

KINGDOM OF BAHRAIN  
Ministry of Transportation  
and Telecommunications



مملكة البحرين  
وزارة المواصلات والاتصالات

# **METEOROLOGICAL DIRECTORATE CLIMATE SECTION**

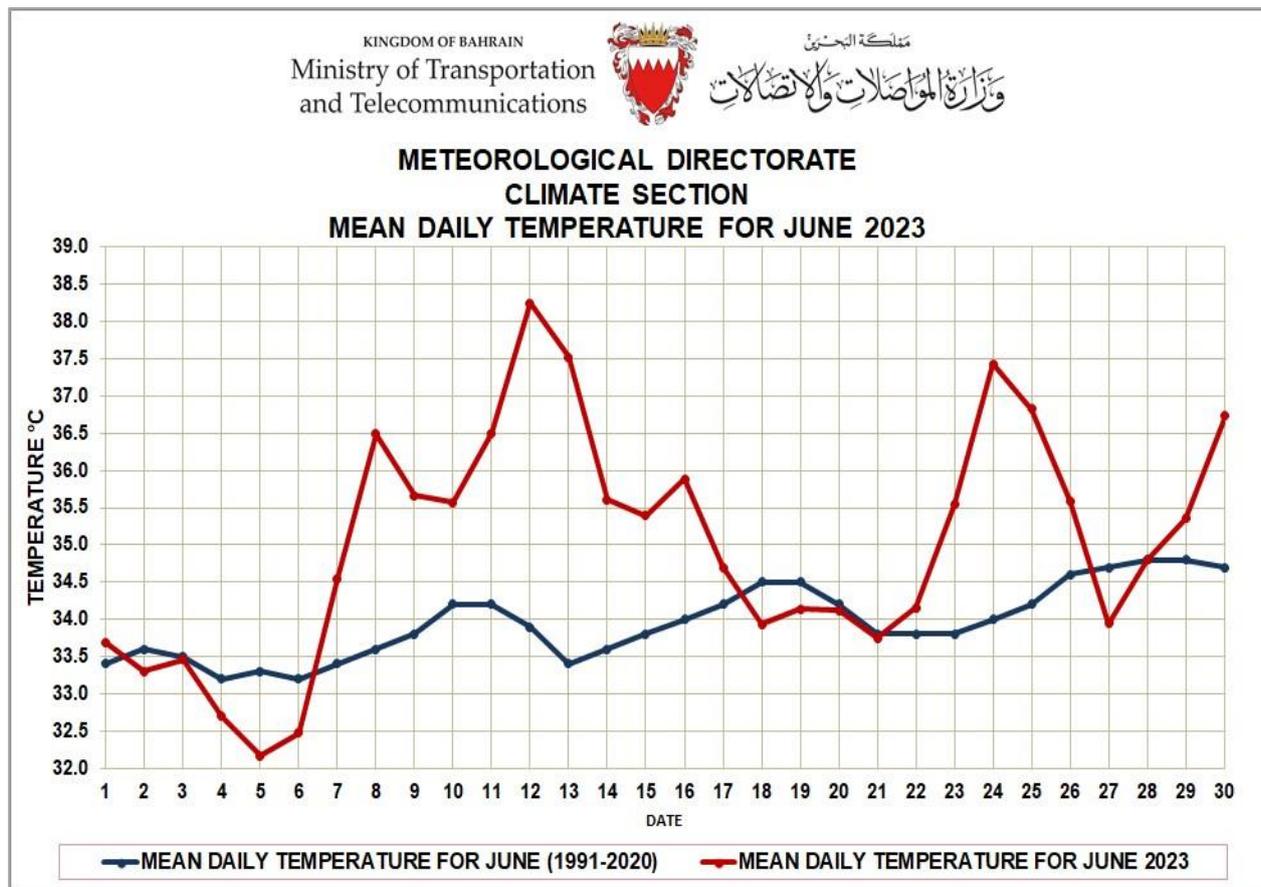
## **MONTHLY CLIMATE SUMMARY JUNE 2023**

# METEOROLOGICAL DIRECTORATE CLIMATE SECTION

## MONTHLY WEATHER SUMMARY – JUNE 2023

### GENERAL

June 2023 was warmer than normal in temperatures with above average wind speed.



