

DUBAI: CLIMATE.

Met. Info. from Dubai Airport.

Tuesday Oct. 2 / 73 06:00 to Oct 3 / 73 06:00

	wind Direction	Velocity ~~knots~~	Pressure	WB	DB	~~WB~~	RH
6:00	100 ESE	10 10	08.1	21.5	36.8	~~18.5~~	21
7:00	80 ~~ESE~~	15 10	08.0	21	36.0	~~18.5~~	17
8:00	80	12 10	07.3	21	39.0	~~18.0~~	15
9:00	80 E	10 5	06.6	20.5	40.0	~~17.0~~	11
10:00	80	18 5	06.1	18	40.0	~~17.0~~	~~41~~
11:00	60 ENE	12 7	05.8	18.4	40.0	~~24.2~~	05
12:00	60	12 10	05.8	18.5	39.0	~~24.5~~	07
13:00	50 NE	10 10	06.0	18.8	38.1	~~24.0~~	09
14:00	70	12 10	06.1	18.5	36.0	~~24.1~~	12
15:00	70	12 10	06.5	18	34.0	~~20.5~~	15
16:00	70	10 12	07.1	16.4	33.5	~~18.0~~	10
17:00	60	5 10	07.4	15.2	29.0	~~18.4~~	15
18:00	60	5 10	07.6	14.2	26.8	~~18.5~~	17
19:00	60	5 10	07.3	14.0	26.5	~~18.8~~	17
20:00	20 NNE	6 10	06.9	13.5	24.5	~~18.8~~	22
21:00	20	6 10	07.2	13	24.0	~~18.0~~	21
22:00	30	6 10	07.1	13	25.0	~~16.4~~	17
23:00	30	4 10	07.3	13.4	24.1	~~15.2~~	22
24:00	60 ENE	5 10	7.6	13.0	23.0	~~14.2~~	24
1:00	40 NE	5 10	8.1	13.0	23.0		24
2:00	50	5 10	8.9	13.0	22.0		29
3:00	150 SE	6 10	9.9	13.7	23.7		26
4:00	120	5 10	10.9	17.0	28.0		28
5:00	150	5 10	11.1	20.0	32.5		28
6:00	90 E	6 10	11.2	20.5	35.0		22

DUBAI. CLIMATE. ?

Generally during the summer months - true for most of year, at night - low to no wind speed at night from 19:00 to ~~02:00~~ 02:00.

early morning wind low from the east 7 k. untill 07:00

after 07:00 change to NW wind velocity 11 k.

between 14:00 - 16:00 changes to NE. 9 k

about 17:00 - 18:00 velocity drops. to calm at midnight then picks up again at 02:00.

DUBAI. CLIMATE. ?

Hourly Wind Direction: Sat. 15th Sept. 1973.

6.00 SE 140/12	12	—	S 180/08
7 SW 200/12	6	E 100/05	SSW 210/06
8 W 280/12	8	N 360/05	SSW 240/09
9 NW 310/12	12	N 350/12	SW 230/10
10 NW 320/12	12	NNW 330/15	WSW 240/15
11 NNW 330/12	18	NNW 330/17	WSW 250/15
12 NNW 340/12	12	NNW 330/14	W 270/15
13 NNW 340/12	12	NNW 340/14	WSW 250/10
14 N 350/12	10	NNW 330/10	NNW 290/10
15 N 360/10	7	N 360/10	NW 320/05
16 NNE 030/10	5	N 010/07	NW 320/05
17 .. 020/10	6	NE 050/08	—
18 N 350/10	5	NNW 340/06	SSW 210/05
19 NNE 030/10	5	—	SSW 200/06
20 SSE 160/10	4	—	—
21 N 350/10	6	—	S 180/07
22 N 350/10	10	—	S 180/06
23 E 080/10	8	—	S 180/07
24 E 090/10	8	—	SSE 160/05
25 ESE 120/10	2	—	SE 160/07
2 —	—	—	SSE 160/07
3 —	—	—	SSE 150/05
4 SE 140/10	5	SSE 160/05	SSW 200/05
5 S 180/10	18	SSE 170/12	S 180/08
6 S 170/10	17	S 180/10	SW 230/05

