

THE UNITED REPUBLIC OF TANZANIA

**FEASIBILITY REPORT**  
**ON**  
**LOWER-MOSHI AGRICULTURAL**  
**DEVELOPMENT PROJECT**

1972



JICA LIBRARY



1063666[0]



**THE UNITED REPUBLIC OF TANZANIA**

***FEASIBILITY REPORT***

***ON***

***LOWER-MOSHI AGRICULTURAL***

***DEVELOPMENT PROJECT***

***DATE BOOK***

**OCTOBER 1980**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

国際協力事業団	
受入 月日 '84. 4. 17.	416
登録No. 03384	807 AFT

## I. METEOROLOGICAL DATA

### 1.1 Summary of Meteorological Records





FEASIBILITY REPORT  
ON  
THE LOWER-MOSHI AGRICULTURAL DEVELOPMENT PROJECT

DATA BOOK

CONTENTS

	<u>PAGE</u>
<b>I. METEOROLOGICAL DATA</b>	
1.1 <u>Summary of Meteorological Records</u> .....	1
1.2 <u>Monthly Meteorological Record</u>	
(1) Moshi Meteorological Station .....	6
(2) Mivaleni Sub-station .....	8
(3) NAFCO Kahé Estate .....	10
(4) TPC Langasani .....	12
(5) Lyamungu ARI .....	14
<b>II. RAINFALL DATA</b>	
2.1 <u>General</u>	
(1) List of Rainfall Stations .....	16
(2) Location of Rainfall Stations .....	17
(3) Availability of Rainfall Records .....	18
2.2 <u>Average Monthly Rainfall</u> .....	19
2.3 <u>Summary for Monthly Rainfall</u> .....	21
2.4 <u>Daily Rainfall Record</u>	
(1) Masama Estate (93.37/002) .....	56
(2) Moshi Meteorological Station (93.37/004) .....	67
(3) Kibosho Mission (93.37/005) .....	84
(4) Old Moshi School (93.37/009) .....	90
(5) Kiléma Mission (93.37/015) .....	94
(6) Lyamungu (93.37/021) .....	119
(7) TPC Langasani (93.37/028) .....	142
(8) Kiyungi (93.37/029) .....	147
(9) Himó Sisal Estate (93.37/031) .....	152
(10) Marangu College (93.37/046) .....	157
(11) Old Moshi Nursery (93.37/064) .....	173
(12) Moshi Prison (93.37/073) .....	189
(13) W.D & I.D Moshi (93.37/091) .....	199
(14) TPC Langasani North (93.37/122) .....	205
(15) Maua Seminary (93.37/123) .....	208
(16) Mivaleni Sub-station (93.37/131) .....	212
(17) Uru Estate (93.37/140) .....	217
(18) NAFCO Kahe Estate (93.37/143) .....	219

III. DISCHARGE DATA	
3.1 <u>General</u>	
(1) List of Gauging Stations .....	226
(2) Location of Gauging Station .....	227
(3) Availability of Discharge Record .....	228
3.2 <u>Monthly Discharge Record</u> .....	
3.3 <u>Daily Discharge Record</u>	
(1) Rau river (1 DC 3) .....	233
(2)     "      (1 DC 3A) .....	237
(3) Njoro river (1 DC 35) .....	245
(4) Mue river (1 DC 6) .....	260
(5) Soko river (1 DC 30A) .....	272
(6) Miwaleni spring (1 DC 33) .....	278
(7) Himo river (1 DC 11) .....	285
(8)     "      (1 DC 11A) .....	293
(9) Ruvu river (1 DC 1) .....	301
(10)     "      (1 DC 2A) .....	310
(11) Kikuletwa river (1 DD 1) .....	322
(12) Karanga river (1 DD 3) .....	344
(13) Weru Weru river (1 DD 5A) .....	351
(14) Kikafu river (1 DD 8) .....	357
3.4 <u>Spot Discharge Record</u>	
(1) Rau river (1 DC 3A) .....	367
(2)     "      (1 DC 5) .....	369
(3) Njoro river (1 DC 35) .....	370
(4) Mue river (1 DC 6) .....	372
(5) Cholo river (1 DC 9) .....	373
(6) Uchira river (1 DC 10) .....	374
(7) Soko river (1 DC 30A) .....	375
(8) Miwaleni spring (1 DC 33) .....	376
(9) Himo river (1 DC 11A) .....	377
(10) Ruvu river (1 DC 2) .....	379
(11)     "      (1 DC 32) .....	380
(12) Kikuletwa river (1 DD 1) .....	381
(13) Kikafu river (1 DD 8A) .....	384
IV. HYDROGEOLOGICAL DATA	
4.1 <u>Result of Geo-electric Prospecting (<math>\rho</math>-a curve)</u> .....	
4.2 <u>Pumping Test Records</u> .....	
V. SOIL MECHANICAL DATA	
5.1 <u>Summary of Soil Test</u> .....	
5.2 <u>Result of Soil Test</u>	
(1) Miwaleni .....	509
(2) Chekereni .....	526

SUMMARY OF METEOROLOGICAL RECORDS (1)

Station: Moshi Meteorological Station Lat. 3°21', Long. 37°20', Alt. 813 m  
(Registered Number: 93-37/004)

Period: From 1970 to 1979 (10 years)

ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL/ AVERAGE
1. Daily Max. Temperature (°C)	31.9	32.1	32.0	28.7	26.7	25.2	25.5	26.2	28.3	30.6	31.2	31.7	29.2
2. Daily Min. Temperature (°C)	17.6	18.3	18.3	19.5	18.6	17.4	16.4	16.0	16.2	17.2	17.8	18.0	17.6
3. Daily Mean Temperature (°C)	24.8	25.2	25.2	24.1	22.7	21.3	21.0	21.1	22.3	23.9	24.5	24.9	23.4
4. Relative Humidity at 9 am (%)	73	72	75	85	86	80	81	80	78	72	73	72	77
5. Relative Humidity at 3 pm (%)	42	43	45	59	63	59	53	47	44	38	37	45	48
6. Mean Relative Humidity (%)	58	58	60	72	75	70	67	64	61	55	55	59	63
7. Pan Evaporation (mm/day)	7.6	7.6	7.1	5.0	3.7	3.6	4.1	4.8	6.7	8.0	8.2	7.6	2,248
8. Piche Evaporation (mm/day)	- Not Available -												
9. Mean Wind Speed (m/sec)	1.62	1.62	1.62	1.12	0.81	0.75	0.75	0.93	1.49	1.80	1.86	1.43	1.32
10. Sunshine Hours (hrs/day)	8.9	8.1	7.2	6.3	5.5	4.3	5.3	5.8	7.0	8.4	7.9	8.9	6.97
11. Radiation (cal/cm <sup>2</sup> /day)	- Not Available -												
12. Monthly Rainfall (mm/month)	50	39	119	411	126	29	19	9	16	15	53	41	927

SUMMARY OF METEOROLOGICAL RECORDS (2)

Station: Miwoleni Sub-station Lat. 3°25', Long. 37°27', Alt. 770 m  
(Registered Number: 93.37/131)

Period: From 1972 to 1979 (8 years)

ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL/ AVERAGE
1. Daily Max. Temperature (°C)	32.8	32.9	32.7	30.2	27.7	26.5	26.6	27.4	29.5	31.9	32.4	32.1	30.2
2. Daily Min. Temperature (°C)	18.5	19.2	19.8	20.1	18.8	17.0	16.1	16.1	16.7	18.5	19.4	18.8	18.3
3. Daily Mean Temperature (°C)	25.7	26.1	26.3	25.2	23.3	21.8	21.4	21.8	23.1	25.3	25.9	25.5	24.3
4. Relative Humidity at 9 am (%)	73	73	76	80	82	80	80	79	76	71	71	72	76
5. Relative Humidity at 3 pm (%)	44	44	47	56	64	59	56	52	47	43	43	45	50
6. Mean Relative Humidity (%)	59	59	62	68	73	70	68	66	62	57	57	59	63
7. Pan Evaporation (mm/day)							- Not Available -						
8. Piche Evaporation (mm/day)	9.0	8.6	8.4	4.4	3.0	3.5	4.1	5.2	6.2	8.0	8.1	8.5	2,320
9. Mean Wind Speed (m/sec)							- Not Available -						
10. Sunshine Hours (hrs/day)							- Not Available -						
11. Radiation (cal/cm <sup>2</sup> /day)	551	551	534	493	438	402	402	460	523	581	570	578	507
12. Monthly Rainfall (mm/month)	55	46	112	238	92	21	13	6	17	17	38	50	705

SUMMARY OF METEOROLOGICAL RECORDS (3)

Station: NAFCO Kahe Estate Lat.  $3^{\circ}30'$ , Long.  $37^{\circ}26'$ , Alt. 708 m  
(Registered Number: 93.37/143)

Period: From 1970 to 1979 (10 years)

ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL/ AVERAGE
1. Daily Max. Temperature ( $^{\circ}\text{C}$ )	31.6	32.7	32.8	30.2	28.2	27.0	26.8	27.3	28.8	30.8	32.0	32.0	30.0
2. Daily Min. Temperature ( $^{\circ}\text{C}$ )	20.3	20.2	20.5	20.7	19.4	17.4	16.7	17.0	17.6	19.0	20.3	20.0	19.1
3. Daily Mean Temperature ( $^{\circ}\text{C}$ )	26.0	26.5	26.7	25.5	23.8	22.2	21.8	22.2	23.2	24.9	26.2	26.0	24.6
4. Relative Humidity at 9 am (%)	87	91	89	89	89	88	88	92	91	92	93	92	90
5. Relative Humidity at 3 pm (%)	40	36	41	48	52	47	41	44	41	38	30	40	42
6. Mean Relative Humidity (%)	64	64	65	69	71	68	65	68	66	65	62	66	66
7. Pan Evaporation (mm/day)	5.8	6.1	5.5	4.8	3.9	3.8	3.7	3.8	4.7	5.5	6.1	6.0	1,813
8. Piche Evaporation (mm/day)	- Not Available -												
9. Mean Wind Speed (m/sec)	2.0	1.8	1.6	1.3	1.0	1.0	1.0	1.0	1.0	1.4	1.8	2.1	1.4
10. Sunshine Hours (hrs/day)	8.4	7.8	7.7	5.8	5.1	5.4	5.0	5.2	6.3	7.2	7.3	8.1	6.6
11. Radiation ( $\text{cal}/\text{cm}^2/\text{day}$ )	684	678	714	701	696	697	706	684	714	729	754	764	710
12. Monthly Rainfall (mm/month)	37	31	68	159	77	15	5	7	12	14	32	38	495



SUMMARY OF METEOROLOGICAL RECORDS (5)

Station: Lyamungu A.R.I.

Lat. 3°14', Long. 37°15', Alt. 1,250 m

(Registered Number: 93.37/021)

Period: From 1970 to 1979 (10 years)

ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL/ AVERAGE
1. Daily Max. Temperature (°C)	27.1	27.4	27.0	24.3	22.2	20.8	20.5	21.3	23.5	25.6	26.4	26.7	24.4
2. Daily Min. Temperature (°C)	13.2	13.4	14.0	15.1	14.5	13.2	12.3	11.3	12.2	12.3	13.3	13.6	13.2
3. Daily Mean Temperature (°C)	20.2	20.4	20.5	19.8	18.3	17.0	16.4	16.6	17.8	19.0	19.8	20.2	18.8
4. Relative Humidity at 9 am (%)	76	76	81	91	91	88	88	87	83	78	79	78	83
5. Relative Humidity at 3 pm (%)	56	58	59	72	74	70	66	62	57	53	58	58	62
6. Mean Relative Humidity (%)	66	67	70	82	83	79	77	75	70	66	69	68	73
7. Pan Evaporation (mm/day)	3.6	3.7	3.4	1.6	1.4	1.7	1.9	2.3	2.9	3.8	3.4	3.3	1,002
8. Piche Evaporation (mm/day)													
9. Mean Wind Speed (m/sec)	0.92	0.94	0.90	0.80	0.84	0.81	0.83	0.87	0.99	1.17	0.98	0.91	0.91
10. Sunshine Hours (hrs/day)	7.6	7.6	6.9	4.5	3.4	3.3	3.8	4.7	6.0	7.0	6.9	7.3	5.8
11. Radiation (cal/cm <sup>2</sup> /day)	467	461	440	293	241	226	250	302	386	452	416	446	365
12. Monthly Rainfall (mm/month)	71	67	125	555	353	108	55	33	28	41	80	76	1,592

- Not Available -





**1.2 Monthly Meteorological Record**

**(1) Moshi Meteorological Station**



MOSHI METEOROLOGICAL STATION (1/2)

MONTHLY RECORD FOR DAILY MAX. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	30.9	32.6	31.1	27.2	26.0	25.0	26.6	26.6	28.6	30.7	32.6	31.3	
1971	31.9	33.0	31.3	29.4	26.3	24.6	24.5	25.0	28.3	30.4	32.4	30.7	
1972	30.3	30.9	30.9	29.4	25.9	25.1	25.1	26.3	27.9	28.8	29.2	31.1	
1973	31.1	32.5	34.2	30.3	26.4	24.5	25.6	26.2	28.9	31.1	31.9	32.3	
1974	32.8	34.0	32.1	28.0	28.3	25.1	27.7	26.7	27.5	30.5	31.5	32.5	
1975	32.7	33.9	32.3	29.5	27.4	25.6	25.2	25.1	27.5	29.9	32.5	32.4	
1976	33.8	32.5	32.9	29.5	26.5	25.7	25.7	26.6	28.4	31.2	31.0	32.2	
1977	32.3	31.4	32.2	27.7	27.7	26.3	26.1	26.2	29.1	30.9	30.2	31.4	
1978	31.5	31.7	29.9	26.6	26.1	25.0	24.0	26.4	29.3	31.3	30.5	29.4	
1979	31.0	30.2	31.6	28.3	25.9	24.1	24.5	25.7	27.7	31.0	32.3	32.0	
MEAN	31.9	32.1	32.0	28.7	26.7	25.2	25.5	26.2	28.3	30.6	31.2	31.7	

MONTHLY RECORD FOR DAILY MIN. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	21.2	21.9	18.4	19.8	18.1	19.4	16.0	15.2	16.2	16.3	17.1	17.8	
1971	17.5	17.4	18.0	18.8	17.6	15.1	15.6	14.4	16.4	16.4	16.5	17.7	
1972	16.3	17.7	17.6	19.4	18.5	17.0	16.7	15.9	15.8	17.8	18.0	18.5	
1973	18.1	18.7	16.9	20.6	19.0	17.3	15.3	16.1	16.3	17.9	18.0	17.6	
1974	17.1	17.6	18.8	19.2	18.2	17.8	16.2	15.3	15.6	15.1	17.3	17.1	
1975	17.2	19.4	19.4	19.2	19.0	18.2	18.5	16.3	17.0	16.9	17.5	18.1	
1976	17.2	18.4	18.9	19.3	19.0	17.1	15.5	15.7	16.7	17.3	17.9	17.4	
1977	19.1	18.2	19.2	19.3	19.2	17.4	16.8	16.0	16.1	17.4	18.4	18.7	
1978	17.7	17.8	18.3	19.5	17.8	17.4	16.0	16.1	16.1	17.8	18.0	18.3	
1979	18.2	18.5	18.5	19.4	18.8	16.7	16.1	16.5	16.1	17.5	17.2	18.6	
MEAN	17.6	18.3	18.3	19.5	18.6	17.4	16.4	16.0	16.2	17.2	17.8	18.0	

MONTHLY RECORD FOR RELATIVE HUMIDITY AT 9AM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	
1971	76	72	72	85	86	73	87	84	81	73	72	75	
1972	76	75	76	83	92	82	83	82	83	77	83	77	
1973	80	80	72	85	86	83	78	76	74	70	73	69	
1974	69	67	74	89	86	87	82	81	75	73	71	67	
1975	70	66	76	83	85	80	80	78	79	72	66	70	
1976	67	71	74	82	86	78	77	76	76	67	68	70	
1977	70	72	79	86	83	79	80	80	77	73	75	74	
1978	-	-	-	-	-	-	-	-	-	-	-	-	
1979	-	-	-	-	-	-	-	-	-	-	-	-	
MEAN	73	72	75	85	86	80	81	80	78	72	73	72	