The mean temperature of the month was 35.0°C which is 1.0°C above the long-term normal for June and this goes on record as the fifth highest mean temperature for June since 1902. Note that the highest mean monthly temperature for June was 36.3°C recorded in 2019.

The mean maximum temperature of the month was 39.0°C which is 0.4°C above the long-term normal and this goes on record as the eighth highest mean maximum temperature for June since 1946. This is the same as in June for the years 2020, 2012, 2010, 2008, and 1997. Note that the highest mean monthly maximum temperature for June was 40.9°C recorded in 2019.

During the month Bahrain had 9 days with a maximum temperature exceeded 40°C. The highest temperature recorded during the month was 45.8°C which occurred on the 12<sup>th</sup> June at Bahrain International Airport and this goes on record as the fourth highest temperature for June since 1946 at Bahrain International Airport. This is the same as the 3<sup>rd</sup> June 2008 and exceeded by the 21<sup>st</sup> June 2022 and 20<sup>th</sup> June 2010 which were 46.6°C, the 19<sup>th</sup> June 2010 which was 46.2°C, and the 3<sup>rd</sup> June 2018 which was 45.9°C.

The highest temperature recorded in the month at Bahrain International Circuit was 48.1°C, at Durrat Al Bahrain was 47.4°C and at the University of Bahrain was 47.0°C which were recorded on the 12<sup>th</sup> June 2023.

The mean minimum temperature of the month was 31.5°C which is 1.5°C above the long-term normal and this goes on record as the fourth highest mean minimum temperature for June since 1946. Note that the highest mean monthly minimum temperature for June was 32.4°C recorded in 2018.

The lowest temperature recorded was 28.1°C on the 4<sup>th</sup> June at Bahrain International Airport but was recorded 25.6°C on the same night at Durrat Al Bahrain.

The mean relative humidity for June was 41% whereas the mean maximum relative humidity was 60% and the mean minimum relative humidity was 25%. The maximum relative humidity was 83% recorded on the 27<sup>th</sup> June and the minimum relative humidity was 9% recorded on the 12<sup>th</sup> June.

June 2023 was the second sunniest month for all June's since the sunshine records began in 1968. The total hours of sunshine for the month were 373.0 hours. Note that the highest monthly total hours of sunshine for June was 374.8 hours recorded in 2020.

The Mean wind speed for June was 10 knots. The prevailing wind was 54% from the Northwest direction. Gust winds reached 32 knots on the 14<sup>th</sup> June at Bahrain International Airport but recorded 36 knots on the 14<sup>th</sup> and 15<sup>th</sup> June at Bahrain International Circuit. This was due to the seasonal Indian low developed over Northern India, central and southern parts of Pakistan and extended into the Arabian Gulf leading to Northwesterly winds which are known locally as (Al-Barreh) and established on the 30<sup>th</sup> May and continued through June with only short breaks on a few days. The Easterly to Southeasterly winds accounted for 5% of the observation.

Dust was reported on the 4<sup>th</sup> June. Visibility dropped to 3000 meters at Bahrain International Airport.

### **TEMPERATURES (DRY-BULB)**

The mean temperature of the month was 35.0°C. This was 1.0°C above the long-term normal. The mean maximum temperature was 39.0°C which is 0.4°C above the long-term normal. The mean minimum was 31.5°C which is 1.5°C above the long-term normal. The highest temperature was 45.8°C which was recorded on the afternoon of the 12<sup>th</sup>. The lowest was 28.1°C which was recorded on the 4<sup>th</sup>.

### **APPARENT TEMPERATURE**

The mean apparent temperature was 37.2°C. This is 0.2°C above the long-term normal. The mean maximum apparent temperature was 41.1°C. This is 2.7°C below the long-term normal. The highest apparent temperature was 45.5°C which occurred on the 8<sup>th</sup> and 27<sup>th</sup>.