Sept 15

Aug 15

June 21

METEOROLOGICAL DATA DUBAI AIRPORT

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	REMARKS
Average rainfall in M/M (1950-1960).	29	17	7	12	6	Tr- ce	1	Tr- ce	Tr- ce	1	11	19	(1) Sharjah rainfall figure (2) Trace = less than 0.5M/M
Wettest day recorded during period 1950-1960.	51	39	24	97	67	Tr- ce	12	24	5	19	74	75	(1) In M/M.
Percentage (%) average humidity	88	80	83	75	79	86	81	83	87	88	77	85	Sharjah figures
Period 1966/1969	54	58	43	41	36	45	42	42	42	45	41	50	Sharjah figures
Temperature	23	24	27	30	34	36	38	39	37	33	31	25	Dubai figures, centigrade.
Mean daily max and min	12	14	15	19	22	25	28	28	25	21	18	13	Dubai figures, centigrade.
Monthly mean pressure in millibars	1018	1017	1014	1011	1008	1001	997	998	1002	1011	1015	1018	Dubai figures
At times of Max and Min temperature.	1019	1017	1014	1010	1006	1001	997	998	1003	1001	1016	1018	Dubai figures

NOTE 1. Sources of information (1) A.I.P Bahrain (Department of Trade and Industry Aeronautical Information service 7/1/71.)

(2) Meteorological office RAF Sharjah (where data for Dubai not available.)

B.P./M.J.

B.J. Plimmer
SATCO
for Manager.

MONTH/ YEAR.	TEMPERATURE			RAIN FALL		MAX WIND		
	MAX	MIN	AV	DATE	M.M	DATE	DIR/SPEED	
1971.				22, 23				
JANUARY.	28	09	24	29, 31	TRACE	26TH	360/28	RISING SAND
FEBRUARY.	33	09	25	14, 15TH	1.25	13TH	150/35	SAND STORM
MARCH.	35	12	27	22, 23	TRACE	23RD	300/31	RISING SAND
APRIL.	43	15	31	8, 9 11, 15	1.9	14TH	030/30	SAND STORM
MAY	41	15	35			18TH	310/25	SAND STORM
JUNE.	44	21	37			6TH	270/45	SAND STORM
JULY.	47	25	41			9TH	210/24	RISING SAND
AUGUST.	41	27	39			22ND	070/30	RISING SAND
SEPTEMBER.	43	20	39			24TH	010/32	SAND STORM
OCTOBER.	38	17	34			12TH	020/23	DUST HAZE
NOVEMBER.	34	15	30	9, 11TH	18.0	11TH	350/30	SAND STORM & HEAVY RAIN
DECEMBER.	30	11	26	20, 25 30TH	1.4	20TH	310/35	RISING SAND
1972.					~~21.2~~			
JANUARY.	30	09	24	12, 25 29, 30	14.6	26TH	160/30	RISING SAND, THUNDER STORM & HEAVY RAIN
FEBRUAR.	28	08	23	1, 3 11TH	1.4	21ST	270/40	RISING SAND
MARCH	35	12	26	9, 10, 14 15, 16, 17, 18	104.6	10TH	330/45	RISING SAND, HEAVY RAIN THUNDER STORM
APRIL.	35	15	30	22, 24 25TH	60.8	24TH	270/35	HEAVY RAIN
MAY.	42	18	35			10TH	210/30	RISING SAND
JUNE.	44	23	38			28TH	020/26	DUST HAZE
JULY.	46	26	39			2ND	080/30	RISING SAND
AUGUST.	47	25	39			9TH	360/30	RISING SAND
SEPTEMBER.								