MONTHLY RECORD FOR RELATIVE HUMIDITY AT 3PM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	
1971	43	36	34	54	64	56	58	60	48	40	30	47	
1972	47	45	48	57	69	59	55	45	48	46	58	50	
1973	50	45	36	54	64	58	48	45	44	37	39	39	
1974	38	33	40	63	57	62	57	48	43	36	32	39	
1975	36	36	41	56	-	60	52	40	47	38	30	36	
1976	32	41	42	51	63	55	47	43	40	35	-	43	
1977	41	38	-	59	58	53	50	51	42	39	47	47	
1978	45	48	55	65	63	62	55	49	40	36	51	59	
1979	49	55	50	66	69	63	58	54	48	39	39	46	
MEAN	42	43	45	59	63	59	53	47	44	38	37	45	

MOSHI METEOROLOGICAL STATION (2/2)

MONTHLY RECORD FOR DAILY PAN EVAPORATION

(Unit: mm/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	6.4	5.2	6.2	6.5	11.1	11.9	-
1976	10.0	8.8	9.1	6.0	3.4	4.0	4.1	5.6	7.4	9.4	-	7.8	-
1977	7.5	8.1	7.1	5.1	4.3	4.0	3.7	4.7	7.2	8.7	6.6	6.9	2,244
1978	6.9	7.5	5.2	4.2	3.6	2.8	3.3	4.4	6.9	7.3	6.7	5.1	1,938
1979	6.1	5.8	6.9	4.5	3.3	3.4	3.2	4.3	6.0	8.3	8.4	6.3	2,022
MEAN	7.6	7.6	7.1	5.0	3.7	3.6	4.1	4.8	6.7	8.0	8.2	7.6	

MONTHLY RECORD FOR DAILY MEAN WIND SPEED

(Unit: m/sec)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	1.4	1.6	2.1	1.9	3.5	2.6	-
1976	3.3	3.4	3.5	2.7	1.4	1.3	1.5	1.8	3.0	4.1	-	2.6	-
1977	2.6	2.7	3.1	1.5	1.3	1.3	1.3	1.7	2.7	2.6	2.7	2.2	-
1978	2.2	2.5	1.8	1.1	1.2	1.1	1.2	1.7	2.1	2.9	2.6	1.6	-
1979	2.1	1.7	2.0	1.7	1.2	1.1	0.8	0.9	1.8	3.2	3.0	2.1	-
MEAN	2.6	2.6	2.6	1.8	1.3	1.2	1.2	1.5	2.4	2.9	3.0	2.3	

MONTHLY RECORD FOR DAILY SUNSHINE HOURS

(Unit: hours/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	9.3	6.8	6.2	8.1	5.7	4.9	3.8	6.2	6.9	8.4	7.5	9.4	2,531
1973	8.3	8.2	9.2	6.3	4.5	2.8	6.0	5.8	6.5	8.3	6.7	9.1	2,486
1974	9.9	9.1	8.0	5.3	6.7	4.1	6.7	7.2	6.2	8.0	9.5	10.0	2,759
1975	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	8.5	-	7.5	5.5	5.0	6.2	6.5	7.6	8.9	-	-	-
1977	8.7	7.2	-	5.0	5.7	5.8	4.8	5.2	7.4	8.8	8.1	8.3	-
1978	8.2	8.9	5.4	5.5	4.7	3.2	4.2	5.1	8.1	8.4	6.7	8.3	2,327
1979	-	-	-	-	-	-	-	4.9	6.6	7.8	8.4	8.3	-
MEAN	8.9	8.1	7.2	6.3	5.5	4.3	5.3	5.8	7.0	8.4	7.9	8.9	

**(2) Miwaleni Sub-station**



MIWALENI SUB-STATION (1/2)

MONTHLY RECORD FOR DAILY MAX. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	27.0	25.7	25.8	26.1	29.4	31.7	33.5	32.2	-
1972	32.9	31.8	31.4	30.7	27.4	26.6	26.4	27.5	29.6	31.4	30.9	31.7	-
1973	31.6	33.3	35.2	31.6	27.7	26.7	27.2	28.0	30.0	32.3	32.4	33.1	-
1974	34.0	-	33.2	29.2	28.8	26.4	26.0	27.6	29.2	31.8	32.8	33.7	-
1975	34.0	34.8	33.8	31.5	28.5	27.2	26.8	27.1	28.6	31.0	32.9	32.9	-
1976	33.2	33.2	33.3	30.3	27.7	27.2	27.2	27.8	30.1	32.5	32.0	33.1	-
1977	33.2	33.3	32.9	29.6	28.6	27.2	27.9	27.7	29.4	32.4	31.9	29.1	-
1978	31.2	32.7	30.4	28.9	26.2	26.3	26.5	27.6	30.7	32.3	31.7	31.0	-
1979	32.2	31.5	31.2	29.5	27.1	25.3	25.5	27.0	28.5	31.9	33.2	32.4	-
MEAN	32.8	32.9	32.7	30.2	27.7	26.5	26.6	27.4	29.5	31.9	32.4	32.1	30.2

MONTHLY RECORD FOR DAILY MIN. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	18.3	15.7	16.4	15.7	16.5	18.6	19.5	18.3	-
1972	18.2	19.4	19.2	20.3	19.2	17.4	16.9	16.2	16.8	19.3	19.0	19.0	-
1973	18.3	19.7	20.4	21.2	19.0	17.4	14.5	16.1	16.5	19.2	19.8	18.1	-
1974	18.9	-	20.4	19.9	19.0	17.8	16.3	16.2	16.3	17.7	19.5	19.6	-
1975	18.9	18.4	18.8	19.8	19.2	17.9	16.6	16.9	16.7	17.5	18.8	19.1	-
1976	17.5	20.1	20.2	20.0	18.9	16.9	15.4	16.2	17.1	18.6	19.5	18.4	-
1977	19.2	18.7	20.8	20.6	19.3	17.5	17.2	16.3	17.4	18.5	19.9	19.2	-
1978	18.1	18.9	19.7	20.1	18.5	17.6	16.3	16.7	17.5	19.4	20.3	18.6	-
1979	19.1	19.1	19.2	19.1	17.7	15.2	15.3	15.0	15.4	17.6	18.5	18.2	-
MEAN	18.5	19.2	19.8	20.1	18.8	17.0	16.1	16.1	16.7	18.5	19.4	18.8	18.1

MONTHLY RECORD FOR DAILY MEAN TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	22.7	20.7	21.1	20.9	23.0	25.2	26.5	25.3	-
1972	25.6	25.6	25.3	25.5	23.3	22.0	21.7	21.9	23.2	25.4	25.0	25.4	24.2
1973	25.0	26.5	27.8	26.4	23.4	22.1	20.9	22.1	23.3	25.8	26.1	25.8	24.6
1974	26.5	-	26.8	24.6	23.9	22.1	21.3	21.9	22.8	24.8	26.2	26.7	-
1975	26.5	26.6	26.3	25.7	23.9	22.6	21.7	22.0	22.7	24.3	25.9	26.0	24.5
1976	25.4	26.7	26.6	25.2	23.3	22.1	21.3	22.0	23.6	25.6	25.8	25.8	24.5
1977	26.2	26.0	26.9	25.1	24.0	22.4	22.6	22.0	23.4	25.5	25.9	24.2	24.5
1978	24.7	25.8	25.1	24.5	22.4	22.0	21.4	22.2	24.1	25.9	26.0	24.8	24.1
1979	25.7	25.3	25.2	24.3	22.4	20.3	20.4	21.0	22.0	24.8	25.9	25.3	23.6
MEAN	25.7	26.1	26.3	25.2	23.3	21.8	21.4	21.8	23.1	25.3	25.9	25.5	24.3

MONTHLY RECORD FOR RELATIVE HUMIDITY AT 9 AM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	80	79	81	79	76	69	66	78	-
1972	70	74	81	82	87	80	81	80	79	78	81	77	-
1973	79	78	72	80	81	79	79	77	74	72	74	70	-
1974	70	-	72	86	77	87	80	79	74	70	71	66	-
1975	70	65	73	76	80	79	77	79	74	72	68	68	-
1976	70	71	74	69	86	79	79	79	78	70	74	68	-
1977	73	72	77	83	81	78	77	77	72	72	71	77	-
1978	76	73	83	81	82	81	80	79	75	67	74	74	-
1979	74	78	76	83	84	81	87	81	80	65	64	68	-
MEAN	73	73	76	80	82	80	80	79	76	71	71	72	-

## MIWALENI SUB-STATION (2/2)

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 3 PM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	63	58	60	56	44	45	37	48	-
1972	41	48	48	51	69	59	58	52	52	53	51	53	-
1973	53	46	43	53	66	54	51	47	44	39	48	41	-
1974	36	-	41	59	57	60	60	52	47	40	39	41	-
1975	40	35	41	49	55	55	51	49	47	43	34	33	-
1976	36	36	46	56	67	61	61	56	49	49	50	45	-
1977	48	48	50	52	61	57	49	47	43	44	42	52	-
1978	51	47	57	62	65	63	53	49	43	37	47	51	-
1979	45	51	49	65	69	65	61	58	51	39	36	41	-
MEAN	44	44	47	56	64	59	56	52	47	43	43	45	-

## MONTHLY RECORD FOR PICHE EVAPORATION

(Unit: mm/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	3.2	3.8	3.6	5.1	7.0	9.0	10.8	9.0	-
1972	9.6	8.3	8.1	4.6	2.1	3.3	3.6	5.2	6.1	7.1	5.0	6.9	2,132
1973	6.3	6.8	10.1	5.6	2.9	3.9	5.1	5.9	7.2	8.6	7.2	8.6	2,389
1974	10.2	-	9.8	2.8	3.9	2.9	3.3	4.6	5.7	6.9	7.3	8.5	-
1975	7.9	12.1	9.2	5.9	4.5	4.9	4.8	5.5	6.4	7.8	11.2	11.4	2,775
1976	12.7	11.6	10.1	6.1	2.1	3.6	5.0	6.3	6.4	8.6	9.7	11.5	2,811
1977	9.2	8.6	8.7	3.5	2.9	3.5	4.0	4.2	5.7	6.8	6.2	7.3	2,141
1978	8.2	8.1	4.2	3.0	2.4	2.4	3.4	4.9	6.7	8.3	7.0	5.5	1,944
1979	7.5	4.9	6.3	4.0	2.7	-	-	-	5.0	8.5	8.2	7.8	-
MEAN	9.0	8.6	8.4	4.4	3.0	3.5	4.1	5.2	6.2	8.0	8.1	8.5	2,339

## MONTHLY RECORD FOR RADIATION

(Unit: cal/cm<sup>2</sup>/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	410	405	386	372	474	551	548	474	-
1972	526	471	520	507	371	391	347	427	501	520	487	523	-
1973	529	512	556	449	391	350	430	454	487	575	534	551	-
1974	556	-	520	457	474	328	336	435	424	578	534	556	-
1975	551	556	529	498	443	416	424	479	498	581	655	600	-
1976	625	581	570	540	468	452	485	482	562	595	578	559	-
1977	556	581	512	446	515	501	311	509	573	595	589	520	-
1978	512	591	465	520	435	377	424	446	595	592	562	548	-
1979	548	567	567	523	405	391	427	449	551	619	636	600	-
MEAN	551	551	534	493	438	402	402	460	523	581	570	578	507



(3) **NAFCO Kahe Estate.**



## NAFCO KAHE ESTATE (1/2)

## MONTHLY RECORD FOR DAILY MAX. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	31.8	33.1	33.9	28.8	26.9	-	27.2	26.3	29.1	31.6	34.1	33.0	
1971	-	33.8	35.3	31	28	27	25	27	26	30	35	33	
1972	28.5	-	-	30.9	28.5	27.0	27.0	26.9	28.9	30.5	30.0	31.4	
1973	31.7	32.5	33.4	28.6	27.0	26.4	27.0	27.9	29.3	31.1	30.5	-	
1974	33.2	33.7	32.4	30.3	29.9	27.3	26.7	27.7	28.4	30.1	32.3	31.3	
1975	32.8	-	33.2	31.3	29.3	27.5	26.9	27.4	28.4	30.3	32.8	32.5	
1976	32.2	32.8	32.8	31.9	27.7	27.3	27.3	27.5	29.0	30.7	32.0	31.7	
1977	32.3	32.2	31.6	30.0	29.2	27.9	27.4	27.1	29.2	31.0	30.7	30.8	
1978	30.7	31.8	30.4	29.1	27.7	26.7	27.7	27.7	30.4	31.2	30.7	30.8	
1979	31.2	31.3	32.6	30.4	27.3	26.3	25.8	27.3	29.2	31.6	32.2	31.7	
MEAN	31.6	32.7	32.8	30.2	28.2	27.0	26.8	27.3	28.8	30.8	32.0	32.0	

## MONTHLY RECORD FOR DAILY MIN. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	19.1	19.8	19.5	19.6	17.9	-	16.5	14.9	16.4	18.1	22.2	20.4	
1971	19.7	18.9	19.3	21	20	16	17	18	18	19.5	21.2	19.8	
1972	20.9	21.5	22.7	20.9	19.8	16.9	17.3	18.1	18.3	19.5	19.7	19.4	
1973	-	20.5	19.9	23.1	19.9	18.4	15.7	17.1	17.6	19.7	20.0	-	
1974	23.4	20.4	20.1	20.3	19.4	18.3	16.8	16.5	19.0	18.0	20.3	20.3	
1975	19.8	-	21.3	20.5	-	17.0	-	17.1	17.0	18.0	18.9	20.3	
1976	19.8	20.2	20.9	20.6	19.5	17.5	16.7	16.6	17.5	19.0	20.0	20.3	
1977	20.8	20.2	21.0	20.9	19.2	18.1	17.0	16.6	17.1	18.3	19.7	19.8	
1978	19.7	19.7	19.9	20.2	19.3	17.5	16.9	17.0	17.6	19.9	20.8	19.5	
1979	19.8	20.3	20.3	20.1	19.2	16.7	16.7	17.9	17.4	19.7	20.4	20.3	
MEAN	20.3	20.2	20.5	20.7	19.4	17.4	16.7	17.0	17.6	19.0	20.3	20.0	

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 9 AM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	70	88	86	86	86	-	82	78	88	87	83	78	
1971	91	85	89	82	92	79	74	82	86	81	60	(57)	
1972	(56)	74	75	84	87	79	75	-	73	75	85	80	
1973	82	82	97	-	-	-	-	-	88	93	85	-	
1974	75	74	76	88	82	84	89	78	-	-	-	-	
1975	78	-	82	80	81	80	-	91	88	93	91	91	
1976	91	92	91	92	91	90	90	91	91	92	92	93	
1977	89	90	90	91	93	91	90	92	90	92	92	89	
1978	93	94	95	94	92	93	-	93	94	92	93	93	
1979	84	88	88	88	89	87	85	-	-	-	-	-	
MEAN	87	91	89	89	89	88	88	92	91	92	93	92	

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 3PM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	-	-	-	-	-	-	-	-	-	-	-	-	
1971	-	-	-	51	72	46	56	-	-	-	-	-	
1972	65	75	-	60	63	53	(74)	-	64	49	49	52	
1973	57	63	73	-	-	-	-	-	-	-	-	-	
1974	-	-	-	-	-	-	-	-	-	-	-	-	
1975	48	-	49	54	60	54	-	47	43	38	33	37	
1976	34	37	34	44	49	41	39	41	41	37	36	38	
1977	38	37	38	42	46	42	41	44	39	38	40	40	
1978	42	39	48	55	50	49	-	44	39	37	44	44	
1979	37	31	37	46	57	-	44	-	-	-	-	-	
MEAN	40	36	41	48	52	47	41	44	41	38	30	40	

