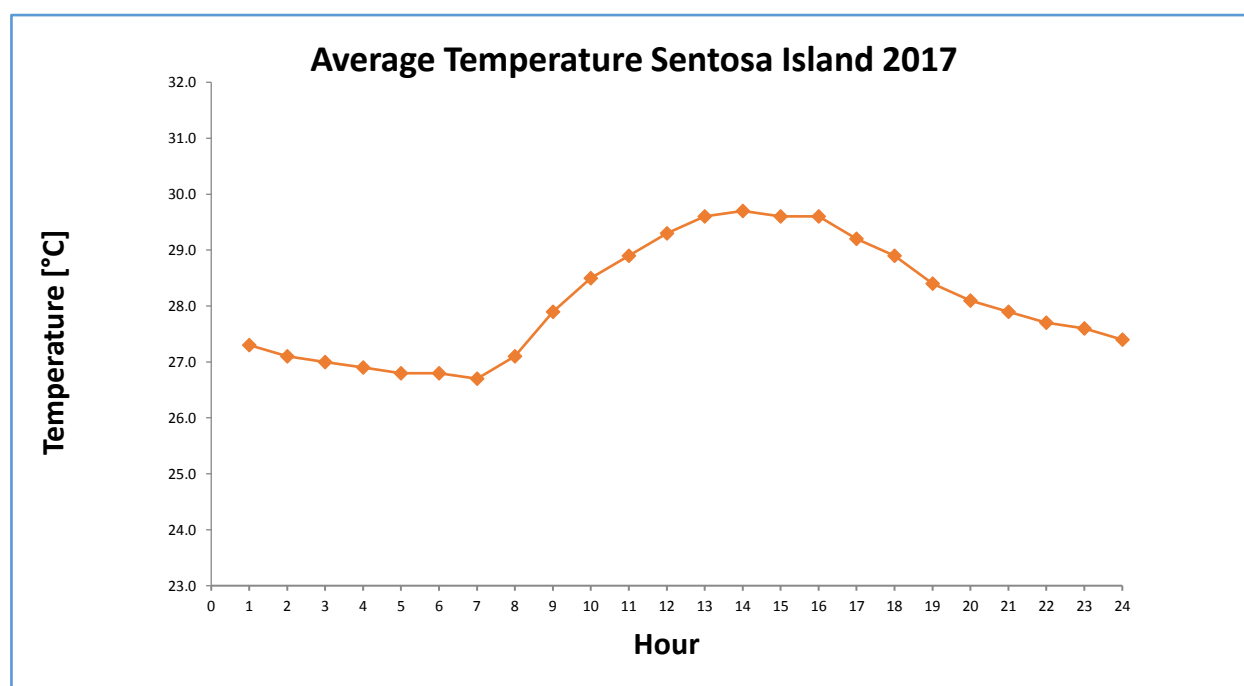
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	22.1	23.5	23.1	22.7	22.9	22.9	23.4	23.6	23.7	24.0	23.2	23.4
Max Dry Bulb Temperature (°C)	35.2	34.8	35.2	35.4	35.5	34.8	33.5	32.1	31.1	30.4	29.7	29.4
Average Dry Bulb Temperature (°C)	29.7	29.7	29.6	29.2	28.7	28.4	27.9	27.5	27.3	27.1	26.9	26.8
Average Dew Point Temperature (°C)	23.5	23.4	23.5	23.6	23.6	23.6	23.7	23.9	24.2	24.2	24.3	24.3
Average Relative Humidity (%)	70.0	69.4	70.7	72.0	73.8	75.4	78.2	80.8	83.0	84.1	85.1	86.1
Average Wind Speed (m/s)	2.8	2.9	2.9	2.8	2.6	2.4	2.0	1.8	1.7	1.7	1.6	1.5
Max Gust (m/s)	13.9	15.0	13.3	13.2	15.5	12.8	12.1	12.7	9.9	9.6	15.3	11.2
Rainfall (mm)	173.2	103.4	210.2	177.8	247.6	179.6	124.2	46.2	48.4	22.6	82.4	68.8



- No Data
- Defective Data

S60 Sentosa Island 2017

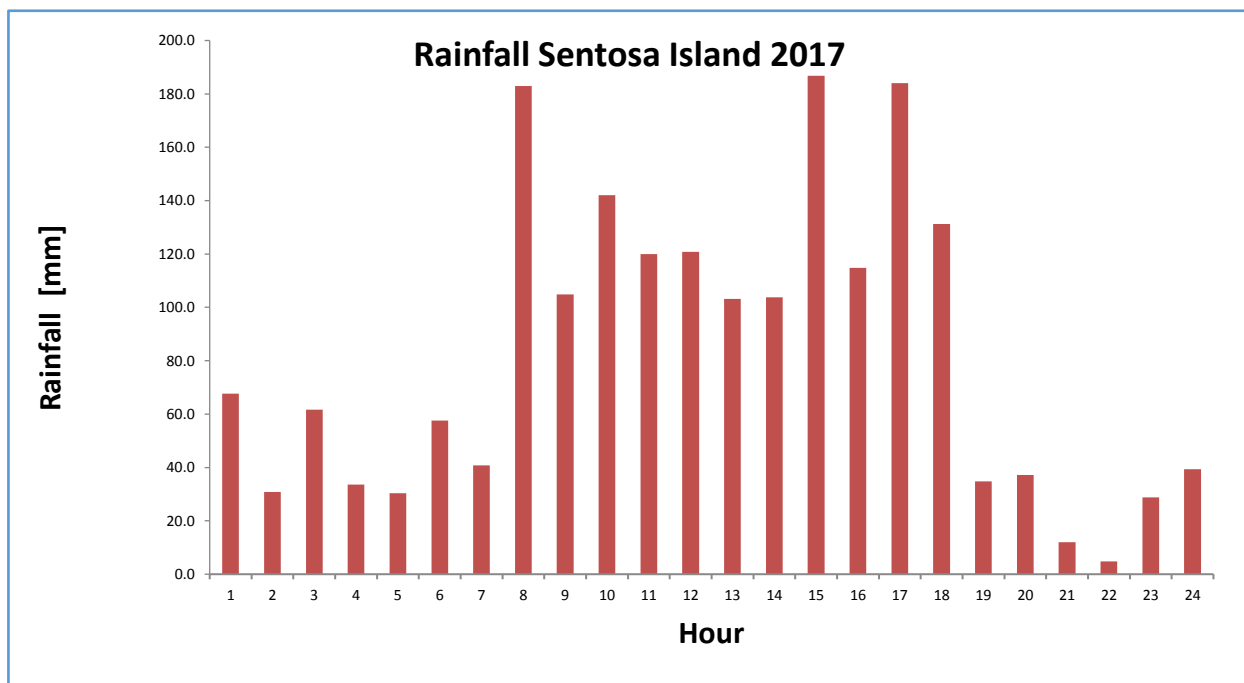
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.1	23.7	23.2	23.4	24.1	23.4	23.4	23.1	23.1	23.0	22.9	23.0
Max Dry Bulb Temperature (°C)	29.4	29.1	31.6	28.8	28.6	28.7	29.3	29.3	30.7	31.6	32.0	32.8
Average Dry Bulb Temperature (°C)	27.3	27.1	27.0	26.9	26.8	26.8	26.7	27.1	27.9	28.5	28.9	29.3
Average Dew Point Temperature (°C)	23.9	24.0	24.1	24.2	24.3	24.3	24.3	24.2	23.6	23.2	22.8	22.5
Average Relative Humidity (%)	82.4	83.6	84.9	85.8	86.7	87.1	87.2	84.4	78.1	73.0	69.7	67.0
Average Wind Speed (m/s)	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.6	1.8	1.9	2.0
Max Gust (m/s)	11.2	11.1	8.9	9.3	10.2	8.7	11.3	10.9	10.9	11.2	12.4	9.8
Rainfall (mm)	67.6	30.8	61.6	33.6	30.4	57.6	40.8	183.0	104.8	142.0	120.0	120.8



- No Data
- Defective Data

S60 Sentosa Island 2017

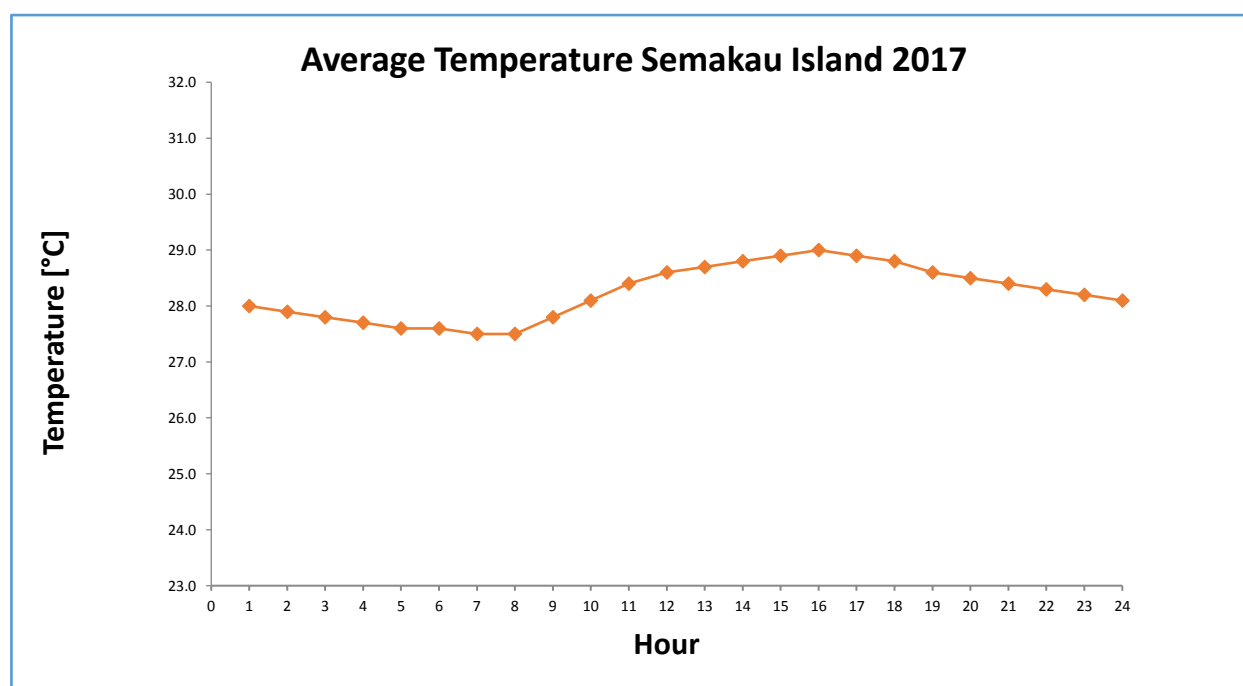
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.1	23.0	23.4	23.6	23.4	22.7	23.1	24.2	24.3	24.5	24.5	23.9
Max Dry Bulb Temperature (°C)	34.9	33.8	33.6	34.0	34.3	33.5	33.1	31.5	31.1	30.9	30.4	29.4
Average Dry Bulb Temperature (°C)	29.6	29.7	29.6	29.6	29.2	28.9	28.4	28.1	27.9	27.7	27.6	27.4
Average Dew Point Temperature (°C)	22.4	22.4	22.3	22.1	22.2	22.3	22.5	22.9	23.2	23.5	23.7	23.9
Average Relative Humidity (%)	66.7	66.2	66.4	65.9	68.0	69.7	72.0	74.9	76.8	78.7	80.5	81.9
Average Wind Speed (m/s)	2.0	2.1	2.0	2.0	2.7	2.9	2.5	2.1	1.9	1.6	1.8	1.5
Max Gust (m/s)	11.3	11.2	11.3	11.0	10.8	10.5	9.2	11.0	10.6	11.4	14.5	11.4
Rainfall (mm)	103.2	103.8	186.8	114.8	184.0	131.2	34.8	37.2	12.0	4.8	28.8	39.4



- No Data
- Defective Data

S102 Semakau Island 2017

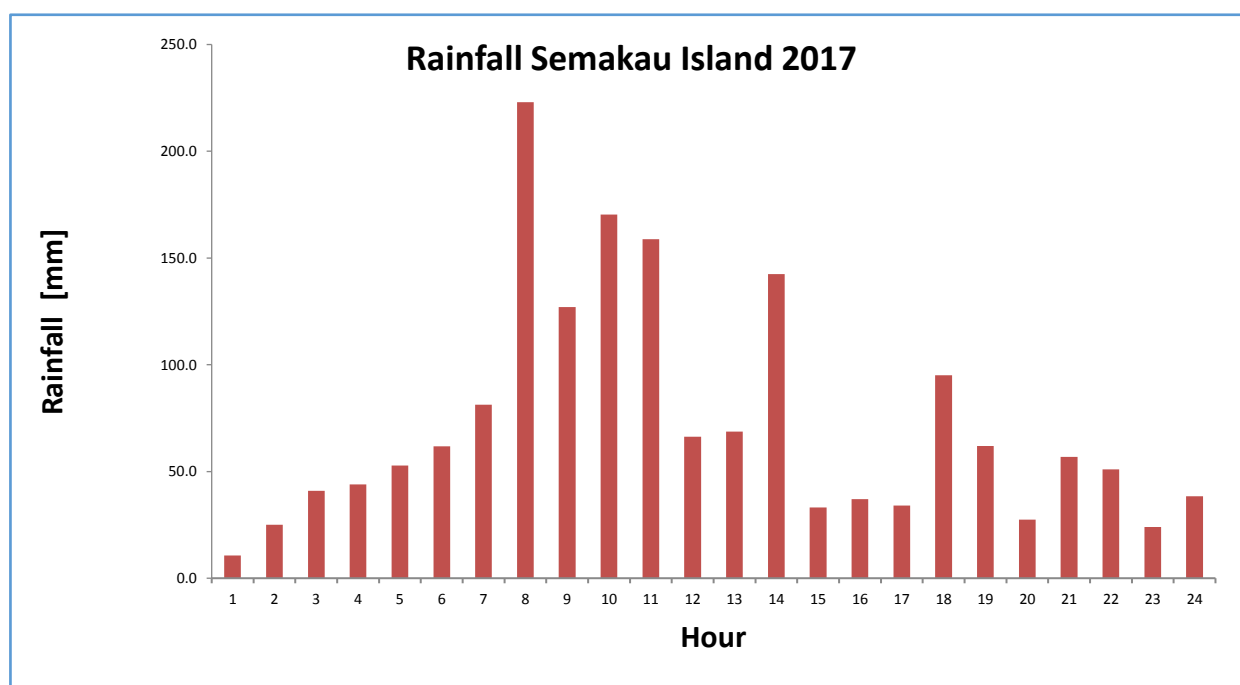
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	24.5	24.5	24.1	23.5	23.9	23.7	24.2	22.9	23.3	23.0	23.2	23.5
Max Dry Bulb Temperature (°C)	30.0	29.8	29.6	29.4	29.4	29.4	29.4	29.5	30.1	31.0	31.4	31.9
Average Dry Bulb Temperature (°C)	28.0	27.9	27.8	27.7	27.6	27.6	27.5	27.5	27.8	28.1	28.4	28.6
Average Dew Point Temperature (°C)	25.2	25.2	25.2	25.2	25.1	25.2	25.2	25.1	25.1	25.0	24.9	24.8
Average Relative Humidity (%)	84.9	85.4	85.8	86.2	86.4	86.9	87.2	86.8	85.2	83.6	81.5	80.1
Average Wind Speed (m/s)	4.3	4.5	4.6	4.6	4.7	4.8	5.0	4.9	5.0	5.1	5.2	5.4
Max Gust (m/s)	18.0	21.9	18.8	22.6	23.8	21.8	22.7	19.8	19.6	24.2	20.6	19.3
Rainfall (mm)	10.6	25.0	41.0	44.0	52.8	61.8	81.2	223.0	127.0	170.4	158.8	66.3



- No Data
- Defective Data

S102 Semakau Island 2017

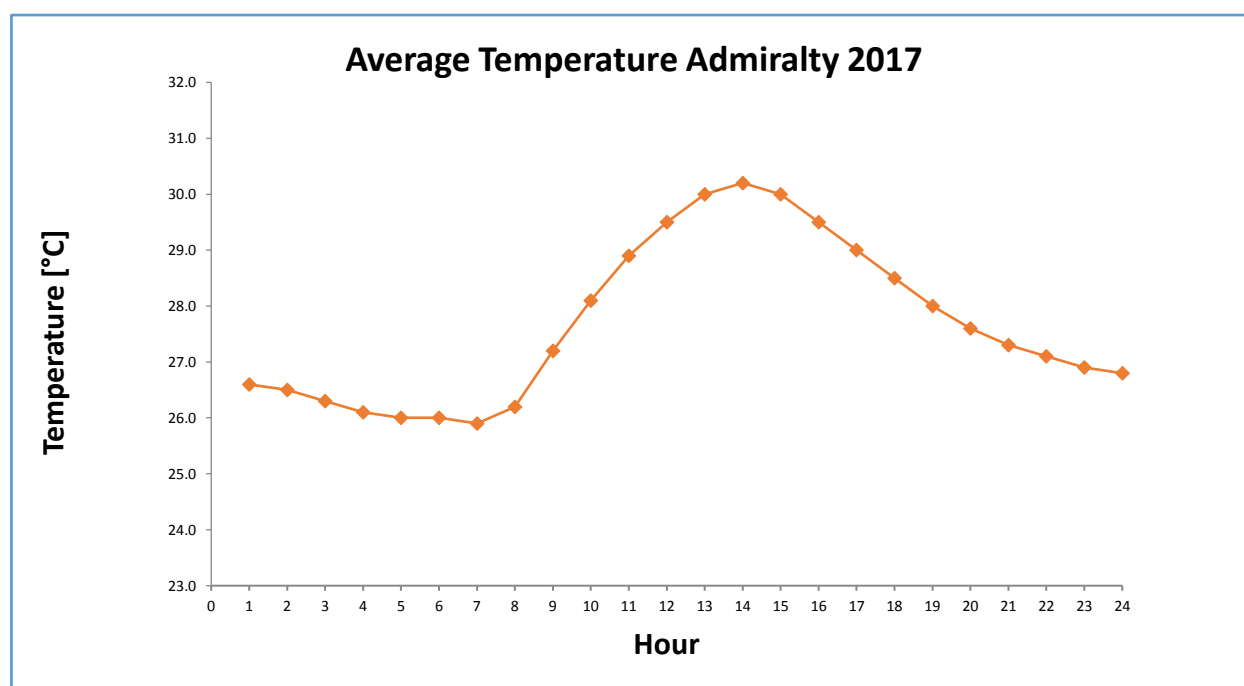
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	24.1	24.2	23.8	24.0	24.4	22.9	23.2	25.0	24.7	25.0	25.2	24.7
Max Dry Bulb Temperature (°C)	31.5	32.2	32.0	32.1	32.0	31.8	31.4	31.3	31.3	31.0	31.1	30.1
Average Dry Bulb Temperature (°C)	28.7	28.8	28.9	29.0	28.9	28.8	28.6	28.5	28.4	28.3	28.2	28.1
Average Dew Point Temperature (°C)	24.8	24.7	24.7	24.6	24.6	24.7	24.8	24.9	25.0	25.1	25.2	25.2
Average Relative Humidity (%)	79.6	79.1	78.7	77.9	78.1	78.7	80.0	81.1	82.2	83.2	83.9	84.3
Average Wind Speed (m/s)	5.7	6.0	6.0	5.8	5.5	5.2	4.9	4.8	4.6	4.6	4.5	4.5
Max Gust (m/s)	20.7	21.1	17.3	18.6	21.1	21.1	17.5	16.7	16.3	19.8	18.9	21.6
Rainfall (mm)	68.6	142.5	33.2	37.0	34.0	95.0	62.0	27.4	56.8	51.0	24.0	38.4



- No Data
- Defective Data

S104 Admiralty 2017

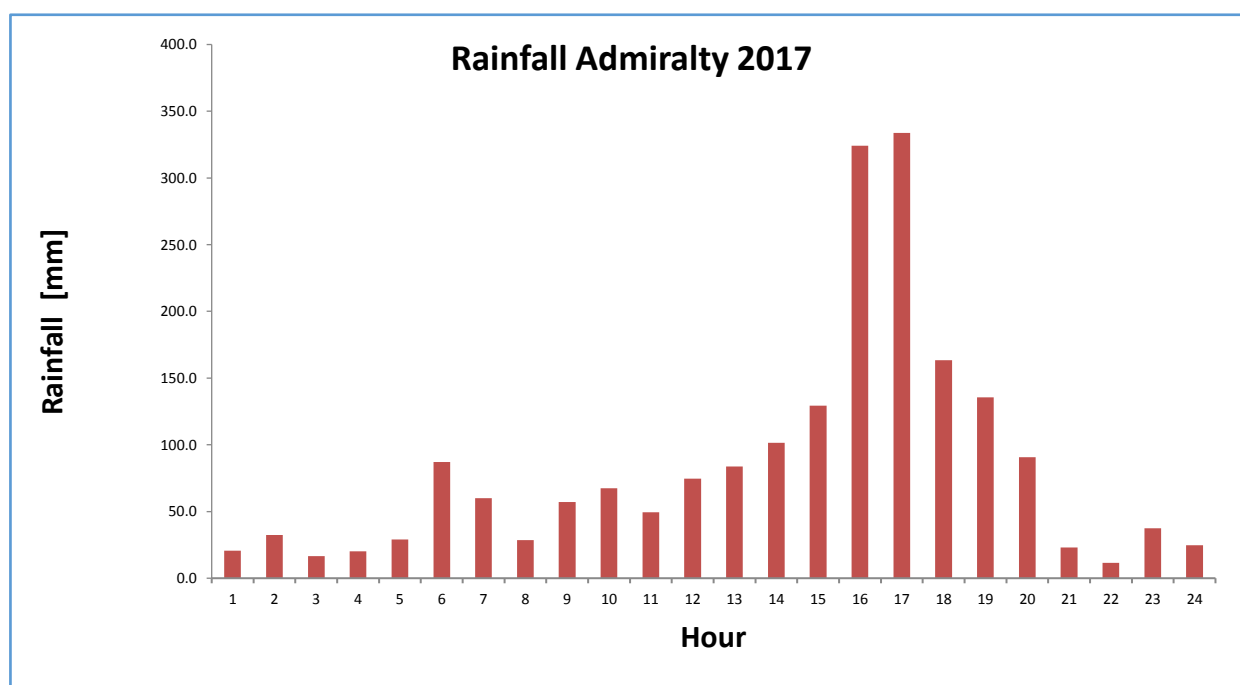
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.3	22.7	22.8	22.6	22.7	23.1	22.7	22.7	22.9	23.0	23.0	23.8
Max Dry Bulb Temperature (°C)	29.8	29.3	28.9	28.8	28.8	28.7	28.4	29.4	30.8	31.9	32.4	33.5
Average Dry Bulb Temperature (°C)	26.6	26.5	26.3	26.1	26.0	26.0	25.9	26.2	27.2	28.1	28.9	29.5
Average Dew Point Temperature (°C)	25.9	25.9	25.8	25.8	25.7	25.7	25.6	25.8	25.9	25.6	25.2	24.8
Average Relative Humidity (%)	95.4	96.3	96.9	97.5	97.9	98.1	98.1	97.0	92.3	86.7	81.0	76.6
Average Wind Speed (m/s)	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.9	1.9	2.4	2.5
Max Gust (m/s)	11.5	11.5	13.5	11.5	9.9	12.4	14.8	12.3	12.8	18.7	14.3	15.8
Rainfall (mm)	20.6	32.4	16.6	20.2	29.0	87.0	60.0	28.6	57.2	67.4	49.4	74.6