### **HUMIDITY**

The mean monthly relative humidity was 41%. This was 5% below the long-term normal. The mean maximum was 60% which is 6% below the long-term normal. The mean minimum was 25% which is 3% below the long-term normal. The absolute maximum was 83% recorded on the 27<sup>th</sup>. The absolute minimum was 9% recorded on the 12<sup>th</sup>.

## **WINDS**

The mean monthly wind speed was 10.1 knots prevailing from the Northwest direction. The long-term average wind speed for June is 9.9 knots. The highest gust was 32 knots which occurred on the 14<sup>th</sup> June.

## **PRECIPITATION & STATE OF SKY**

No precipitation was reported.

Few to Scattered clouds were reported during the month. Broken clouds were reported in 2 days and 16 days in June 2023 had clear skies.

## **SUNSHINE**

The mean daily sunshine was 12.4 hours. This is 0.9 hours above the long-term normal. The highest day with sunshine was 12.9 hours which occurred on the 29<sup>th</sup> June.

## **VISIBILITY**

Visibility was generally good. It fell below 10 km in 10 days and below 5 km in 1 day. The lowest visibility was 3000 meters due to Dust on the 4<sup>th</sup> June at Bahrain International Airport.



METEOROLOGICAL DIRECTORATE  
CLIMATE SECTION

Bahrain Int. Airport (Lat 26.16N Long 50 39E Height 2m)