## NAFCO KAHE ESTATE (2/2)

## MONTHLY RECORD FOR DAILY PAN EVAPORATION

(Unit: mm/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	4.9	5.4	5.5	4.3	4.2	-	4.0	4.8	5.6	5.5	6.9	6.8	
1971	5.9	6.2	6.7	5.5	3.8	4.8	4.2	4.5	5.2	6.4	7.6	5.7	
1972	5.3	4.6	3.2	4.9	4.2	2.9	3.2	2.9	3.1	3.2	3.1	3.4	
1973	3.3	3.7	-	4.5	3.1	-	3.2	3.6	3.9	-	-	-	
1974	5.5	5.9	5.1	3.3	2.9	-	2.7	3.4	3.8	4.5	5.1	5.9	
1975	5.5	-	4.4	4.4	3.3	3.3	-	3.7	3.7	4.6	6.0	7.4	
1976	8.5	7.9	7.3	5.9	4.1	4.6	4.4	4.3	5.5	6.8	7.6	7.8	
1977	7.5	7.4	6.3	4.8	4.8	4.2	3.9	4.0	4.6	6.2	5.8	6.0	
1978	5.7	6.4	4.9	4.2	4.3	3.2	4.0	3.9	5.5	6.0	6.2	5.6	
1979	6.1	7.4	6.4	5.8	4.5	3.7	3.6	3.0	5.9	5.9	6.4	5.7	

MEAN	5.8	6.1	5.5	4.8	3.9	3.8	3.7	3.8	4.7	5.5	6.1	6.0	
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

## MONTHLY RECORD FOR MEAN WIND SPEED

(Unit: m/sec)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	2.6	1.5	1.6	1.6	1.2	-	1.1	1.3	1.6	1.7	2.9	2.5	
1971	2.1	2.4	2.7	2.7	1.6	1.3	2.0	2.0	1.2	1.5	1.7	2.8	
1972	2.1	1.7	1.4	1.3	1.4	1.6	1.3	1.3	1.3	2.1	1.8	2.0	
1973	1.5	1.3	2.0	1.3	1.1	1.2	1.4	1.4	1.3	1.5	1.8	-	
1974	2.1	2.3	1.9	0.8	0.7	0.6	0.6	0.9	1.2	1.5	2.2	2.5	
1975	1.8	-	1.7	1.8	1.2	1.3	-	1.2	1.0	1.3	1.9	2.2	
1976	2.3	1.8	1.5	1.3	0.9	0.9	0.8	0.9	1.0	1.3	1.5	2.3	
1977	2.0	1.8	1.4	0.9	0.8	0.7	0.8	0.9	1.0	1.2	1.3	1.9	
1978	1.6	1.7	1.0	0.7	0.7	0.7	0.7	0.3	0.8	1.0	1.1	1.5	
1979	1.7	1.3	1.2	0.9	0.8	0.7	0.7	0.6	0.7	1.2	1.8	1.4	

MEAN	2.0	1.8	1.6	1.3	1.0	1.0	1.0	1.0	1.0	1.4	1.8	2.1	
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

## MONTHLY RECORD FOR MEAN DAILY SUNSHINE HOURS

(Unit: hours/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970													
1971													
1972													
1973													
1974													
1975													
1976	9.1	8.0	7.5	6.9	4.7	4.5	5.5	5.7	6.5	6.3	7.5	8.5	
1977	7.7	7.5	7.9	4.7	5.5	6.2	4.4	4.7	6.1	8.1	7.0	7.6	
1978													
1979													

MEAN	8.4	7.8	7.7	5.8	5.1	5.4	5.0	5.2	6.3	7.2	7.3	8.1	
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

## MONTHLY RECORD FOR RADIATION

(Unit: cal/cm<sup>2</sup>/d)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970													
1971													
1972													
1973													
1974													
1975													
1976	677	692	691	672	697	692	707	667	707	677	720	730	
1977	690	664	730	730	695	702	705	700	720	781	788	798	
1978													
1979													

MEAN	684	678	714	701	696	697	706	684	714	729	754	764	
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

**(4) TPC Langasani**



## T.P.C. LANGASANI (1/2)

## MONTHLY RECORD FOR DAILY MAX. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	32.0	34.0	33.0	30.0	28.0	28.0	27.0	28.0	30.0	31.0	33.0	31.0	
1971	32.0	31.0	33.0	30.0	28.0	26.0	26.0	26.4	29.7	30.8	32.2	30.9	
1972	31.8	31.0	32.3	30.8	27.9	27.5	27.3	27.9	29.6	31.2	30.5	32.9	
1973	32.4	33.1	34.6	31.6	28.6	27.0	27.1	28.2	29.4	31.8	31.7	32.5	
1974	34.5	34.9	32.4	30.0	29.5	27.0	26.1	28.2	29.0	31.1	32.2	33.0	
1975	33.1	34.2	33.4	31.6	29.2	27.2	26.6	27.3	28.7	30.6	32.7	32.5	
1976	32.8	33.4	33.5	30.7	28.4	27.5	27.5	27.5	29.1	31.0	31.8	31.5	
1977	31.4	31.9	31.7	30.4	29.6	28.2	28.0	28.0	29.8	31.7	30.7	30.1	
1978	30.5	30.9	31.0	29.6	27.6	26.7	26.5	27.7	30.4	32.1	30.1	30.7	
1979	31.6	32.2	33.1	30.6	27.8	25.7	25.9	27.1	29.2	31.7	32.7	33.1	
MEAN	32.2	32.9	32.8	30.5	28.5	27.1	26.8	27.6	29.5	31.3	31.8	31.8	

## MONTHLY RECORD FOR DAILY MIN. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	19.0	19.0	19.0	19.0	18.0	15.0	13.0	11.0	14.0	16.0	18.0	17.0	
1971	17.0	16.0	16.0	17.0	15.0	12.0	13.2	12.0	13.2	15.1	15.7	15.7	
1972	15.4	15.9	16.1	17.2	16.0	12.4	12.8	11.9	13.3	15.7	15.7	15.9	
1973	15.4	16.4	16.6	17.0	15.1	14.7	13.6	15.6	16.0	18.4	19.3	18.9	
1974	17.7	18.2	18.2	19.2	17.2	15.1	11.0	12.0	12.6	12.9	16.2	16.9	
1975	18.6	18.9	19.8	19.7	19.0	17.0	14.8	15.4	16.1	17.1	18.0	19.1	
1976	18.3	19.4	19.5	19.4	18.1	15.3	14.1	14.3	16.2	17.3	17.9	18.6	
1977	19.8	18.8	19.4	19.9	18.4	15.8	15.2	14.9	15.7	15.8	19.0	19.0	
1978	17.8	18.6	19.5	19.8	17.3	16.3	15.5	15.5	16.7	19.2	18.8	18.3	
1979	18.9	19.0	20.0	19.7	18.8	15.6	15.2	16.2	16.4	18.2	19.3	19.9	
MEAN	17.8	18.0	18.4	18.8	17.3	14.9	14.0	14.1	15.0	16.5	17.8	17.9	

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 9 AM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	65	64	65	64	64	65	65	66	70	68	67	72	
1971	89	87	91	93	92	83	90	90	82	82	82	87	
1972	87	87	88	87	92	90	90	86	89	87	92	91	
1973	91	83	88	92	92	90	89	84	85	85	87	87	
1974	86	87	88	90	93	81	89	83	87	89	88	85	
1975	87	87	89	89	91	90	91	90	88	85	82	89	
1976	85	82	88	91	91	90	90	87	83	83	83	86	
1977	87	87	87	91	92	90	87	90	87	85	91	91	
1978	90	92	93	95	93	93	93	90	87	87	92	93	
1979	92	93	91	97	86	80	85	82	78	76	73	74	
MEAN	88	87	89	92	91	89	89	87	85	84	85	87	

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 3 PM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	38	36	40	45	39	39	43	43	40	37	37	43	
1971	40	42	40	47	50	49	47	48	42	41	42	45	
1972	46	49	50	52	56	52	51	50	50	51	51	51	
1973	49	48	49	50	52	53	50	49	48	45	47	46	
1974	41	42	50	60	67	50	53	59	60	50	54	53	
1975	49	45	49	52	59	57	58	52	55	49	46	48	
1976	46	44	45	55	61	56	53	50	51	48	47	48	
1977	49	47	52	57	62	59	58	53	47	45	53	49	
1978	49	49	61	64	67	70	53	50	46	45	51	61	
1979	56	54	49	64	69	61	62	58	53	49	47	47	
MEAN	47	46	49	55	58	55	53	51	49	46	48	49	

## T. P. C LANGASANI (2/2)

## MONTHLY RECORD FOR DAILY PAN EVAPORATION

(Unit: mm/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	5.0	6.4	5.7	4.7	3.9	3.3	3.8	4.6	5.9	6.6	6.4	5.5	1,876
1971	6.3	7.1	7.7	5.9	4.5	4.2	3.8	3.9	5.9	6.9	7.4	5.8	2,107
1972	7.1	5.8	6.8	6.0	3.9	4.5	4.5	4.9	5.8	6.2	5.9	7.1	2,034
1973	6.3	6.3	7.4	5.2	4.5	3.4	4.4	5.4	6.0	7.0	6.9	7.5	2,119
1974	7.2	7.8	8.2	4.3	5.2	4.5	3.5	5.6	5.7	7.3	7.2	7.6	2,252
1975	7.6	7.9	6.3	5.8	5.0	4.4	4.4	5.0	6.2	6.3	8.0	8.0	2,274
1976	9.4	8.0	7.9	5.9	4.5	4.6	5.1	5.5	6.4	6.4	7.0	7.4	2,373
1977	7.4	7.6	6.8	4.0	4.4	5.0	5.0	5.0	6.1	6.5	5.8	6.4	2,126
1978	6.2	6.2	3.4	2.1	3.8	2.8	3.5	4.5	5.7	6.0	5.9	4.5	1,657
1979	5.4	5.2	5.3	3.5	2.7	2.6	3.0	3.5	-	5.8	7.2	7.3	
MEAN	6.8	6.8	6.6	4.8	4.2	3.9	4.1	4.8	6.0	6.5	6.8	6.7	2,066

## MONTHLY RECORD FOR MEAN WIND SPEED

(Unit: m/sec)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	1.19	1.08	1.23	1.47	1.08	0.97	1.12	1.19	1.49	1.53	1.90	1.75	
1971	1.45	1.40	1.92	1.34	1.34	0.99	1.00	1.05	1.27	1.34	1.82	1.42	
1972	1.47	1.14	1.23	1.40	1.27	0.89	0.98	1.12	1.33	1.43	1.24	1.79	
1973	1.22	1.28	1.56	1.45	1.14	1.15	1.10	1.35	1.38	1.63	1.92	2.19	
1974	2.07	2.40	2.00	1.09	0.99	0.87	0.82	1.14	-	-	2.19	2.38	
1975	1.19	2.28	1.62	2.51	1.20	1.21	1.13	1.31	1.42	1.57	2.17	2.21	
1976	2.37	2.09	1.80	1.49	1.26	1.22	1.22	1.38	1.58	1.65	1.76	2.49	
1977	2.08	1.83	1.73	1.49	3.07	1.02	1.05	1.25	1.48	1.50	1.50	1.88	
1978	1.63	1.53	1.14	0.93	1.59	0.89	0.84	0.75	0.56	1.34	1.30	1.01	
1979	1.54	1.31	1.52	0.80	1.16	1.25	0.87	1.14	1.24	1.50	1.91	1.83	
MEAN	1.62	1.62	1.58	1.30	1.22	1.05	1.01	1.17	1.31	1.33	1.77	1.90	

## MONTHLY RECORD FOR DAILY SUNSHINE HOURS

(Unit: hours/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	5.9	8.4	7.8	6.7	4.8	5.3	5.6	6.3	8.5	8.8	8.1	7.1	2,529
1971	7.8	9.2	9.6	8.1	6.3	6.3	4.9	5.4	8.2	8.9	9.1	7.4	2,785
1972	9.0	7.0	8.7	8.4	5.3	5.9	5.3	6.5	7.8	8.1	7.2	8.5	2,668
1973	7.7	8.2	9.7	6.4	5.2	4.4	7.4	6.6	7.7	8.5	8.1	8.9	2,704
1974	9.0	9.5	8.3	5.3	9.5	3.7	3.7	7.0	7.6	9.0	9.2	9.6	2,779
1975	9.1	10.1	7.6	7.7	6.2	4.9	5.1	5.6	6.9	7.9	10.2	8.4	2,721
1976	9.7	8.6	8.4	7.4	6.6	5.5	6.5	6.6	8.0	8.4	8.6	9.2	2,813
1977	8.7	8.1	8.2	6.0	7.0	6.8	6.0	6.7	8.0	9.2	8.6	8.9	2,805
1978	8.1	9.2	6.0	6.6	6.0	4.4	5.6	6.7	8.8	8.9	7.8	7.8	2,617
1979	8.0	8.0	8.7	7.1	5.0	4.6	5.4	6.2	7.4	8.3	8.9	8.9	2,630
MEAN	8.3	8.6	8.3	7.0	6.2	5.2	5.6	6.4	7.9	8.6	8.6	8.5	2,711

## MONTHLY RECORD FOR RADIATION

(Unit: cal/cm<sup>2</sup>/h)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	515	609	553	506	442	424	451	480	568	606	585	521	
1971	574	624	641	568	493	427	415	445	547	618	621	556	
1972	626	565	632	597	462	468	442	498	533	582	559	621	
1973	585	571	626	512	459	374	471	506	556	615	635	682	
1974	700	783	662	541	648	498	582	438	570	667	572	582	
1975	585	570	544	478	412	334	375	413	518	471	630	544	
1976	594	580	558	506	416	398	427	474	544	550	603	585	
1977	591	588	582	453	468	457	386	427	556	582	530	500	
1978	497	547	444	459	367	316	357	442	553	550	512	471	
1979	489	543	588	510	510	333	339	486	533	597	603	603	
MEAN	576	598	583	513	467	403	425	461	548	584	585	567	



(5) **Lyamungu ARI**



## LYAMUNGU A.R.I. (1/2)

## MONTHLY RECORD FOR DAILY MAX. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	26.1	27.4	26.7	23.1	21.8	21.4	20.9	21.9	23.9	25.9	27.8	26.8	
1971	27.4	27.7	27.9	24.7	22.0	20.5	20.1	20.4	23.4	25.5	27.8	26.4	
1972	27.1	26.3	26.7	24.8	22.4	20.9	20.4	21.7	23.4	25.0	24.6	26.6	
1973	27.0	27.6	28.7	25.5	22.4	20.7	21.1	21.8	24.1	26.1	26.6	27.4	
1974	28.3	29.0	27.1	23.9	22.7	20.4	20.0	21.7	22.6	25.6	26.1	27.4	
1975	27.2	28.9	27.1	24.6	22.5	20.6	20.3	20.8	22.4	24.4	27.0	27.1	
1976	23.2	27.2	27.1	25.0	22.0	21.2	21.0	21.3	23.6	25.9	26.3	27.1	
1977	27.3	27.2	26.3	23.9	23.3	21.7	21.2	21.5	24.3	26.1	25.2	25.9	
1978	26.8	26.8	25.5	23.7	21.6	20.3	19.9	21.4	24.3	26.0	25.5	24.8	
1979	25.9	25.8	26.7	24.2	21.1	19.8	20.1	20.9	22.8	25.7	26.9	27.7	
MEAN	27.1	27.4	27.0	24.3	22.2	20.8	20.5	21.3	23.5	25.6	26.4	26.7	

## MONTHLY RECORD FOR DAILY MIN. TEMPERATURE

(Unit: °C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	14.6	14.6	15.5	16.2	15.3	13.8	13.2	12.6	12.7	12.8	13.7	14.0	
1971	13.8	13.5	13.7	15.6	14.7	12.6	12.7	12.1	12.2	11.7	12.2	13.8	
1972	12.9	14.4	13.8	14.9	15.2	13.6	13.1	12.5	12.4	14.2	14.8	14.4	
1973	14.7	14.9	14.0	15.8	15.2	13.9	11.8	12.4	12.7	13.1	13.5	12.9	
1974	11.8	12.2	13.3	15.3	13.9	13.4	12.5	11.7	11.8	11.6	12.7	12.5	
1975	12.4	12.1	14.3	14.6	13.7	13.2	12.1	11.7	12.3	11.7	11.8	12.5	
1976	11.6	12.4	12.8	14.0	14.2	12.9	11.2	11.4	11.7	11.4	12.7	12.7	
1977	13.7	13.1	14.0	14.9	14.6	12.8	12.2	11.7	11.5	12.2	13.6	13.7	
1978	12.8	12.5	14.4	15.1	13.6	13.0	11.9	11.6	11.1	11.5	13.4	14.0	
1979	13.9	13.9	13.7	14.8	14.3	12.7	11.8	10.6	13.1	13.2	14.1	15.0	
MEAN	13.2	13.4	14.0	15.1	14.5	13.2	12.3	11.8	12.2	12.3	13.3	13.6	