- No Data
- Defective Data

S104 Admiralty 2017

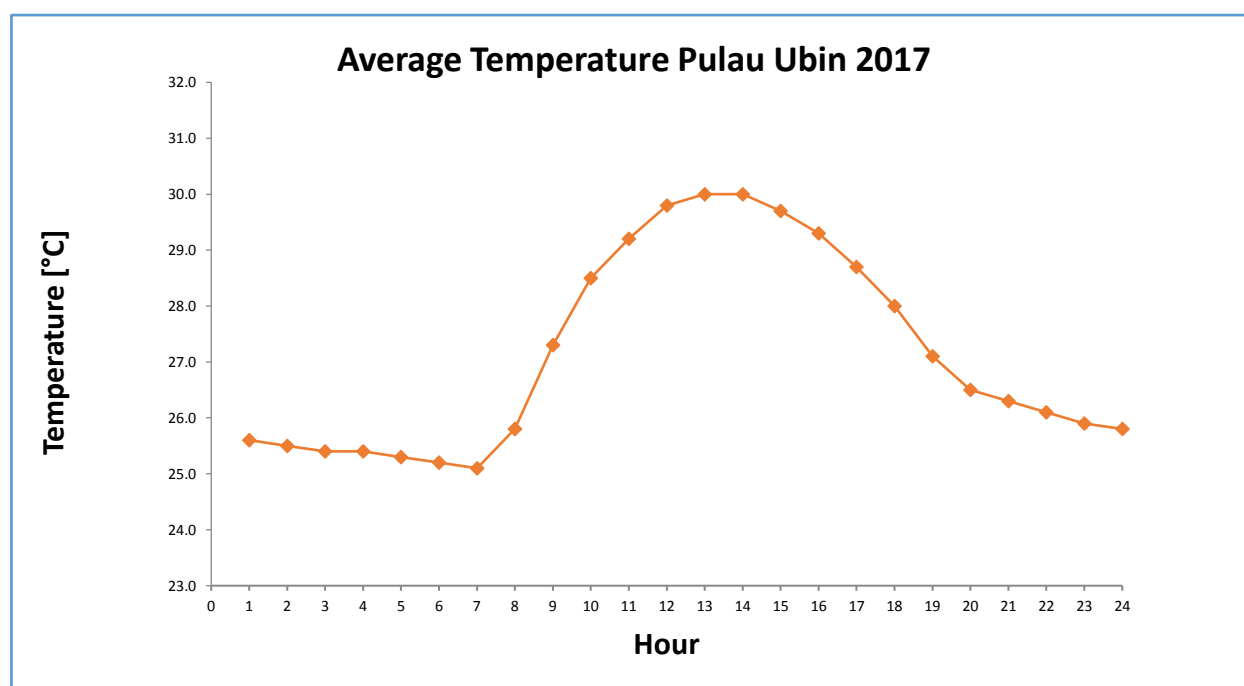
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	22.9	23.1	22.1	22.7	23.2	22.9	23.0	23.0	23.7	23.3	23.5	23.3
Max Dry Bulb Temperature (°C)	34.0	34.7	35.3	34.8	34.4	34.2	33.4	32.2	31.4	30.2	30.1	30.0
Average Dry Bulb Temperature (°C)	30.0	30.2	30.0	29.5	29.0	28.5	28.0	27.6	27.3	27.1	26.9	26.8
Average Dew Point Temperature (°C)	24.4	24.1	24.1	24.3	24.5	24.6	24.8	25.2	25.5	25.7	25.8	25.8
Average Relative Humidity (%)	73.0	71.2	72.1	74.6	77.2	80.6	83.9	87.1	90.2	92.2	93.4	94.4
Average Wind Speed (m/s)	2.6	2.7	2.8	2.8	2.6	2.5	2.3	2.1	2.0	1.9	1.9	1.8
Max Gust (m/s)	15.1	16.5	16.9	16.2	14.1	15.6	15.0	14.8	14.1	13.8	10.8	12.8
Rainfall (mm)	83.8	101.6	129.4	324.2	333.8	163.4	135.6	90.8	23.0	11.4	37.4	24.8



- No Data
- Defective Data

S106 Pulau Ubin 2017

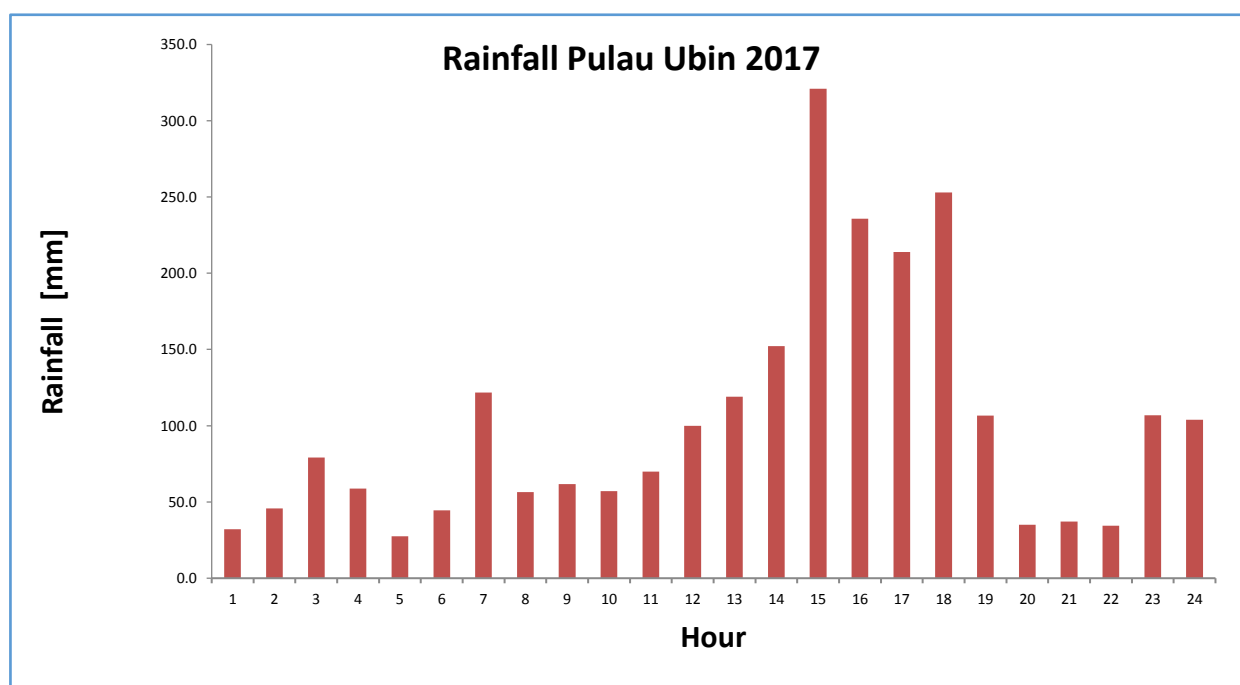
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.1	23.1	23.1	22.3	22.8	22.8	22.0	21.9	22.7	23.2	23.1	23.1
Max Dry Bulb Temperature (°C)	28.8	28.6	28.5	28.1	28.1	28.1	28.3	28.9	30.6	32.2	32.6	34.3
Average Dry Bulb Temperature (°C)	25.6	25.5	25.4	25.4	25.3	25.2	25.1	25.8	27.3	28.5	29.2	29.8
Average Dew Point Temperature (°C)	25.2	25.2	25.1	25.1	25.1	25.0	24.9	25.4	25.7	25.6	25.5	25.5
Average Relative Humidity (%)	97.6	98.0	98.3	98.5	98.7	98.9	98.9	97.8	91.3	84.9	81.0	77.9
Average Wind Speed (m/s)	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	2.3	2.8	3.1	3.3
Max Gust (m/s)	8.1	13.6	10.4	10.6	19.3	9.5	9.2	11.2	8.4	10.0	11.1	12.0
Rainfall (mm)	32.2	45.8	79.2	58.8	27.4	44.4	121.8	56.4	61.8	57.0	70.0	100.0



- No Data
- Defective Data

S106 Pulau Ubin 2017

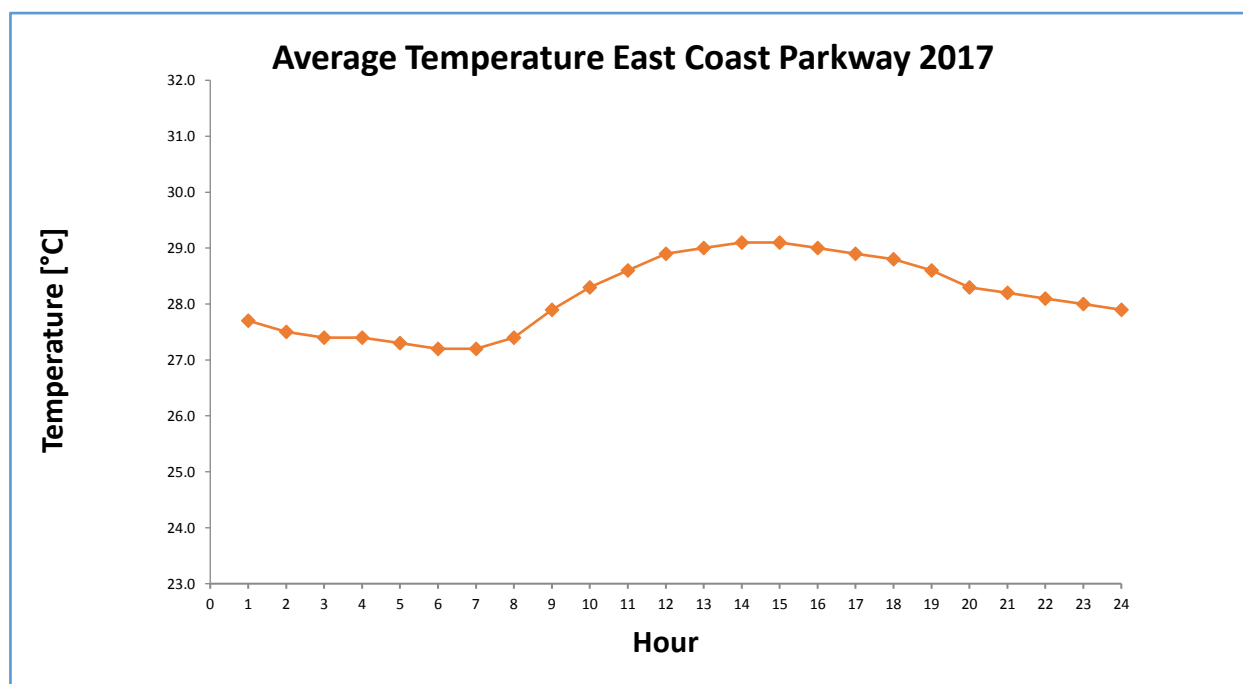
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.0	23.3	23.4	22.9	21.7	21.8	22.8	23.3	23.5	23.5	23.2	23.2
Max Dry Bulb Temperature (°C)	34.7	34.5	34.8	34.9	34.5	34.7	33.0	30.3	29.7	29.1	29.0	28.8
Average Dry Bulb Temperature (°C)	30.0	30.0	29.7	29.3	28.7	28.0	27.1	26.5	26.3	26.1	25.9	25.8
Average Dew Point Temperature (°C)	25.4	25.3	25.3	25.2	25.1	25.1	25.0	25.0	25.1	25.2	25.2	25.2
Average Relative Humidity (%)	76.8	76.7	77.9	79.4	81.7	84.9	88.8	91.8	93.8	95.2	96.3	97.0
Average Wind Speed (m/s)	3.2	3.2	3.1	2.9	2.7	2.3	1.9	1.8	1.7	1.6	1.6	1.5
Max Gust (m/s)	10.7	13.4	11.2	11.3	10.9	10.5	11.4	20.8	18.2	11.0	9.8	10.0
Rainfall (mm)	119.0	152.2	321.0	235.8	214.0	253.0	106.6	35.0	37.2	34.4	106.8	104.0



■ No Data
— Defective Data

S107 East Coast Parkway 2017

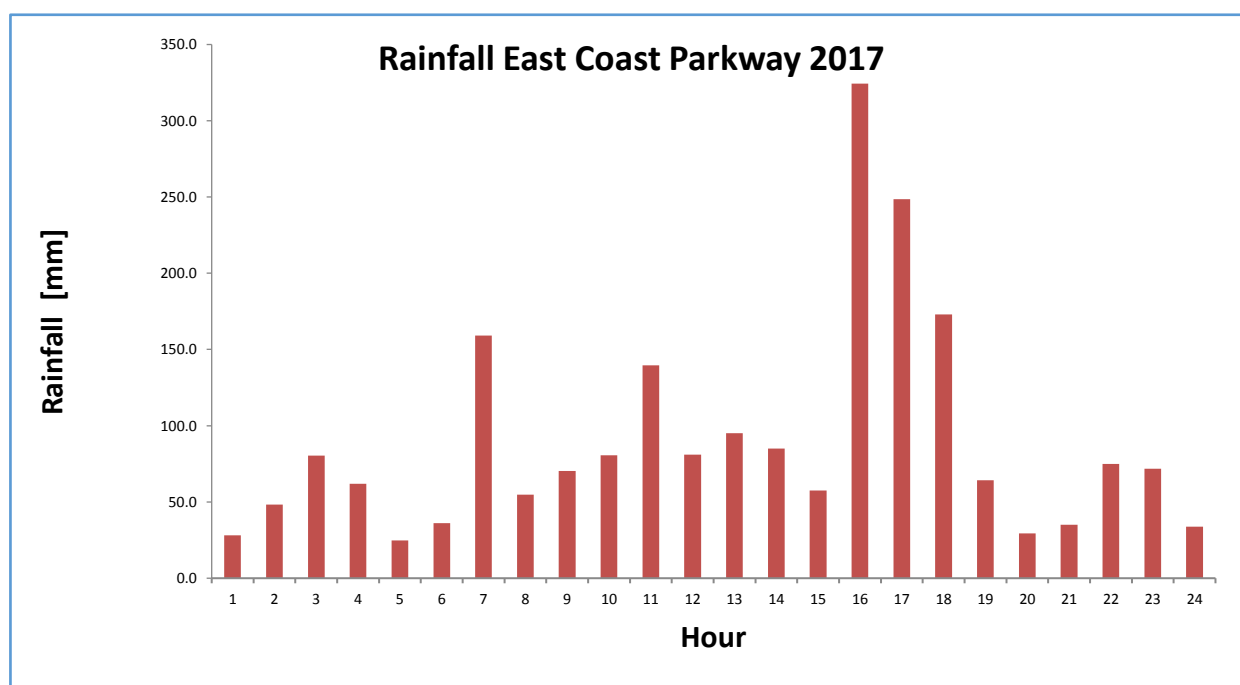
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.9	23.7	23.6	23.5	23.7	23.8	22.6	23.0	23.9	23.9	22.8	24.1
Max Dry Bulb Temperature (°C)	30.2	30.0	29.9	29.8	29.8	29.7	29.7	29.7	30.4	30.4	31.3	31.7
Average Dry Bulb Temperature (°C)	27.7	27.5	27.4	27.4	27.3	27.2	27.2	27.4	27.9	28.3	28.6	28.9
Average Dew Point Temperature (°C)	25.1	25.1	25.2	25.2	25.1	25.1	25.0	25.0	24.9	24.8	24.7	24.6
Average Relative Humidity (%)	85.9	86.9	87.7	88.1	88.2	88.4	88.3	86.7	84.0	81.5	79.8	78.1
Average Wind Speed (m/s)	2.4	2.4	2.4	2.4	2.5	2.6	2.6	2.7	3.0	3.3	3.4	3.6
Max Gust (m/s)	14.7	11.7	13.8	13.1	14.5	13.5	20.0	14.7	12.3	14.1	18.9	15.5
Rainfall (mm)	28.2	48.2	80.4	62.0	24.8	36.2	159.2	54.8	70.4	80.6	139.6	81.0



- No Data
- Defective Data

S107 East Coast Parkway 2017

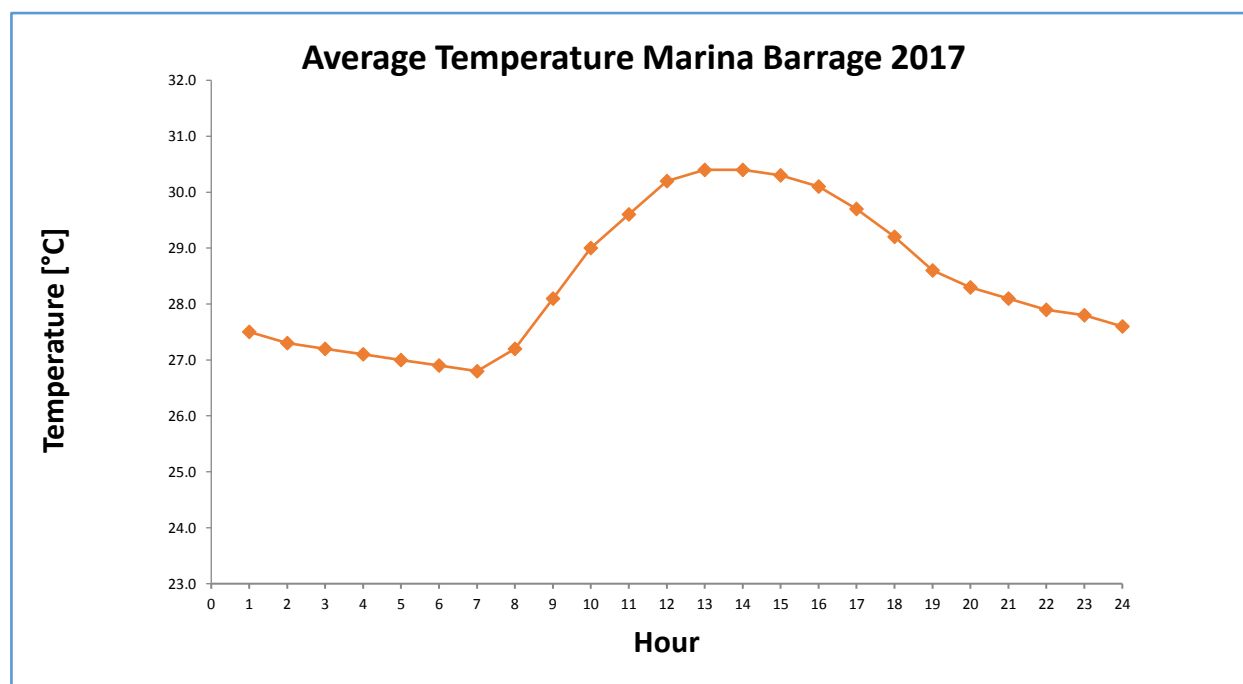
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.9	24.3	24.2	23.6	23.6	23.7	24.1	24.2	24.3	24.3	24.5	24.2
Max Dry Bulb Temperature (°C)	32.2	32.7	32.7	32.5	32.5	32.4	32.2	31.8	31.5	30.9	30.3	30.2
Average Dry Bulb Temperature (°C)	29.0	29.1	29.1	29.0	28.9	28.8	28.6	28.3	28.2	28.1	28.0	27.9
Average Dew Point Temperature (°C)	24.6	24.7	24.7	24.7	24.7	24.6	24.7	24.8	24.9	25.0	25.1	25.1
Average Relative Humidity (%)	77.6	77.3	77.3	78.1	78.6	79.0	79.9	81.6	82.7	83.9	84.4	84.8
Average Wind Speed (m/s)	3.8	4.1	4.2	4.1	3.9	3.6	3.3	3.1	2.9	2.8	2.7	2.6
Max Gust (m/s)	15.6	17.8	15.9	17.3	17.9	16.2	14.6	12.1	13.9	11.0	13.4	14.1
Rainfall (mm)	95.0	85.0	57.6	324.4	248.6	173.0	64.2	29.4	35.0	75.0	71.8	33.8



- No Data
- Defective Data

S108 Marina Barrage 2017

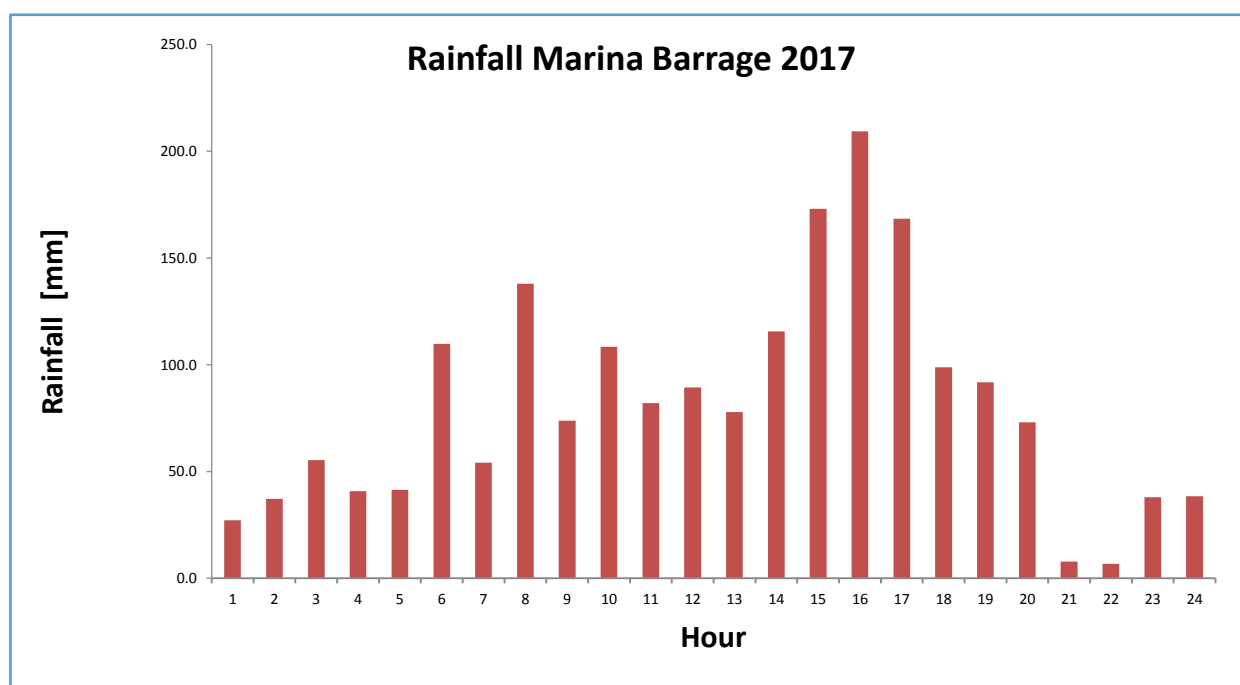
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	24.1	23.6	23.4	23.4	23.6	23.6	23.5	22.7	23.2	23.4	23.1	23.8
Max Dry Bulb Temperature (°C)	29.6	29.6	29.3	29.2	29.2	29.0	29.0	29.9	31.6	32.6	33.2	34.3
Average Dry Bulb Temperature (°C)	27.5	27.3	27.2	27.1	27.0	26.9	26.8	27.2	28.1	29.0	29.6	30.2
Average Dew Point Temperature (°C)	24.5	24.5	24.6	24.6	24.6	24.5	24.5	24.5	24.5	24.3	24.1	24.1
Average Relative Humidity (%)	84.1	84.9	85.7	86.3	86.7	87.0	87.1	85.6	81.0	76.2	72.9	70.2
Average Wind Speed (m/s)	2.5	2.5	2.5	2.4	2.4	2.4	2.5	3.1	3.1	3.0	2.8	2.7
Max Gust (m/s)	12.6	12.3	13.5	12.1	12.9	16.1	13.1	12.7	13.1	15.4	14.7	15.2
Rainfall (mm)	27.2	37.2	55.4	40.8	41.4	109.8	54.2	138.0	73.8	108.4	82.0	89.4