ORLY INTERNATIONAL AIRPORT

	TEMPERATURE			RAIN		FALL	MAX	WIND	
	MAX	MIN	AV	DATE	M.M.				
1967. 1967									
January.									
February.									
March.									
April.									
May.									
June.									
July.									
August.	45	43	37	37		26th	010/19		
September.	43	41	35	37		13th	170/25		
October.	40	40	17	34		3rd	230/20		
November.	33	33	17	30		26th	300/20		
December.	29	29	10	24		26th	270/25		
1968. 1968									
January.	27	27	07	23	50th	2.5	26th	180/23	
February.	27	27	00	23	23rd	22.9	23rd	310/20	
March.	34	34	11	38			26th	040/25	
April.	30	39	14	30	2, 26th	Trace	27th	070/25	
May.	41	41	14	34			27th	270/25	
June.	40	40	22	35			26th	320/20	
July.	44	46	26	39			26th	310/20	
August.	46	48	25	39			25th	340/25	
September.	42	42	23	36			18th	380/18	
October.	29	39	10	34			19th	350/18	
November.	34	34	12	30			18th	320/25	
December.	31	31	15	27	9th	10.1	320/25		
1969. 1969									
January.	30	30	10	34	3, 5, 5, 6, 7, 8, 9	102.0	25th	330/35	
February.	27	27	10	32	14, 22	2.0	3rd	380/34	
March.	40	40	14	31			15th	300/30	
April.	30	39	10	31	5, 6, 7, 8	27.0	13th	230/40	
May.	42	42	10	35			24th	350/20	
June.	43	43	24	37			2nd	010/24	
July.	42	42	26	37			24th	130/22	
August.	43	43	25	39			28th	090/35	
September.	43	43	21	37			14th	030/25	
October.	40	40	20	34	30, 31	35.0	31st	280/30	
November.	31	31	13	28	27, 28	3.0	4th	010/30	
December.	30	32	12	26			12th	330/19	
1970. 1970									
January.	28	28	10	34	8, 12, 17	15.7	12th	180/35	
February.	30	30	11	36	27, 28		16th	330/20	
March.	37	37	11	28			15th	270/25	
April.	41	41	17	33			23rd	310/25	
May.	41	41	19	35			3rd	250/40	
June.	44	44	25	37			2nd	070/25	
July.	43	42	23	39			10th	300/30	
August.	43	43	27	39	22, 23	7.0	22nd	030/35	
September.	41	41	22	37			21st	330/22	
October.	37	37	18	34			16th	340/20	
November.	33	35	18	30			26th	380/20	
December.	30	30	11	26			19th	300/30	

Average rainfall in
M/M (1950-1969).

(1) Sharjah rainfall figures
(2) Trace + less than 0.5m/s

REMARKS

Wettest day recorded during period 1950-1969.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
29	17	7	12	6	Tra- ce	1	Tra- ce	Tra- ce	1	11	19	
51	39	24	97	67	Tra- ce.	12	2.4	5	19	74	75	

(1) In M/M

Percentage (%)
average humidity.

	MAX
G	88 89 83 75 79 86 81 83 87 88 77 85 Sharjah figures

Period 1966/1969.

MIN	54	56	43	41	36	45	42	42	42	45	41	50	Sharjah figures
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Temperature

	Dubal	figures in centigrade.	25	31	33	37	39	38	36	34	30	27	24	23	MAX
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	Max	MIN	Dubai figures
Mean daily	12	14	15
	19	22	28
	25	28	25
	28	21	18
	18	15	15

[illegible]

At times of Max and Min temperature.	MIN	1019	1017	1014	1010	1006	1001	997	998	1003	1001	1016	1018	Dubai figures
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NOTE: 1 Sources of Information (1) A.I.P. Bahrain (Department of Trade and Industry Aeronautical Information Service 7/1/71).

(2) Meteorological office RAF Sharjah (where data for Dubai not available.)

B 3P/NJ.

B. J. Plimmer
SATCO
for Manager.

File Dubai airport

2-3 Coast Room
revised.

LOCAL WEATHER CHARACTERISTICS

SHARJAH

From a meteorological point of view 'IDEAL CONDITIONS' occur during the months October to February, with visibility of the order of 25 to 60 miles, apart from the rather isolated occasions of rising sand or fog. Even instances of unlimited visibility have been recorded on many occasions.

During the months March to September, average visibility is in the region of 10-15 miles, mainly due to heat haze, but again excluding the occasions of rising sand or dust haze.

The average cloud amount for the year is about 2 oktas. November to March are usually cloudier months with cloud amount of the order 3 to 4 oktas. During the months May to October there is little or no cloud.

SANDSTORMS - RISING SAND - DUST HAZE.

Sandstorms, although rather infrequent, can occur in almost any month of the year but, from statistics, are more predominant during the periods January to March and August to October. They are mainly associated with a dry desert wind from the East to South quadrant, with a wind velocity of 18-20 knots or more. The usual duration is 1 to 2 hours, with a period of suspended dust to follow, which may persist for some considerable time.

Rising sand can occur with a fresh wind from almost any direction, but mainly with a wind from the East to South quadrant. However, a strong NW'ly can also stir up loose sand between the sea and the station. The average number of occasions is around 30 days per year. A wind of the order of 17-18 knots is usually sufficient to lift loose sand, depending on the condition of the surface at any particular time. An increase of a further 3-4 knots can bring visibility down to sandstorm limits (less than 1100 yds.). As opposed to a sandstorm, the rising sand can last for a whole day.

Dust haze, or suspended dust, can occur with visibilities as low as two miles or up as far as 12 miles and can usually be detected at the higher limits by a brownish belt around the Southern horizon, extending up to 2000 to 3000 feet. The main months are May to August. The duration is normally one day, but can be more. In May 1958 several days were experienced when visibility almost went down to sandstorm limits, due to a very widespread belt over an area Habbaniyah to Karachi and possibly beyond, and as far South as Masirah.