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 9AM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	82	80	86	93	90	83	83	87	79	78	75	77	
1971	79	72	75	83	92	85	90	88	83	76	72	75	
1972	73	78	78	90	93	89	90	88	85	81	84	79	
1973	80	79	79	91	91	83	85	84	83	77	80	72	
1974	68	68	79	91	90	91	89	89	81	78	78	74	
1975	72	69	79	89	90	90	86	83	86	79	73	74	
1976	71	77	79	88	92	86	84	84	84	76	75	75	
1977	77	75	85	92	91	87	87	86	86	79	85	83	
1978	77	79	86	92	90	91	92	90	83	78	83	87	
1979	85	82	80	92	94	89	89	90	82	81	80	80	
MEAN	76	76	81	91	91	88	88	87	83	78	79	78	

## MONTHLY RECORD FOR RELATIVE HUMIDITY AT 3PM

(Unit: %)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	63	62	64	77	74	64	63	57	52	45	47	56	
1971	53	50	46	68	73	68	67	63	54	48	46	57	
1972	52	61	59	67	77	71	68	60	59	59	72	63	
1973	61	62	51	69	75	70	59	59	54	49	56	49	
1974	44	44	53	73	69	73	71	58	57	49	56	53	
1975	51	45	59	69	71	69	67	60	62	52	48	56	
1976	50	57	56	67	74	69	65	62	59	52	60	58	
1977	58	62	68	74	72	67	65	65	54	53	67	66	
1978	60	64	73	79	75	76	70	65	55	52	67	69	
1979	65	68	60	79	80	74	68	67	59	68	58	57	
MEAN	56	58	59	72	74	70	66	62	57	53	58	58	

LYAMUNGU A.R.I. (2/2)

MONTHLY RECORD FOR DAILY PAN EVAPORATION

(Unit: mm/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	2.6	3.2	2.6	1.1	1.5	2.1	2.3	2.9	3.8	4.6	4.7	3.4	
1971	3.9	4.2	4.7	1.8	1.3	1.8	1.7	2.0	2.8	4.0	4.7	3.6	
1972	3.8	3.1	3.4	2.0	1.1	1.8	1.8	2.4	2.6	2.9	2.1	2.9	
1973	3.0	3.1	4.1	1.8	1.3	1.8	2.3	2.6	3.2	4.0	3.5	4.3	
1974	5.2	5.6	4.0	1.3	1.8	1.4	1.7	2.4	3.1	4.5	3.6	3.9	
1975	4.1	5.2	3.5	1.7	1.6	1.8	1.9	2.4	2.3	3.6	4.7	3.7	
1976	4.8	3.8	4.6	2.2	1.4	2.0	2.2	2.5	3.3	3.7	3.7	3.6	
1977	3.6	3.7	2.5	1.5	1.6	2.0	2.1	2.1	2.8	3.6	2.1	2.5	
1978	3.1	2.7	1.7	1.0	1.3	1.2	1.6	2.0	3.1	3.9	2.3	1.9	
1979	2.2	2.0	2.6	1.2	0.8	1.3	1.3	1.5	2.1	2.9	3.0	3.1	
MEAN	3.63	3.66	3.37	1.56	1.37	1.72	1.89	2.28	2.91	3.77	3.44	3.29	

MONTHLY RECORD FOR MEAN WIND SPEED

(Unit: m/sec)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	0.83	0.87	0.75	0.77	0.89	0.87	0.86	0.93	1.09	1.16	1.09	0.89	
1971	0.93	1.02	1.08	0.89	0.95	0.92	0.81	0.87	1.01	1.30	1.13	0.93	
1972	0.98	0.91	0.95	0.89	0.95	1.02	0.99	0.95	0.99	1.03	0.88	0.89	
1973	0.91	0.89	0.96	1.05	0.92	1.05	0.97	0.95	1.04	1.20	0.64	1.01	
1974	1.05	1.09	0.97	0.71	0.79	0.73	0.85	0.88	0.95	1.10	1.04	0.94	
1975	0.91	1.01	0.99	0.85	0.94	0.97	0.85	0.93	0.96	1.16	1.18	0.99	
1976	1.06	1.01	0.99	0.88	0.94	0.96	1.00	0.98	1.11	1.26	1.17	1.02	
1977	1.02	1.00	0.92	0.63	0.61	0.34	0.57	0.91	1.11	1.24	1.05	0.82	
1978	0.91	0.95	0.80	0.84	0.67	0.50	0.57	0.47	0.70	1.07	0.64	0.63	
1979	0.59	0.65	0.61	0.43	0.76	0.72	0.85	0.81	0.94	1.13	0.96	0.95	
MEAN	0.92	0.94	0.90	0.80	0.84	0.81	0.83	0.87	0.99	1.17	0.98	0.91	

MONTHLY RECORD FOR DAILY SUNSHINE HOURS

(Unit: hours/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
1970	5.4	8.2	5.9	3.2	2.5	3.8	3.8	5.2	6.5	7.5	7.5	6.5	
1971	7.4	8.0	7.3	5.3	3.5	4.2	3.4	4.0	6.5	8.1	8.4	7.3	
1972	8.7	6.8	8.2	6.1	3.6	4.5	2.8	5.1	6.4	6.5	5.8	8.1	
1973	7.8	8.0	8.8	5.1	3.2	2.5	5.5	4.9	5.8	7.4	6.6	8.5	
1974	9.2	9.0	6.5	3.5	4.8	2.7	3.0	5.0	5.7	8.6	7.0	8.1	
1975	7.7	8.8	6.9	4.9	4.0	2.8	3.4	4.2	4.8	6.4	8.2	7.7	
1976	9.0	7.4	7.4	5.6	2.9	3.8	5.1	5.0	5.6	7.9	7.1	7.4	
1977	7.1	7.0	6.1	3.8	4.4	4.5	4.1	5.3	6.3	8.6	6.4	6.6	
1978	7.7	8.6	4.2	3.3	3.4	2.1	3.2	4.2	7.0	6.7	4.9	5.2	
1979	6.3	6.9	7.6	3.8	1.5	2.0	3.8	3.9	5.6	6.6	6.8	7.2	
MEAN	7.6	7.9	6.9	4.5	3.4	3.3	3.8	4.7	6.0	7.4	6.9	7.3	

MONTHLY RECORD FOR RADIATION

(Unit: Cal/cm<sup>2</sup>)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970	365	419	353	208	193	214	217	290	365	413	428	393	
1971	440	540	458	332	238	259	229	259	380	443	455	425	
1972	492	407	455	326	238	256	214	317	359	395	350	470	
1973	443	452	507	271	202	172	296	290	380	422	407	488	
1974	522	500	410	262	271	151	226	286	368	495	410	481	
1975	483	516	479	353	247	211	211	293	308	401	455	443	
1976	528	431	458	323	205	244	290	299	344	449	419	443	
1977	437	437	377	280	341	323	296	347	467	522	425	425	
1978	522	507	377	256	265	211	244	326	479	483	404	392	
1979	446	392	513	308	196	220	271	311	404	486	404	513	
MEAN	467	461	440	293	243	226	250	302	386	452	416	446	

## **II. RAINFALL DATA**

### **2.1 General**

#### **(1) List of Rainfall Stations**



LIST OF RAINFALL STATIONS

NO.	REGISTERED NUMBER	NAME OF STATION	LOCATION			HISTORY		DATA COLLECTED	
			Lat.	Long.	Alt.	Opening	Closure	Monthly years	Daily years
1.	93.37/002	Masama Estate	3 18'S	37 13'E	975	1930	-	27	19
2.	004	Moshi Metco. Station	21	20	813	1894	-	50	33
3.	005	Kibosho Mission	13	20	1,478	1912	-	45	11
4.	009	Old Moshi School	19	24	1,067	1922	-	48	7
5.	015	Kilema Mission	18	30	1,422	1929	-	50	50
6.	018	Singa Chini	17	20	1,113	1934	1968	18	-
7.	021	Lyamungu	14	15	1,268	1935	-	44	43
8.	028	T.P.C. Langasani	30	19	701	1935	-	42	9
9.	029	Kiyungi	24	19	753	1935	-	45	9
10.	031	Himo Sisal Estate	23	33	810	1936	-	42	10
11.	036	Kabe Railway Station	30	26	708	1936	-	34	-
12.	046	Marangu College	17	31	1,433	1941	1976	34	34
13.	064	Old Moshi Nursery	17	26	1,646	1947	-	32	29
14.	072	Kifaru Sisal Estate	31	33	700	1951	-	16	-
15.	073	Moshi Prison	20	18	914	1951	-	29	16
16.	085	Lyakirima Mwika	17	34	1,440	1956	-	20	-
17.	086	Kirua Vunjo	18	27	1,676	1956	-	15	-
18.	091	W.D. & I.D. Moshi	21	20	838	1956	-	24	12
19.	120	Kilema Forest Station	15	27	1,830	-	-	7	-
20.	122	T.P.C. Langasani North	28	19	735	1963	-	17	6
21.	123	Maua Seminary	16	19	1,660	1972	-	8	8
22.	131	Miwaleni Sub-station	25	27	770	1971	-	9	9
23.	140	Uru Estate	15	21	1,340	-	-	10	4
24.	143	NAFCO Kabe Estate	29	26	710	1966	-	14	14
25.	-	Mt. Kilimanjaro, 1E	13	31	2,200	1945	1971	20	-
26.	-	- do - 2E	10	31	2,870	1945	1971	16	-
27.	-	- do - 3E	08	26	3,810	1945	1971	20	-
28.	-	- do - 4E	06	26	4,270	1945	1971	20	-
29.	-	- do - 5E	05	23	4,800	1945	1971	19	-
30.	-	T.P.C., 2F	29	19	715	1960	-	20	-
31.	-	T.P.C., Camp 8	33	19	698	1960	-	20	-
32.	-	T.P.C., Camp 10	31	20	708	1960	-	20	-
33.	-	T.P.C., D25-Area	29	21	715	1966	-	14	-
34.	-	T.P.C., 20-Area	32	22	706	1968	-	12	-
35.	-	T.P.C., H-Area	30	18	710	1968	-	12	-

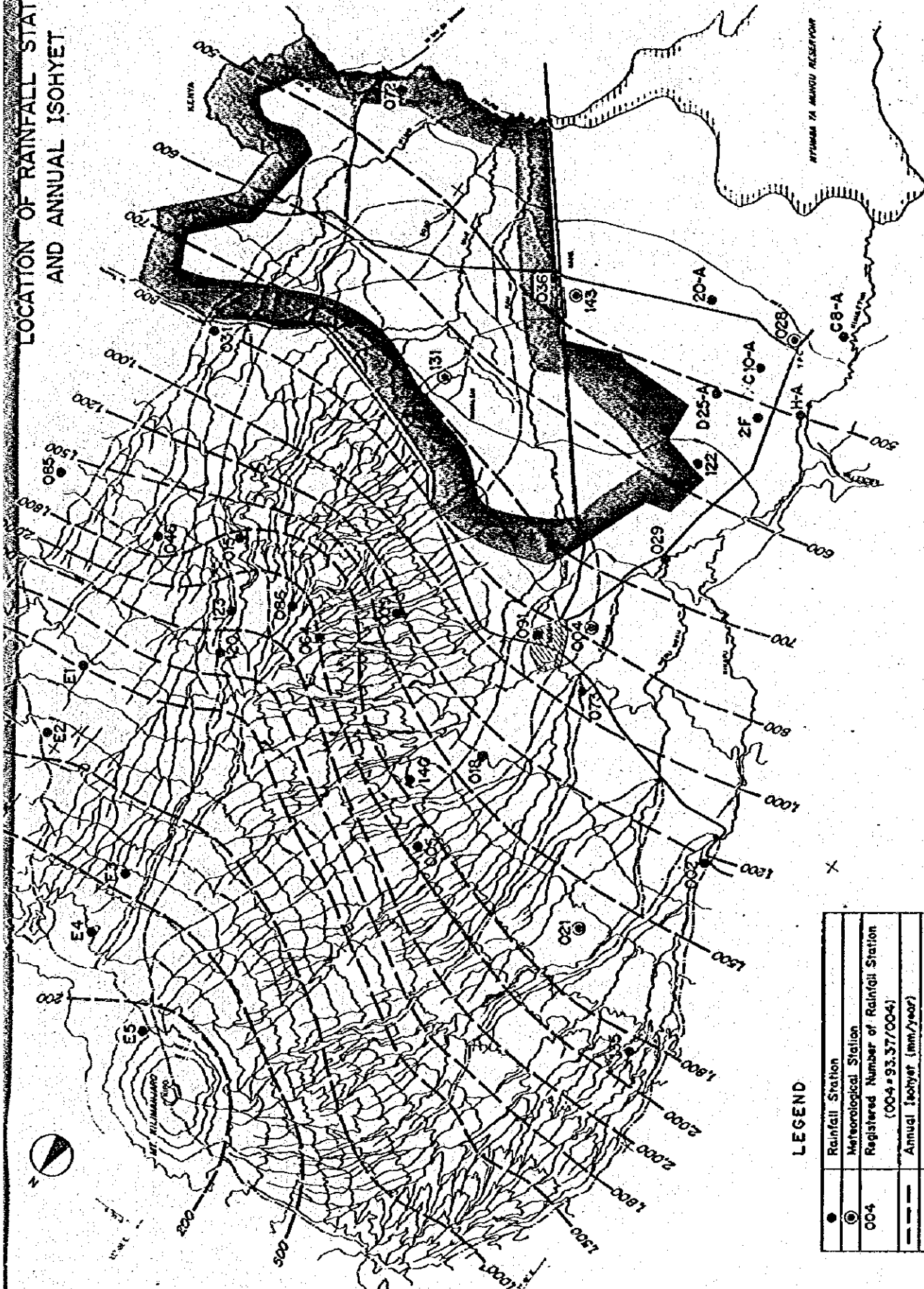




**(2) Location of Rainfall Stations**



LOCATION OF RAINFALL STATION  
AND ANNUAL ISOHYET



LEGEND

●	Rainfall Station
⊙	Meteorological Station
004	Registered Number of Rainfall Station (004 = 93.37/004)
—	Annual Isohyet (mm/year)
—	Boundary of the Lower-Moshi Area
—	Watershed Boundary
—	Rivers
—	Contour Line in Feet

SCALE

HYUNDAI TA MANHOU RESERVOIR

KLENYA

014

017

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A

028

029

029

029

029

029

029

029

029

029

029

021

022

025-A

029

036

143

20-A



**(3) Availability of Rainfall Records**



# AVAILABILITY OF RAINFALL RECORD

REGISTERED NUMBER	NAME OF STATION	OPENING YEAR	CALENDAR												COLLECTION DAILY		
			30	35	40	45	50	55	60	65	70	75	79				
1	33.37.002 Masama Estate	1930															19
2	004 Moshi Mereo Station	1894															27
3	005 Kibosho Mission	1912															33
4	009 Old Moshi School	1922															50
5	015 Kilema Mission	1929															11
6	018 Singa Chini	1934															48
7	021 Lyamungu	1935															7
8	028 T.P.C. Langasani	1935															50
9	029 Kiyungi	1935															18
10	031 Himo Sisal Estate	1936															43
11	036 Kahe Railway Station	1936															44
12	046 Marangu College	1941															9
13	064 Old Moshi Nursery	1947															42
14	072 Kifaru Sisal Estate	1951															9
15	073 Moshi Prison	1951															45
16	085 Lyakirumu Mwika	1956															10
17	088 Kirua Vunjo	1956															42
18	091 W.D. & H.O. Moshi	1956															9
19	120 Kilema Forest Station	1973															45
20	122 T.P.C. Langasani North	1963															10
21	123 Maua Seminary	1972															42
22	131 Miwaleni Sub-Station	1971															9
23	140 Unu Estate	1970															9
24	143 NAFCO Kahe Estate	1966															4
25	Mt. Kilimanjaro I E	1945															14
26	" 2 E	1945															14
27	" 3 E	1945															20
28	" 4 E	1945															20
29	" 5 E	1945															20
30	T.P.C. 2F	1960															19
31	" Camp 8	1960															20
32	" Camp 10	1960															20
33	" 0-25	1966															20
34	" 20-Area	1968															14
35	" H-Area	1968															12