- No Data
- Defective Data

S108 Marina Barrage 2017

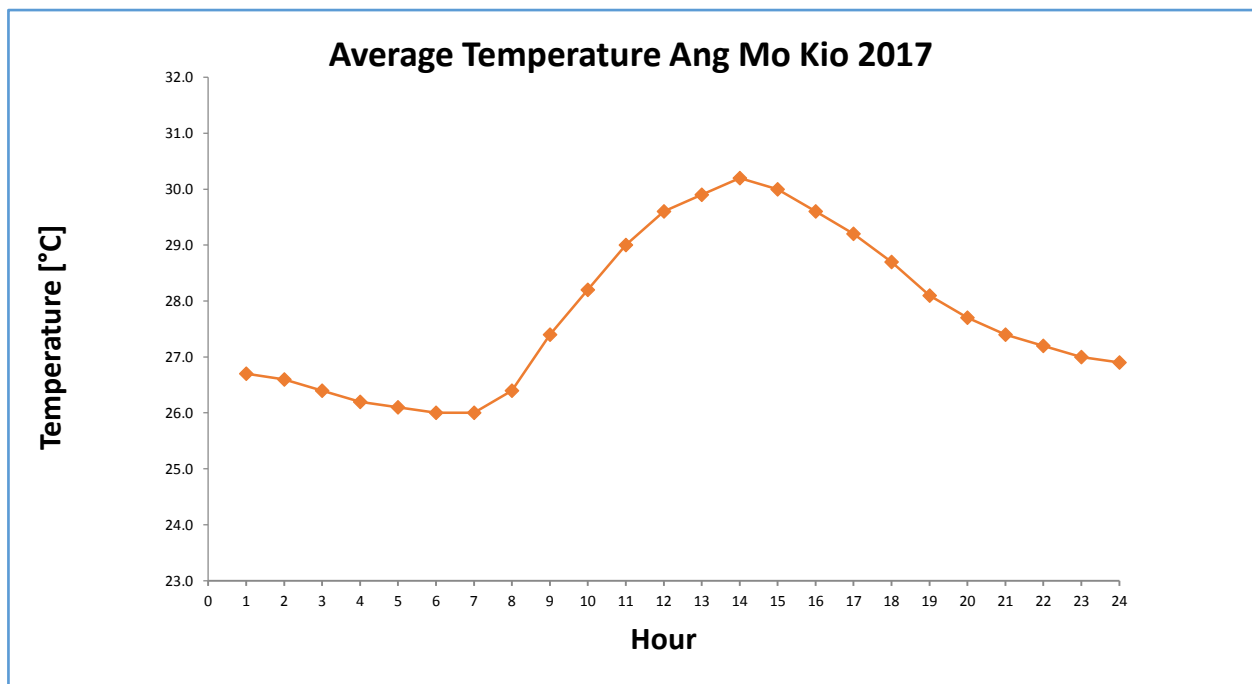
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.9	23.5	23.8	22.9	23.6	24.1	23.5	24.3	24.5	24.6	24.7	24.3
Max Dry Bulb Temperature (°C)	34.6	34.7	34.9	34.9	34.9	34.5	33.9	32.6	31.6	31.3	30.1	29.8
Average Dry Bulb Temperature (°C)	30.4	30.4	30.3	30.1	29.7	29.2	28.6	28.3	28.1	27.9	27.8	27.6
Average Dew Point Temperature (°C)	24.0	24.0	24.0	23.9	23.8	23.8	23.9	24.1	24.3	24.4	24.5	24.5
Average Relative Humidity (%)	69.2	69.4	69.6	70.4	71.6	73.5	76.4	78.7	80.3	81.5	82.5	83.2
Average Wind Speed (m/s)	2.7	2.7	2.7	2.8	2.9	3.0	2.9	2.8	2.7	2.7	2.6	2.5
Max Gust (m/s)	15.9	19.1	17.8	18.5	14.9	14.4	15.3	14.6	14.4	13.1	14.9	15.6
Rainfall (mm)	77.8	115.6	173.0	209.4	168.4	98.8	91.8	73.0	7.8	6.8	38.0	38.4



- No Data
- Defective Data

S109 Ang Mo Kio 2017

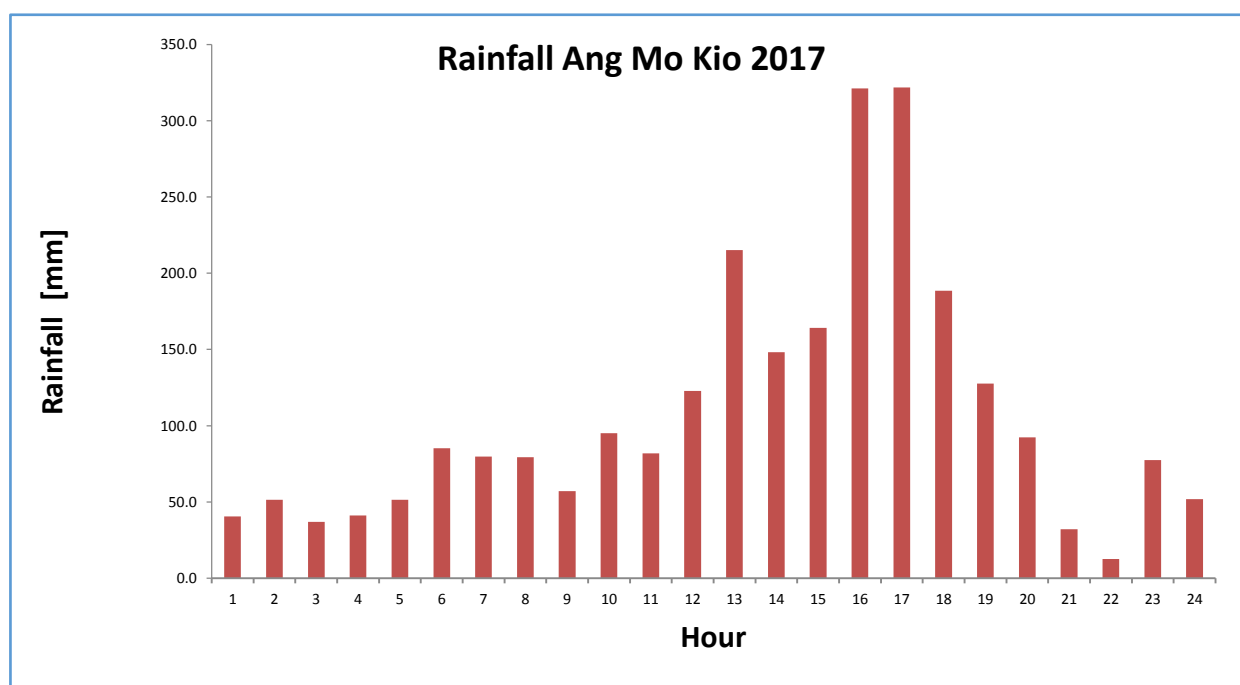
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.4	23.0	22.9	22.7	22.8	23.0	22.9	22.6	22.7	23.1	22.9	23.2
Max Dry Bulb Temperature (°C)	29.5	29.4	29.3	29.1	29.0	29.0	28.9	29.4	31.0	32.2	32.9	33.5
Average Dry Bulb Temperature (°C)	26.7	26.6	26.4	26.2	26.1	26.0	26.0	26.4	27.4	28.2	29.0	29.6
Average Dew Point Temperature (°C)	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.1	23.7	23.2	22.9
Average Relative Humidity (%)	86.7	87.6	88.4	89.2	90.0	90.7	90.7	88.4	82.8	77.1	72.0	68.2
Average Wind Speed (m/s)	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.3	1.6	1.9	2.0	2.1
Max Gust (m/s)	10.6	8.1	10.9	8.7	8.7	9.9	9.5	10.2	9.7	13.3	12.1	14.7
Rainfall (mm)	40.6	51.4	37.0	41.2	51.4	85.2	79.8	79.4	57.2	95.0	81.8	122.8



- No Data
- Defective Data

S109 Ang Mo Kio 2017

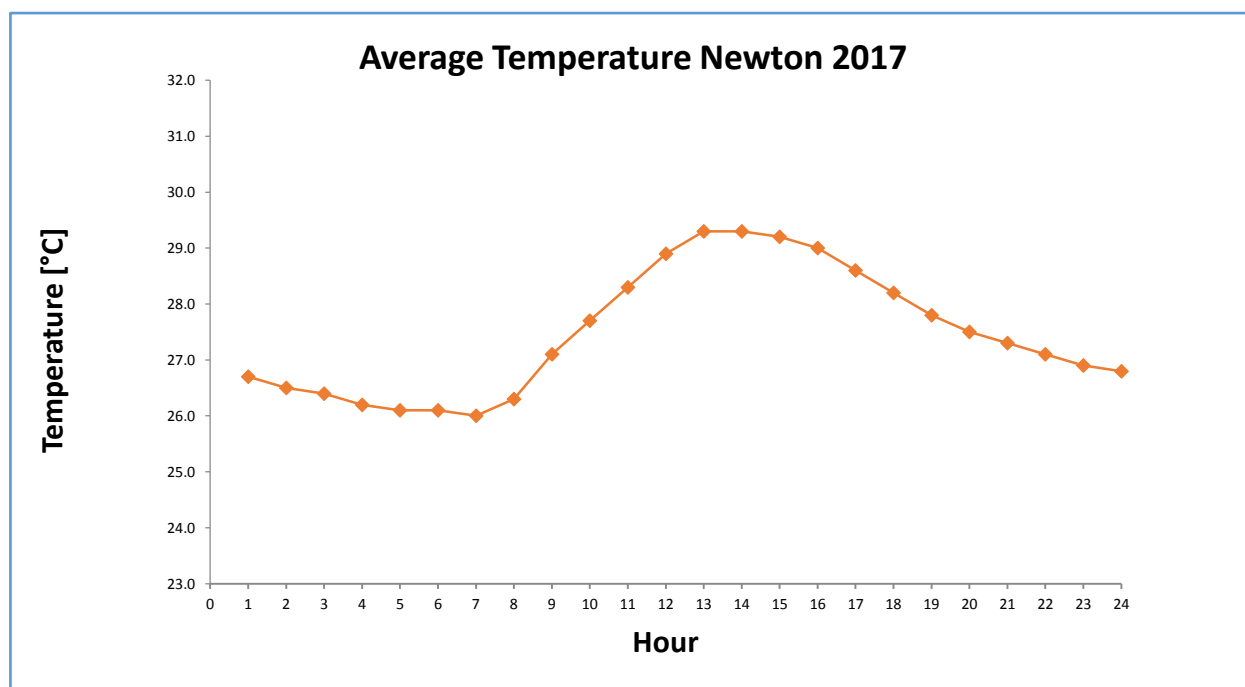
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	22.9	23.2	23.6	23.0	22.4	22.8	23.4	23.3	23.6	23.8	22.9	23.5
Max Dry Bulb Temperature (°C)	34.6	34.6	35.0	35.2	35.2	34.8	34.1	32.8	32.2	31.7	30.7	30.1
Average Dry Bulb Temperature (°C)	29.9	30.2	30.0	29.6	29.2	28.7	28.1	27.7	27.4	27.2	27.0	26.9
Average Dew Point Temperature (°C)	22.7	22.6	22.6	22.8	22.8	23.0	23.2	23.5	23.8	24.0	24.1	24.2
Average Relative Humidity (%)	66.3	65.0	65.9	68.4	70.4	73.0	76.2	79.2	81.5	83.4	84.5	85.5
Average Wind Speed (m/s)	2.1	2.2	2.2	2.2	2.1	1.9	1.7	1.5	1.4	1.4	1.4	1.3
Max Gust (m/s)	12.9	12.1	11.8	16.0	12.5	12.7	15.8	11.4	9.6	8.0	15.2	12.8
Rainfall (mm)	215.2	148.2	164.2	321.2	321.8	188.6	127.6	92.4	32.2	12.6	77.4	51.8



■ No Data
— Defective Data

S111 Newton 2017

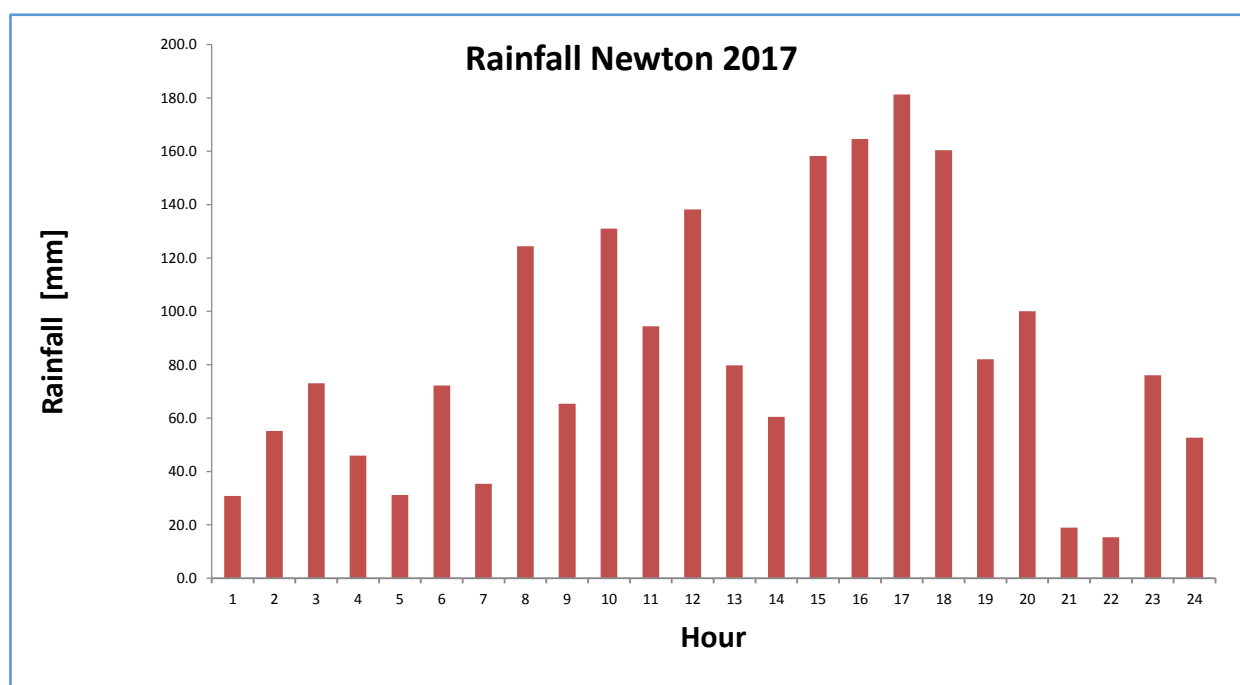
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.3	22.5	22.9	22.6	22.5	22.6	22.4	22.4	23.0	21.9	21.8	22.9
Max Dry Bulb Temperature (°C)	29.6	29.1	28.8	28.6	28.5	28.5	28.5	29.1	30.8	32.1	32.6	34.1
Average Dry Bulb Temperature (°C)	26.7	26.5	26.4	26.2	26.1	26.1	26.0	26.3	27.1	27.7	28.3	28.9
Average Dew Point Temperature (°C)	24.3	24.2	24.2	24.2	24.1	24.1	24.1	24.1	24.2	23.6	23.2	23.0
Average Relative Humidity (%)	86.0	86.5	86.8	87.3	87.5	87.3	87.7	86.5	83.4	78.1	73.7	70.5
Average Wind Speed (m/s)	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.6	1.8	2.0	2.1	2.1
Max Gust (m/s)	12.6	11.7	11.3	10.0	11.8	12.0	11.5	14.4	12.2	18.8	18.2	13.6
Rainfall (mm)	30.8	55.2	73.0	45.9	31.2	72.2	35.4	124.4	65.4	131.0	94.4	138.2



- No Data
- Defective Data

S111 Newton 2017

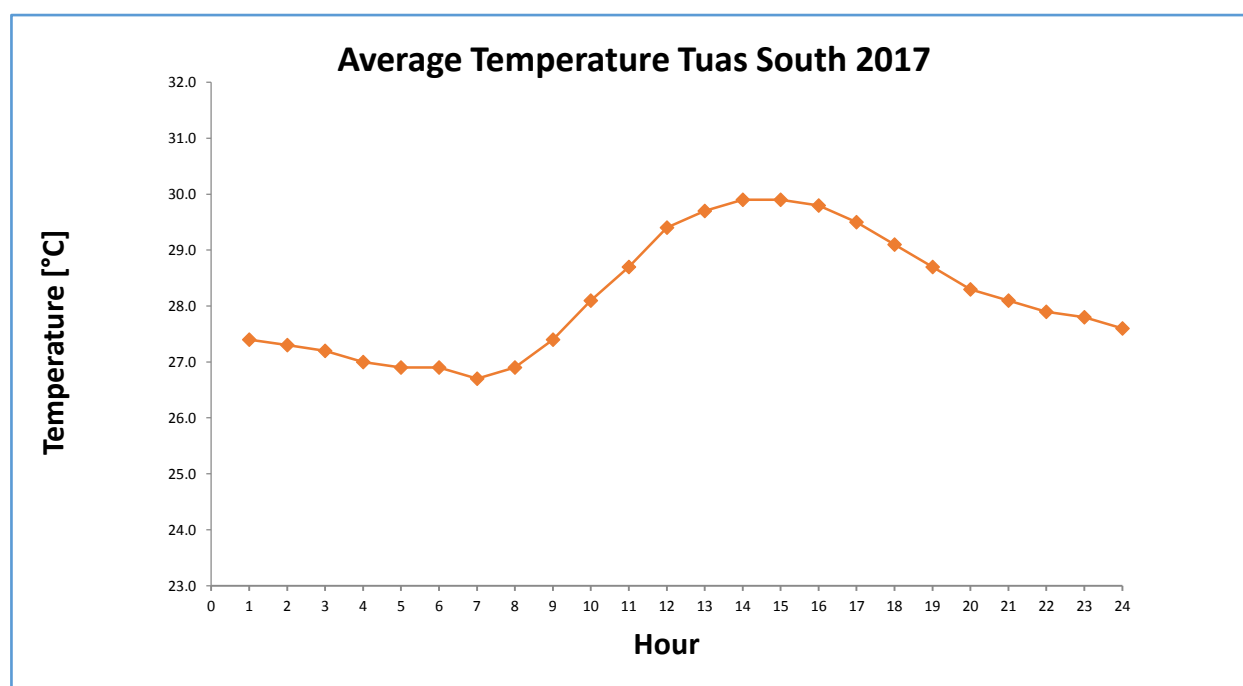
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.3	23.2	23.1	22.5	23.0	22.6	22.6	23.5	23.5	23.4	23.3	23.1
Max Dry Bulb Temperature (°C)	34.0	34.2	34.3	34.3	34.2	33.7	32.4	31.6	31.0	30.5	30.0	29.6
Average Dry Bulb Temperature (°C)	29.3	29.3	29.2	29.0	28.6	28.2	27.8	27.5	27.3	27.1	26.9	26.8
Average Dew Point Temperature (°C)	22.9	23.0	22.9	22.9	23.0	23.0	23.2	23.4	23.7	23.9	24.2	24.2
Average Relative Humidity (%)	68.8	69.2	68.9	69.6	71.5	73.1	76.1	78.3	80.5	82.5	84.6	85.4
Average Wind Speed (m/s)	2.2	2.3	2.4	2.4	2.2	2.1	1.9	1.7	1.7	1.7	1.6	1.6
Max Gust (m/s)	15.2	12.7	13.7	13.5	13.1	13.4	14.0	12.1	11.5	10.4	11.0	16.0
Rainfall (mm)	79.8	60.5	158.2	164.6	181.3	160.4	82.1	100.0	19.0	15.4	76.0	52.6



■ No Data
— Defective Data

S115 Tuas South 2017

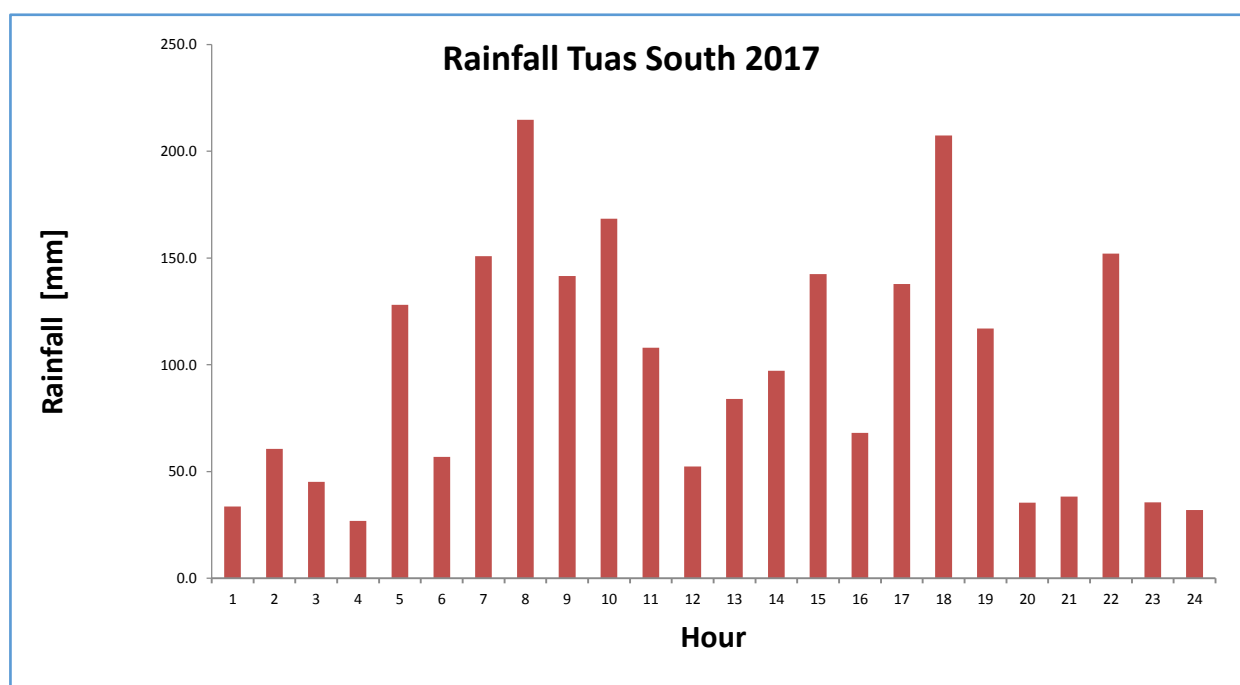
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.8	23.8	23.8	23.5	23.4	23.5	22.6	23.0	23.5	23.5	23.7	23.7
Max Dry Bulb Temperature (°C)	30.2	30.2	29.8	29.3	29.3	29.3	29.3	29.5	30.0	31.0	31.9	32.3
Average Dry Bulb Temperature (°C)	27.4	27.3	27.2	27.0	26.9	26.9	26.7	26.9	27.4	28.1	28.7	29.4
Average Dew Point Temperature (°C)	23.9	24.0	23.9	23.9	23.9	23.9	23.9	24.0	24.1	24.0	24.0	23.9
Average Relative Humidity (%)	81.3	82.1	82.7	83.3	83.9	84.2	84.6	84.3	82.1	79.0	75.9	72.7
Average Wind Speed (m/s)	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.7	1.9	2.2	2.4
Max Gust (m/s)	11.4	13.6	11.2	11.2	15.8	12.3	14.8	13.8	20.1	17.2	12.6	11.4
Rainfall (mm)	33.6	60.6	45.2	26.8	128.0	56.8	150.8	214.8	141.6	168.4	108.0	52.4



- No Data
- Defective Data

S115 Tuas South 2017

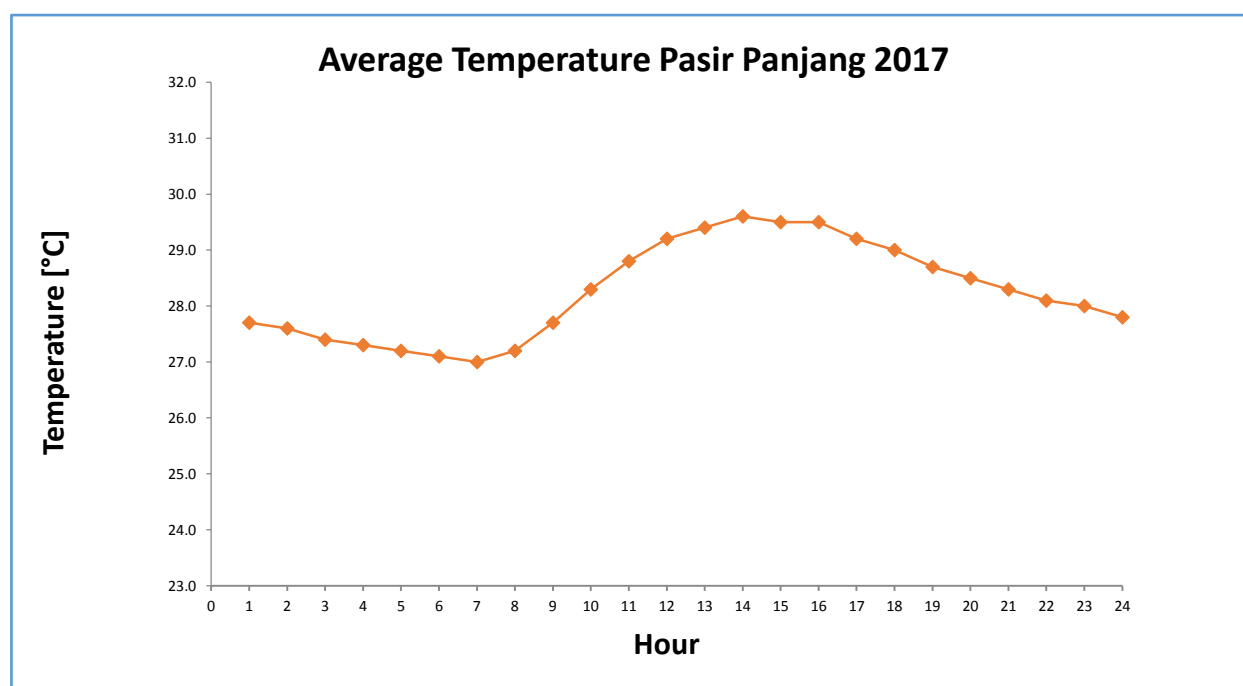
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	21.7	23.8	23.9	24.1	23.2	23.0	23.5	24.4	24.5	24.0	23.7	23.9
Max Dry Bulb Temperature (°C)	32.6	32.9	33.5	33.6	33.6	33.1	33.2	32.0	31.7	31.4	31.1	30.2
Average Dry Bulb Temperature (°C)	29.7	29.9	29.9	29.8	29.5	29.1	28.7	28.3	28.1	27.9	27.8	27.6
Average Dew Point Temperature (°C)	23.8	23.8	23.8	23.8	23.7	23.7	23.7	23.7	23.8	23.9	23.9	23.9
Average Relative Humidity (%)	71.2	70.7	70.7	70.5	71.3	72.9	74.8	76.5	77.8	79.0	79.9	80.6
Average Wind Speed (m/s)	2.7	2.8	2.8	2.6	2.2	1.8	1.5	1.3	1.2	1.2	1.2	1.2
Max Gust (m/s)	13.9	10.7	11.8	10.3	11.7	13.2	10.8	9.9	9.7	11.3	13.9	15.1
Rainfall (mm)	84.0	97.2	142.4	68.0	137.8	207.4	117.0	35.4	38.2	152.0	35.6	32.0