FOG AND LOW STRATUS.

Early morning fog and/or low stratus occurs mainly in February to April, but one month may make 1 or 2 occasions of fog. The average number of days per year is about 20. Fog usually forms any time between 2200 to midnight, and it normally disperses 1 to 2 hours after sunrise. Low stratus from lifting fog usually burns off very rapidly.

RAINFALL.

Average rainfall is about 117 millimetres, 4.6 inches. The 'rainy' months are generally reckoned as November to March, but the odd thunderstorm in April or May can produce a substantial fall, and produce flooding. For example, between the 7th and 11th of April 1957 there was a fall of 134.4 millimetres, 5.3 ins., and in May of 1963 (2nd to 6th), a fall of 119.0 millimetres, 4.7 ins. On both of these occasions severe flooding was encountered. After a few light showers, when the ground surface has been moistened, a fall of only 10-15 millimetres can be sufficient to make the airfield water-logged, drainage into the ground being virtually nil. A fall of 25 millimetres is considered sufficient to make the sand runways and sand parking areas unserviceable for at least ten days.

HUMIDITY.

High wet-bulb temperatures July to September inclusive often result in extremely trying conditons, and even April, May, June and October can be unpleasant on occasions. On the other hand, the onset of the sea breeze around mid to late morning, whilst increasing the humidity by as much as 30% in 15-30 minutes, can lower the temperature by as much as 10 F in the same space of time, which results in more pleasant conditions. In the summer time, when the sea breeze drops in the late afternoon, conditions once again can become most trying, when even to sit outside in the late evening is most unpleasant. Of course, airconditioning has provided the answer to this.

TEMPERATURE.

The highest temperature recorded in 119 F in the summer of 1962, and the lowest 39 F in January of 1950. These are of course respectively warmer and colder than the average maximum for summer and the average minimum for the winter months.

DISCOMFORT.

For the purpose of determining unpleasant working conditions in hot climates the United States Weather Bureau use a Temperature Humidity Index figure, which is obtained by taking two-fifths of the sum of the wet and dry bulb readings, and adding a constant of 15. On this scale in still air when the index figure reaches 75, they maintain that at least half of the people will be uncomfortable while at 79 few, if any, will be comfortable. When the index figure has reached 86 inside a Federal Building in Washington, everybody may besent home. The following table showing figures for Sharjah over last summer should be of interest to Section Commanders who have personnel working in non-air-conditioned premises or in the open air when there is no wind.

Week Ending	Maximum Dry Bulb	Humidity	Temperature Humidity
	Wet Bulb at time		Index Figure.
7 July	89.5 F 94.7 F	88	88.6
14 "	86.2 92.9	76	86.6
21 "	87.1 93.5	70	88.0
28 "	87.8 95.4	73	88.2
4 Aug	87.9 99.0	61	89.8
11 "	89.7 96.1	77	89.4
18 "	88.8 96.0	74	89.0
25 "	88.4 94.9	77	88.4
1 Sep	88.4 96.0	73	88.8
8 "	85.4 93.0	73	86.4
15 "	84.6 94.6	65	86.6
22 "	85.9 92.0	77	86.2
29 "	85.0 91.8	75	85.8

The average T.H.I for the summer is therefore 87.7 Wet bulb temperatures of 86 F and over are almost standard in the summer months, which is rather trying. In 1957 there were several readings of 91 F. In the main, highest temperatures occur with lowest humidities, the hottest wind being the southerly or southeasterly off the desert.

CLIMATOLOGICAL STATISTICS

1950-1962 (incl)

<u>Temperatures in Deg. Fahrenheit.</u>			<u>Rainfall in Millimetres.</u>	
Mean Max. Temp.	Mean Min. Temp.	Highest Max. Temp.	Lowest Min. Temp.	Aver.Monthly Rainfall.

Jan	74	56	91	39	28.7
Feb	75	56	98	40	13.6
Mar	82	62	104	48	8.8
Apr	88	65	107	53	17.1
May	94	71	112	60	0.5
June	98	76	113	66	N11
July	102	82	119	71	1.5
Aug	103	81	117	72	N11
Sep	99	78	113	64	0.5
Oct	93	70	104	61	0.1
Nov	85	63	97	50	14.7
Dec	78	57	90	45	23.6

WINDS

A NW'y sea breeze sets in daily mid to late morning (except in cyclonic conditions). The prevailing wind is SE'y early morning (land breeze from the desert), veering W to NW, percentages being 30% and 60% of all directions.

