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1. General:

The transition from the northeast monsoon season to the southwest monsoon, which began in March is completed in May. The air of the southwest monsoon originates in part as a warm, dry, stable air mass over Australia & merges with tropical air as it moves northward over the Indian Ocean. During passages over warm tropical waters, the air mass is rapidly modified by the addition of heat and moisture. It arrives over the area as a very moist, unstable tropical air mass which produces extensive convective clouds, heavy rainshowers and thunderstorms over most of the area, especially on the windward side of the mountain slopes. During the southwest monsoon, the lift (air blowing up the side of a mountain) provided by these mountains augments the process of convective instability (unstable air implies rainshowers/thunderstorms) to produce much cloudiness and heavy rainshower activity on the westward windward slopes as a direct result of topography.

Small changes in location can cause large changes in the observed weather. Surges do occur in the southwest monsoon which causes an increase in the recorded surface winds. Wind gusts to 20 knots are common and gusts will occasionally exceed 30 knots. Large local variation in wind direction and speed will occur in more mountainous terrain, due to the channelling effect of valleys and ridges.

2. Precipitation:

May is a wet season month. Rainfall increases everywhere and is primarily afternoon and evening rainshowers and thunderstorms. The principle factor influencing the amounts of precipitation is exposure to the moist wind flow. Higher elevations receive more precipitation.

Precipitation can be expected on 10-15 days/month for the following totals:

Monthly mean - 9"

Monthly max - 20"

Monthly min - 2.8"

24 Hr Max - 4"

3. Cloudiness:

Cloud amounts continue to increase in May. Convective clouds with bases 3,001 form during the day, late morning and afternoon ceilings are common. During May, skies are cloudy 65% of the time and the table below describes the type of cloudiness that makes up the total.

<u>TIME (local)</u>	<u>CONDITIONS</u>	<u>MEAN NUMBER OF DAYS/MONTH</u>
0700	(No ceilings below 10,000 feet and visibility greater than five miles)	11
1000	"	10
1300	"	5
1600	"	7
1900	"	15
All hours	(Days total cloud cover less than 30% - no ceiling)	5
All hours	(Days total cloud cover forms a ceiling at some time during the day)	23

Generally, ceilings will be 3,000 feet above ground level except during surges and afternoon rainshowers/thunderstorms.

4. Visibility:

No significant improvement in the visibility occurs in May. Although the smoke and haze is decreasing, the increase in convective cloudiness decreases the slant range visibility for aircraft and rainshowers/thunderstorms will lower the visibility to 1-3 miles in local areas. Occurance of fog is decreasing with an average of one fog day per month.

5. Thunderstorms:

A thunderstorm day is defined as a day on which thunder is heard at the location. Precipitation does not have to occur. The statement "an average of one to two thunderstorms days" means that any specific location in that area averages one to two days per month with thunderstorms. The area in concern has 12 thunderstorm days per month during May. The duration of individual thunderstorms is one hour, however, continuous thunderstorm activity at any station often lasts longer than one hour due to development of additional thunderstorm cells. Typical thunderstorm weather observations are as follows:

1000 SCTD, 2000 BRKN, VSBY 2 Miles in thunderstorms (implies heavy rain), winds VRBL at 15 gust to 35 knots.

In more severe thunderstorms gusts can be as high as 50 knots. Generally, hail does not reach the surface from tropical thunderstorms, but can be found above and near the freezing level which is at 14,000 feet during May. Tornadoes occur rarely with tropical thunderstorms and do not pose a serious threat in Vietnam.



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6. Temperatures:

At these locations, temperatures for the monthly averages indicate cooler weather due to the gradual increase in the amount of cloudiness during the month.

Extreme maximum	100 (F°)
Mean maximum	90
Mean minimum	70
Extreme minimum	62

7. Relative Humidity:

The mean relative humidity for all hours of every day is 88%. A diurnal cycle does occur where the morning relative humidities often exceed 95% with the lowest humidity (70-75%) occurring in the afternoon.

WINDS:	<u>DIRECTION</u>	<u>SPEED</u>	<u>SPEED (SURGE)</u>	
SURFACE	SW	8	25 knots	
2000 Feet (Above Mean Sea Level)	SW	8	20-25 knots	
5000 Feet	"	W	10	20-30 knots
10,000 Feet	"	WSW	7	no data
20,000 Feet	"	S	5	no data

During the surges, wind directions and speeds will vary considerably due to the channeling effect of mountain ridges and valleys. Occasionally, winds warnings will be issued for high gusts and turbulence.

LIGHT DATA FOR MAY 1970

<u>DAY</u>	<u>EMNT</u>	<u>SR</u>	<u>SS</u>	<u>EENT</u>	<u>MR</u>	<u>MS</u>	<u>PHASE</u>	<u>FMI</u>
1	0604	0626	1904	1926	0306	1512	LAST QTR	25
2	0604	0626	1904	1926	0348	1608	"	16
3	0603	0625	1904	1927	0427	1703	"	08
4	0603	0625	1905	1927	0508	1800	"	03
5	0602	0625	1905	1927	0550	1857	"	01
6	0602	0624	1905	1927	0635	1955	NEW	00
7	0601	0624	1905	1927	0635	1955	"	02
8	0601	0623	1906	1928	0817	2152	"	06
9	0601	0623	1906	1928	0911	2245	"	12
10	0600	0623	1906	1929	1006	2334	"	19
11	0600	0622	1906	1929	1100	---	"	28
12	0559	0622	1907	1929	1152	0019	"	37
13	0559	0622	1907	1929	1242	0100	"	46
14	0559	0621	1907	1930	1329	0137	LST QTR	55
15	0559	0621	1907	1930	1416	0211	"	65
16	0558	0621	1908	1930	1503	0245	"	74
17	0558	0621	1908	1931	1551	0219	"	82
18	0558	0620	1908	1931	1641	0354	"	89
19	0557	0620	1908	1931	1735	0433	"	94
20	0557	0620	1909	1932	1832	0515	"	98
21	0557	0620	1909	1932	1934	0604	FULL	100
22	0557	0620	1909	1932	2037	0658	"	99
23	0557	0620	1910	1933	2140	0758	"	95
24	0556	0619	1910	1933	2239	0903	"	90
25	0556	0619	1910	1933	2333	1007	"	81
26	0556	0619	1911	1934	---	1110	"	72
27	0556	0619	1911	1934	0021	1211	"	61
28	0556	0619	1911	1934	0105	1308	LAST QTR	49
29	0556	0619	1912	1935	0146	1403	"	38
30	0556	0619	1912	1935	0226	1457	"	28
31	0556	0619	1912	1935	0305	1552	"	18

LEGEND:

- EMNT: BEGINNING MORNING NAUTICAL TWILIGHT
- SR: SUNRISE
- SS: SUNSET
- EENT: END EVENING NAUTICAL TWILIGHT
- MR: MOONRISE
- MS: MOONSET
- PHASE: PHASE OF MOON IN QUARTERS
- FMI: PERCENT MOON ILLUMINATION