- No Data
- Defective Data

S116 Pasir Panjang 2017

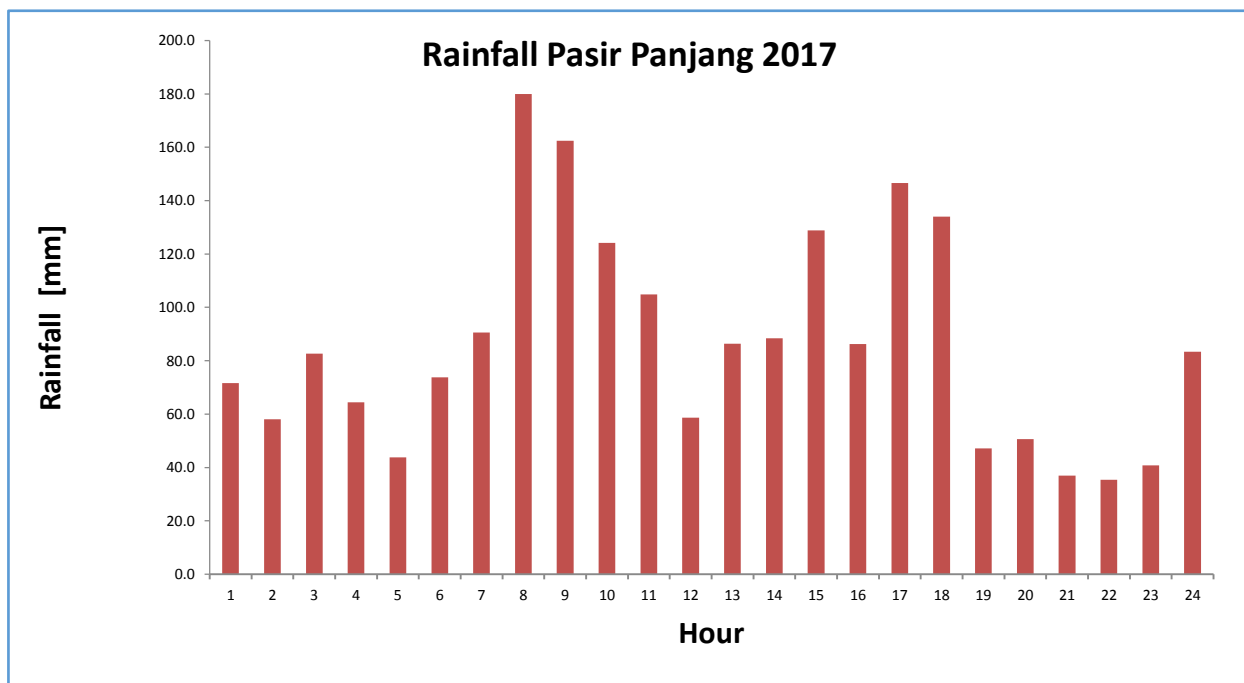
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	24.1	23.6	23.5	23.6	23.6	23.2	23.3	23.1	23.7	23.2	23.3	23.7
Max Dry Bulb Temperature (°C)	30.5	30.3	29.9	29.7	29.6	29.6	29.7	29.9	30.3	31.1	31.8	32.8
Average Dry Bulb Temperature (°C)	27.7	27.6	27.4	27.3	27.2	27.1	27.0	27.2	27.7	28.3	28.8	29.2
Average Dew Point Temperature (°C)	25.7	25.7	25.6	25.7	25.6	25.6	25.6	25.6	25.6	25.5	25.3	25.2
Average Relative Humidity (%)	89.1	89.7	90.2	90.9	91.2	91.6	92.0	91.2	88.2	84.8	81.8	79.7
Average Wind Speed (m/s)	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.9	3.1	3.2	3.3
Max Gust (m/s)	18.7	18.1	17.0	14.6	16.7	18.4	15.2	17.2	20.1	24.9	20.5	17.1
Rainfall (mm)	71.6	58.0	82.6	64.4	43.8	73.8	90.6	180.0	162.4	124.2	104.8	58.6



- No Data
- Defective Data

S116 Pasir Panjang 2017

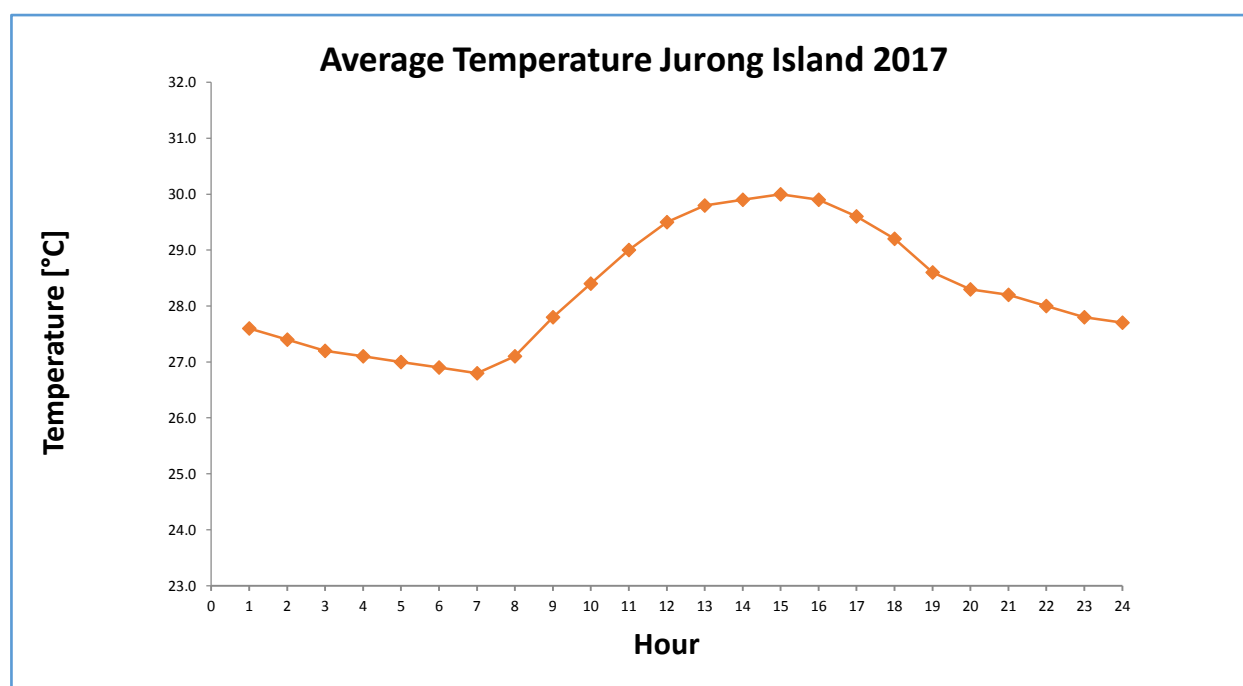
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	24.3	24.3	23.5	23.3	23.1	22.6	23.5	24.4	24.5	24.6	23.5	23.9
Max Dry Bulb Temperature (°C)	33.3	33.9	33.4	33.4	33.6	33.6	33.2	32.4	32.3	31.6	31.3	30.7
Average Dry Bulb Temperature (°C)	29.4	29.6	29.5	29.5	29.2	29.0	28.7	28.5	28.3	28.1	28.0	27.8
Average Dew Point Temperature (°C)	25.1	25.1	25.2	25.1	25.0	25.1	25.1	25.3	25.5	25.6	25.7	25.7
Average Relative Humidity (%)	78.1	77.8	78.2	78.1	79.0	80.0	81.4	83.6	85.3	86.6	87.6	88.4
Average Wind Speed (m/s)	3.4	3.5	3.5	3.4	3.2	3.0	2.7	2.6	2.6	2.6	2.5	2.4
Max Gust (m/s)	21.7	14.6	15.7	16.1	14.8	19.9	16.6	14.9	13.0	18.1	16.6	25.0
Rainfall (mm)	86.4	88.4	128.8	86.2	146.6	134.0	47.2	50.6	37.0	35.4	40.8	83.4



■ No Data
— Defective Data

S117 Jurong Island 2017

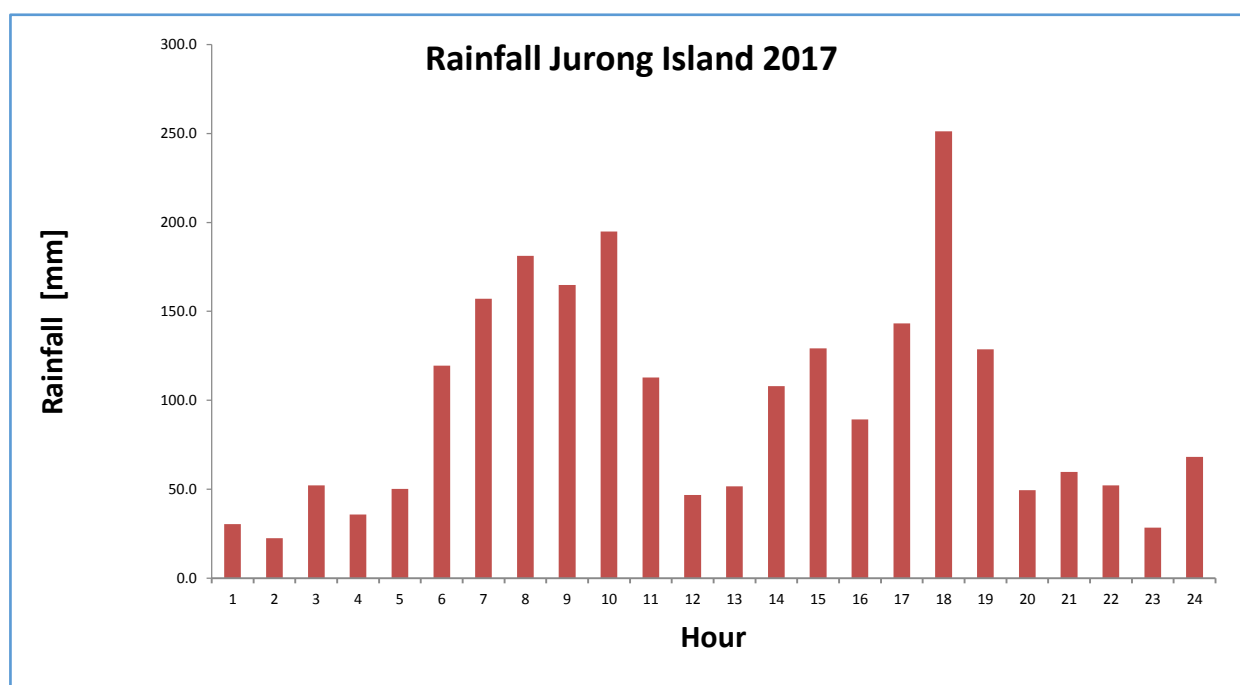
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.9	23.8	23.2	23.1	23.3	23.0	22.8	22.6	22.9	22.3	22.6	22.1
Max Dry Bulb Temperature (°C)	29.7	29.5	29.4	29.2	29.1	29.2	29.3	29.3	30.4	31.3	32.0	32.9
Average Dry Bulb Temperature (°C)	27.6	27.4	27.2	27.1	27.0	26.9	26.8	27.1	27.8	28.4	29.0	29.5
Average Dew Point Temperature (°C)	24.1	24.0	24.1	24.1	24.1	24.0	24.0	24.1	24.0	23.8	23.6	23.4
Average Relative Humidity (%)	81.4	82.2	83.0	83.7	84.0	84.5	85.1	83.9	80.3	76.5	73.3	70.6
Average Wind Speed (m/s)	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.2	2.5	2.6	2.7
Max Gust (m/s)	12.8	14.9	14.2	13.8	12.4	11.4	13.4	17.1	14.4	15.5	13.5	13.6
Rainfall (mm)	30.4	22.4	52.2	35.8	50.2	119.4	157.0	181.2	164.8	194.8	112.8	46.8



- No Data
- Defective Data

S117 Jurong Island 2017

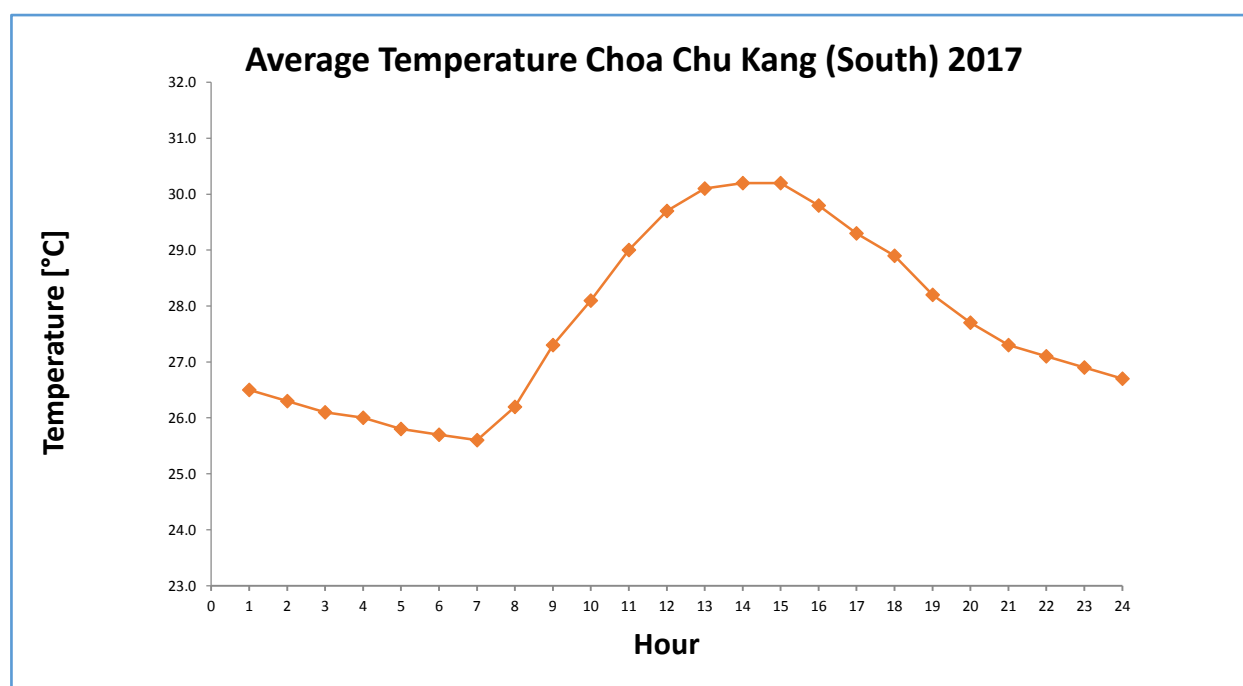
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.3	23.6	22.3	23.1	23.5	23.0	23.8	24.1	24.3	23.7	23.8	24.2
Max Dry Bulb Temperature (°C)	33.3	34.1	34.4	34.4	34.5	34.2	33.0	32.3	32.3	32.0	31.1	30.6
Average Dry Bulb Temperature (°C)	29.8	29.9	30.0	29.9	29.6	29.2	28.6	28.3	28.2	28.0	27.8	27.7
Average Dew Point Temperature (°C)	23.3	23.4	23.3	23.3	23.2	23.3	23.4	23.6	23.7	23.9	24.0	24.0
Average Relative Humidity (%)	69.0	68.6	68.2	68.5	69.5	71.4	74.0	75.9	77.3	78.9	79.8	80.7
Average Wind Speed (m/s)	2.9	3.0	3.0	2.9	2.6	2.4	2.1	2.0	1.9	2.0	1.9	1.9
Max Gust (m/s)	16.6	12.3	14.8	12.2	12.8	13.0	13.4	12.1	12.0	14.2	16.0	15.1
Rainfall (mm)	51.6	108.0	129.2	89.2	143.2	251.2	128.6	49.4	59.8	52.2	28.4	68.2



■ No Data
— Defective Data

S121 Choa Chu Kang (South) 2017

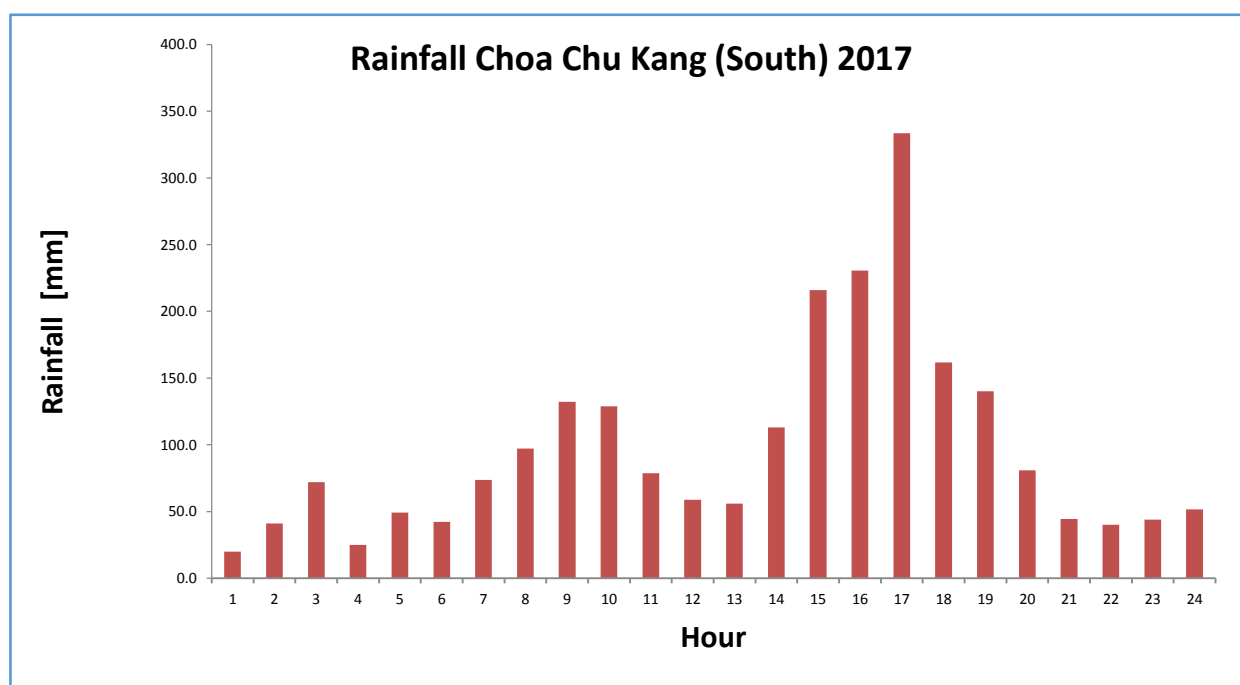
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.4	22.6	23.2	23.0	22.9	22.7	22.7	22.6	23.1	23.0	22.4	23.0
Max Dry Bulb Temperature (°C)	29.3	29.0	28.9	28.7	28.8	28.3	28.3	29.5	31.4	32.1	32.9	33.8
Average Dry Bulb Temperature (°C)	26.5	26.3	26.1	26.0	25.8	25.7	25.6	26.2	27.3	28.1	29.0	29.7
Average Dew Point Temperature (°C)	24.6	24.6	24.6	24.5	24.4	24.3	24.1	24.3	24.8	24.5	24.2	23.8
Average Relative Humidity (%)	89.0	90.0	90.6	90.9	91.4	91.2	91.1	89.1	86.0	80.0	75.2	70.5
Average Wind Speed (m/s)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.1	1.5	1.8	2.0	2.1
Max Gust (m/s)	11.8	27.3	7.8	12.7	9.9	33.1	12.8	14.6	22.9	22.8	11.7	16.9
Rainfall (mm)	20.0	41.0	72.0	25.0	49.2	42.2	73.6	97.2	132.2	128.8	78.6	58.8



- No Data
- Defective Data

S121 Choa Chu Kang (South) 2017

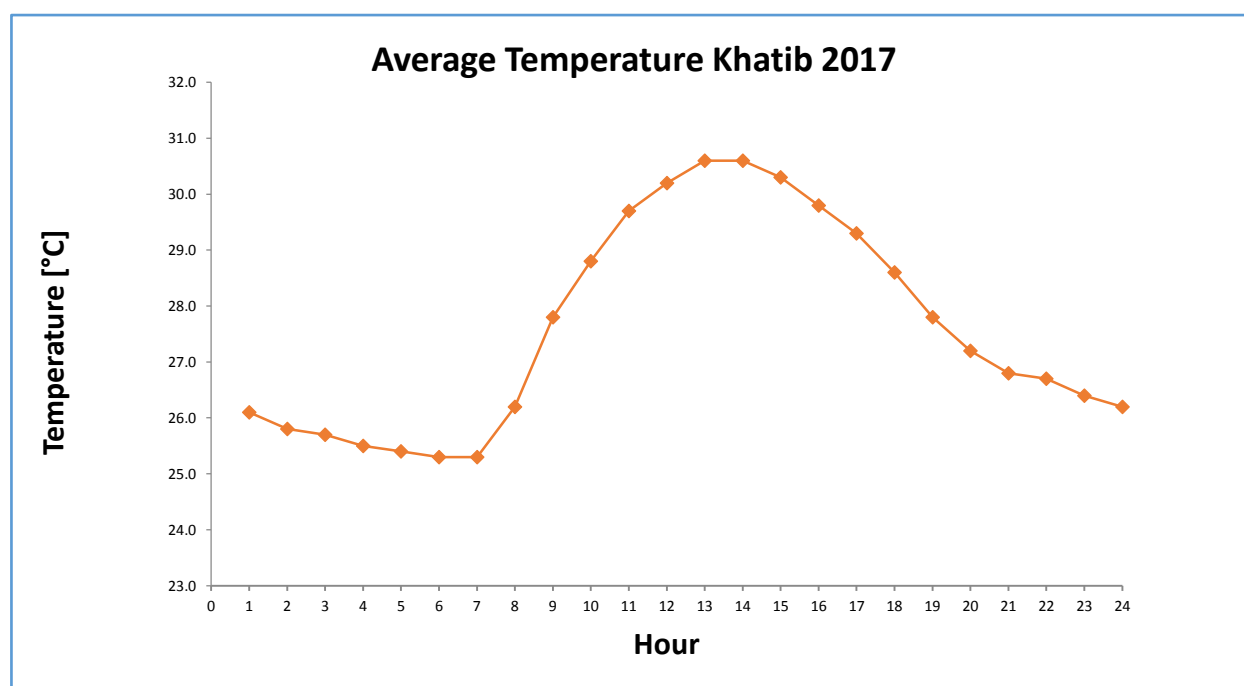
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	23.9	23.4	23.0	22.8	22.9	22.7	23.1	23.6	23.7	23.8	23.5	23.3
Max Dry Bulb Temperature (°C)	34.2	34.7	35.0	35.0	35.0	34.4	33.7	32.4	31.4	30.5	29.8	29.6
Average Dry Bulb Temperature (°C)	30.1	30.2	30.2	29.8	29.3	28.9	28.2	27.7	27.3	27.1	26.9	26.7
Average Dew Point Temperature (°C)	23.5	23.4	23.4	23.5	23.5	23.6	23.9	24.1	24.2	24.5	24.6	24.6
Average Relative Humidity (%)	68.3	67.3	67.8	69.8	70.9	73.0	77.3	80.5	82.9	85.2	86.7	87.9
Average Wind Speed (m/s)	2.1	2.2	2.2	2.1	1.9	1.6	1.4	1.3	1.1	1.1	1.0	1.0
Max Gust (m/s)	12.4	11.3	30.8	29.4	22.8	11.9	11.9	10.7	11.4	8.7	9.0	12.7
Rainfall (mm)	55.8	113.0	216.0	230.6	333.6	161.8	140.0	80.8	44.4	40.0	44.0	51.6