From December to February the average speed is 7-10 knots but subject to occasional presence of disturbed weather giving SE winds in advance of depressions and SW to NW in the rear.

March to May - generally a period of light winds except in depressions early to mid-March, and those winds associated with the passage of troughs.

From June to August, as distinct from the sea breeze, the Shamal, or NW wind, is predominant, due to a vast low pressure area over NW India, which extends sometimes as far as the Mediterranean. Winds occasionally become strong but very rarely reach gale force. These NW winds are often laden with sand but do not seem to affect Sharjah in the form of sandstorms.

September to November - continuing mainly NW'y, less strong, but in November subject squalls. Land and sea breezes are well defined. The speed usually reaches its maximum around 1400 hours, but decreases suddenly after sunset. The breezes may be masked by passage of depressions.

The local wind 'Shamal' blows 9 months of the year. Although mainly NW'y the W and SW winds over Sharjah are also known as the Shamal. The so-called 40-day Shamal, or Great Shamal is the rather stronger NW'y from mid-June to late July. Kaus is the local name given to the SE wind December to April which occurs in advance of depressions, accompanied by a fall in pressure with damp and gloomy weather, accompanied sometimes by thunderstorms and heavy rain at times.

THUNDERSTORMS.

Over a period of nine years, March, April, November and December have been the main 'thunder' months, the actual number of occasions being March (13), April (10), November (9) and December (8). These figures do not of course include instances of storms seen at night over the Oman Hills 50-60 miles distant, when no thunder has been heard. Lightning on these occasions is often composed of almost continuous flashes and lasting for several hours. While the intertropical convergence zone does not normally reach Sharjah (infrequently it moves as far north as Oman) high cloud ahead of the front has been seen on occasions. Active thunderstorms are most associated with winter depressions and cold fronts moving east, from November to April.

With the rapidity of the vertical development of Cumulonimbus, it is not often possible to give much warning well in advance, as this development is often obscured in the East to South quadrant by rising sand or dust.

HAIL.

Hail is very rare, and only nine occasions have been reported at Sharjah since records were started in 1949.

SWELL (ARABIAN GULF).

Swell is usually negligible in Spring (March to May) but a swell may be noticed from mid-June to the end of July with the Great Shamal. The sea from then on until the end of November is reasonably smooth. During the period December to February, with the passage of the cold front associated with depressions moving east, the strong squally NW'lies produce considerable swell. In February 1950, with a N'ly wind of over 30 knots blowing more or less continuously throughout the whole day, the sea-wall was breached and the airfield flooded to a depth of four feet in parts. Under similar conditions in January 1964, although with less wind strength, the sea once again invaded the airfield, but did not quite reach the runway. A very great deal depends on tidal state. If a strong SE'ly prevails for some considerable time the waters of the Arabian Sea flow more strongly up the Gulf of Oman and make a funnel-effect entry to the Gulf through the Strait of Hormuz, literally raising the level of the Gulf, from which the SE flow cannot escape. Should the wind suddenly swing round to NW'ly, the swell travels in the same direction in advance of the wind, and flooding of low-lying areas is almost imminent. The Gulf then resumes its normal level.

WATERSPOUTS.

Although waterspouts are not uncommon in the southern and eastern areas of the Gulf, particularly in the Strait of Hormuz north of Oman, They have only been reported on two occasions as having been observed from Sharjah.

MIRAGE.

This area is noted for the high degree of refraction, or mirage, particularly during the summer months, in the mornings, when features can become greatly distorted, villages sometimes appearing as clumps of trees, and small hillocks or dunes as hills of considerable height.

SQUALLS.

Squalls are a characteristic feature of the weather of the Gulf and are a most serious menace to shipping. They can occur in all seasons of the year. The so-called Sharjah 'hurricane' in early May 1963 was in fact a line squall, with winds estimated to over 70 knots, which is not unusual with a tropical cyclone. Winter squalls are associated with the arrival of the cold front of western depressions. In Spring they are accompanied by dust and evening thunderstorms, and likewise for Summer, although little detailed information is available. Squalls in the Autumn are usually severe, and not appear to blow from any specific direction.

DUST DEVILS.

These are not uncommon in this area, but are more confined to the areas further inland. Small dust devils are quite common in the Spring and even the Summer, but there is little for them to pick up.

SEA TEMPERATURE.

For most part of the year the sea temperature is over 70 F and during the summer months can exceed 90 F.

(P.T. HUTTON)

Senior Scientific Assistant.

2th March 1964.