 : Daily Rainfall Data Collected     
  : Monthly Rainfall Data Collected





## 2.2 Average Monthly Rainfall



## AVERAGE MONTHLY RAINFALL (1)

(Unit: mm)

Station (Registered No.)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total	Avail- able Nos. of Tra
Masana Estate (93.37/002)	Ave.	65	58	110	373	297	77	48	28	27	33	86	58	1260	23
	Max.	234	133	464	893	1005	254	216	122	190	136	475	181	1005	
	Min.	0	0	0	107	46	1	0	0	0	0	0	0	0	
Moshi Meteor. Station (93.37/004)	Ave.	41	51	109	302	166	29	16	13	16	32	34	49	878	50
	Max.	166	113	360	752	404	108	93	62	135	239	425	213	752	
	Min.	0	0	3	49	44	0	0	0	0	0	0	0	0	
Kibosho Mission (93.37/005)	Ave.	88	64	133	507	478	180	104	58	34	35	93	86	1862	45
	Max.	497	236	376	1204	958	397	239	171	271	200	663	363	1204	
	Min.	0	0	13	69	59	0	29	7	0	0	0	4	0	
Old Moshi School (93.37/009)	Ave.	56	47	136	376	256	65	34	23	21	44	80	72	1210	48
	Max.	235	156	352	776	544	250	236	81	183	209	603	259	776	
	Min.	0	0	10	73	10	0	0	0	0	0	0	0	0	
Kilima Mission (93.37/015)	Ave.	87	98	223	483	313	108	64	66	53	88	169	110	1862	50
	Max.	442	426	664	1094	584	420	181	268	276	413	447	466	1094	
	Min.	0	0	0	122	60	0	0	0	0	0	3	1	0	
Singu Chini (93.37/018)	Ave.	28	52	92	373	254	46	29	14	13	22	93	48	2064	18
	Max.	167	147	224	762	451	131	65	38	34	62	266	183	762	
	Min.	0	0	8	56	60	0	10	0	0	0	0	0	0	
Lyaungu (93.37/021)	Ave.	51	65	112	530	423	113	61	36	33	39	96	75	1634	44
	Max.	211	246	374	1034	901	288	152	110	198	175	708	260	1034	
	Min.	1	4	4	156	114	9	7	4	0	0	4	6	0	
T.P.C. Langasani (93.37/028)	Ave.	38	35	69	142	61	6	8	5	9	19	45	36	473	42
	Max.	153	154	347	419	197	28	71	26	69	95	239	110	419	
	Min.	0	0	0	29	0	0	0	0	0	0	0	0	0	
Kiyungi (93.37/029)	Ave.	36	45	88	237	129	17	7	11	14	27	33	48	694	45
	Max.	191	178	232	542	348	102	60	70	119	157	302	254	542	
	Min.	0	0	0	13	26	0	0	0	0	0	0	0	0	
Himo Sisal Estate (93.37/031)	Ave.	52	61	116	199	114	23	13	17	11	29	101	91	809	42
	Max.	181	260	355	415	408	119	60	76	81	169	421	331	421	
	Min.	10	0	0	53	7	0	0	0	0	0	0	0	0	
Eshe Railway Station (93.37/036)	Ave.	25	25	54	116	74	7	6	7	8	13	27	36	398	34
	Max.	130	125	199	364	211	61	63	53	98	91	161	154	364	
	Min.	0	0	0	0	0	0	0	0	0	0	0	0	0	
Marangu College (93.37/046)	Ave.	73	95	227	395	258	82	64	53	43	97	183	107	1677	34
	Max.	277	242	523	790	510	304	185	181	237	490	761	390	790	
	Min.	0	7	7	185	66	0	0	0	0	0	5	0	0	
Old Moshi Nursery (93.37/064)	Ave.	78	90	212	579	370	149	92	56	32	73	123	109	1953	33
	Max.	229	243	310	1096	680	732	202	126	125	307	526	320	1096	
	Min.	0	10	6	86	164	14	21	15	0	0	19	28	0	
Kiferu Sisal Estate (93.37/072)	Ave.	40	23	54	110	76	16	9	4	9	21	69	55	486	15
	Max.	135	137	184	325	190	82	90	23	32	71	245	172	325	
	Min.	0	0	0	14	24	0	0	0	0	0	6	0	0	
Moshi Prison (93.37/073)	Ave.	33	39	82	284	130	29	10	8	14	33	72	51	787	29
	Max.	177	108	233	749	252	101	55	62	66	176	312	181	749	
	Min.	0	0	0	14	28	0	0	0	0	0	0	0	0	
Lyakirima Mwika (93.37/085)	Ave.	132	83	237	397	182	61	65	60	46	79	196	123	1661	30
	Max.	381	285	429	763	412	219	160	127	163	207	383	457	763	
	Min.	0	0	15	121	39	1	23	8	0	2	18	23	0	
Kirua Yunjo (93.37/086)	Ave.	119	135	298	570	392	100	118	64	53	208	234	143	2434	15
	Max.	246	382	818	1048	984	264	265	167	214	1151	699	359	1151	
	Min.	0	33	88	275	153	10	25	12	0	0	20	20	0	
V.D. & I.D. Moshi (93.37/091)	Ave.	56	47	98	300	132	33	20	13	14	37	58	45	853	24
	Max.	204	176	247	760	356	90	92	60	83	273	244	158	760	
	Min.	0	3	9	42	41	0	0	0	0	0	5	1	0	

## AVERAGE MONTHLY RAINFALL (2)

No.	Station (Registered No.)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	(Units: mm)	
															Annual Total Max. Min.	Avail- able Nos. of Tra
19	Kilelesh Forest Station (93.37/120)	Ave. Max. Min.	80 135 11	142 301 60	186 325 86	618 1263 170	247 343 158	187 388 80	149 305 68	62 118 15	74 177 12	75 165 18	115 156 40	90 123 70	2023 1263 11	7
20	T.P.C. Langasani North (93.37/122)	Ave. Max. Min.	43 198 0	33 103 0	104 374 3	199 481 23	86 284 19	12 56 0	8 48 0	5 26 0	13 43 0	27 142 0	48 271 0	46 199 0	624 483 0	37
21	Maua Seminary (93.37/123)	Ave. Max. Min.	97 150 26	106 204 41	157 261 50	568 989 316	298 634 162	129 234 44	82 130 17	51 86 23	71 152 6	83 224 12	152 465 31	87 171 26	1881 989 6	8
22	Nivaloni Sub-Station (93.37/131)	Ave. Max. Min.	55 181 1	46 127 9	112 347 4	238 368 125	92 230 36	21 54 1	13 52 0	6 30 0	17 61 0	17 94 0	38 80 14	50 159 12	705 368 0	9
23	Uru Estate (93.37/140)	Ave. Max. Min.	56 139 3	57 111 12	145 261 39	526 919 311	376 670 235	141 238 30	81 175 30	54 115 15	35 84 3	43 252 0	106 401 10	69 220 13	1689 919 0	10
24	NAPCO Kabe Estate (93.37/143)	Ave. Max. Min.	37 114 0	31 66 3	63 247 0	159 364 16	77 186 14	15 54 0	5 37 0	7 21 0	12 44 0	14 60 0	32 184 0	38 129 0	495 364 0	14
25	Mt. Kilimanjaro 1E	Ave. Max. Min.	90 255 4	115 330 28	196 406 48	247 765 46	186 386 48	120 245 34	84 219 13	80 163 28	61 243 4	91 443 14	93 260 27	69 179 14	1434 765 4	20
26	Mt. Kilimanjaro 2E	Ave. Max. Min.	91 261 3	122 311 23	152 613 42	167 499 55	120 270 36	90 186 26	68 178 27	57 123 26	41 114 3	57 134 11	76 147 25	54 185 13	1093 613 3	16
27	Mt. Kilimanjaro 3E	Ave. Max. Min.	43 217 2	48 209 2	86 376 7	96 267 28	70 153 16	37 93 5	26 96 2	23 82 1	16 63 0	29 115 0	50 119 8	23 116 3	547 376 0	20
28	Mt. Kilimanjaro 4E	Ave. Max. Min.	13 54 0	19 78 0	30 189 0	35 127 3	21 78 0	11 56 0	5 38 0	5 74 0	5 48 0	8 41 0	18 57 0	9 81 0	181 189 0	20
29	Mt. Kilimanjaro 5E	Ave. Max. Min.	36 275 0	40 118 0	60 330 0	122 811 0	52 249 0	14 65 0	5 57 0	7 102 0	3 55 0	12 64 0	22 73 0	16 181 0	391 811 0	20
30	T.P.C. 2F	Ave. Max. Min.	34 165 0	25 81 0	87 246 4	179 392 32	68 215 16	7 33 0	5 21 0	3 23 0	12 54 0	21 93 0	43 139 0	37 113 0	521 392 0	20
31	T.P.C. Camp 8	Ave. Max. Min.	36 117 0	21 52 0	80 245 9	145 337 29	47 235 2	5 33 0	5 29 0	2 17 0	11 50 0	16 64 0	57 149 0	27 74 3	452 337 0	20
32	T.P.C. Camp 10	Ave. Max. Min.	39 167 0	21 74 0	82 306 0	104 392 20	60 181 17	8 38 0	6 28 0	3 15 0	12 49 0	20 77 0	31 183 0	35 111 0	441 392 0	20
33	T.P.C. H-Area	Ave. Max. Min.	42 139 0	37 65 0	90 222 0	200 392 30	77 159 17	6 20 0	5 28 0	4 13 0	10 49 0	12 77 0	46 183 0	33 92 0	564 392 0	12
34	T.P.C. 20-Area	Ave. Max. Min.	42 183 0	27 85 1	88 282 24	182 375 24	79 233 16	12 33 0	4 29 0	4 17 0	14 48 0	17 49 0	35 110 0	40 127 0	544 375 0	12
35	T.P.C. D-25	Ave. Max. Min.	47 192 0	28 110 0	92 347 4	209 402 36	82 216 18	13 40 0	7 25 0	8 26 0	14 52 0	26 65 0	33 123 0	39 144 2	598 402 0	14

### **2.3 Summary for Monthly Rainfall**





## SUMMARY FOR MONTHLY RAINFALL

Station: Moshi Metro. Station (91.37/004)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	107	40	127	710	229	48	81	11	24	1	41	37	1,456
1978	72	62	295	284	118	26	5	0	0	4	145	58	1,069
1977	11	79	81	456	166	11	8	28	11	69	61	16	997
1976	8	35	128	228	93	32	4	2	21	0	16	52	619
1975	24	24	62	345	61	6	37	1	65	2	16	11	656
1974	34	9	44	724	50	82	5	7	1	1	40	15	1,012
1973	93	34	3	187	75	27	2	5	0	8	44	37	515
1972	15	57	132	244	234	5	23	6	37	57	145	22	977
1971	43	2	58	537	152	47	22	2	0	0	15	129	1,007
1970	93	45	257	396	76	10	5	26	1	6	6	37	958
Average	50	39	119	411	126	29	19	9	16	15	53	41	927
1969	6	64	28	58	189	49	11	56	2	78	66	6	613
1968	0	134	136	335	207	91	20	21	52	29	104	170	1,299
1967	8	35	16	139	404	25	61	40	65	156	62	0	1,011
1966	21	31	156	165	105	48	9	0	1	3	6	46	591
1965	99	9	48	54	62	0	5	5	6	32	48	22	390
1964	3	65	77	286	120	7	3	6	16	43	23	33	682
1963	14	136	268	246	62	59	16	0	8	0	173	88	1,070
1962	61	5	13	128	56	18	15	28	1	12	113	58	508
1961	11	13	38	140	104	3	93	0	47	259	425	141	1,274
1960	135	14	141	665	82	42	5	0	1	35	10	4	1,134
Average	36	51	92	222	139	34	24	16	20	65	103	57	859
1959	39	45	38	186	44	11	31	17	0	6	20	21	458
1958	4	112	139	176	168	57	2	1	0	0	4	52	745
1957	166	17	21	261	198	6	9	5	5	104	69	81	942
1956	107	6	56	260	51	12	1	14	5	3	12	0	527
1955	14	103	753	323	103	68	9	13	0	0	18	114	918
1954	25	65	8	319	263	8	40	1	2	13	33	12	819
1953	9	0	66	176	178	5	16	32	21	49	78	20	650
1952	41	21	100	209	79	11	0	2	8	3	41	17	535
1951	75	48	97	388	277	70	15	3	2	100	101	52	1,228
1950	9	35	219	180	254	17	18	16	16	2	12	62	840
Average	49	45	90	251	162	27	14	10	6	28	39	43	764
1949	25	64	12	272	59	1	16	0	5	4	8	37	503
1948	0	2	110	193	151	21	8	9	1	25	4	125	649
1947	65	33	109	434	202	103	3	12	18	23	36	24	1,067
1946	1	11	14	324	123	1	7	7	155	117	7	57	824
1945	18	15	101	105	223	8	24	16	2	0	44	20	576
1944	48	27	121	387	136	5	5	8	47	73	93	107	1,062
1943	7	97	82	70	345	16	64	0	13	1	33	28	776
1942	13	0	360	339	331	2	0	13	0	0	41	34	1,133
1941	26	18	68	181	28	34	0	2	11	0	46	213	627
1940	103	105	113	240	138	10	5	25	0	3	73	0	815
Average	31	37	109	255	174	23	13	9	25	25	39	65	805
1939	11	8	119	401	326	10	4	13	11	8	11	27	949
1938	5	99	331	240	330	13	4	7	3	149	53	23	1,257
1937	6	11	128	703	348	19	1	16	0	1	58	49	1,340
1936	111	53	110	458	132	88	7	62	44	14	19	76	1,374
1935	1	113	173	205	245	38	13	37	22	7	22	52	928
1934	48	51	71	68	231	62	28	8	0	4	68	37	678
1933	165	57	75	49	44	25	13	28	0	0	27	39	522
1932	0	72	74	392	220	77	6	2	14	13	9	27	906
1931	22	52	46	752	305	8	15	12	13	17	16	62	1,320
1930	11	32	247	431	124	7	4	9	12	45	102	11	1,038
Average	38	55	137	370	231	35	10	19	12	26	39	40	1,012
1930 - 79 Average	41	51	109	302	166	29	16	13	16	32	54	49	878