- No Data
- Defective Data

S122 Khatib 2017

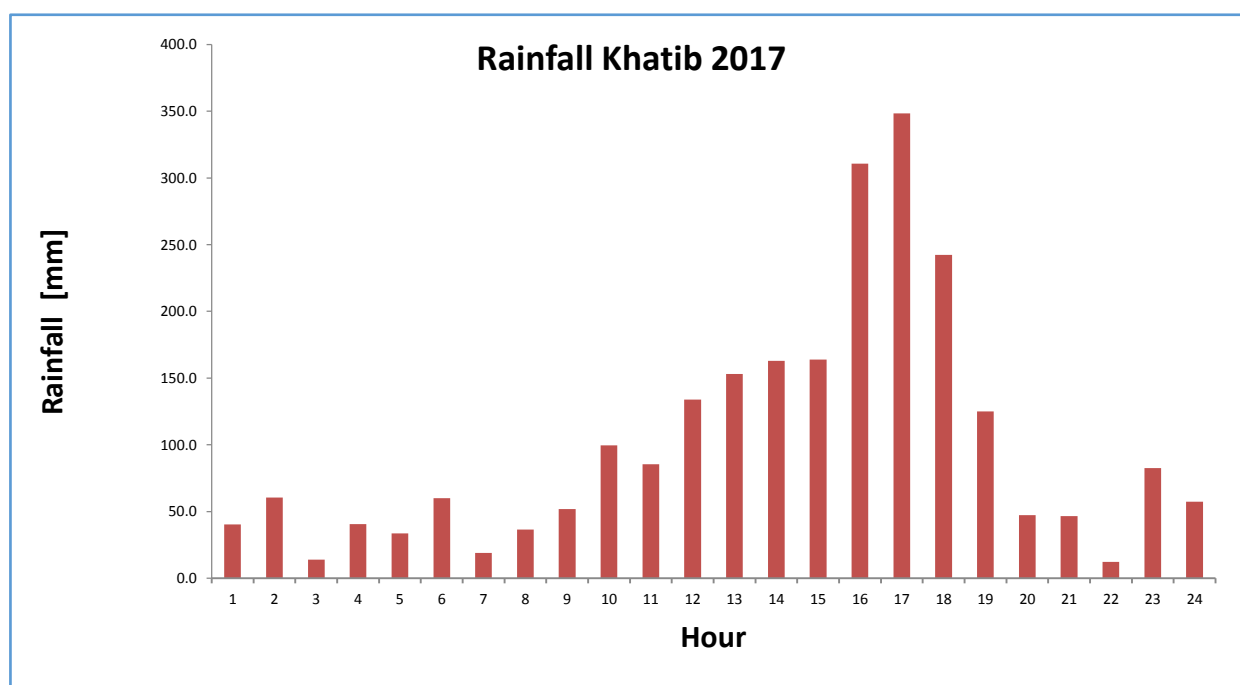
Hours	1	2	3	4	5	6	7	8	9	10	11	12
Min Dry Bulb Temperature (°C)	23.4	23.4	23.1	22.8	22.8	23.1	23.1	22.8	22.7	23.3	23.3	23.5
Max Dry Bulb Temperature (°C)	29.6	29.5	29.0	28.9	28.9	28.7	28.4	29.3	30.7	32.2	33.6	34.4
Average Dry Bulb Temperature (°C)	26.1	25.8	25.7	25.5	25.4	25.3	25.3	26.2	27.8	28.8	29.7	30.2
Average Dew Point Temperature (°C)	25.4	25.6	25.8	25.8	25.5	25.3	25.3	25.9	26.1	25.5	24.7	24.2
Average Relative Humidity (%)	92.3	92.3	92.6	92.3	91.3	95.7	91.8	99.8	90.5	82.6	74.4	70.0
Average Wind Speed (m/s)	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	1.2	1.5	1.7	1.8
Max Gust (m/s)	6.7	7.5	8.1	7.5	7.4	11.9	7.3	9.1	8.7	14.2	12.5	11.7
Rainfall (mm)	40.4	60.4	14.0	40.5	33.6	60.0	18.9	36.5	51.8	99.6	85.5	133.8



- No Data
- Defective Data

S122 Khatib 2017

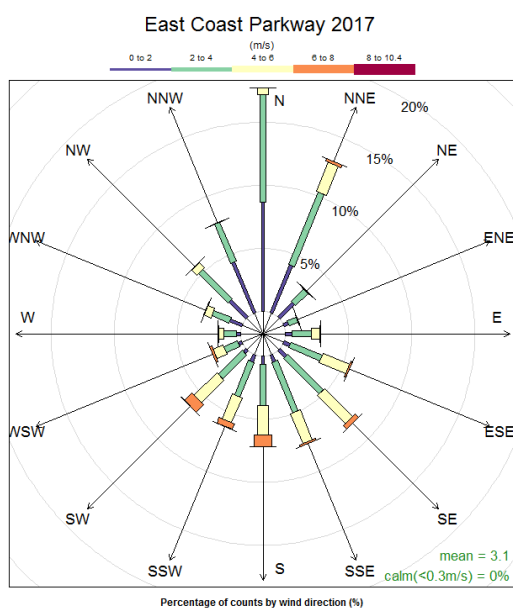
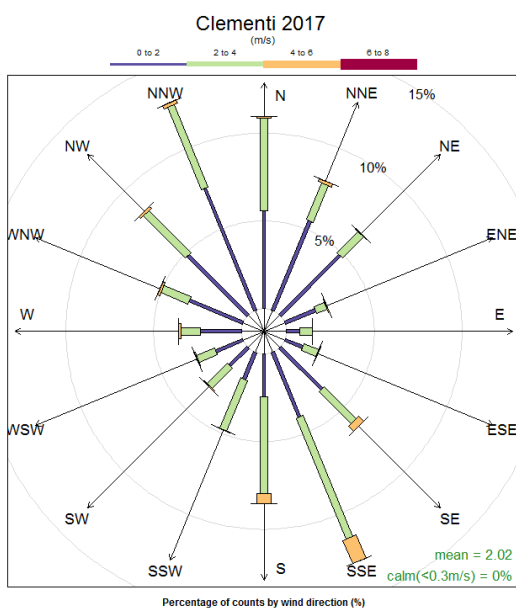
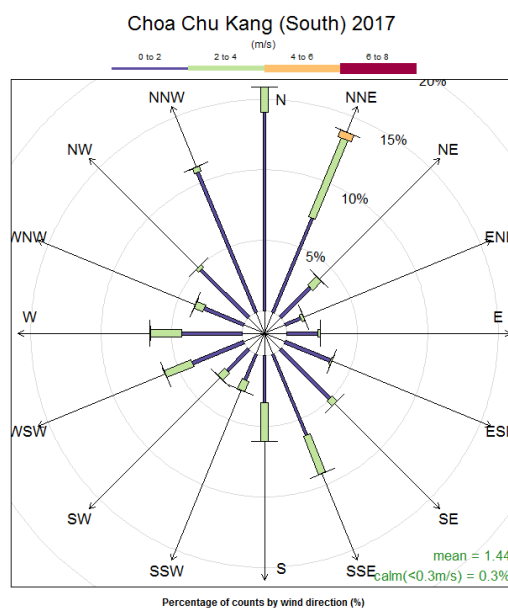
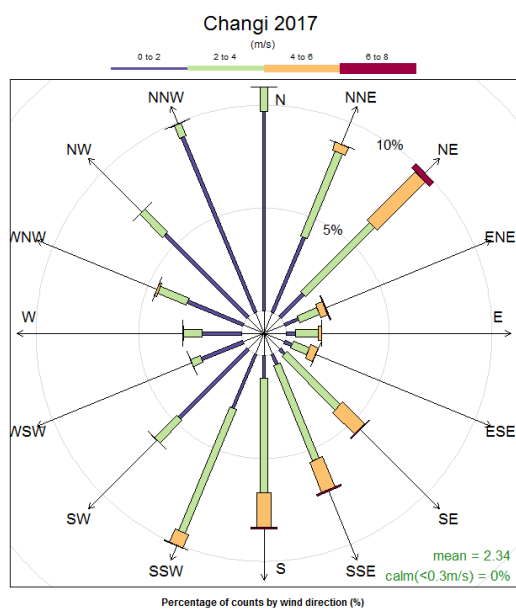
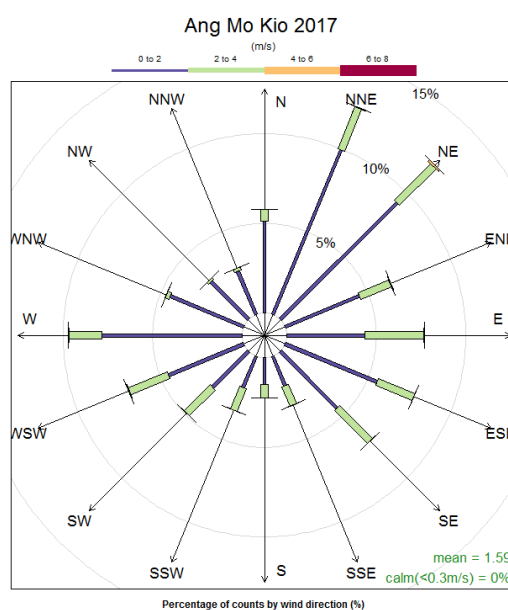
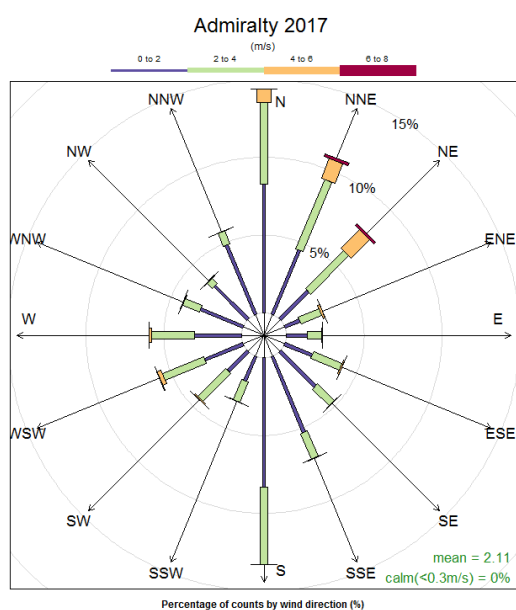
Hours	13	14	15	16	17	18	19	20	21	22	23	24
Min Dry Bulb Temperature (°C)	22.7	22.7	23.3	22.7	22.3	22.8	22.6	23.4	23.8	23.7	23.4	23.2
Max Dry Bulb Temperature (°C)	34.3	34.8	35.2	35.2	35.0	34.4	33.0	31.1	30.2	30.0	29.9	29.6
Average Dry Bulb Temperature (°C)	30.6	30.6	30.3	29.8	29.3	28.6	27.8	27.2	26.8	26.7	26.4	26.2
Average Dew Point Temperature (°C)	24.2	24.0	23.8	23.9	23.9	24.1	24.2	24.8	25.2	25.5	25.4	25.7
Average Relative Humidity (%)	66.8	67.7	68.8	68.3	70.1	72.8	78.9	85.7	89.5	92.4	93.3	91.3
Average Wind Speed (m/s)	1.8	1.9	1.9	1.8	1.7	1.5	1.3	1.1	1.0	0.9	0.9	0.8
Max Gust (m/s)	11.3	10.0	11.6	10.8	10.6	10.7	10.1	8.8	7.3	8.5	9.3	8.3
Rainfall (mm)	153.1	162.9	163.9	310.7	348.3	242.2	125.1	47.3	46.6	12.3	82.6	57.3

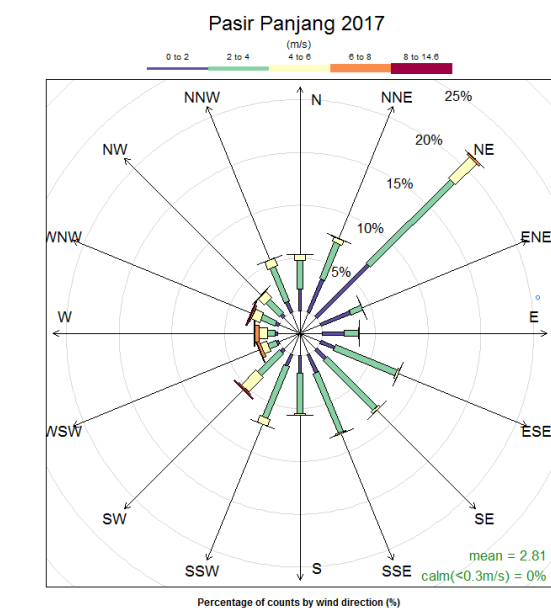
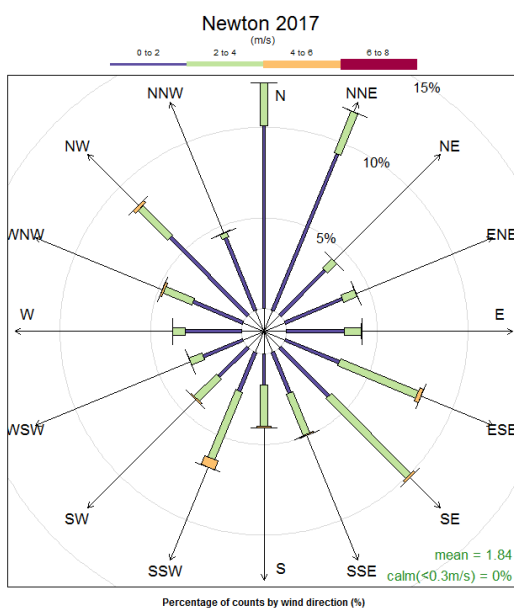
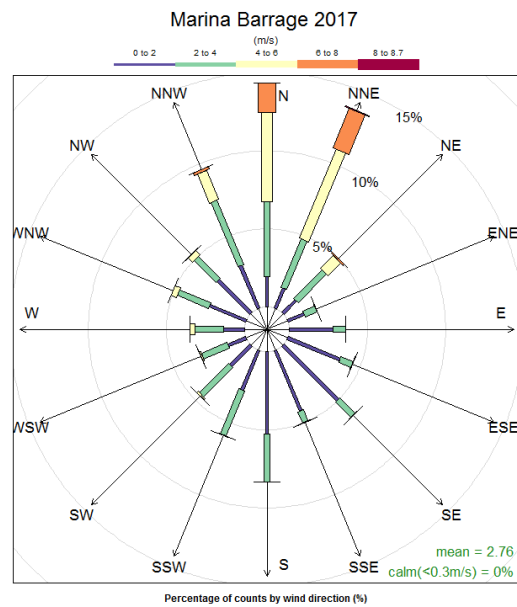
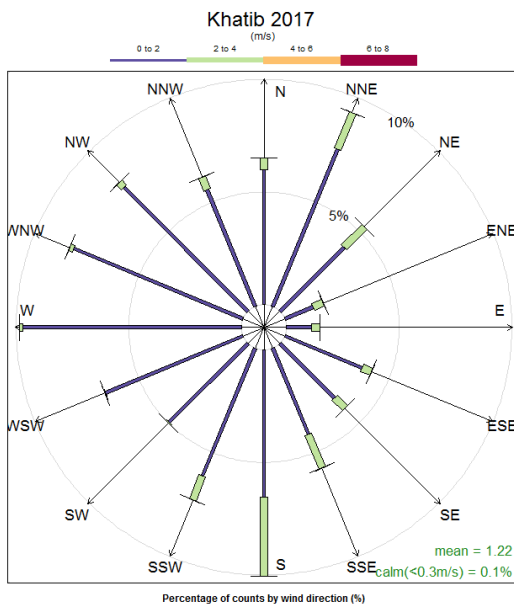
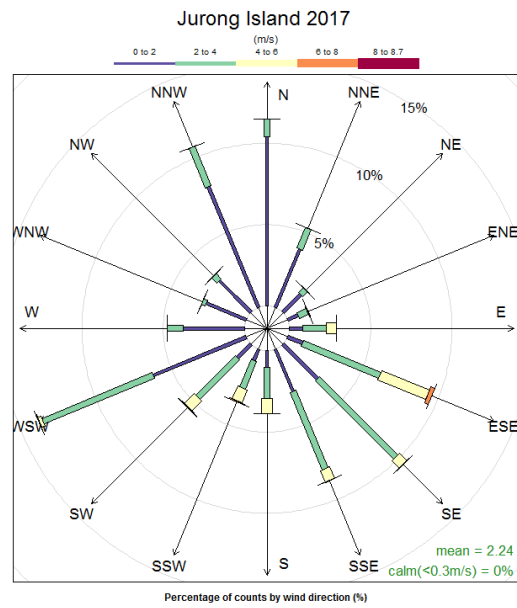
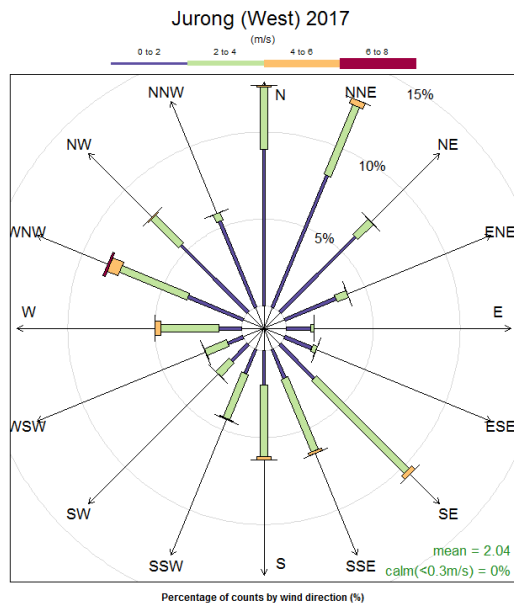