CLIMATOLOGICAL SUMMARY: JUNE 2023

Day	Temperatures (°C)									Relative Humidity (%)			Pressure (hPa)			Evap (mm)	Wind (knot)				Gust (knot)		Sun (Hrs)	Rain (mm)
	Dry Bulb			Wet Bulb			Apparent			Max	Min	Mean	Max	Min	Mean		Prvln drn	Mean spd	Max drn	Max spd	Max			
	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min							Max					Min	Max	Min	Max
01-06-2023	33.7	36.4	31.5	23.8	24.7	23.0	35.5	37.6	34.0	55	34	43	1009	1006	1007	21.4	330	13.0	320	18.0	330	25.0	12.1	0.0
02-06-2023	33.3	36.2	30.8	22.8	24.5	21.2	34.3	37.7	31.9	53	27	40	1009	1005	1007	19.3	330	14.3	340	22.0	340	31.0	12.7	0.0
03-06-2023	33.5	36.4	30.5	23.3	24.4	21.9	34.9	37.7	32.6	52	34	41	1006	1004	1005	19.3	300	13.4	320	23.0	310	30.0	12.5	0.0
04-06-2023	32.7	36.8	28.1	23.6	26.2	20.9	34.4	37.2	31.9	81	26	48	1006	1003	1004	14.2	300	8.2	320	15.0	320	21.0	12.3	0.0
05-06-2023	32.2	36.3	28.5	25.4	27.7	22.1	36.1	40.3	30.9	82	36	58	1005	1003	1004	14.6	060	6.2	320	12.0	320	17.0	12.5	0.0
06-06-2023	32.5	37.6	29.1	25.8	27.3	24.0	36.8	40.4	33.4	75	33	59	1007	1004	1005	19.1	360	5.7	310	11.0	360	18.0	12.5	0.0
07-06-2023	34.6	39.9	31.2	24.1	25.9	22.3	36.7	40.9	33.6	56	28	41	1005	1002	1004	14.6	330	8.4	320	15.0	320	22.0	12.5	0.0
08-06-2023	36.5	45.2	32.5	24.2	28.0	21.0	38.6	45.5	33.6	68	12	38	1004	1001	1003	15.0	240	6.2	090	12.0	080	20.0	11.9	0.0
09-06-2023	35.7	40.4	32.1	23.7	26.6	19.7	37.1	39.9	34.6	59	13	37	1002	1000	1001	18.3	330	7.5	320	12.0	330	18.0	12.1	0.0
10-06-2023	35.6	38.4	32.1	24.1	25.6	22.0	37.7	41.8	33.6	47	32	37	1001	999	1000	18.4	300	10.5	320	18.0	320	24.0	12.7	0.0
11-06-2023	36.5	39.8	32.5	23.7	27.3	20.6	37.9	42.5	33.2	65	25	33	1001	997	999	14.9	330	7.3	320	14.0	320	20.0	12.2	0.0
12-06-2023	38.3	45.8	32.5	23.9	27.4	21.1	39.1	44.3	36.0	65	9	32	1000	997	998	15.1	300	5.6	300	8.0	050	15.0	11.9	0.0
13-06-2023	37.5	41.8	33.6	24.3	26.4	21.5	39.1	41.3	36.1	51	15	33	1000	997	999	16.5	330	7.3	310	12.0	330	16.0	12.0	0.0
14-06-2023	35.6	38.0	33.8	24.8	26.2	23.1	39.0	41.6	36.2	52	30	40	1001	997	999	24.6	330	19.7	310	24.0	330	32.0	12.5	0.0
15-06-2023	35.4	37.6	33.3	24.9	26.4	22.0	39.0	43.0	35.1	52	29	42	1000	997	998	20.9	330	16.4	330	24.0	320	31.0	11.8	0.0
16-06-2023	35.9	40.4	32.5	23.8	25.7	21.4	37.3	41.6	35.2	52	19	36	1000	997	999	18.0	300	11.7	320	18.0	320	24.0	12.4	0.0
17-06-2023	34.7	37.8	31.3	24.0	26.3	20.9	36.8	41.9	33.4	65	27	41	1001	999	1000	17.7	330	13.1	330	20.0	320	26.0	12.7	0.0
18-06-2023	33.9	38.2	30.4	24.2	26.6	22.3	36.2	38.8	33.5	72	30	45	1002	999	1000	15.6	330	8.1	320	16.0	320	23.0	12.7	0.0
19-06-2023	34.1	38.0	31.0	24.3	25.9	23.6	36.4	40.0	33.9	66	32	44	1002	999	1001	17.8	330	11.7	360	19.0	350	30.0	12.6	0.0
20-06-2023	34.1	37.4	30.9	24.7	25.8	23.3	37.0	41.3	34.0	60	33	46	1001	999	1000	18.9	330	12.6	350	19.0	340	27.0	12.5	0.0
21-06-2023	33.8	36.5	31.0	24.8	25.9	23.5	36.7	40.2	34.4	63	35	47	1002	1000	1001	19.5	330	13.3	320	19.0	330	26.0	12.7	0.0
22-06-2023	34.2	36.9	31.9	25.0	25.9	23.6	37.4	40.9	35.6	60	38	47	1002	1000	1001	18.9	330	12.9	320	19.0	320	27.0	12.6	0.0
23-06-2023	35.5	39.0	31.7	24.0	26.0	20.8	37.5	41.3	34.3	54	25	38	1002	999	1001	18.1	300	10.6	310	16.0	320	23.0	12.4	0.0
24-06-2023	37.4	40.2	34.2	23.0	25.4	20.1	38.0	42.0	34.2	39	18	28	1001	997	999	15.1	330	10.5	330	18.0	320	24.0	12.4	0.0
25-06-2023	36.8	40.3	33.3	23.6	25.3	19.7	38.1	42.3	34.5	46	18	32	999	996	997	17.9	300	12.2	330	20.0	330	26.0	12.6	0.0
26-06-2023	35.6	40.8	31.9	23.4	26.2	20.1	36.6	39.0	34.8	60	14	36	998	996	997	12.6	270	7.8	330	16.0	330	22.0	12.4	0.0
27-06-2023	33.9	38.3	29.5	26.3	28.5	20.5	39.7	45.5	33.2	83	19	56	999	996	998	13.7	090	5.5	100	14.0	100	19.0	12.4	0.0
28-06-2023	34.8	39.6	30.4	24.3	26.7	20.9	37.1	41.9	33.6	73	23	42	1002	999	1001	13.7	360	7.1	330	14.0	320	17.0	12.8	0.0
29-06-2023	35.4	39.8	31.6	23.6	26.5	21.4	36.9	43.2	33.1	52	20	37	1002	998	1000	16.4	270	8.3	320	14.0	340	19.0	12.9	0.0
30-06-2023	36.7	40.9	32.6	22.3	25.6	19.7	36.8	42.0	32.7	40	15	27	1001	996	998	15.5	300	8.1	330	14.0	310	18.0	12.7	0.0
Prevailing wind																	330	Total				373.0	0.0	
Mean	35.0	39.0	31.5	24.1	26.2	21.6	37.2	41.1	33.9	60	25	41	1002	999	1001	17.2		10.1	308	16.5		23.0	12.4	0.0
Max	38.3	45.8	34.2	26.3	28.5	24.0	39.7	45.5	36.2	83	38	59	1009	1006	1007	24.6	330	19.7	360	24.0	330	32.0	12.9	0.0
Min	32.2	36.2	28.1	22.3	24.4	19.7	34.3	37.2	30.9	39	9	27	998	996	997	12.6	090	5.5	90	8.0	050	15.0	11.8	0.0