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Rainfall Statistics (millimetres) 1950-1956.

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Mean	28.8	12.2	7.7	15.0	7.9	-	1.7	-	0.3	0.1	13.1	21.7	108.6 (4.27ins)
Average No of Rain Days (0.1mm or more)	2.3	1.0	0.9	1.1	0.5	-	0.3	-	0.1	-	0.7	2.2	8.1
Maximum in a month	95.1	66.6	50.1	152.0	120.6	Tr	15.6	Tr	5.4	0.7	76.9	75.0	342.5
	1957	1954	1955	1957	1963	56.59	1956	55.57	1956	1956	1957	1962	1957
						62.64.		59.61.					
Maximum in one day	50.5	28.2	23.7	97.3	66.6	Tr	12.3	Tr	5.4	0.7	74.3	75.0	
	17.1.52	11.2.53	12.3.55	8.4.57	2.5.63	28.6.56	26.7.56	19.8.55	12.9.56	2.10.56	22.11.57	14.12.62	
						29.6.56		30.8.57					
						21.6.59		29.8.59					
						30.6.62		10.8.61					
						11.6.64							
Maximum Rainfall in a winter period (Oct. to May.)	267.5 mm							10.6. ins			1956-1957		
Minimum Rainfall in a winter period (Oct. to May.)	Trace							Trace			1961-1962		
Maximum Rainfall in Calendar Year	342.5 mm							13.5 ins			1957		
Minimum Rainfall in Calendar Year	33.1 mm							1.3 ins			1957		
Maximum Rainfall in one month	152 mm							6.0 ins			1957 April		
Maximum Rainfall in a day	97.3 mm							3.9 ins			1957 April		

SHARJAH.

Dry Bulb Temperature Statistics (Degrees Fahrenheit) 1950-1956.

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Mean Daily Maximum	74	76	82	87	93	97	102	103	99	93	85	78	89
Mean Daily Minimum	56	57	62	65	71	76	83	82	77	70	63	57	68
Highest Maximum	91	98	104	107	112	113	119	117	113	104	97	90	119
Lowest Maximum	57	63	67	73	73	37	88	94	92	86	74	63	57
Highest Minimum	69	69	77	81	88	88	93	90	87	80	82	70	93
Lowest Minimum	39	40	48	53	60	66	71	72	64	58	50	44	49
Highest Mean Daily Maximum	77	80	87	90	98	100	107	106	101	94	87	80	107
Lowest Mean Daily Maximum	72	71	80	83	88	95	97	99	97	91	83	72	71
Highest Mean Daily Minimum	58	59	67	70	75	77	85	86	82	73	67	61	86
Lowest Mean Daily Minimum	54	50	59	61	69	74	80	80	75	67	60	53	50

File Airport
LOCAL AREA CLIMATOLOGY

1. Average Monthly Maximum Temperatures (by Day)

Degrees Centigrade

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Maximum	23	25	27	31	34	36	39	39	37	34	30	25
Highest Recorded	33	37	40	41	44	45	48	47	45	40	36	32

2. Average Monthly Minimum Temperatures (by Night)

Degrees Centigrade

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Minimum	13	14	16	19	22	24	28	28	25	21	17	14
Lowest Recorded	04	05	09	12	15	19	22	22	18	15	09	07

Average Monthly Maximum Wet-bulb Temperatures

Degrees Centigrade

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Maximum	18	19	21	22	26	29	30	30	29	27	22	19

3. Average Monthly Rainfall

Millimetres

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	26	14	07	13	07	00	02	00	03	00	12	20
Wettest Day Recorded	51	28	24	97	67	Tr	12	Tr	05	01	74	75
Wettest Month Recorded	95	67	50	152	121	Tr	16	Tr	15	01	77	75

Flooding has occurred from time to time.

4. Prevailing Winds

5. Diurnal Variation of the Wind

During the night there tends to be a land breeze from between east and south, speed 05 to 10 knots, while during the late morning and afternoon, the sea breeze sets in from between west and north with a speed generally around 10 to 15 knots.

In winter the wind can remain west to northeast all night when a strong shamal is affecting the Gulf, and has set in at Sharjah during the previous 48 hours. After about 48 hours the normal land-sea breeze regime becomes re-established.

The onset of the shamal can be quite sudden with squalls, thunderstorms and gusts of up to 50 knots have been recorded although gusts to 70 knots have been known to occur in similar situations in other parts of the Gulf.

6. Visibility

The visibility can be reduced mainly by dust haze, blowing sand, and fog at any time of the year.