■ No Data
— Defective Data

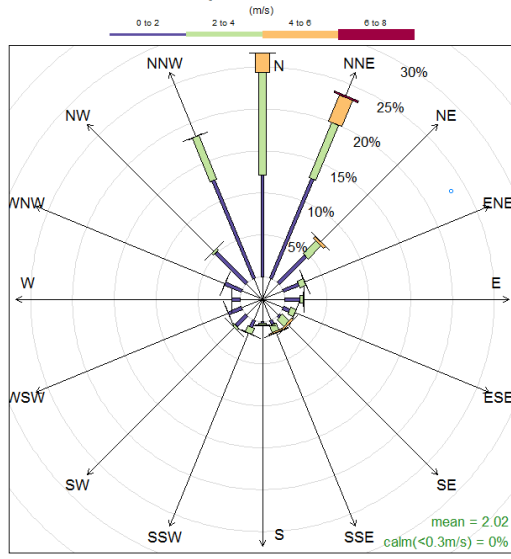
11. Wind Rose

11.1. Annual Wind Rose of All Stations

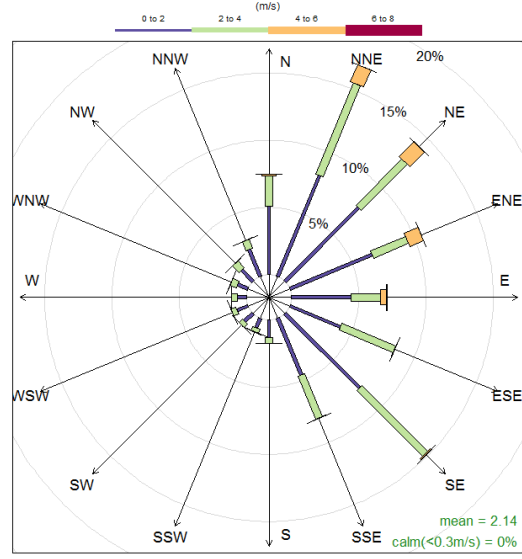




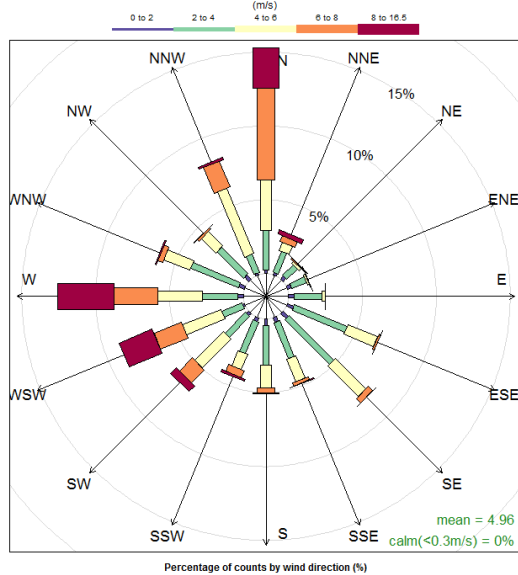
Paya Lebar 2017



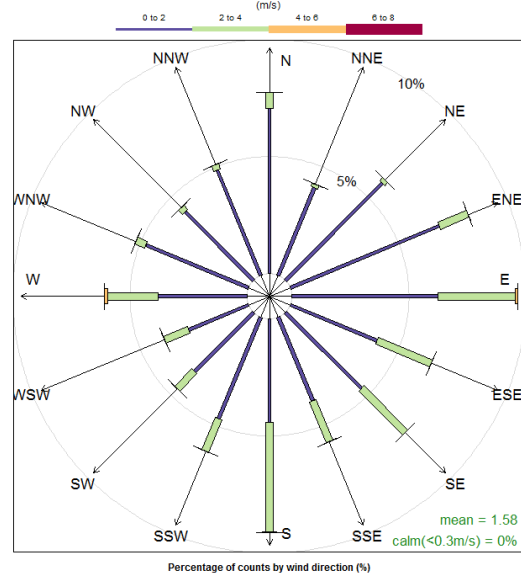
Pulau Ubin 2017



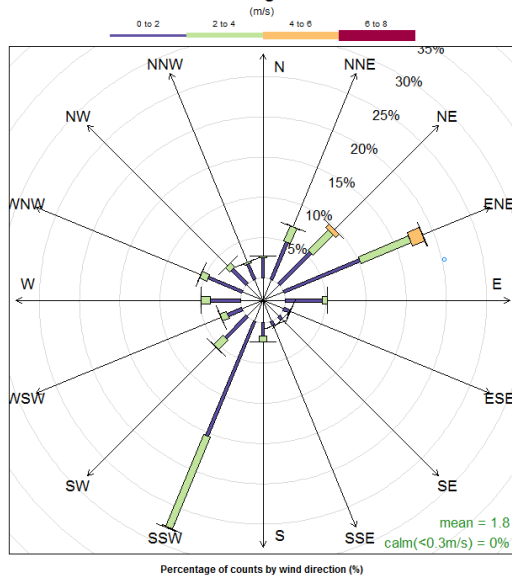
Semakau Island 2017



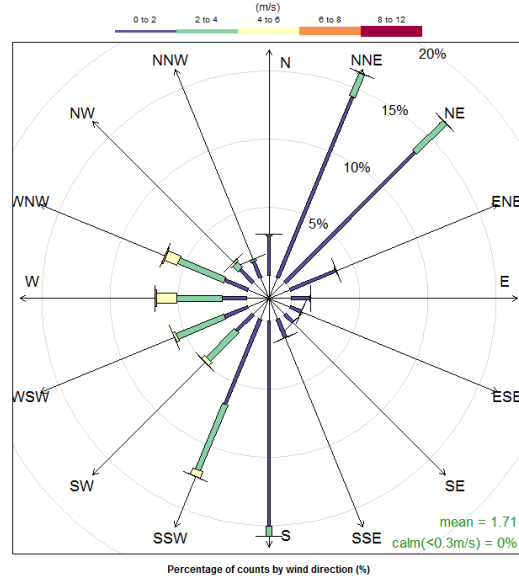
Sentosa Island 2017



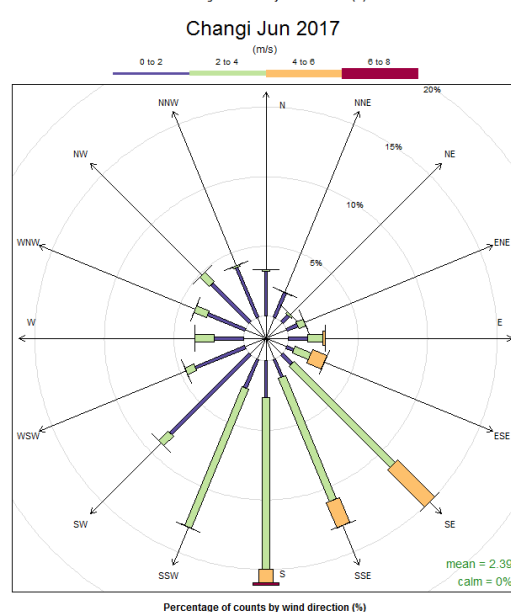
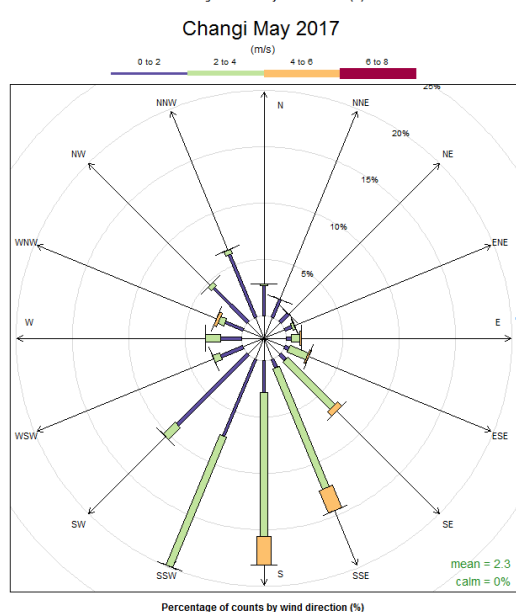
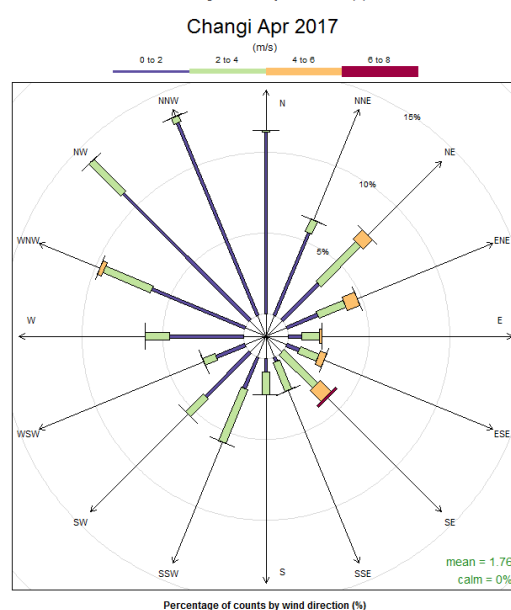
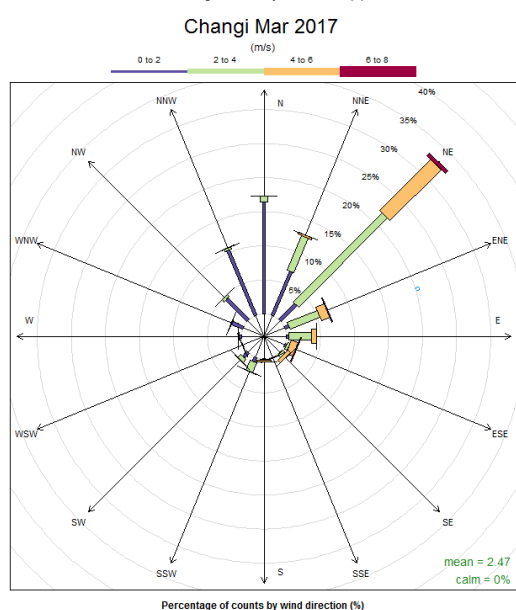
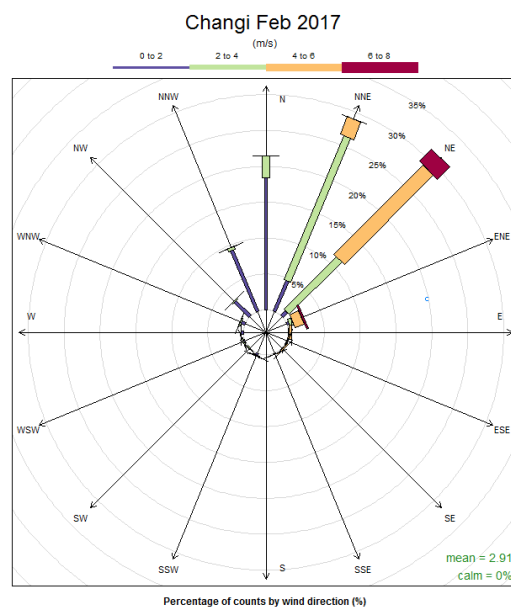
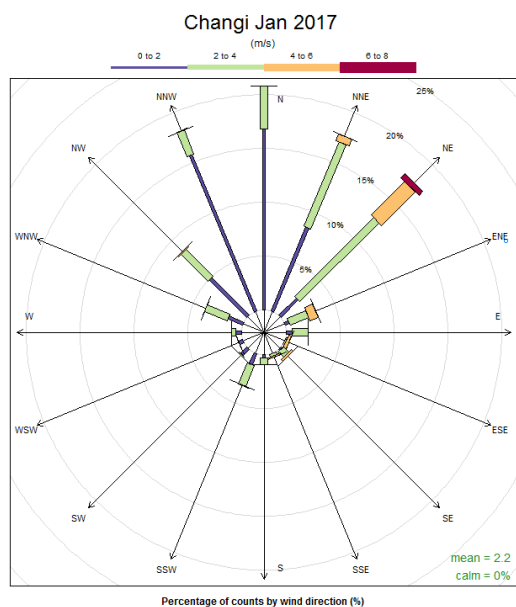
Tai Seng 2017



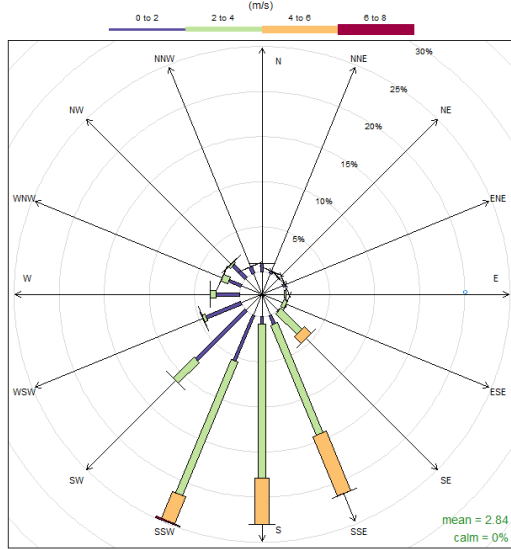
Tuas South 2017



11.2. Monthly Wind Rose of Changi Climate Station

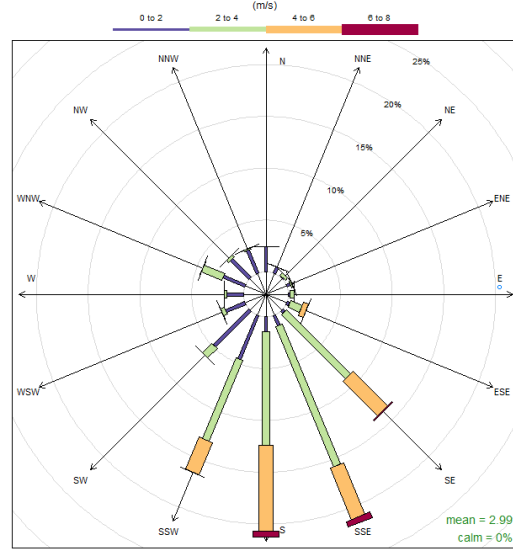


Changi Jul 2017



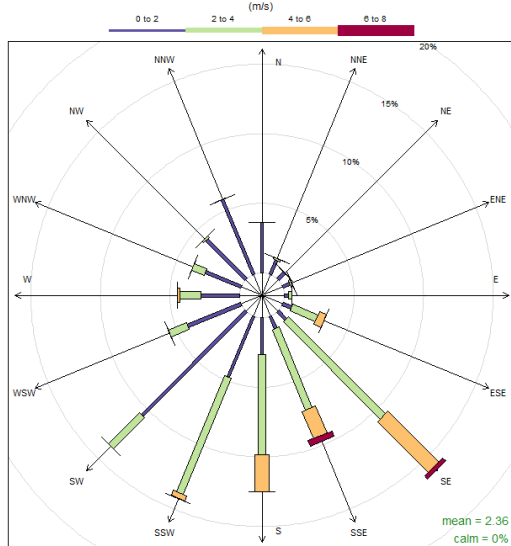
Percentage of counts by wind direction (%)

Changi Aug 2017



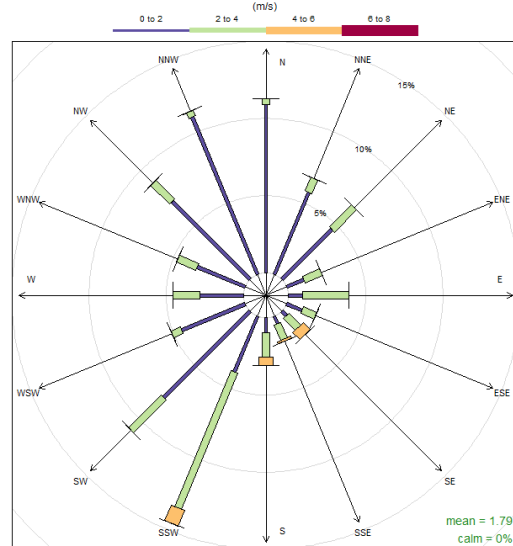
Percentage of counts by wind direction (%)

Changi Sep 2017



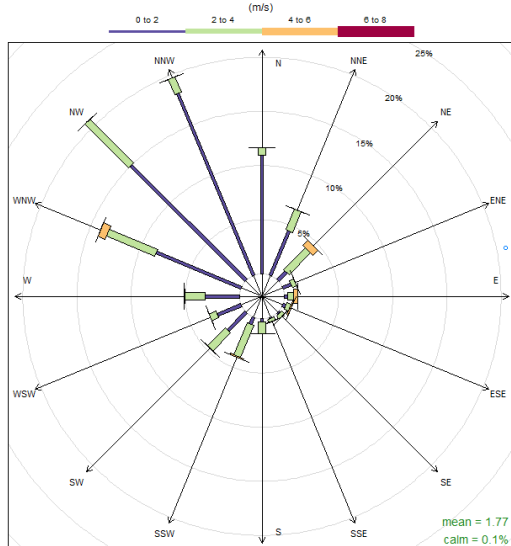
Percentage of counts by wind direction (%)

Changi Oct 2017



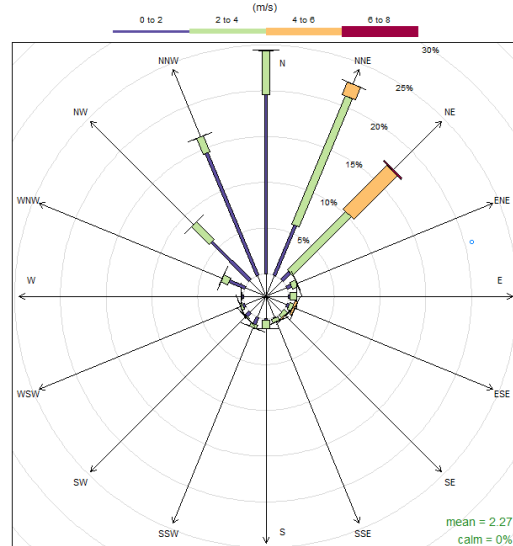
Percentage of counts by wind direction (%)

Changi Nov 2017



Percentage of counts by wind direction (%)

Changi Dec 2017



Percentage of counts by wind direction (%)

12. Upper Air Data

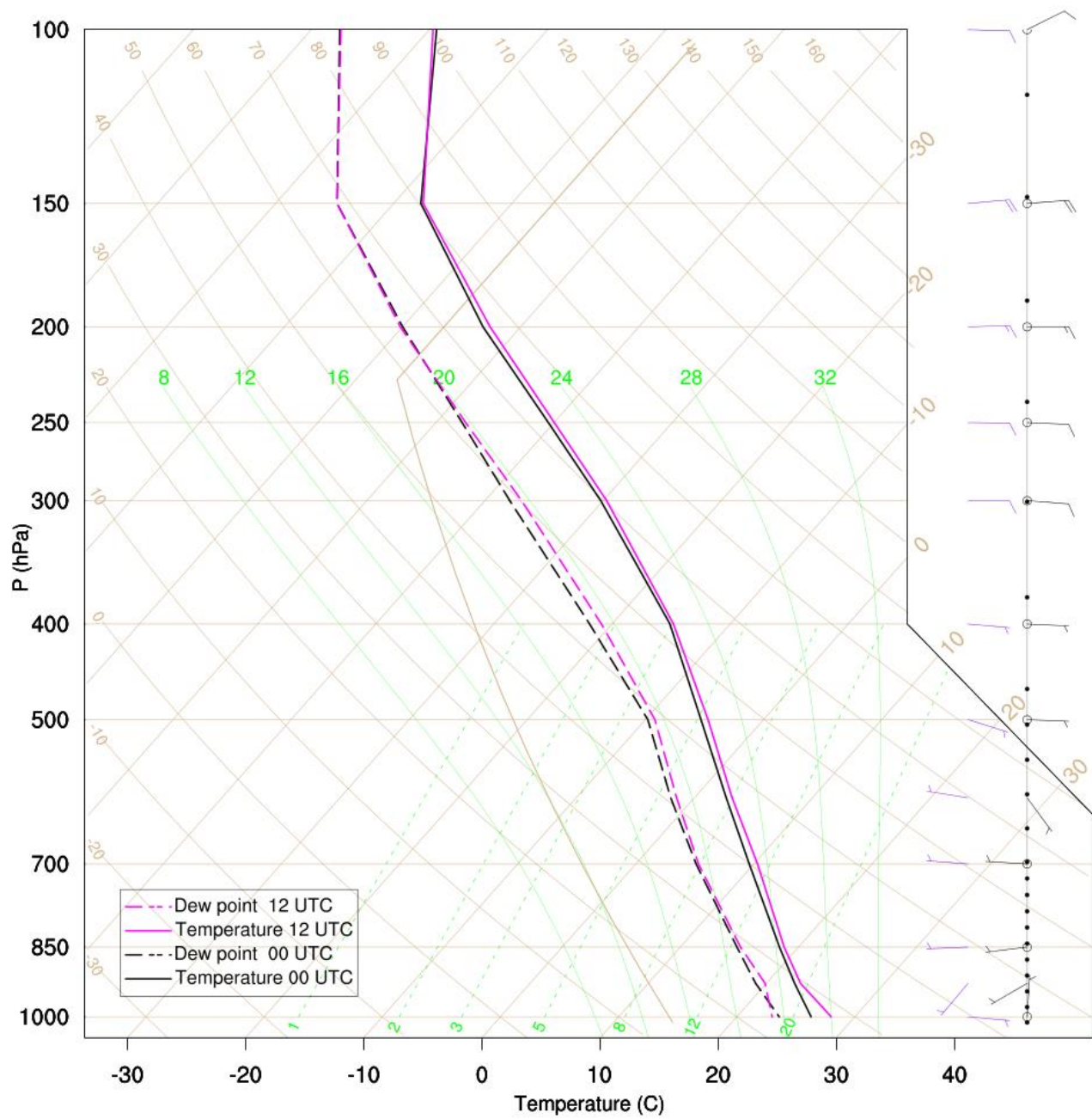
Temperature (°C) at 00 UTC and 12 UTC Singapore, 2017

Pressure	Time	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1000	00 UTC	25.6	25.2	25.5	26.1	27.5	27.4	27.0	26.9	26.8	26.5	25.7	25.6
	12 UTC	27.5	26.7	27.6	28.0	28.9	28.8	28.8	28.2	28.5	28.3	27.5	27.0
925	00 UTC	22.0	21.3	22.0	22.8	23.0	23.2	22.4	22.4	22.4	22.8	22.4	21.9
	12 UTC	22.5	21.7	22.5	23.2	23.7	23.4	23.1	22.7	23.0	23.4	23.0	22.3
850	00 UTC	18.0	17.7	18.0	18.7	19.0	19.0	18.7	18.3	18.3	18.5	18.4	17.9
	12 UTC	18.5	17.7	18.7	18.9	19.7	19.3	18.9	18.5	18.9	19.3	19.0	18.2
700	00 UTC	9.4	9.2	9.4	9.8	10.2	9.7	9.6	9.4	9.2	9.6	9.7	9.4
	12 UTC	10.0	9.8	10.1	10.5	11.2	10.5	10.1	10.3	10.1	10.3	10.4	10.0
600	00 UTC	2.7	2.5	2.5	2.8	3.3	2.5	2.7	2.4	2.3	2.6	2.8	3.0
	12 UTC	2.7	2.9	3.0	3.4	4.0	2.9	3.2	2.9	3.3	3.0	3.5	3.4
500	00 UTC	-5.4	-5.4	-5.5	-5.2	-4.5	-5.5	-5.9	-5.3	-5.4	-5.1	-4.9	-5.1
	12 UTC	-5.0	-5.0	-4.9	-4.4	-3.7	-5.0	-5.2	-5.0	-4.7	-4.9	-4.5	-4.7
400	00 UTC	-15.4	-15.3	-15.5	-15.2	-13.8	-15.5	-15.5	-15.3	-15.0	-15.2	-14.4	-15.0
	12 UTC	-15.0	-15.3	-15.1	-14.7	-13.7	-15.1	-15.2	-14.9	-14.8	-14.8	-14.3	-14.8
300	00 UTC	-30.4	-31.0	-30.7	-29.9	-28.7	-30.5	-30.9	-30.5	-30.1	-29.8	-29.4	-30.2
	12 UTC	-29.9	-30.5	-30.2	-29.4	-28.5	-29.9	-30.4	-30.1	-29.8	-29.6	-28.9	-29.6
250	00 UTC	-40.8	-41.5	-41.2	-40.1	-38.2	-40.4	-41.1	-41.1	-40.8	-40.3	-39.8	-40.5
	12 UTC	-40.3	-40.9	-40.7	-39.6	-38.7	-40.2	-40.5	-40.4	-40.1	-39.8	-39.1	-40.0
200	00 UTC	-53.6	-54.2	-53.8	-52.8	-51.9	-52.8	-53.6	-53.5	-53.4	-53.1	-52.7	-53.2
	12 UTC	-53.1	-53.6	-53.4	-52.4	-51.3	-52.2	-52.8	-53.0	-52.8	-52.4	-52.1	-52.8
150	00 UTC	-69.1	-67.8	-68.0	-68.3	-65.1	-66.9	-67.2	-67.3	-67.5	-68.5	-68.6	-68.1
	12 UTC	-68.8	-67.7	-67.5	-67.8	-66.6	-66.7	-67.1	-66.9	-67.3	-68.2	-68.1	-67.8
100	00 UTC	-80.3	-80.8	-79.3	-80.2	-77.9	-76.8	-76.3	-78.7	-78.8	-78.3	-84.6	-81.2
	12 UTC	-79.8	-80.3	-79.2	-80.5	-80.3	-76.9	-76.5	-79.2	-79.5	-79.2	-84.4	-80.8
70	00 UTC	-74.3	-75.0	-74.9	-74.3	-71.5	-72.3	-69.5	-69.9	-72.3	-73.2	-74.5	-76.3
	12 UTC	-76.0	-76.9	-75.3	-74.6	-75.1	-72.8	-70.1	-70.6	-72.9	-73.3	-75.3	-77.1
50	00 UTC	-66.5	-68.3	-67.2	-66.7	-64.6	-65.3	-65.3	-65.8	-66.9	-68.0	-69.4	-70.3
	12 UTC	-68.2	-68.8	-68.0	-67.1	-66.1	-65.4	-66.0	-67.2	-67.9	-68.2	-70.3	-70.5
30	00 UTC	-59.8	-60.0	-59.2	-58.2	-56.7	-61.0	-60.4	-62.1	-62.3	-60.6	-59.6	-60.1
	12 UTC	-60.9	-61.0	-59.2	-59.0	-59.5	-60.9	-60.0	-61.5	-62.3	-61.3	-59.8	-61.3
20	00 UTC	-54.4	-54.5	-53.2	-53.2	-52.1	-53.2	-54.1	-54.9	-54.5	-53.1	-52.1	-52.4
	12 UTC	-55.9	-56.5	-54.9	-53.9	-52.3	-52.1	-52.5	-54.2	-54.1	-52.5	-51.5	-52.1
10	00 UTC	-50.8	-49.8	-47.0	-44.6	-43.4	-43.1	-45.5	-46.6	-43.7	-41.8	-39.5	-40.9
	12 UTC	-47.2	-46.6	-43.9	-41.2	-40.0	-41.6	-44.6	-44.4	-41.9	-39.7	-36.2	-37.7

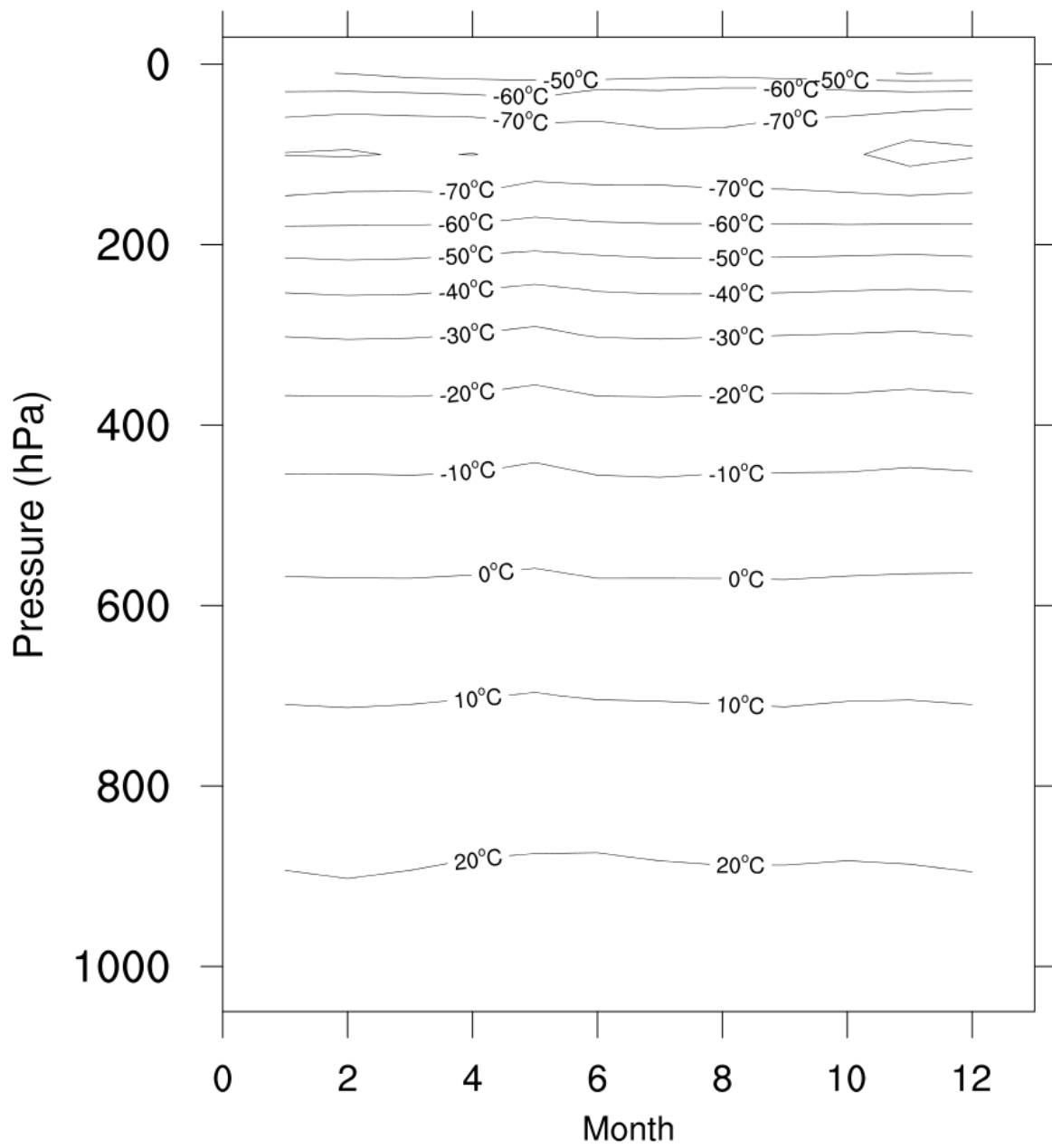
Dew Point (°C) at 00 UTC and 12 UTC Singapore, 2017

