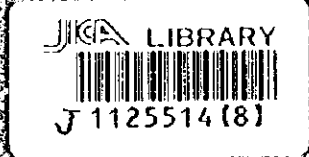


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STATE SECRETARIAT OF PLANNING AND GENERAL COORDINATION,
PARANÁ STATE, THE FEDERATIVE REPUBLIC OF BRAZIL

THE MASTER PLAN STUDY ON
THE UTILIZATION OF WATER RESOURCES IN PARANÁ STATE
IN
THE FEDERATIVE REPUBLIC OF BRAZIL

FINAL REPORT

DATA BOOK

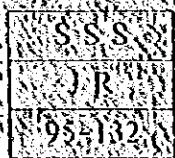


December, 1995

Yachiyo Engineering Co., Ltd.
Tokyo, Japan

and

Nippon Koei Co., Ltd.
Tokyo, Japan



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STATE SECRETARIAT OF PLANNING AND GENERAL COORDINATION,
PARANÁ STATE, THE FEDERATIVE REPUBLIC OF BRAZIL

THE MASTER PLAN STUDY ON
THE UTILIZATION OF WATER RESOURCES IN PARANÁ STATE
IN
THE FEDERATIVE REPUBLIC OF BRAZIL

FINAL REPORT

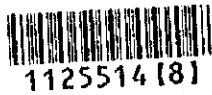
DATA BOOK

December, 1995

Yachiyo Engineering Co., Ltd.
Tokyo, Japan

and

Nippon Koei Co., Ltd.
Tokyo, Japan



**Cost Estimate is Based
on The Price Level of August, 1994,
According to The Following Exchange Rate.**

**US\$ 1.00 = ¥ 98.87
(as of August, 1994)**

COMPOSITION OF FINAL REPORT

1. EXECUTIVE SUMMARY
2. MAIN REPORT
 - I. Strategy for Paraná State
 - II. Master Plan for Iguazu River Basin
 - III. Master Plan for Tibagi River Basin
3. SECTORAL REPORT
 - A. Socio-economy
 - B. Meteorology, Hydrology and Surface Water Resources
 - C. Hydrogeology and Groundwater Resources
 - D. Domestic and Industrial Water
 - E. Agriculture
 - F. Hydroelectric Power Generation
 - G. Water Utilization Plan
 - H. Flood Control
 - I. Water Quality and Sewerage
 - J. Soil Erosion and Forest
 - K. Ecology
 - L. Water Environment Management
 - M. Institution
 - N. Cost Estimate, and Economic and Financial Assessment
4. DATA BOOK

THE MASTER PLAN STUDY ON
THE UTILIZATION OF WATER RESOURCES IN PARANÁ STATE
IN THE FEDERATIVE REPUBLIC OF BRAZIL
DATA BOOK
TABLE OF CONTENTS

I. Data for Sectoral Report Vol. B, Meteorology and Hydrology and Surface Water Resources	
1. Computation Results of Meteorological Analysis by Station	I-1
2. Computation Results of Hydrological Analysis by Station	I-191
3. Computation Results of Drought Discharge by Hydrological Station.....	I-320
4. Computation Results of Drought Discharge by Basin.....	I-341
II. Data for Sectoral Report Vol. G, Water Utilization Plan	
1. Drought Discharge (Return Period 10 years).....	II-1
2. Dam Reservoir Operation Curve.....	II-20
3. Storage Capacity Curve	II-36
4. Cost Estimation of Other Urban Area	II-49
5. Description of Existing Intake Facilities.....	II-78
6. Planning Development Points in Iguazu River Basin.....	II-125
7. Planning Development Points in Tibagi River Basin	II-185
8. Computation Results for Annual Maximum Reservoir Volume.....	II-217
9. Minimum Discharge Values for the Stations Studied by JICA	II-278
III. Data for Sectoral Report Vol. H, Flood Control	
1. Introduction.....	III-1
2. Output of Non-uniform Flow Calculation	III-1
2.1 Without Excavation	III-2
2.2 Case with Excavation - 1	III-17
2.3 Case with Excavation - 2	III-26
3. River Cross Section Data	III-35
3.1 Original River Cross Sections	III-36
3.2 River Cross Sections with Excavation - 1	III-154
3.3 River Cross Sections with Excavation - 2.....	III-177

**I. DATA FOR SECTORAL REPORT VOL. B, METEOROLOGY AND
HYDROLOGY AND SURFACE WATER RESOURCES**

I-1 Computation Results of Meteorological Analysis by Station

Summary of Correlation Curve (Monthly Rainfall)

(1/1)