The dust haze which sometimes affects the area is usually advected down the Gulf from Iraq during a shamal, and can reduce the visibility below 1100 yards on occasions.

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Blowing sand can occur especially with a strong wouth to southwest wind, but can occur with other directions as well, as the critical speed for blowing sand is around 17 to 18 knots.

Fog (and low stratus) can occur at any time of the year, but is most common in March and September, but the frequency varies markedly from year to year.

Frequency of Fog and Blowing Sand (Days)

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Fog	2	2	3	2	3	2	1	1	3	2	1	1
Blowing Sand	3	3	5	4	5	4	5	3	2	2	2	1

7. General Factors Affecting the Climatology of the Region

The climatology of the region is modified to a great extent by virtue of the relative position of the mountains of Persia and Turkey. This prevents most of the cold outbursts of air from Siberia penetrating into the Gulf in the Winter, and in summer the mountains are probably the main contributory cause of the air in the Gulf becoming stagnant, and hence hot and humid, particularly in August, together with the fact that the Persian Gulf is almost completely surrounded by land, and this causes the water to become very warm.

The summer synoptic situation is dominated by the intense low pressure area which develops over northeast India, and extends westwards to Arabia. In winter the reverse is true, with a persistent high pressure area over Asia. This encourages depressions to pass eastwards across Iraq and often, especially in January and February, across Saudi Arabia and the Persian Gulf Area.

8. Local Factors Modifying the Regional Climatology

The main local factor modifying the regional climatology is the land and sea breeze effect. The land breeze from the Southeast which usually blows during the night and early morning, tends to make conditions cooler and less humid than other coastal and island areas of the Gulf, especially in the summer months. During the afternoons the sea breeze prevails from the northwest, and in summer the dry-bulb and wet-bulb temperatures revert to the more normal Gulf levels, though the sea breeze tends to reach 10 to 15 knots in speed, and this reduces somewhat any discomfort.

**Temperature, Rainfall and Relative Humidity Data for
SHARJAH**

Temperature (°C)
(20 year period 1950 to 1969)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average daily maximum	23	24	28	31	34	36	39	39	37	34	30	25
Highest recorded during the period	33	37	40	41	44	45	48	47	45	40	36	32
Average daily minimum	13	14	17	19	22	24	26	26	25	21	17	14
Lowest recorded during the period	04	05	09	12	15	19	22	22	18	15	09	07

Wet Bulb Temperature (°C)
(20 year period 1950 to 1969)

Average daily maximum	18	19	21	22	26	29	30	30	29	27	22	19
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Relative Humidity (%)
(4 year period 1966 to 1969)

Average daily maximum	83	89	83	75	79	86	81	83	87	83	77	85
Average daily minimum	34	35	43	41	36	45	42	42	42	45	41	50

Rainfall (mm)
(20 year period 1950 to 1969)

Average monthly fall	29	17	37	12	06	Tr	01	Tr	0.3	01	11	19
Wettest day recorded during the period	51	39	24	97	67	Tr	12	Tr	95	19	74	75
Wettest month recorded during the period	95	16	50	152	121	Tr	16	Tr	95	19	77	13

Note: Tr - Trace, less than 0.25 mm.

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NOTES ON WEATHER SHARJAH/DUBAI TAKEN FROM METEOROLOGICAL
OFFICE, R.A.F. SHARJAH.

Incidence of Hail, Thunderstorms, and Fog over a 20 year
period upto 1970.

<u>MONTH</u>	<u>HAIL</u>	<u>T/S</u>	<u>FOG</u>
Jan	2	11	36
Feb	-	12	41
Mar	4	18	61
April	2	26	49
May	1	9	59
June	-	-	57
July	-	7	34
Aug	-	1	29
Sent.	-	4	66
Oct	-	2	51
Nov	2	17	14
Dec.	2	18	26

SURFACE WIND :

1. On most days there is a regular diurnal wind variation - effect of land and sea breezes. The only exception occurs when there is a marked depression in the area and even on some of these occasions, the gradient wind appears to be influenced by the sea-breeze effect.
2. It is generally calm at night; between 3-4 a.m. and E to S.E. wind starts, speed 3-6 knots, which may reach 10-14 for short periods. Sometimes stronger wind for 3-6 hours but this is due to the land breeze being reinforced by the katabatic wind from Oman Mtns.
3. Between 8-9 a.m. direction veers with little change in speed. The sea breeze starts between 11-12 the direction normally between 290° - 330° speed 10-16 knots.
4. If there is a westerly gradient, the sea breeze may start as early as 8 or 9 am although the speed will be light at first.
5. If there is an easterly gradient, the direction of the land breeze may be between E and NE. Sea breeze will start after backing of the wind and its final direction may be between N.N.W. and N. In this direction there will be some rising sand if the speed is strong enough.
6. The onset of the sea breeze will result in an increase of humidity and can on occasions cause advection of stratus, especially if the wind sets in early.
7. The general N.W. wind over the Arabian Gulf is called shamal. With low pressure over Iran, this is common in early summer and there is even a tradition of a 40 day or 'Ground Shamal' blowing continuously in June and July.
8. With L.P. to the west of Sharjah the surface wind will be between E and S and can reach 20-30 knots and with this one gets rising sand. With this there is little diurnal variation. The persistent S.E. is called 'Kans'.