METEOROLOGICAL DIRECTORATE  
CLIMATE SECTION

Bahrain Int. Airport (Lat 26.16N Long 50 39E Height 2m)

MONTHLY CLIMATOLOGICAL SUMMARY: JUNE 2023

Element	Value	Dates
<b>TEMPERATURE (°C)</b>		
Mean	35.0	
Daily Average Max	39.0	
Daily Average Min	31.5	
Absolute Max	45.8	12
Absolute Min	28.1	4
Wet Bulb - Mean Daily Max	26.2	
Wet Bulb - Absolute Max	28.5	27
Ground Min - Daily Average	29.6	
Mean Apparent	37.2	
Absolute Max Apparent	45.5	8, 27
<b>RELATIVE HUMIDITY (%)</b>		
Mean	41	
Mean Max	60	
Absolute Max	83	27
Mean Min	25	
Absolute Min	9	12
<b>WIND SPEED (knots)</b>		
Prevailing Wind	330	
Mean	10	
Daily Average Max	17	
Absolute Max	24	14, 15
Highest Gust	32	14
<b>PRECIPITATION (mm)</b>		
Total	0.0	
24 Hour Max	0.0	
<b>SEA LEVEL PRESSURE (hPa)</b>		
Mean	1001.0	

Element	Value	Dates
<b>VAPOUR PRESSURE (hPa)</b>		
Mean	23.2	
<b>SUNSHINE (hours)</b>		
Total	373.0	
% of Possible Max	90.2%	
Daily Average	12.4	
24 Hour Max	12.9	29
<b>EVAPORATION (mm)</b>		
Total	515.6	
Daily Average	17.2	
24 Hour Max	24.6	14
<b>CLOUD (okta)</b>		
Mean Low Cloud	0.0	
Max 24 hour Low Cloud	0.0	OFTEN
Mean Total Cloud	0.3	
Max 24 hour Cloud	2.6	
<b>VISIBILITY DAYS</b>		
FOG (<=1000m)	0	
DUST, SMOKE, SAND, RAIN, DRIZZLE, HAIL (<1000m)	0	
<b>WEATHER DAYS</b>		
Cloud - 1/8 or more	8	
Cloud - 4/8 or more	0	
RAIN - including Trace	0	
- 1mm or more	0	
HAIL	0	
THUNDERSTORM	0	
SANDSTORM	0	