## SUMMARY FOR MONTHLY RAINFALL

Station: Kibosho Mission (93.37/005)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	151	49	181	469	541	164	81	95	37	17	33	82	1,900
1978	54	24	56	115	166	146	102	32	2	2	133	71	903
1977	36	39	176	713	228	67	71	171	8	200	58	34	1,801
1976	23	44	118	219	440	295	91	34	38	0	114	54	1,470
1975	31	11	203	535	299	77	77	49	67	4	19	80	1,452
1974	12	20	91	787	356	310	142	43	21	0	24	44	1,850
1973	197	61	14	347	368	194	75	61	5	19	70	26	1,437
1972	22	78	58	316	486	55	152	51	93	22	211	78	1,622
1971	34	-	51	-	563	201	189	89	22	1	10	161	-
1970	361	104	287	615	95	269	36	42	22	1	-	13	-
Average	92	48	124	457	354	178	102	67	32	27	75	64	1,620
1969	78	100	66	122	339	92	73	78	53	3	108	13	1,125
1968	3	79	289	676	437	166	76	109	16	38	184	172	2,245
1967	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	168	46	56	871	619	0	114	55	28	94	129	37	2,217
1964	30	120	228	800	259	258	65	95	41	39	104	88	2,127
1963	63	30	151	574	450	267	70	49	3	5	267	263	2,192
1962	251	5	74	215	426	46	194	58	1	4	65	150	1,489
1961	5	65	41	241	322	53	239	65	105	104	665	234	2,139
1960	84	20	112	676	330	194	76	25	1	36	52	6	1,612
Average	85	58	127	522	398	135	113	67	31	40	197	120	1,893
1959	24	15	101	424	187	116	215	57	6	26	38	86	1,295
1958	28	236	153	431	617	293	147	7	0	0	22	76	2,010
1957	497	55	67	526	951	126	188	29	16	92	190	157	2,894
1956	478	78	169	411	482	125	81	42	120	28	76	4	2,096
1955	21	31	111	318	692	200	90	30	0	0	35	115	1,643
1954	30	112	60	863	501	73	45	50	19	0	51	39	1,843
1953	42	1	30	506	600	118	85	114	62	62	147	19	1,786
1952	71	122	64	509	571	199	85	35	13	5	27	20	1,723
1951	123	47	98	679	519	268	117	49	25	99	207	155	2,386
1950	24	112	313	332	459	190	89	46	32	43	3	21	1,664
Average	134	81	117	500	558	171	114	46	29	36	80	69	1,935
1949	7	74	14	188	325	100	100	52	7	32	0	60	1,159
1948	19	18	70	513	451	230	115	31	23	60	126	225	1,871
1947	67	12	149	1,304	757	362	81	74	47	10	19	53	2,833
1946	0	8	28	28	552	155	29	62	271	167	40	89	1,429
1945	48	65	73	405	681	177	121	48	10	0	172	16	1,816
1944	17	57	65	69	409	121	136	73	30	65	100	152	1,294
1943	26	91	82	193	59	194	111	30	0	3	72	19	880
1942	39	0	415	1,152	422	274	109	42	0	31	59	116	2,659
1941	31	55	13	616	332	167	63	108	79	4	99	363	1,930
1940	121	110	88	626	393	93	129	85	11	0	14	24	1,694
Average	38	49	100	519	438	186	97	61	48	37	70	112	1,755
1939	6	50	155	662	682	353	61	36	28	0	15	11	2,059
1938	0	149	226	347	508	152	74	18	7	52	111	24	1,668
1937	53	40	376	817	958	295	54	85	6	105	163	64	3,014
1936	89	133	147	996	743	285	111	48	58	10	18	85	2,723
1935	1	91	261	326	742	137	54	51	17	59	65	125	1,929
1934	31	69	72	231	459	197	95	32	32	15	42	87	1,562
1933	474	94	311	450	720	33	179	69	28	14	33	35	2,440
Average	93	89	221	547	687	216	90	48	25	36	64	62	2,198
1933 - 79 Average	88	64	133	507	478	180	104	58	34	35	95	86	1,862

## SUMMARY FOR MONTHLY RAINFALL

Station: Old Moshi School (93.37/009)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979													
1978													
1977	15	59	-	-	-	-	-	59	2	95	75	-	-
1976	-	-	-	-	137	98	7	40	20	2	29	-	-
1975	-	30	51	-	-	-	-	-	-	-	-	-	-
1974	20	10	104	634	87	121	-	-	-	-	-	-	-
1973	-	24	13	167	78	33	0	2	0	6	47	20	-
1972	-	61	153	264	196	59	-	54	40	49	206	20	-
1971	79	8	64	598	232	49	21	9	1	3	0	47	1,111
1970	133	93	179	383	94	5	16	2	1	8	0	59	970
Average	62	41	94	409	137	61	15	28	11	27	60	37	982
1969	6	67	42	73	181	85	9	76	2	131	141	26	839
1968	0	54	198	225	187	65	36	7	48	83	143	161	1,205
1967	8	38	35	158	395	46	56	26	80	209	50	0	1,101
1966	18	20	358	177	125	32	0	0	0	6	18	74	628
1965	88	7	10	290	65	0	107	0	2	41	34	38	682
1964	8	33	155	599	141	6	18	19	8	4	15	58	1,064
1963	(43)	140	203	275	142	59	12	0	0	0	285	0	1,159
1962	136	7	30	166	62	11	17	6	7	0	93	0	535
1961	28	33	110	195	126	10	236	1	52	204	605	256	1,856
1960	92	16	101	548	142	60	11	0	0	38	41	1	1,050
Average	43	42	104	271	157	37	50	14	20	71	143	61	1,013
1959	13	49	47	207	54	9	35	15	0	4	26	13	472
1958	3	102	154	349	349	367	108	95	(19)	(12)	(47)	9	1,614
1957	235	47	42	449	447	44	20	12	4	178	51	202	1,731
1956	150	32	203	307	166	10	16	6	15	0	30	17	952
1955	20	108	174	384	300	114	19	9	0	5	58	90	1,281
1954	0	156	14	203	30	43	0	15	7	54	115	55	672
1953	9	0	103	280	336	29	46	48	33	48	131	(68)	1,131
1952	71	121	124	407	220	32	12	0	7	2	33	32	1,061
1951	(56)	0	141	605	367	88	28	32	1	122	245	76	1,761
1950	0	39	304	386	285	38	48	35	40	10	0	(68)	1,253
Average	56	65	131	358	253	77	33	27	13	44	74	63	1,194
1949	0	5	15	517	121	19	21	11	0	29	29	211	978
1948	1	0	117	312	272	25	33	5	9	21	16	54	865
1947	123	20	104	681	515	250	30	37	17	28	0	0	1,805
1946	0	38	18	232	417	11	13	15	183	80	45	115	1,167
1945	26	23	155	438	443	56	70	24	1	0	98	16	1,350
1944	180	4	213	385	235	82	51	38	53	118	81	107	1,547
1943	10	91	162	129	388	94	94	4	9	6	18	4	1,009
1942	146	6	352	552	350	54	17	16	2	11	82	99	1,687
1941	68	22	101	417	151	57	14	50	77	0	94	299	1,350
1940	184	113	186	444	244	25	24	81	4	10	50	46	1,411
Average	74	32	142	411	314	67	37	28	36	30	51	95	1,317
1939	44	21	246	503	426	98	16	10	35	0	34	1	1,434
1938	4	90	349	389	398	25	27	31	0	31	97	80	1,521
1937	15	36	265	742	534	154	18	22	3	75	147	70	2,081
1936	117	73	113	660	449	247	31	56	75	53	20	170	2,064
1935	1	73	248	191	544	102	8	33	14	35	57	98	1,404
1934	22	13	39	121	249	198	52	28	1	12	102	129	966
1933	160	43	65	100	91	27	33	65	4	13	11	38	650
1932	21	92	152	456	449	108	23	19	18	4	31	82	1,455
1931	32	43	44	776	399	44	33	10	30	29	10	58	1,508
1930	49	-	413	539	149	57	-	-	-	111	184	44	-
Average	47	54	193	448	369	106	27	32	20	36	69	77	1,478
1930 - 77 Average	56	47	136	376	256	65	34	23	21	44	80	72	1,210

## SUMMARY FOR MONTHLY RAINFALL

Station: Kiléma Mission (93.37/015)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	109	312	212	602	408	88	98	118	145	67	92	61	2,312
1978	103	55	297	472	237	141	8	25	3	78	130	148	1,697
1977	75	49	207	684	115	31	58	58	39	110	271	161	1,858
1976	100	148	186	415	171	87	22	22	90	41	66	32	1,380
1975	59	67	233	385	115	56	129	19	177	46	34	83	1,403
1974	19	15	91	727	282	228	131	40	34	17	144	4	1,732
1973	148	109	122	286	152	81	28	41	4	12	60	36	1,079
1972	63	108	134	373	322	121	71	68	85	208	373	124	2,050
1971	160	17	106	865	340	110	78	68	21	37	33	82	1,917
1970	182	43	540	905	164	152	88	67	29	26	97	42	2,335
Average	102	92	213	571	231	110	71	53	63	64	130	77	1,777
1969	51	158	245	131	183	51	71	73	53	197	266	23	1,552
1968	0	92	201	412	412	252	34	102	40	77	353	227	2,202
1967	0	0	107	501	541	217	167	0	122	328	319	38	2,340
1966	125	85	541	543	-	93	25	0	0	38	77	37	-
1965	72	33	71	466	-	5	107	2	51	215	243	216	-
1964	5	152	265	922	298	63	18	55	13	76	176	127	2,170
1963	442	426	-	-	-	-	111	94	72	-	447	-	-
1962	208	25	80	-	413	-	-	268	81	79	111	198	-
1961	9	173	24	380	-	21	157	41	142	413	-	466	-
1960	136	88	333	527	191	148	10	16	13	119	198	1	1,780
Average	105	123	207	492	340	106	77	65	59	171	243	133	2,121
1959	106	12	281	341	267	16	181	78	16	35	75	35	1,443
1958	31	92	252	525	584	110	96	52	25	10	102	73	1,952
1957	111	119	103	325	547	77	61	47	74	201	193	324	2,182
1956	313	100	220	193	337	101	21	161	41	34	164	3	1,878
1955	84	149	155	233	214	122	61	17	9	47	123	133	1,347
1954	26	34	161	803	328	40	0	47	19	110	318	74	1,960
1953	33	17	170	228	328	41	74	156	72	142	310	21	1,595
1952	29	136	101	353	302	69	53	19	38	29	135	21	1,185
1951	80	66	199	678	531	177	46	20	11	215	331	138	2,495
1950	117	13	664	604	243	98	40	30	87	0	100	15	2,011
Average	93	74	231	447	358	85	63	63	39	82	185	84	1,804
1949	28	46	0	544	60	20	62	45	5	20	3	90	923
1948	32	35	92	289	199	64	46	21	19	75	53	115	1,040
1947	14	45	65	454	373	420	23	42	68	30	125	20	1,679
1946	2	67	9	496	314	53	19	86	276	102	65	141	1,630
1945	117	59	243	155	413	192	80	77	22	0	265	1	1,624
1944	168	5	241	341	202	107	70	67	61	146	215	176	1,799
1943	4	159	407	236	200	111	70	4	19	31	84	20	1,335
1942	179	318	546	666	288	87	34	50	3	66	121	81	2,449
1941	43	116	96	438	262	163	35	102	0	0	250	450	1,955
1940	194	194	247	637	264	72	52	86	18	11	95	56	1,926
Average	78	104	195	425	258	129	50	58	49	48	128	115	1,637
1939	20	30	397	515	390	138	23	75	75	4	159	5	1,831
1938	29	100	492	361	404	35	84	48	10	42	258	96	1,959
1937	16	54	328	1,094	617	176	15	112	11	229	121	128	2,901
1936	129	120	135	532	474	0	56	122	96	84	118	255	2,121
1935	2	170	372	216	515	48	12	93	77	60	313	163	2,041
1934	29	110	105	252	475	264	88	126	15	99	159	264	1,986
1933	200	90	166	122	117	45	162	179	16	92	145	90	1,454
1932	53	134	180	611	419	220	44	106	84	25	180	127	2,203
1931	13	117	223	566	290	63	56	5	47	84	31	112	1,607
1930	68	66	320	530	187	86	49	64	70	86	(173)	53	1,742
Average	56	99	272	481	389	108	59	81	53	81	166	129	1,974
1930 - 79 Average	87	98	223	483	313	108	64	66	53	88	169	110	1,862

SUMMARY FOR MONTHLY RAINFALL

Station: Singa Chini (9).37/018)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969													
1968													
1967	0	38	8	169	-	-	-	-	-	-	-	-	-
1966	26	38	158	276	175	120	10	12	2	2	0	0	819
1965	0	0	14	325	104	3	22	14	24	25	86	34	651
1964	0	52	224	762	398	22	24	0	8	0	0	0	1,490
1963	10	81	181	301	206	131	22	10	3	10	265	183	1,404
1962	39	3	58	258	203	0	62	18	0	0	-	-	-
1961	0	26	24	56	60	4	21	0	10	62	217	25	505
1960	56	5	119	588	192	-	-	-	-	-	-	-	-
Average	16	30	98	342	191	47	27	9	8	17	114	48	947
1959	24	36	63	351	-	-	-	-	-	-	-	-	-
1958	0	147	47	302	-	-	-	-	-	-	-	-	-
1957	167	65	25	532	451	43	43	5	-	-	-	-	-
1956	76	76	119	540	142	0	-	15	34	48	100	102	1,592
1955	10	123	119	155	366	87	17	19	-	6	69	-	-
1954	19	38	38	565	214	17	4	36	8	12	25	17	993
1953	0	0	43	295	281	32	65	1	33	45	75	19	889
1952	35	89	-	-	-	-	-	-	-	-	-	-	-
1951	-	87	167	555	147	-	-	-	-	-	-	-	-
1950	18	48	162	306	413	88	30	38	12	30	-	-	-
Average	39	71	87	400	316	45	32	19	20	28	67	46	1,170
1950 - 67													
Average	28	52	92	373	254	46	29	14	13	22	93	48	1,064

## SUMMARY FOR MONTHLY RAINFALL

Station: Lyamungu (93.37/021)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	106	106	69	634	551	112	68	61	69	7	36	37	1,876
1978	106	56	182	383	358	215	62	28	10	0	204	260	1,864
1977	48	50	116	844	243	39	17	102	8	175	99	107	1,848
1976	19	123	50	290	342	137	54	17	23	10	40	52	1,157
1975	32	9	374	467	290	80	120	12	77	5	21	42	1,529
1974	3	11	45	953	231	180	53	13	10	5	22	67	1,593
1973	175	148	6	421	316	91	7	22	3	19	35	32	1,295
1972	19	106	128	407	518	37	71	36	67	167	330	39	1,925
1971	37	44	90	684	399	118	80	20	9	1	4	101	1,587
1970	160	20	194	468	259	46	22	20	4	18	9	27	1,247
Average	71	67	125	555	353	108	55	33	28	41	80	76	1,592
1969	43	69	78	170	389	134	45	110	11	71	103	10	1,224
1968	2	81	164	654	316	152	97	63	22	29	154	139	1,873
1967	3	99	10	329	628	149	152	53	194	90	146	6	1,859
1966	27	36	265	431	295	106	21	9	5	19	29	32	1,275
1965	103	20	39	512	155	9	28	20	20	45	146	38	1,135
1964	18	100	195	939	456	31	40	21	11	36	30	36	1,913
1963	37	39	121	345	281	122	58	34	5	2	246	257	1,547
1962	188	22	43	368	365	27	126	61	13	8	46	127	1,394
1961	10	25	30	156	151	19	139	26	115	149	708	260	1,788
1960	127	4	110	821	338	126	31	5	1	40	32	8	1,643
Average	56	50	106	473	337	88	74	40	40	49	164	91	1,568
1959	5	27	60	439	114	46	133	52	0	10	40	59	985
1958	12	183	125	345	376	173	64	4	4	0	10	65	1,361
1957	98	15	40	655	622	69	74	7	18	41	239	125	2,003
1956	211	24	110	412	218	86	44	33	74	5	44	14	1,275
1955	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	42	62	64	619	416	37	12	44	11	11	33	31	1,382
1953	19	182	111	451	447	166	58	18	2	56	125	33	1,668
1952	45	39	83	346	354	94	46	18	79	12	67	11	1,194
1951	101	71	102	533	501	204	64	45	8	82	218	186	2,115
1950	49	78	184	446	641	139	59	45	51	15	22	20	1,749
Average	65	76	98	472	410	113	62	30	27	26	89	60	1,528
1949	39	97	4	278	309	27	53	27	9	22	6	40	911
1948	18	26	79	383	398	97	41	13	9	58	46	160	1,328
1947	33	16	88	962	664	288	45	38	39	27	20	40	2,260
1946	0	29	15	501	542	61	17	29	193	136	14	62	1,607
1945	34	73	70	410	538	98	81	34	6	1	121	10	1,476
1944	28	41	155	789	340	98	69	38	56	82	94	100	1,890
1943	1	65	37	194	521	116	134	12	11	5	52	6	1,135
1942	39	12	371	1,034	520	122	61	30	5	11	84	47	2,336
1941	30	52	63	450	290	137	24	67	80	2	122	253	1,570
1940	82	121	101	569	326	88	60	74	9	34	22	32	1,518
Average	30	53	98	557	445	114	57	36	42	38	58	75	1,603
1939	8	11	109	692	645	267	25	14	44	2	16	13	1,846
1938	14	75	361	292	540	77	47	16	6	66	81	28	1,603
1937	5	3	260	968	901	156	43	73	16	118	102	48	2,693
1936	82	144	57	927	806	199	102	68	46	10	138	131	2,710
1935	3	246	108	369	690	156	40	41	12	25	70	102	1,862
Average	22	96	179	650	716	171	53	42	25	44	81	64	2,141
1935 - 79 Average	51	65	112	530	423	113	61	36	33	39	96	75	1,634