Pressure	Time	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1000	00 UTC	23.3	22.7	23.4	23.8	24.6	24.3	23.9	24.0	23.9	23.8	23.2	23.1
	12 UTC	22.9	22.5	23.0	23.6	23.8	23.5	23.2	23.1	23.0	23.2	23.3	23.0
925	00 UTC	19.0	18.9	19.0	19.8	20.7	18.9	19.6	19.0	19.0	19.4	19.4	18.9
	12 UTC	19.5	19.4	20.2	20.3	20.4	20.0	19.7	20.0	20.0	19.8	20.3	19.7
850	00 UTC	14.7	14.0	14.9	15.6	16.0	14.5	14.4	14.2	15.0	14.8	15.6	15.2
	12 UTC	14.8	15.5	15.6	15.9	15.8	14.8	14.8	15.4	14.8	14.3	15.9	15.6
700	00 UTC	5.6	4.8	4.2	6.5	7.1	4.5	4.0	5.4	5.6	5.0	6.8	6.3
	12 UTC	5.8	5.2	5.1	6.4	6.3	4.2	5.1	5.5	5.3	5.1	6.9	6.3
600	00 UTC	-1.3	-4.5	-2.4	-0.1	0.7	-1.7	-3.2	-1.0	-0.8	-1.2	0.2	-1.4
	12 UTC	0.1	-3.0	-2.1	-0.1	0.7	-1.5	-3.0	-0.6	-0.9	-1.0	0.7	-0.4
500	00 UTC	-9.0	-11.9	-10.7	-8.1	-8.1	-9.4	-10.0	-9.4	-9.1	-9.9	-6.9	-9.4
	12 UTC	-8.1	-10.8	-10.3	-8.0	-8.0	-8.2	-9.5	-9.1	-8.8	-9.3	-6.6	-8.3
400	00 UTC	-19.6	-23.4	-22.1	-20.0	-20.9	-20.4	-22.7	-21.9	-22.2	-20.0	-18.5	-20.3
	12 UTC	-18.6	-22.1	-21.9	-19.3	-19.8	-20.0	-21.0	-21.1	-20.7	-18.7	-17.4	-19.2
300	00 UTC	-36.2	-37.8	-38.8	-36.2	-38.6	-36.6	-37.2	-38.0	-38.2	-36.7	-34.4	-35.5
	12 UTC	-35.2	-37.6	-37.5	-35.4	-36.8	-36.2	-36.0	-36.2	-37.3	-34.9	-33.4	-34.6
250	00 UTC	-46.7	-47.9	-47.6	-46.7	-48.5	-47.8	-47.0	-47.0	-46.7	-46.9	-44.6	-46.4
	12 UTC	-45.6	-46.3	-48.1	-46.6	-46.2	-48.0	-47.5	-46.7	-46.9	-44.8	-44.7	-46.1
200	00 UTC	-58.8	-59.0	-59.7	-59.0	-59.6	-60.6	-59.7	-59.1	-58.9	-59.4	-57.9	-59.2
	12 UTC	-58.6	-59.4	-60.6	-58.9	-58.5	-61.0	-60.4	-59.2	-58.6	-58.1	-58.3	-59.0
150	00 UTC	-74.3	-74.6	-74.2	-74.1	-71.6	-74.0	-75.3	-74.2	-73.7	-73.2	-73.1	-73.9
	12 UTC	-74.1	-75.1	-74.4	-73.6	-73.0	-74.0	-74.6	-74.2	-74.2	-73.4	-72.9	-73.3
100	00 UTC	-88.9	-88.1	-87.5	-86.8	-84.2	-84.6	-84.8	-84.9	-85.7	-85.8	-89.5	-88.2
	12 UTC	-88.7	-88.0	-87.2	-86.6	-85.9	-84.7	-84.8	-84.9	-85.8	-85.5	-89.2	-88.3
70	00 UTC	-89.6	-89.5	-89.4	-88.9	-86.6	-87.9	-88.3	-87.6	-87.9	-86.9	-86.6	-87.4
	12 UTC	-89.2	-90.0	-89.2	-89.2	-88.5	-88.3	-88.8	-87.3	-87.2	-87.0	-86.9	-88.1
50	00 UTC	-88.8	-88.6	-89.3	-88.9	-85.7	-87.9	-87.9	-88.3	-89.1	-89.9	-89.4	-88.9
	12 UTC	-90.1	-89.0	-89.9	-89.2	-88.5	-90.2	-88.4	-89.3	-89.9	-90.1	-90.1	-90.3
30	00 UTC	-90.0	-86.2	-89.5	-88.8	-83.8	-86.9	-86.5	-87.8	-87.9	-86.7	-89.8	-86.3
	12 UTC	-90.7	-90.8	-85.6	-85.5	-85.8	-86.9	-86.2	-87.3	-87.9	-87.2	-90.0	-91.0
20	00 UTC	-86.2	-86.3	-85.4	-85.4	-80.5	-85.4	-86.0	-86.6	-86.3	-85.3	-84.6	-84.8
	12 UTC	-87.2	-87.7	-86.6	-85.9	-84.8	-84.6	-84.9	-86.1	-86.0	-84.9	-84.2	-84.6
10	00 UTC	-83.7	-83.0	-81.1	-79.5	-78.7	-78.5	-80.1	-80.9	-78.9	-77.6	-76.0	-77.0
	12 UTC	-81.3	-80.9	-79.0	-77.2	-76.4	-77.5	-79.5	-79.4	-77.7	-76.2	-73.8	-74.8

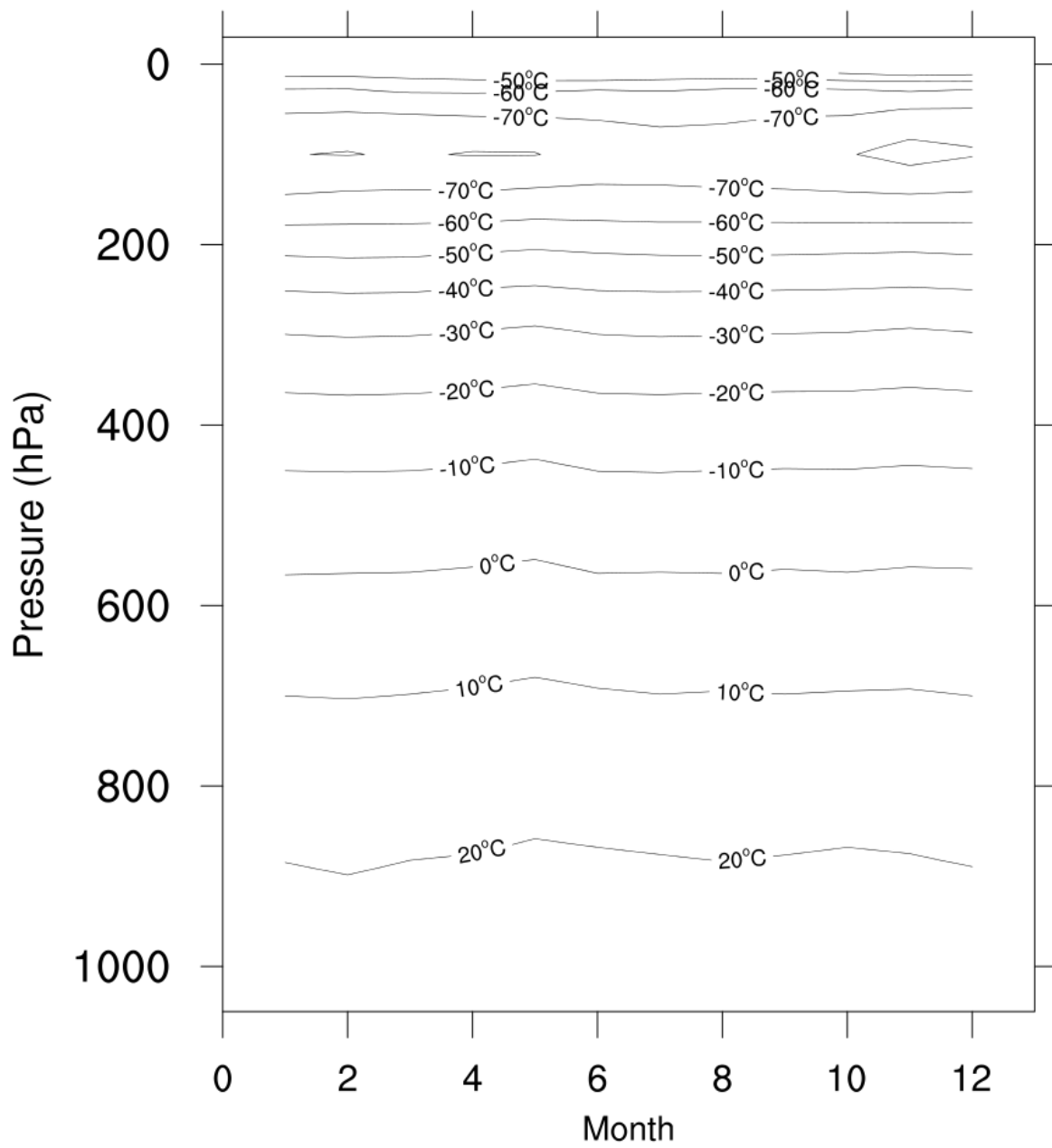
Skew-T: Annual Profile



Monthly Mean Temperature (°C) at 00 UTC in 2017



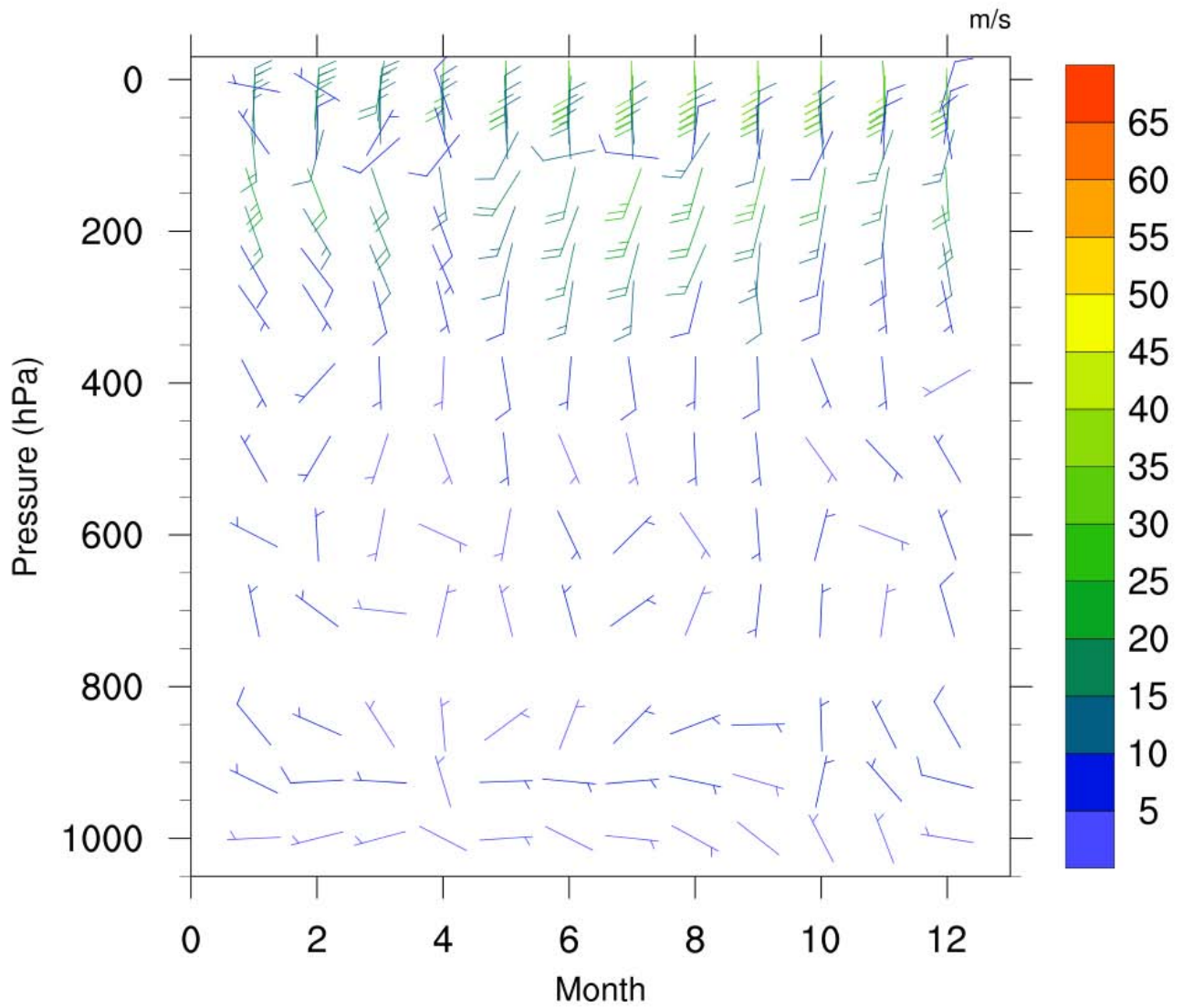
Monthly Mean Temperature (°C) at 12 UTC in 2017



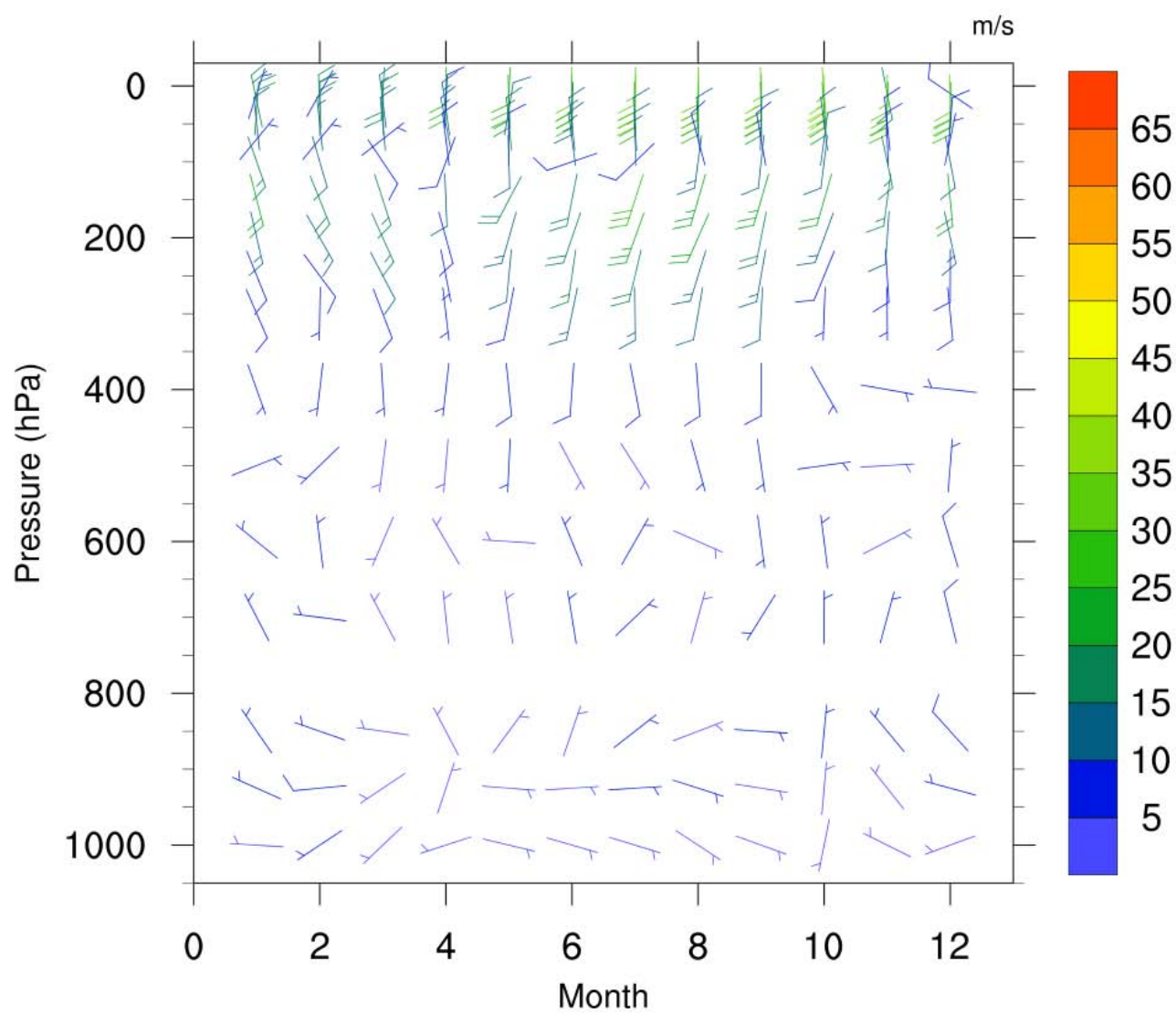
Wind Speed (m/s) at 00 UTC and 12 UTC Singapore, 2017

Pressure	Time	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1000	00 UTC	2.6	4.0	3.3	2.2	2.6	2.2	3.2	2.9	2.2	2.5	2.8	2.9
	12 UTC	3.7	5.3	3.6	2.9	2.6	3.4	3.7	3.5	2.9	2.9	2.5	3.7
925	00 UTC	7.3	9.4	5.3	4.6	5.8	5.2	7.3	6.8	5.0	5.2	6.7	8.0
	12 UTC	6.2	8.8	4.8	4.4	4.5	4.4	6.5	5.8	4.8	3.8	4.9	7.1
850	00 UTC	7.8	7.3	4.5	4.4	4.8	4.9	6.9	5.2	5.4	6.2	5.6	7.7
	12 UTC	6.1	7.0	4.0	4.4	4.3	4.9	6.2	4.6	5.1	5.7	5.4	7.7
700	00 UTC	6.4	6.0	3.9	4.5	4.1	5.9	5.6	3.7	5.7	5.6	4.9	8.6
	12 UTC	6.9	5.8	4.1	4.4	4.8	6.4	5.4	4.7	6.2	5.9	5.1	8.0
600	00 UTC	6.4	6.0	3.7	4.5	3.7	5.5	5.7	4.4	7.0	6.3	4.8	7.1
	12 UTC	6.9	6.3	4.0	4.4	3.6	5.4	5.8	4.7	6.6	6.4	4.7	7.7
500	00 UTC	5.5	6.7	4.6	4.5	6.1	4.8	4.7	5.8	6.4	4.9	5.1	6.2
	12 UTC	6.0	6.5	4.5	4.1	6.0	4.1	4.5	5.8	6.7	6.0	4.8	6.3
400	00 UTC	5.8	6.9	6.7	4.8	8.7	7.2	8.6	7.2	8.1	5.5	5.8	4.8
	12 UTC	5.7	7.3	6.7	5.3	8.6	8.4	8.8	7.5	8.3	5.1	5.4	5.3
300	00 UTC	7.4	6.8	9.6	6.0	8.7	13.4	14.5	10.0	10.3	7.8	6.5	7.4
	12 UTC	7.7	6.6	8.2	6.8	9.2	12.9	13.6	11.1	11.8	7.4	6.6	7.8
250	00 UTC	9.8	9.1	12.1	6.6	10.1	16.4	19.1	15.3	13.7	9.2	8.6	11.2
	12 UTC	9.4	9.3	12.4	7.1	10.6	15.4	17.9	14.5	14.6	9.4	8.5	10.0
200	00 UTC	15.1	14.2	17.6	9.8	13.6	18.4	24.9	22.2	19.7	13.5	11.5	16.2
	12 UTC	14.2	14.5	17.1	9.3	13.5	18.6	24.7	22.2	18.9	12.9	11.6	14.7
150	00 UTC	23.0	21.3	17.6	13.5	17.9	17.8	27.4	24.2	25.4	20.3	15.1	22.2
	12 UTC	22.2	20.0	17.0	12.5	18.7	18.4	28.0	24.0	23.7	20.3	16.3	21.4
100	00 UTC	17.1	11.5	8.3	8.8	10.3	10.3	8.8	13.6	11.0	10.0	16.0	12.8
	12 UTC	15.8	10.6	8.8	9.6	11.9	9.6	8.7	14.5	12.4	11.8	16.3	12.2
70	00 UTC	6.8	8.0	7.2	7.3	10.4	13.9	13.2	9.1	10.0	11.1	9.1	7.5
	12 UTC	6.9	7.4	6.9	7.6	8.6	12.8	12.6	9.1	9.3	11.4	9.9	7.5
50	00 UTC	14.4	15.7	12.6	13.2	14.7	13.4	11.9	12.5	12.1	9.7	9.7	7.5
	12 UTC	11.9	14.6	10.3	12.7	16.2	14.3	11.6	12.3	12.2	10.9	9.2	7.6
30	00 UTC	17.3	17.5	16.1	14.2	11.4	16.2	25.6	26.7	25.9	27.1	26.7	28.6
	12 UTC	18.8	19.6	16.2	14.7	10.9	15.0	26.1	25.4	23.9	24.5	26.7	27.6
20	00 UTC	14.0	15.2	13.4	8.7	21.7	28.5	31.3	33.7	35.6	38.3	35.1	33.4
	12 UTC	17.9	18.7	14.8	9.7	21.4	29.5	31.3	32.2	34.1	36.3	34.8	32.5
10	00 UTC	7.2	7.1	18.1	26.8	27.4	30.2	32.0	34.8	33.0	33.1	21.7	8.5
	12 UTC	6.9	7.3	18.2	27.9	29.4	30.9	33.5	32.4	33.9	32.8	18.5	8.9