FOG OR LOW STRATUS : occurs 20-30 times in any year.

THUNDERSTORMS : are most common in November to May with a peak in Decem. and January. They frequently occur with characteristics of an active front or squall line. Storms can be very violent and can cause much damage. Hail can occur in them. Notable storms were those of Nov. 23 1959 and January 7 1969 (a comet aircraft parked on Sharjah Airport was badly damaged) These storms may produce winds of up to 40 knots.

DUSTSTORMS : With 1000 m visibility or less may occur 4-8 times a year. Most frequently in winter and usually associated with fronts or depressions.

RISING SAND : occurs at any time with winds of 18 knots and over. Visibility 1000 to 6000 m, though may be less for short periods.

GENERAL WEATHER :

October is generally affected by ~~fxg~~ fog and low stratus, forms soon after midnight but clears soon after sunrise. Fronts active in October in the Eastern mediterranean, Syria, Turkey, Iraq and N. Iran. More active fronts affecting Dubai in November. Worst weather (unsettled) is in January & December- low pressure persists for several days and can produce substantial falls of rain. Behind depressions get N.W. wind - Shamal - normally it does not affect weather, but produces rough seas. There are long settled periods between disturbances, which are sunny by day, clear by night and pleasantly cool.

Weather alternating between settled and unsettled persists until late April-May.

May to October, dry and cloudless, but strong N.W. or W. winds occur, particularly in June and July and May produce periods of poor visibility from duststorms or rising sand. Dust haze also affects Dubai in summer.

The summer monsoon from later June to mid-Sept. will produce heavy showers or thunderstorms over the Oman Mtns. but these do not often affect Dubai, when they do perhaps once or twice a year, a sandstorm may occur.

At any time during the year fog may affect Dubai but clearance will be very rapid in summer. In winter fog may persist even as late at 10 or 11 am and could form as early as 10 p.m.

The average sea temperature is rarely below 70°F and between July and September is over 90°F.

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Sharjah

in knots

Month	Speed & Direction % of time				mean wind speed	highest hourly wind for month			
	prevailing direction					Direction from N	Speed	Day	hour
	0-3 kt	4-10	11-21	22+					
October 68	27 S	53 SE	20 NW	—	6.6	310	16	11	10
November 68	18 SSE	66 SSE	14 NW	1 NNW	6.7	310	27	18	24
Dec. 68	19 ~~SE-S~~ SE-S	63 SE	18 NW	—	7.0	310	20	10	15
Jan 69	16 S	59 SS-1-S	22 SE	3 NW	8.3	310	30	31	14
Feb	24 SE	48 NW	28 W-1-NW	~~1~~	7.5	280	20	12	24
March	19 SE-S	53 SE	27 WNW	1 W	8.1	280	23	24 ~~12~~	15
April	13 SES	54 S	32 W-NW	1 VAR	8.8	340	27	8	13
May	15 SE	49 SW	36 W	—	8.4	240	21	1	15
June	14 SE	54 S	31 W	1 SW	8.5	250	23	23	13
July	10 SE	64 S-W	26 W/NW	—	7.9	180	19	23	16
Aug	22 SE	55 SE/S	23 NW/N	—	7.1	110	19	28	17
Sept	24 ESE	50 ESE/NW	26 NW	—	7.0	090	20	15	14

Extreme velocity 7th January - 80 knots
at 330° from North

	69												68
	J	F	M	A	M	J	J	A	S	O	N	D	
Max	28.6	~~27.8~~ 27	~~40.4~~ 40.4	38.9	42.1	42	44.3	44.2	~~41~~ 38.2	33.2	31.6		
Min	9.7	8.2	12.9	16.1	18.8	21	23	24	20.9	18.7	12.9	11.9	
Mean	19.3	17.8	24	25.5	28.5	30.8	32	33.5	30.3	27.8	24	21.1	