SUMMARY FOR MONTHLY RAINFALLStation: T.P.C Langassai (9).37/028)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	72	16	102	250	197	6	8	2	4	4	2	9	712
1978	112	108	154	213	56	1	1	0	0	6	138	80	869
1977	34	21	49	183	40	5	1	13	9	65	50	32	502
1976	33	12	72	102	32	10	1	0	69	3	22	4	362
1975	17	6	45	51	51	3	9	2	25	3	1	36	249
1974	7	0	35	337	128	6	32	1	0	0	8	5	539
1973	153	56	3	67	40	5	0	1	2	20	48	4	399
1972	28	29	94	133	115	2	1	1	27	31	239	50	750
1971	-	-	-	-	-	-	28	0	1	2	19	65	-
Average	57	31	69	172	82	5	9	2	15	15	59	32	518

## SUMMARY FOR MONTHLY RAINFALL

Station: Kiyungi Sigal Estate (93.37/029)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	191	25	26	440	190	27	46	1	10	9	4	32	1,001
1978	(61)	59	220	329	35	8	0	0	0	0	141	82	915
1977	3	74	147	420	181	7	0	30	10	80	9	26	987
1976	4	27	192	98	113	26	2	0	39	0	18	37	555
1975	21	7	128	173	79	0	14	0	0	0	6	23	477
1974	45	0	24	542	95	50	0	4	0	0	26	14	800
1973	91	52	0	153	41	25	0	3	0	15	25	36	441
1972	11	23	89	164	268	0	2	2	32	75	58	36	760
1971	71	20	73	505	97	34	0	0	0	0	4	142	946
1970	117	50	232	160	48	0	6	13	3	3	3	28	663
Average	62	34	113	298	115	18	7	5	12	18	29	46	757
1969	5	28	19	53	135	13	0	38	2	86	21	4	404
1968	0	89	154	288	244	54	9	12	48	32	62	254	1,246
1967	16	7	5	122	181	6	27	15	47	61	66	25	578
1966	12	23	123	119	109	10	0	0	0	24	9	11	440
1965	98	17	45	78	72	0	0	5	5	38	49	13	420
1964	1	78	67	463	275	3	0	1	30	7	4	74	1,003
1963	22	105	168	142	26	34	3	0	2	10	188	42	742
1962	91	10	7	198	45	3	3	2	5	3	28	61	456
1961	12	7	25	164	46	5	60	1	18	157	302	46	843
1960	129	34	152	317	52	29	0	0	0	32	0	3	748
Average	39	40	77	194	119	16	10	7	16	45	73	53	689
1959	5	42	22	170	32	21	11	51	1	6	8	30	399
1958	1	110	142	159	94	37	2	0	3	0	2	52	602
1957	132	11	32	206	309	6	3	3	8	104	116	104	1,034
1956	126	26	46	186	30	0	1	3	2	2	22	0	444
1955	11	147	136	93	112	23	15	12	0	3	14	93	659
1954	49	94	8	378	182	0	0	27	19	8	17	4	786
1953	3	2	17	123	148	0	9	45	14	56	24	33	474
1952	13	32	46	160	80	0	0	4	11	1	13	32	392
1951	37	13	10	399	177	28	6	0	4	77	55	50	856
1950	7	39	147	212	155	8	11	28	3	0	4	14	628
Average	38	52	61	209	132	12	6	17	7	26	28	41	629
1949	8	84	3	462	34	0	9	0	9	0	1	27	637
1948	1	0	71	170	87	16	6	0	0	29	7	125	512
1947	61	76	53	377	146	56	0	0	10	0	(22)	(55)	856
1946	1	1	1	13	140	0	0	0	119	78	0	32	385
1945	4	31	79	85	195	0	8	0	0	0	3	0	405
1944	4	2	81	228	76	0	0	15	45	106	56	105	673
1943	26	178	29	236	348	30	29	0	0	0	8	24	908
1942	0	0	192	412	115	0	0	11	0	2	49	42	823
1941	19	14	83	146	26	18	0	6	0	2	52	137	503
1940	64	130	107	311	98	10	9	19	0	5	25	4	782
Average	19	52	70	244	127	13	6	5	18	22	22	55	653
1939	4	0	109	455	185	5	0	0	0	0	6	49	813
1938	14	44	213	201	123	28	0	0	0	10	63	39	735
1937	0	0	125	237	143	20	0	27	1	58	0	73	684
1936	29	145	104	220	213	102	5	34	75	0	0	0	947
1935	0	125	200	108	209	17	0	70	49	39	4	73	894
Average	9	63	150	244	175	34	1	30	25	21	15	47	814
1935 - 79	36	45	88	237	129	17	7	11	14	27	35	48	694

SUMMARY FOR MONTHLY RAINFALL

Station: Himo Sisal Estate (93.37/031)

(Units: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	46	130	110	204	172	17	13	47	14	3	12	185	953
1978	144	83	-	-	-	-	7	0	0	7	101	68	-
1977	75	65	127	353	58	23	3	45	5	71	176	88	1,091
1976	90	260	146	348	81	20	9	0	21	26	138	41	1,180
1975	10	8	22	54	7	26	18	52	36	17	61	43	354
1974	0	3	9	406	80	43	44	0	0	20	1	0	606
1973	98	40	0	84	73	28	0	0	0	0	39	8	370
1972	77	95	211	100	233	58	22	24	45	35	212	64	1,176
1971	138	0	67	271	218	73	25	17	0	27	39	113	988
1970	60	36	243	415	63	0	8	10	15	2	82	109	1,043
Average	74	72	104	248	109	32	15	20	14	21	86	72	867
1969	5	183	38	69	8	4	2	37	0	33	38	6	423
1968	0	0	239	290	88	5	0	58	0	4	85	18	787
1967	0	67	31	272	135	0	34	76	76	8	272	66	1,037
1966	4	94	185	181	32	48	7	33	0	3	15	46	628
1965	39	41	33	70	58	0	7	5	13	106	129	68	569
1964	5	22	139	415	50	4	1	4	1	20	57	124	842
1963	116	56	179	87	99	47	15	4	4	2	190	61	860
1962	146	30	25	78	72	16	12	11	2	46	81	108	627
1961	7	82	117	193	56	10	60	7	42	118	369	199	1,260
1960	48	23	125	259	65	4	4	0	0	30	17	0	575
Average	37	60	111	191	66	14	14	22	14	37	123	70	761
1959	54	86	131	204	94	1	44	11	0	6	131	11	716
1958	17	171	192	78	102	69	3	0	0	1	34	54	721
1957	181	36	86	173	254	0	4	0	2	10	145	77	968
1956	122	123	94	141	49	0	4	26	7	1	88	15	670
1955	20	63	103	127	69	30	16	0	0	37	154	86	705
1954	47	3	46	348	408	7	0	7	17	169	34	42	1,128
1953	30	2	182	110	127	3	24	32	21	37	75	11	654
1952	50	141	181	242	45	0	32	3	9	50	27	7	767
1951	37	41	59	360	186	48	19	0	2	58	114	95	1,019
1950	42	13	331	179	62	13	5	15	11	0	58	12	741
Average	60	68	141	196	140	17	13	9	7	37	85	41	815
1949	42	82	0	105	82	0	0	10	0	13	3	150	487
1948	31	1	114	100	116	12	10	6	0	8	42	79	519
1947	37	18	118	283	148	119	9	5	10	6	106	28	887
1946	0	7	11	210	113	62	24	11	81	104	50	48	721
1945	51	13	24	82	172	13	24	10	0	0	110	15	514
1944	70	3	88	153	87	31	0	24	8	87	216	106	873
1943	19	177	64	102	71	27	17	0	0	1	57	4	539
1942	52	5	280	256	103	11	0	10	0	36	57	142	954
1941	40	40	26	94	96	36	0	64	0	21	421	331	1,169
1940	135	150	141	275	113	10	0	29	10	0	44	25	932
Average	48	50	87	166	110	32	8	17	11	28	111	93	761
1939	0	0	91	198	202	12	9	30	26	5	16	40	631
1938	11	88	355	185	329	0	13	4	0	5	153	107	1,250
Average	6	44	224	192	266	6	11	17	13	5	85	74	943
1938 - 79 Average	52	61	116	199	114	23	13	17	11	29	101	69	805





## SUMMARY FOR MONTHLY RAINFALL

Station: Marangu College (93.37/046)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979													
1978													
1977													
1976													
1975	71	-	343	276	-	-	-	-	-	-	-	-	-
1974	0	25	105	550	266	228	111	63	58	21	176	16	1,644
1973	38	107	17	185	-	-	-	-	-	-	-	-	-
1972	116	170	170	392	344	107	66	49	105	138	355	135	2,147
1971	176	46	131	790	486	145	101	37	40	26	54	129	2,161
1970	260	146	591	603	192	20	66	53	26	19	86	138	2,200
Average	110	99	226	466	322	125	91	52	57	51	163	105	1,872
1969	130	242	204	203	124	(83)	(53)	0	18	226	322	45	1,650
1968	0	140	368	437	424	204	0	0	21	201	14	277	1,986
1967	4	11	98	431	397	107	78	128	112	334	392	(141)	2,233
1966	(53)	142	493	323	117	89	42	24	4	33	78	76	1,474
1965	(53)	60	128	370	213	0	71	47	30	74	269	(141)	1,456
1964	(53)	113	216	273	112	23	10	49	16	56	201	0	1,122
1963	84	172	386	244	25	175	44	37	28	65	395	137	1,748
1962	150	30	122	308	247	24	61	131	43	101	134	390	1,791
1961	6	166	163	269	144	7	153	66	133	490	761	206	2,569
1960	0	53	294	571	119	121	19	3	0	93	126	0	1,404
Average	53	113	247	343	192	81	53	54	41	158	269	141	1,747
1959	113	66	198	319	198	44	122	26	22	24	82	0	1,214
1958	35	199	278	471	406	75	16	24	39	10	80	154	1,787
1957	117	78	93	293	510	43	27	33	43	197	206	272	1,922
1956	277	61	209	371	256	36	72	63	13	38	114	25	1,535
1955	69	178	227	293	183	98	68	11	13	49	121	126	1,436
1954	31	43	146	696	291	46	7	54	20	90	328	108	1,860
1953	0	27	278	204	114	33	52	127	66	86	178	31	1,396
1952	66	124	117	234	256	26	20	20	27	71	33	38	1,032
1951	30	73	205	630	467	(43)	50	29	20	218	242	222	2,234
1950	31	7	271	270	106	29	25	65	19	17	77	9	926
Average	77	86	202	379	299	48	46	45	29	80	146	99	1,516
1949	0	78	7	575	66	40	131	86	29	17	5	73	1,107
1948	23	17	200	398	207	89	62	19	16	82	64	137	1,314
1947	28	44	95	579	385	304	45	78	73	0	260	51	1,942
1946	0	38	71	589	247	107	185	107	237	142	63	153	1,919
1945	136	94	261	183	380	18	52	103	19	0	307	11	1,569
1944	(53)	(79)	523	363	210	77	74	52	65	238	193	135	2,064
1943	5	143	251	233	239	74	76	12	21	16	106	16	1,192
1942	194	140	469	505	312	84	47	44	2	24	126	105	2,052
Average	55	79	235	429	256	99	84	63	58	65	141	86	1,650
1912 - 75													
Average	73	95	227	393	258	82	64	53	43	97	183	107	1,677



SUMMARY FOR MONTHLY RAINFALL

Station: Kifaru Sisal Estate (93.37/072)

(Units: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979													
1978													
1977													
1976													
1975													
1974													
1973	51	27	0	69	55	28	0	0	0	13	48	0	291
1972													
1971													
1970													
Average	51	27	0	69	55	28	0	0	0	13	48	0	291
1969	5	24	37	85	24	0	0	-	-	-	-	-	-
1968	52	0	184	259	63	82	0	0	0	18	109	94	861
1967	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	4	29	90	125	83	-	-	-	-	-	-	-	-
1965	91	11	46	14	76	0	0	2	10	71	34	6	361
1964	10	8	9	123	51	0	0	20	27	14	6	25	293
1963	55	6	92	43	45	45	5	0	0	24	111	15	441
1962	115	0	14	72	27	0	19	0	0	3	36	99	385
1961	0	22	3	35	33	0	90	0	32	0	245	172	632
1960	82	14	80	88	87	6	0	0	-	-	-	-	-
Average	46	13	62	94	54	17	14	3	12	22	90	69	496
1959													
1958													
1957													
1956													
1955	8	137	7	73	87	22	7	0	0	2	52	67	462
1954	11	20	0	198	133	0	0	6	0	17	18	7	410
1953	36	0	33	71	138	8	8	23	22	39	58	12	448
1952	47	31	111	63	53	5	0	0	13	13	34	30	400
1951	37	20	106	325	190	24	0	0	0	37	76	75	890
Average	28	42	51	146	120	12	3	6	7	22	48	38	523
1951 - 73													
Average	40	23	54	110	76	16	9	4	9	21	69	55	486



## SUMMARY FOR MONTHLY RAINFALL

Station: Lyakirima Mwika (9).17/085

(Units: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	-	-	-	434	168	59	66	-	-	-	-	-	-
1978	97	21	-	763	174	32	-	-	42	-	-	-	-
1976	76	51	307	416	141	49	33	43	81	206	106	70	1,579
1975	381	52	364	205	141	41	112	23	163	53	63	126	1,724
1974	24	5	159	735	264	219	137	106	75	12	183	31	1,950
1973	277	285	35	269	159	97	54	43	11	10	133	94	1,447
1972	203	108	267	331	-	-	-	48	-	136	-	-	-
1971	185	13	94	511	275	58	83	18	41	60	381	457	2,181
1970	174	93	313	500	75	5	22	52	9	2	18	86	1,349
Average	177	79	217	463	175	70	73	48	60	68	147	144	1,721
1969	-	0	-	133	85	57	46	106	0	115	267	65	-
1968	0	120	454	447	412	82	23	125	22	59	209	216	2,169
1967	2	46	155	479	358	111	105	127	136	150	338	23	2,030
1966	199	143	429	273	152	50	36	-	4	42	121	93	1,550
1965	120	143	237	414	150	16	78	53	49	106	354	252	1,972
1964	51	87	329	594	319	46	24	28	19	68	104	51	1,720
1963	189	157	288	263	134	42	105	29	26	92	360	123	1,808
1962	68	14	64	121	78	7	25	69	14	59	87	62	668
1961	11	42	91	140	39	6	37	25	57	144	334	168	1,094
1960	134	49	173	648	150	108	24	-	-	73	-	-	-
Average	86	80	247	351	188	53	50	63	36	91	242	117	1,604
1959	96	143	286	262	176	63	160	114	27	26	83	57	1,493
Average	96	143	286	262	176	63	160	114	27	26	83	57	1,493
1959 - 78	132	83	237	397	182	61	65	60	46	79	196	123	1,661
Average	132	83	237	397	182	61	65	60	46	79	196	123	1,661



## SUMMARY FOR MONTHLY RAINFALL

Station: V.D. & I.D. Moshi (93.97/091)

YEAR	(Unit: mm)												ANNUAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1979	55	17	106	760	230	51	92	9	22	0	39	29	1,410
1978	70	85	168	256	124	75	0	0	0	0	134	(31)	943
1977	13	71	71	354	133	0	0	46	0	55	59	(31)	833
1976	5	21	49	264	41	32	3	3	5	0	13	16	452
1975	30	28	81	276	62	6	45	1	40	1	13	10	593
1974	29	3	52	495	73	90	9	2	0	0	27	12	793
1973	79	27	9	148	67	25	2	3	0	9	46	9	424
1972	11	79	175	207	214	25	19	27	44	62	151	19	1,033
1971	70	3	39	493	186	43	22	9	1	0	5	118	989
1970	98	45	157	276	71	10	5	13	0	15	4	37	731
Average	46	38	91	353	120	36	20	11	11	14	49	31	820
1959	9	71	36	42	165	35	10	60	0	65	64	7	564
1958	0	72	152	353	144	61	21	27	46	11	112	138	1,137
1967	19	35	26	140	356	28	53	25	83	176	44	1	986
1966	43	29	173	153	130	32	4	1	0	4	15	65	649
1965	72	17	51	184	60	1	6	4	9	27	48	25	504
1964	7	75	117	440	131	12	3	17	9	28	42	48	929
1963	26	176	247	329	110	68	10	0	0	0	244	158	1,268
1962	171	6	25	181	67	10	22	4	4	4	71	81	646
1961	11	25	39	193	122	11	88	1	62	233	-	-	-
1960	174	50	141	678	100	62	17	2	1	26	29	21	1,301
Average	53	56	101	259	139	32	23	14	21	61	74	60	893
1959	26	68	120	240	41	11	34	21	0	0	32	20	613
1958	1	104	152	257	231	82	10	1	1	0	9	89	937
1957	204	24	78	348	249	15	6	0	3	117	95	86	1,225
1956	121	8	82	221	72	10	7	28	7	8	40	1	605
Average	88	51	108	267	148	30	14	13	3	31	44	49	846
1956 - 79	56	47	98	300	132	33	20	13	14	37	58	45	853