Wind Profile at 00 UTC in 2017

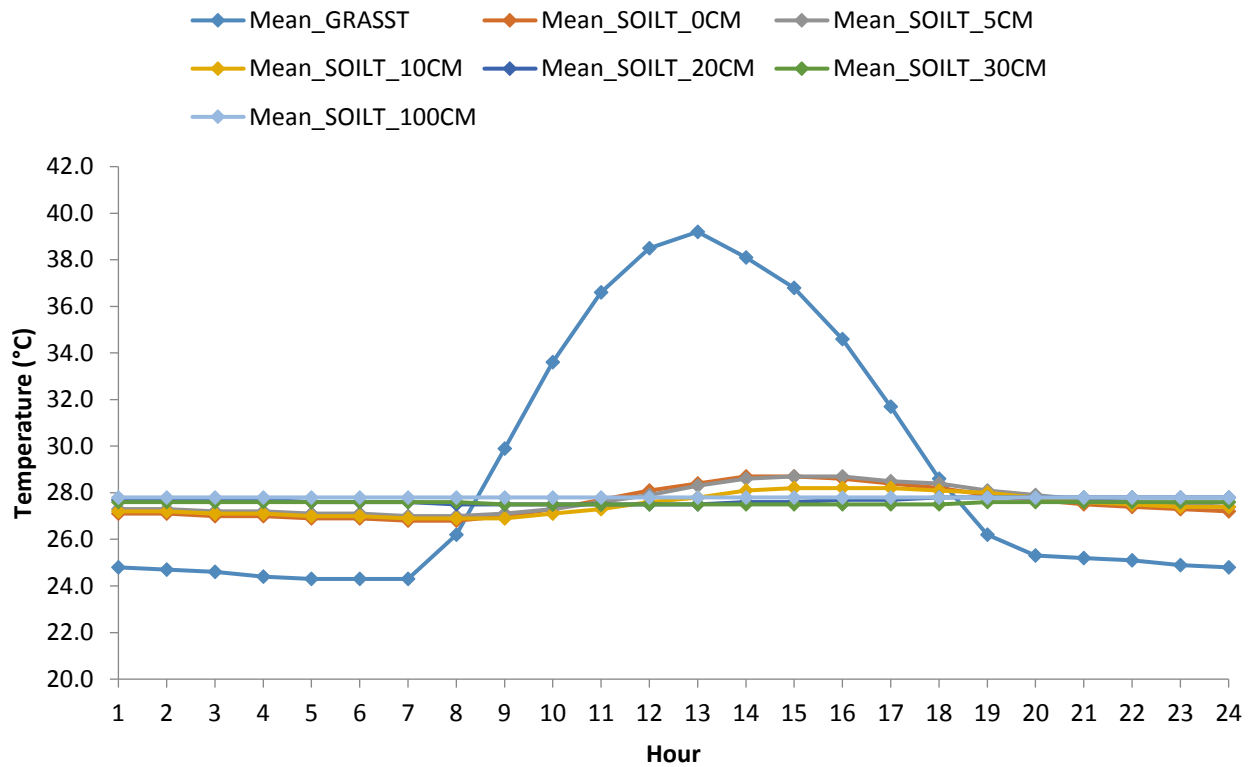


Wind Profile at 12 UTC in 2017

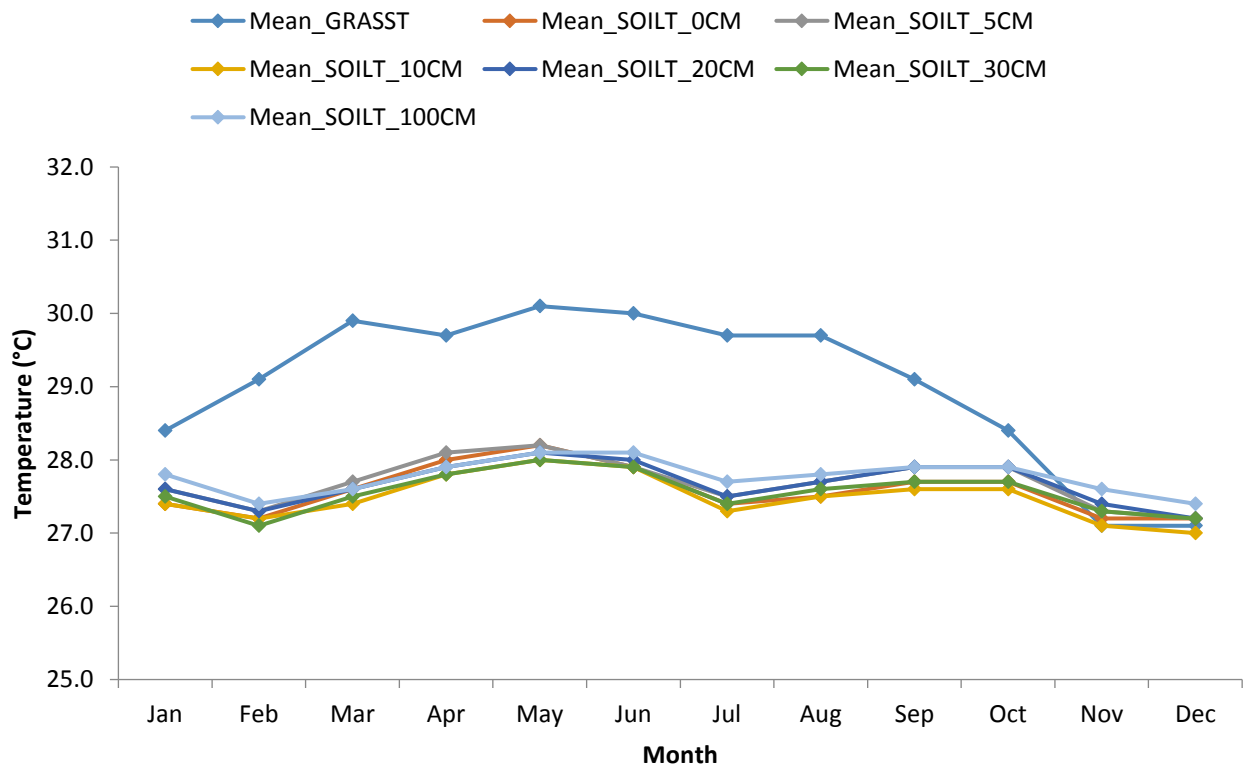


13. Soil Data

Changi Hourly Soil Temperature



Changi Monthly Soil Temperature



Annex 1 Instruments of the Manned Meteorological Station

Since 1984, the manned meteorological station serving the Changi International Airport has been designated as the Climate Station of Singapore. The locations of the other 4 manned stations are at Paya Lebar, Tengah, Seletar, and Sembawang. The Paya Lebar station is the longest serving meteorological station, which has been operational since the 1950s. The Changi station operates 24 hours every day while the other 4 meteorological stations record observations only from 4 am to 11 pm.

ID	Station	Parameters	Operational Period	Instruments	Location
24	Changi Climate Station	Pressure	1 Jun, 1981 to 1 Nov, 2010	WilhLambrecht ⁴	Indoor
			1 Nov, 2010 to Present	Vaisala ⁵	Outdoor
		Temperature	1 Jun, 1981 to 1 Aug, 2011	Zeal/Casella (Mercury) ⁶	Outdoor
			1 Aug, 2011 to Present	Vaisala	Outdoor
		Humidity	1 Jun, 1981 to 1 Aug, 2011	Zeal/Casella (Mercury)	Outdoor
			1 Aug, 2011 to Present	Vaisala	Outdoor
		Surface Wind	1 Jun, 1981 to 1 Aug, 2011	Munro Pressure Tube ⁷	Outdoor
			1 Aug, 2011 to Present	Vaisala	Outdoor
		Rainfall	1 Jun, 1981 to 1 Nov, 2010	Munro Rain Gauges ⁷	Outdoor
			1 Nov, 2010 to Present	Vaisala	Outdoor
06	Paya Lebar Meteorological Station	Pressure	1 Aug, 1955 to 1 Jan, 1982	F Darton & Company ⁸	Indoor
			1 Jan, 1982 to Present	Negretti and Zambra ⁹	Outdoor
		Temperature	1 Aug, 1955 to 1 Aug, 1981	Zeal/Casella (Mercury)	Outdoor
			1 Aug, 1981 to Present	Casella	Roof top
		Humidity	1 Aug, 1955 to 1 Aug, 1981	Zeal/Casella (Mercury)	Outdoor
			1 Aug, 1981 to Present	Casella	Roof top
23	Tengah Meteorological Station	Pressure	1 Jan, 1950 to 1 Oct, 2003	THIES Clima	Indoor
			1 Oct, 2003 to Present	Sutron Corp	Indoor
		Temperature	1 Jan, 1950 to 1 Oct, 2003	Zeal/Casella (Mercury)	Outdoor
			1 Oct, 2003 to Present	Sutron Corp	Outdoor
		Humidity	1 Jan, 1950 to 1 Oct, 2003	Zeal/Casella (Mercury)	Outdoor
			1 Oct, 2003 to Present	Sutron Corp	Outdoor
25	Seletar Meteorological Station	Pressure	1 May, 1970 to 31 May, 2005	THIES Clima ¹⁰	Indoor
			1 Jun, 2005 to Present	ALMOS/ Vaisala	Outdoor
		Temperature	1 May, 1970 to 31 May, 2005	Zeal/Casella (Mercury)	Outdoor
			1 Jun, 2005 to Present	ALMOS/ Vaisala	Outdoor
		Humidity	1 May, 1970 to 31 May, 2005	Zeal/Casella (Mercury)	Outdoor
			1 Jun, 2005 to Present	ALMOS/ Vaisala	Outdoor
		Rainfall	1 May, 1970 to Present	Munro Rain Gauges	Outdoor

⁴www.lambrech.net

⁵www.vaisala.com

⁶www.zeal.co.uk and www.casellameasurement.com/cl_ne_manual.htm

⁷www.munroinstruments.com

⁸www.russell-scientific.co.uk

⁹www.negrettiandzambra.co.uk

¹⁰www.thiesclima.com/air-pressure.html

ID	Station	Parameters	Operational Period	Instruments	Location
80	Sembawang Meteorological Station	Pressure	1 Apr, 1986 to 30 Sep, 2003	WilhLambrecht	Indoor
			1 Oct, 2003 to Present	Sutron Corp ¹¹	Indoor
		Temperature	1 Apr, 1986 to 30 Sep, 2003	Zeal/Casella (Mercury)	Outdoor
			1 Oct, 2003 to Present	Sutron Corp	Outdoor
		Humidity	1 Apr, 1986 to 30 Sep, 2003	Zeal/Casella (Mercury)	Outdoor
			1 Oct, 2003 to Present	Sutron Corp	Outdoor
		Rainfall	1 Apr, 1986 to Present	Munro Rain Gauges	Outdoor

Table 6: Instruments and their operational dates at the Manned Meteorological Stations

¹¹www.sutron.com

Annex 2 Instruments of the Manual Rainfall Station

Before the AWSs system, there were a number of manual rain gauges in operation in Singapore. Rainfall was recorded on continuous strips of paper rolls, and operators had to visit the stations once a week to collect and replace them. Among the rain gauges used in the past were the natural siphon rain gauge, the tilting siphon rain gauge and the Hellmann rain gauge.

The tilting siphon rain gauge, produces an autographic record of rainfall accumulation from a pen attached to a float in the rainfall chamber of the instrument. The chamber tilts and empties when the pen reaches the top of the chart at 25mm rainfall. Siphoning starts when the chamber tilts.

The natural siphon rain gauge works in a similar mechanism as the tilting siphon rain gauge except the way in which it siphons. It consists of two coaxial tubes to the sides of the float container. The annular gap between the inner and outer tubes is so small that siphoning can start abruptly when water reaches the top of the tube without any mechanical trigger.

The Hellman rain gauge is an autographic rain gauge with 200cm² circular collecting area. Measuring 453mm tall, it consists of a protective housing, tunnel, built-in measuring vessel with float and siphoning device, and records on a clockwork driven drum with nominal recording period of 7 days.

Station Number	Location	Operational Period		Instruments	Lat.(N)	Long. (E)
07	Macritchie Reservoir	1 Jan, 1953	26 May, 1982	Natural	1°20.51	103°50.03
	Macritchie Reservoir	27 May, 1982	7 May, 1987	Tilting	1°20.51	103°50.03
	Macritchie Reservoir	8 May, 1987	Present	Hellmann	1°20.51	103°50.03
	Macritchie Reservoir	12 Feb, 2009	Present	Vaisala	1°20.51	103°50.03
11	Ama Keng Police Station	1 Feb, 1954	26 Nov, 1984	Tilting	1°24.00	103°42.00
	Ama Keng Police Station	27 Nov, 1984	30 Jun, 1988	Hellmann	1°24.00	103°42.00
	Ama Keng Telephone Exchange	1 Jul, 1988	31 Oct, 2003	Hellmann	-	-
	Choa Chu Kang Cemetery Office	1 Nov, 2003	30 Sep, 2009	Hellmann	1°22.47	103°41.63
	Choa Chu Kang Cemetery Office	5 Mar, 2009	Present	Vaisala	1°22.46	103°41.62
29	Serangoon Sewage Treatment Work	1 Jan, 1949	20 Mar, 1975	-	1°23.15	103°55.41
	Serangoon Sewage Treatment Work	21 Mar, 1975	29 Apr, 1977	Natural	1°23.15	103°55.41
	Serangoon Sewage Treatment Work	30 Apr, 1977	30 Apr, 1987	Tilting	1°23.15	103°55.41
	Serangoon Sewage Treatment Work	1 May, 1987	30 Jun, 2010	Hellmann	1°23.15	103°55.41
	Pasir Ris Home Team Chalets	5 May, 2010	Present	Vaisala	1°23.19	103°56.48
31	Singapore Harbour Board Gate 9	1 Mar, 1948	30 Sep, 1976	Tilting	1°16.00	103°49.00
	Saint James Complex	1 Jun, 1976	15 Apr, 1986	Tilting	1°15.93	103°49.47
	Saint James Complex	16 Apr, 1986	31 Mar, 2010	Hellmann	1°15.93	103°49.47
	CHIJ (Kellock) Primary School	28 Apr, 2010	Present	Vaisala	1°16.46	103°49.69
33	Tanjong Kling Police Station	01 Jan, 1953	31 Dec, 1969	Tilting	1°18.50	103°43.00
	Tanjong Kling Police Station	01 Jan, 1973	25 Sep, 1977	Hellmann	1°18.50	103°43.00
	Marine Police Station Jurong Pier	26 Sep, 1977	31 Aug, 1999	Hellmann	-	-
	Jurong Pier Road	1 Sep, 1999	30 Apr, 2010	Hellmann	1°18.49	103°42.60
	Jurong Pier Road	3 Feb, 2010	Present	Vaisala	1°18.49	103°42.59
35	Ulu Pandan Sewage Treatment Work	19 Jun, 1975	30 Nov, 1981	Tilting	1°19.97	103°45.34
	Ulu Pandan Sewage Treatment Work	1 Dec, 1981	1 Mar, 2010	Hellmann	1°19.97	103°45.34
	Ulu Pandan Sewage Treatment Work	27 Feb, 2009	Present	Vaisala	1°19.95	103°45.30
36	Woodleigh Filter	1 Dec, 2000	Mar, 2010	Hellmann	1°20.29	103°51.94
	Woodleigh Filter	19 Jul, 2009	Present	Vaisala	1°20.26	103°51.97
40	Singapore Orchid's	16 Oct, 1965	7 May, 1987	Tilting	1°24.40	103°47.00

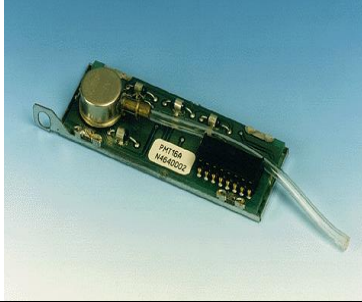
Station Number	Location	Operational Period		Instruments	Lat.(N)	Long. (E)
	Singapore Orchid's	8 May, 1987	31 Mar, 2010	Hellmann	1°24.40	103°47.00
	Singapore Orchid's	11 Dec, 2009	Present	Vaisala	1°24.40	103°46.99
43	Upper Air Observatory	1 Apr, 1962	31 Dec, 2011	Tilting	1°20.44	103°53.29
	Upper Air Observatory	28 Apr, 2011	Present	Vaisala	1°20.44	103°53.29
44	Nanyang Technical University	1 Apr, 1967	31 Dec, 1971	Tilting	1°20.71	103°41.00
	Nanyang Technical University	1 Jan, 1972	31 Aug, 2009	Hellmann	1°20.71	103°41.00
	Nanyang Technological University	17 Mar, 2009	Present	Vaisala	1°20.71	103°41.00
46	Singapore Golf Club	1 Sep, 1967	3 Mar, 1978	Natural	1°20.50	103°48.64
	Singapore Golf Club	4 Mar, 1978	31 Mar, 2010	Hellmann	1°20.50	103°48.64
	Singapore Golf Club	21 Jan, 2010	Present	Vaisala	1°20.49	103°48.65
50	Singapore Boy's Home	1 Nov, 1968	31 Aug, 1973	Tilting	-	-
	Singapore Boy's Home	1 Sep, 1973	31 Oct, 1994	Hellmann	-	-
	Ngee Ann Polytechnic	1 Nov, 1994	30 Jun, 2010	Hellmann	1°19.91	103°46.57
	Ngee Ann Polytechnic	14 Apr, 2010	Present	Vaisala	1°19.91	103°46.57
55	Trafalgar Station	12 Apr, 1973	30 Aug, 1979	Tilting	1°23.00	103°54.00
	Trafalgar Station	31 Aug, 1979	24 Mar, 1997	Hellmann	1°23.00	103°54.00
	Woodbridge Hospital	25 Mar, 1997	3 Jan, 2010	Hellmann	1°23.01	103°53.16
	Woodbridge Hospital	6 Nov, 2008	Present	Vaisala	1°23.02	103°53.16
60	Sentosa Telecom Station	1 May, 1972	15 Jan, 1976	-	1°14.87	103°50.18
	Sentosa Telecom Station	16 Jan, 1976	31 Dec, 1980	Tilting	1°14.87	103°50.18
	Sentosa Telecom Station	1 Jan, 1981	1 Apr, 2010	Hellmann	1°14.87	103°50.18
	Sentosa	4 Mar, 2010	Present	Vaisala	1°15.02	103°49.65
61	Opera Estate	1 Jan, 1976	31 Dec, 1981	Tilting	1°19.00	103°55.00
	Chai Chee Pumping Station	1 Jan, 1982	21 Oct, 1987	Hellmann	-	-
	Chai Chee Complex	22 Oct, 1987	4 Apr, 2010	Hellmann	1°19.38	103°55.30
	Ping Yi Secondary School	15 Dec, 2009	Present	Vaisala	1°19.63	103°55.24
63	International Road Pumping Station	1 Nov, 1976	17 Aug, 1982	Tilting	1°19.65	103°42.25
	International Road Pumping Station	18 Aug, 1982	3 Nov, 2009	Hellmann	1°19.65	103°42.25
	International Road Pumping Station	24 Mar, 2009	Present	Vaisala	1°19.65	103°42.25
64	Bukit Panjang Sewage Treatment Work	28 Nov, 1977	30 Nov, 1984	Tilting	-	-
	Bukit Panjang Telephone Exchange	1 Dec, 1984	31 Mar, 2010	Hellmann	1°22.94	103°45.64
	Bukit Panjang Telecom	7 Dec, 2009	Present	Vaisala	1°22.94	103°45.64
66	Kranji Reservoir	1 Jan, 1978	2 Nov, 2009	Hellmann	1°26.32	103°44.16
	Kranji Reservoir	23 Oct, 2008	Present	Vaisala	1°26.32	103°44.16
71	Kent Ridge Met. Station	1 Oct, 1980	11 Apr, 1984	Tilting	1°18.10	103°46.42
	Kent Ridge Road	12 Apr, 1984	3 Jan, 2010	Hellmann	1°17.54	103°46.89
	Kent Ridge Road, CRISP	24 Mar, 2009	Present	Vaisala	1°17.54	103°46.89
72	Prince Edward Road	1 Jul, 1982	Present	Hellmann	1°16.43	103°50.89
	Prince Edward Road	27 Jan, 2010	Present	Vaisala	1°16.43	103°50.89
77	Clarence Lane Pumping Station	1 Jan, 1980	23 Apr, 1990	Tilting	1°17.40	103°48.90
	Clarence Lane Pumping Station	24 Apr, 1990	14 Dec, 1998	Hellmann	1°17.40	103°48.90
	MOE Kay Siang Road	15 Dec, 1998	1 Apr, 2010	Hellmann	1°17.10	103°48.80
	Queenstown Secondary School	23 Nov, 2009	Present	Vaisala	1°17.62	103°48.76
78	Poole Road	1 Jul, 1977	24 Aug, 1984	Tilting	1°18.42	103°53.44
	Poole Road	25 Aug, 1984	4 Jan, 2010	Hellmann	1°18.42	103°53.44
	Poole Road Pumping Station	24 Sep, 2008	Present	Vaisala	1°18.42	103°53.44
79	Power Building Somerset/ Triple One	1 Sep, 1984	Present	Hellmann	1°18.02	103°50.23
	Triple One Somerset Building	24 Mar, 2011	Present	Vaisala	1°18.02	103°50.23
81	Punggol Port Road	1 Jun, 1986	31 Dec, 2002	Hellmann	1°24.40	103°55.10
	Punggol 17 th Ave	1 Jan, 2003	28 Feb, 2010	Hellmann	1°25.00	103°54.32
	Punggol Secondary School	4 Jun, 2009	Present	Vaisala	1°24.17	103°54.57
82	Tuas Incinerator	1 Aug, 1986	1 Jul, 2010	Hellmann	1°19.48	103°38.11

Station Number	Location	Operational Period		Instruments	Lat.(N)	Long. (E)
	Tuas Incinerator	3 Mar, 2009	Present	Vaisala	1°19.49	103°38.11
89	Tuas Fire Station	1 Jan, 1999	14 Sep, 2010	Hellmann	1°19.19	103°39.68
	Tuas Fire Station	2 Oct, 2008	Present	Vaisala	1°19.19	103°39.68
90	CCAB Bukit Timah Road	1 Jun, 1995	2 Nov, 2009	Hellmann	1°19.15	103°49.16
	CCAB Bukit Timah Road	3 Mar, 2009	Present	Vaisala	1°19.15	103°49.16
91	Yishun Ave 5	1 Jul, 1995	1 Oct, 2009	Hellmann	1°25.80	103°49.84
	Yishun Ave 5	19 May, 2009	Present	Vaisala	1°25.80	103°49.84
92	NACLI, South Buona Vista	1 Sep, 1995	Present	Hellmann	1°17.05	103°47.33
	NACLI, South Buona Vista	2 Mar, 2009	Present	Vaisala	1°17.05	103°47.33
94	Pasir Ris Street 51	1 Feb, 1999	1 Jul, 2010	Hellmann	1°21.97	103°57.17
	Coral Secondary School	18 Mar, 2010	Present	Vaisala	1°22.08	103°56.94

Table 7: Locations and instruments of the Manual Rainfall Stations

Annex 3 Instruments of the Automatic Weather Station

MSS employs an array of sensors and instruments that measures and records different meteorological parameters. These include radiation shield sensor, ultrasonic wind sensor, temperature and humidity sensor, electronic tipping bucket rain gauge, and pressure sensor. Information recorded by these sensors is transmitted wirelessly to the Main Meteorological Office located at terminal building of the Changi International Airport.

Instruments	General Specifications	Reference Picture
Vaisala Rain Gauge RG13	• Contact closure every 0.2 mm • Constant flow rate from siphoning device at base of funnel • Area of aperture 400 cm²	
Vaisala HMP45A and HMP45D Relative Humidity and Temperature Probes, Vaisala HUMICAP® Sensor	• Measurement range from -39.2 to 60 °C and 0.8 to 100% RH • Output scale from -40 to 60 °C and 0 to 100 % RH • Uncertainty at 20 °C is ± 0.2 °C, $\pm 2\%$ RH for 0 to 90 % RH and $\pm 3\%$ RH for 90 to 100 % RH	
Vaisala DTR503 Radiation Shield	• 12 plate plastic shield to house humidity and temperature sensors • White outer surface, black inner surface	
Vaisala WMT50 Ultrasonic Wind Sensor	• Measuring range from 0 to 60 m/s • Response time 0.25 s • Accuracy (0 to 35 m/s) ± 0.3 m/s or $\pm 3\%$, whichever is greater • Accuracy (35 to 60 m/s) $\pm 5\%$ • Accuracy (wind direction) $\pm 3\%$	
Vaisala PMT16A Pressure Sensor	• Measurement range from 600 to 1100 hPa • Total uncertainty ± 0.3 hPa	

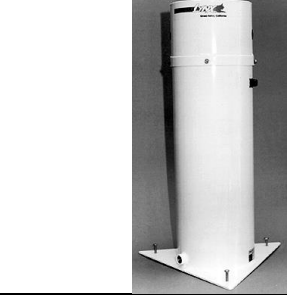
Kipp & Zonen CNR 1 Net Radiometer	- Measures short and long-wave radiation - Response time less than 18 seconds - Daily uncertainty $\pm 10\%$	
Kipp & Zonen CUV 4 Broadband UV Radiometer	- Spectral range 305 to 385 nm - Response time less than 1 second - Maximum irradiance 100 W/m²	
Middleton Solar UVR1-B Narrow-band UV-B global spectral radiometer	- Spectral range 280 to 315 nm - Response time less than 0.5 second	
Vaisala CL31 Celiometer	- Measurement range from 0 to 7.5 km - Measurement cycle adjustable between 2 and 120 seconds - Reporting resolution in 5 m	
Vaisala FD12 Visibility Meter	- Measurement range from 10 to 50000 m - Instrument uncertainty $\pm 4\%$	
Nova Lynx Model 255-100 Analog Output Evaporation Gauge	- Measurement range from 0 to 10 inches - Reporting resolution in 0.01 inches - Uncertainty $\pm 0.25\%$	

Table 8: Current list of instruments in use in MSS