METEOROLOGICAL DIRECTORATE  
CLIMATE SECTION

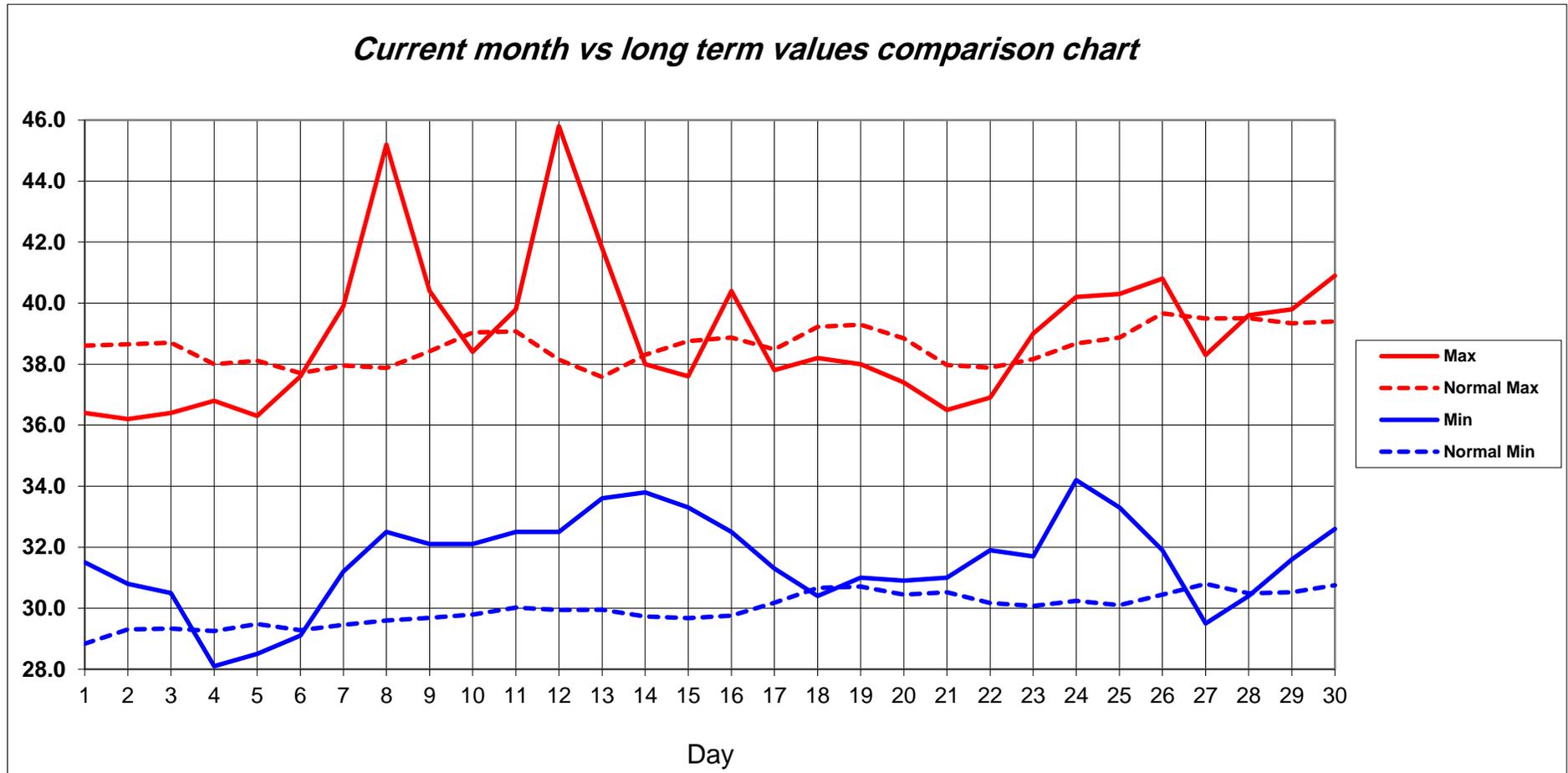
**Station:** Bahrain Int. Airport  
**WMO index:** 41150  
**Date:** JUNE 2023

**Latitude:** 26.16N  
**Longitude:** 50 39E  
**Elevation:** 2

Daily Maximum of Daily maximum temperature & Daily Minimum of Temperature Min [deg. C]