SUMMARY FOR MONTHLY RAINFALLStation: Kilmea Forest Station (93.37/120)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	27	301	86	1,263	251	104	74	-	-	-	-	-	-
1978	155	68	323	406	217	168	305	15	11	98	86	92	1,946
1977	11	148	299	936	162	80	175	61	40	165	142	70	2,289
1976	133	97	90	170	294	247	36	21	118	76	141	77	1,500
1975	72	98	267	576	343	172	167	58	177	57	40	103	2,130
1974	87	60	94	734	303	388	218	101	88	18	156	75	2,322
1973	95	223	137	243	158	150	68	117	12	37	124	123	1,487
1972													
1971													
1970													
Average	83	142	185	618	247	187	149	62	74	75	115	90	2,027



## SUMMARY FOR MONTHLY RAINFALL

Station: Mesa Seminary (93.37/123)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	126	204	200	670	634	192	115	86	152	78	83	95	2,635
1978	88	123	261	479	204	222	97	29	6	101	133	131	1,874
1977	102	53	177	989	294	70	49	63	50	145	159	171	2,322
1976	150	76	117	358	257	106	32	30	75	59	105	48	1,413
1975	56	60	246	457	190	83	130	23	131	30	31	81	1,518
1974	26	41	150	651	242	234	126	54	35	20	121	26	1,726
1973	116	157	50	316	162	80	17	62	10	12	121	44	1,167
1972	90	147	53	621	405	44	86	59	111	224	465	95	2,400
1971													
1970													
Average	97	108	157	568	299	129	82	51	71	84	152	86	1,884

## SUMMARY FOR MONTHLY RAINFALL

Station: Niwateni Sub-Station (93.37/131)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	99	55	85	333	148	24	52	13	16	1	48	22	897
1978	50	42	347	255	67	15	6	0	0	3	37	62	884
1977	53	61	29	303	65	9	1	30	3	46	45	158	803
1976	12	23	144	249	79	24	2	0	17	0	14	12	576
1975	18	29	37	139	49	5	24	0	61	1	38	17	438
1974	5	9	27	368	36	54	13	3	1	0	20	27	563
1973	181	21	4	125	57	18	0	0	0	8	41	45	500
1972	23	127	197	128	230	1	11	5	53	94	80	74	1,023
1971	-	-	-	-	92	35	5	2	2	3	20	34	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	55	46	111	238	91	21	13	6	17	17	38	50	703

## SUMMARY FOR MONTHLY RAINFALL

Station: Uru Estate (93.37/140)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	76	77	175	324	557	186	92	100	59	5	-	-	-
1978	137	37	178	340	307	222	147	47	13	4	235	220	1,897
1977	40	93	117	919	255	35	62	115	3	252	68	87	2,048
1976	24	39	77	341	407	177	83	22	34	0	59	61	1,329
1975	3	12	235	444	276	143	123	28	73	4	24	13	1,378
1974	8	25	50	791	235	238	108	49	29	0	38	20	1,591
1973	139	43	39	378	299	153	60	43	6	33	101	39	1,333
1972	39	66	261	311	471	30	102	50	84	119	401	36	1,970
1971	43	67	113	620	670	132	175	67	32	1	10	88	2,018
1970	(56)	111	202	721	278	93	30	15	20	8	14	61	1,609
Average	57	57	145	526	376	141	99	54	35	43	106	69	1,708

## SUMMARY FOR MONTHLY RAINFALL

Station: NAFCO Kaha Estate (93.37/143)

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	11	20	65	141	102	39	3	6	1	0	13	11	412
1978	98	59	247	109	47	9	4	1	0	2	30	73	679
1977	31	54	16	241	45	4	0	20	19	60	17	73	580
1976	23	12	71	129	80	10	4	9	24	0	17	2	381
1975	29	5	12	39	43	2	8	1	40	2	12	49	242
1974	3	5	21	307	32	32	9	0	0	0	6	19	434
1973	114	26	0	129	45	14	0	4	1	14	35	0	382
1972	11	61	66	104	165	0	1	5	44	36	184	22	699
1971	69	3	25	173	73	54	4	0	0	3	0	38	442
1970	84	12	102	94	14	0	0	0	13	0	1	56	376
Average	47	26	63	147	65	16	3	5	14	12	32	34	464
1969	10	50	54	16	45	9	0	21	0	25	47	4	281
1968	2	65	199	364	128	25	2	4	11	14	82	129	1,026
1967	0	33	0	219	186	0	37	20	22	35	10	18	570
1966									2	2	5	36	--
			(The meteo. station opened in Sep. 1966)										
Average	4	50	84	200	120	11	13	15	9	19	36	47	608
1966 - 79													
Average	37	31	68	159	77	15	6	7	14	14	33	38	499



SUMMARY FOR MONTHLY RAINFALL

Station: Mt. Killmanjaro 2E

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	96	68	53	55	57	38	30	34	25	47	56	13	572
1968	3	98	143	142	120	89	52	50	38	56	106	28	925
1967	3	26	55	99	122	106	83	121	80	60	75	26	856
1966	72	81	42	73	42	57	45	32	3	11	25	26	509
1965	24	23	62	55	67	32	30	26	30	64	70	64	547
1964	25	57	63	83	55	26	27	28	25	22	36	44	491
1963	58	63	74	78	77	78	58	51	26	27	95	57	742
1962	134	72	58	102	112	57	50	74	53	55	78	56	901
1961	31	55	55	184	50	41	107	61	114	134	144	183	1,161
1960	234	257	268	272	228	139	102	60	52	100	56	29	1,797
Average	68	80	87	114	93	66	58	54	45	58	74	53	850
1959	49	311	189	236	153	178	178	125	78	38	134	32	1,701
1958	30	145	187	158	232	79	51	37	39	11	25	33	1,027
1957	261	217	191	242	179	155	81	67	18	14	29	27	1,481
1956	-	-	-	-	-	-	-	-	-	-	-	110	-
1955	261	249	221	228	36	186	64	59	4	93	147	(46)	1,594
1954	-	-	-	-	-	-	-	36	38	116	125	31	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	88	110	613	499	270	-	-	-	-	-	-	-	-
Average	138	206	280	273	174	150	94	65	35	54	92	47	1,608
1950 - 69	91	122	152	167	120	90	68	57	41	57	76	54	1,095



## SUMMARY FOR MONTHLY RAINFALL

Station: Mt. Kilimanjaro JE

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	64	45	30	31	30	5	3	28	20	27	50	11	344
1968	2	58	125	124	100	51	30	24	19	39	91	5	668
1967	2	15	50	70	88	82	65	82	63	39	92	22	669
1966	55	65	22	66	22	40	7	5	0	7	14	11	314
1965	3	2	39	43	6	5	5	4	6	38	52	38	241
1964	8	52	43	65	36	14	5	7	5	3	11	15	264
1963	14	19	27	52	51	52	39	13	6	5	55	29	362
1962	55	25	23	39	39	14	7	11	3	9	20	12	257
1961	11	25	27	65	16	15	44	30	60	92	119	116	620
1960	27	78	116	126	95	95	33	7	5	26	9	10	627
Average	24	38	50	68	48	37	24	21	19	29	51	27	436
1959	26	209	135	100	26	39	37	59	44	13	82	11	781
1958	18	79	105	86	117	40	27	20	0	0	8	22	522
1957	79	38	7	57	54	40	18	15	9	5	26	19	367
1956	-	-	-	-	-	-	-	-	-	-	-	14	-
1955	40	32	103	103	91	25	2	4	2	17	89	(19)	532
1954	9	(55)	104	70	57	39	6	1	3	36	38	23	441
1953	3	23	165	165	115	(37)	45	26	(12)	(22)	41	15	669
1952	217	25	64	93	153	64	19	13	11	21	57	18	755
1951	140	52	78	267	82	34	96	14	4	38	26	(19)	850
1950	36	16	376	209	113	16	15	65	28	115	78	28	1,095
Average	63	59	126	128	90	37	29	24	13	30	49	19	667
1950 - 69 Average	43	48	86	96	70	37	26	23	16	29	50	23	547

SUMMARY FOR MONTHLY RAINFALL

Station: Ht. Kilimanjaro 4E

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	54	24	0	3	0	0	0	0	7	24	27	6	145
1968	0	35	83	81	78	40	6	6	0	6	57	0	392
1967	0	5	25	40	65	55	33	74	48	15	28	0	393
1966	24	50	0	50	0	3	0	0	0	0	9	2	138
1965	0	0	16	19	23	0	0	0	4	25	27	25	139
1964	0	25	19	31	13	3	0	0	0	0	6	9	106
1963	3	5	14	28	25	23	16	0	0	0	26	5	145
1962	49	3	0	17	12	0	0	2	0	3	11	5	102
1961	3	12	14	35	9	6	22	3	21	41	54	81	301
1960	5	25	50	56	29	15	0	0	1	6	5	0	192
Average	14	18	22	36	25	15	8	9	8	12	25	13	205
1959	10	78	31	27	15	16	14	7	5	0	20	2	223
1958	2	25	34	27	32	21	4	0	0	0	3	8	156
1957	53	18	2	27	18	10	0	1	0	0	15	3	147
1956	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	6	5	6	10	7	0	0	0	0	1	6	4	43
1954	13	(19)	38	23	27	9	2	0	2	3	4	0	145
1953	0	8	38	47	11	8	0	0	8	2	16	3	141
1952	53	13	25	8	16	1	0	0	1	3	0	1	121
1951	9	1	7	127	6	0	1	0	0	13	1	(4)	169
1950	3	2	189	41	10	3	2	6	1	11	26	13	307
Average	17	19	41	38	16	8	3	2	2	4	10	4	164
1950 - 69 Average	15	19	30	35	21	11	5	5	5	8	18	9	181



SUMMARY FOR MONTHLY RAINFALLStation: T.P.C. 2F

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	56	31	222	337	130	35	20	0	0	0	0	23	854
1978	98	81	163	146	62	5	0	0	0	10	118	90	773
1977	10	19	44	137	56	0	0	23	18	93	12	33	445
1976	3	17	43	110	32	11	3	-	24	1	9	10	-
1975	23	5	79	32	120	2	7	0	17	-	-	11	-
1974	6	0	10	392	215	6	20	1	0	0	14	7	671
1973	165	46	4	130	45	6	0	0	4	11	26	11	448
1972	10	12	126	333	121	2	1	0	23	61	120	40	849
1971	38	26	45	359	71	26	11	0	0	0	6	68	650
1970	85	14	246	63	20	0	7	0	24	13	5	36	513
Average	49	25	98	204	87	9	7	3	11	21	34	33	581
1969	10	17	59	37	21	0	0	7	0	18	59	10	238
1968	0	30	133	341	110	12	2	8	4	17	113	113	883
1967	0	10	9	178	103	12	21	17	54	32	66	10	512
1966	5	15	83	102	60	3	0	0	0	16	11	16	311
1965	82	15	89	83	40	0	0	6	50	60	35	0	465
1964	16	39	122	223	16	5	0	0	10	9	3	32	475
1963	10	40	62	57	18	14	0	0	0	0	139	73	413
1962	-	-	-	-	28	0	0	3	0	15	34	79	-
1961	0	-	30	-	-	0	-	0	-	-	-	-	-
1960	-	-	88	161	20	-	0	0	0	-	0	-	-
Average	15	24	75	148	46	5	3	4	13	21	51	42	447
1960 - 79 Average	34	25	87	179	68	7	5	3	12	21	43	37	521



## SUMMARY FOR MONTHLY RAINFALL

Station: T.P.C. Camp-10

(Units: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	58	21	171	272	134	38	14	1	2	0	7	25	743
1978	103	74	133	133	38	6	1	0	0	23	46	111	668
1977	9	20	21	130	35	4	0	11	18	35	87	18	388
1976	10	13	60	104	53	10	2	-	47	2	15	14	-
1975	6	7	31	20	45	2	7	0	16	-	-	31	-
1974	4	0	34	326	182	7	20	2	0	0	6	4	585
1973	167	57	12	138	40	6	0	1	5	12	31	2	471
1972	20	17	101	274	107	1	0	0	17	44	167	43	791
1971	34	27	37	350	84	20	19	0	0	11	15	85	682
1970	79	21	306	49	17	0	5	0	5	11	3	39	535
Average	49	26	91	180	74	9	7	2	11	15	42	35	541
1969	8	16	54	30	24	2	0	10	0	22	60	5	231
1968	0	30	147	392	118	14	2	13	5	17	114	92	944
1967	3	10	29	143	104	12	28	15	48	22	42	19	475
1966	0	16	99	-	60	9	0	0	0	5	4	13	-
1965	101	12	78	81	55	0	0	0	49	32	41	0	452
1964	21	26	106	224	17	7	0	0	5	3	3	42	454
1963	11	25	54	63	18	20	0	0	0	0	125	71	392
1962	75	4	0	83	26	0	0	2	0	25	29	68	312
1961	0	-	-	73	31	0	32	0	20	77	183	31	-
1960	73	3	88	149	22	6	0	0	0	45	0	21	407
Average	29	16	73	138	48	7	6	4	13	25	60	36	455
1960 - 79 Average	39	21	82	104	60	8	6	3	12	20	51	35	441

## SUMMARY FOR MONTHLY RAINFALL

Station: T.P.C. D-25

YEAR	(Unit: mm)												ANNUAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1979	54	30	142	343	116	29	25	0	0	0	0	31	770
1978	111	110	141	135	37	6	0	0	0	-	-	56	-
1977	18	19	30	148	18	3	0	16	16	58	27	38	391
1976	9	26	66	186	61	14	2	-	21	7	6	23	-
1975	30	7	85	36	66	3	11	2	27	-	2	22	-
1974	2	0	25	402	216	28	16	1	0	2	19	12	723
1973	192	32	6	163	39	9	0	3	11	31	23	2	511
1972	18	17	94	370	118	2	3	3	37	65	97	27	851
1971	32	9	41	388	82	40	11	0	0	9	13	68	695
1970	118	35	347	64	30	0	5	1	10	26	8	59	703
Average	58	29	98	224	78	13	7	3	12	23	22	34	603
1969	18	17	74	64	34	5	0	17	1	32	62	18	342
1968	2	55	129	340	158	24	5	8	21	25	123	144	1,034
1967	0	9	4	183	98	10	21	26	52	47	47	16	523
1966	-	-	97	111	79	9	0	3	0	9	5	28	-
Average	7	27	76	175	92	12	7	14	19	28	59	52	568
1966 - 79	47	28	92	209	82	13	7	8	14	26	33	39	598

## SUMMARY FOR MONTHLY RAINFALL

Station: T.P.C. 20-Area

(Unit: mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	36	10	99	289	136	31	29	2	22	0	0	3	657
1978	90	66	161	151	37	9	0	0	2	34	63	68	681
1977	20	30	37	170	27	3	0	17	20	42	41	30	437
1976	28	2	43	121	65	10	2	-	48	2	18	-	-
1975	6	11	33	29	51	3	4	0	40	-	-	41	-
1974	3	1	28	275	235	23	8	0	0	0	11	46	630
1973	183	41	-	146	54	5	0	3	6	28	12	3	-
1972	18	44	84	272	113	0	0	0	20	49	104	30	734
1971	34	19	24	231	81	33	5	0	0	0	4	47	498
1970	74	6	282	76	16	0	4	0	6	0	1	46	511
Average	49	23	88	178	82	12	5	2	16	17	28	35	512
1969	13	18	37	24	19	8	0	13	0	20	17	0	169
1968	0	85	137	375	111	12	1	8	4	15	110	127	935
Average	7	52	87	200	65	10	1	11	2	18	64	64	581
1968 - 79	42	27	88	182	79	12	4	4	14	17	35	40	544