Normal Max: 1991 - 2020, 30 years

Normal Min: 1991 - 2020, 30 years

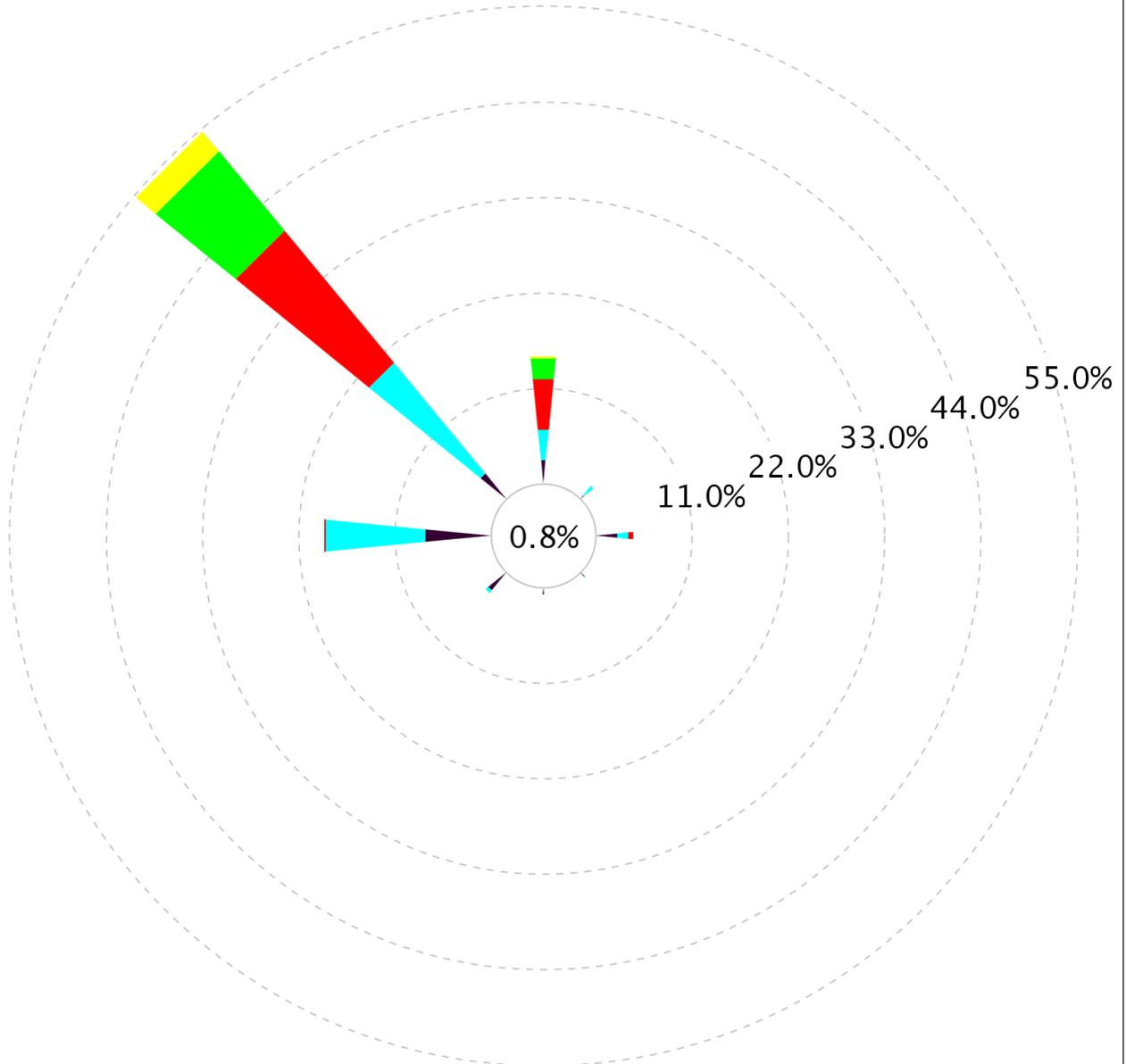




METEOROLOGICAL DIRECTORATE  
CLIMATE SECTION

# Bahrain Int. Airport

## June 2023



Calm [Knots]  
<1 1 5 10 15 20 25 30 35 40 45

Mean speed: 10.1 Knots

No. of obs.: 720 / 720

Wind Group: wind

Data Source: Climatic observation