No.	X Station	Y Station	Y = a + b x X		X = a' + b' x Y		Correlation Coefficient
			a	b	a'	b'	
0-4	(02651000-2651004)		171.13	0.96	-177.95	1.04	0.94
3-4	02350017 Cambara	02350018 Bandeirantes	15.40	0.93	-16.63	1.03	0.85
5-7	02351003 Londrina	02351011 Ibiçora	12.89	0.88	-14.64	1.14	0.91
8-6	02352017 Paranavai	02351008 Apucarana	30.32	0.87	-34.94	1.15	0.81
12-7	02450011 Telemaco	02351011 Ibiçora	28.48	0.77	-36.87	1.29	0.73
12-13	02450011 Telemaco	02451052 Candido Abreu	33.64	0.85	-39.39	1.17	0.79
13-6	02451052 Candido Abreu	02351008 Apucarana	27.12	0.73	-36.92	1.36	0.74
13-7	02451052 Candido Abreu	02351011 Ibiçora	33.64	0.66	-51.12	1.52	0.67
13-14	02451052 Candido Abreu	02452050 Nova Cantu	59.97	0.81	-73.69	1.23	0.76
14-16	02452050 Nova Cantu	02453023 Cascavel	22.08	0.86	-25.69	1.16	0.79
15-16	02453003 Palotina	02453023 Cascavel	43.36	0.86	-50.61	1.17	0.77
17-18	02548038 Morretes	02548039 Guaraquecaba	13.74	1.13	-12.20	0.89	0.85
19-17	02548070 Antonina	02548038 Morretes	17.76	0.68	-26.11	1.47	0.88
20-11	02549041 Piraquara	02449013 Cerro Azul	19.51	0.78	-25.16	1.29	0.78
21-22	02549091 Lapa	02550024 Ponta Grossa	28.79	0.85	-34.05	1.18	0.86
22-23	02550024 Ponta Grossa	02550025 Teixeira	21.02	0.87	-24.10	1.15	0.82
24-25	02551010 Guarapuava	02552009 Laranjeiras	22.49	0.93	-25.56	1.14	0.84
26-27	02553015 Planalto	02553018 Quedas	28.59	0.88	-32.65	1.14	0.85
27-28	02553018 Quedas	02554026 Sao Miguel	21.82	0.75	-28.95	1.33	0.85
30-31	02651043 Palmas	02652003 Clevelandia	9.49	0.94	-10.11	1.07	0.90
31-32	02652003 Clevelandia	02652035 Pato Branco	13.30	0.94	-14.10	1.06	0.93

Summary of Correlation Curve (Monthly Temperature)

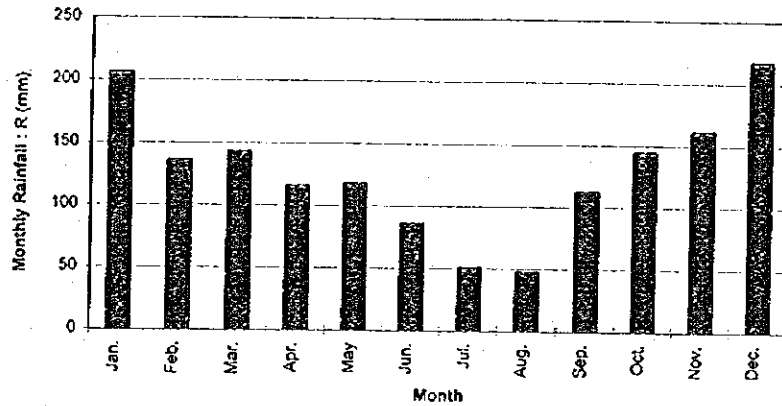
No.	X Station	Y Station	Y = a + b x X		X = a' + b' x Y		Correlation Coefficient
			a	b	a'	b'	
3-4	02350017 Cambara	02350018 Bandeirantes	1.07	0.95	-1.11	1.04	0.99
5-7	02351003 Londrina	02351011 Ibiçora	1.56	0.97	-1.61	1.03	1.00
8-6	02352017 Paranavai	02351008 Apucarana	1.79	0.85	-2.09	1.17	0.99
9-10	02352019 Cianorte	02353008 Umuarama	0.29	1.00	-0.29	1.00	1.00
11-12	02449013 Cerro Azul	02450011 Telemaco	-0.79	0.95	0.84	1.06	0.99
13-6	02451052 Candido Abreu	02351008 Apucarana	5.35	0.78	-6.81	1.27	0.98
14-15	02452050 Nova Cantu	02453003 Palotina	-2.61	1.14	2.29	0.83	0.93
15-16	02453003 Palotina	02453023 Cascavel	0.83	0.88	-0.95	1.14	0.99
17-18	02548038 Morretes	02548039 Guaraquecaba	-0.37	1.02	0.36	0.93	1.00
19-20	02548070 Antonina	02549041 Piraquara	-1.51	0.83	1.71	1.13	0.98
21-22	02549091 Lapa	02550024 Ponta Grossa	-1.09	1.07	1.01	0.93	0.99
22-23	02550024 Ponta Grossa	02550025 Teixeira	-1.38	1.06	1.31	0.95	0.99
22-24	02550024 Ponta Grossa	02551010 Guarapuava	-1.36	1.03	1.32	0.97	0.96
25-27	02552009 Laranjeiras	02553018 Quedas	-0.31	1.10	0.28	0.91	0.99
26-27	02553015 Planalto	02553018 Quedas	-0.74	0.98	0.75	1.02	0.99
27-28	02553018 Quedas	02554026 Sao Miguel	-1.21	1.11	1.10	0.90	0.99
29-31	02651007 Porto Uniao	02652003 Clevelandia	2.25	0.86	-2.62	1.17	0.99
30-31	02651043 Palmas	02652003 Clevelandia	1.31	0.93	-1.34	1.02	0.99
32-33	02652035 Pato Branco	02653012 Francisco	-1.39	1.10	1.26	0.91	1.00

Summary of Correlation Curve (Monthly Evaporation)									
No.	X Station	Y Station	Y = a + b x X		X = a' + b' + Y		Correlation Coefficient		
			a	b	a'	b'			
1-6	02251027	Bela Vista	02351008	Apucarana	-4.17	0.96	4.33	1.04	0.90
2-3	02349030	Joaquim	02350017	Cambara	21.42	0.93	-22.96	1.07	0.95
3-4	02350017	Cambara	02350018	Bandeirantes	-5.25	0.98	5.35	1.02	0.96
5-7	02351003	Londrina	02351011	Ibipora	4.29	0.97	-4.41	1.03	0.99
6-7	02351008	Apucarana	02351011	Ibipora	27.28	0.85	-31.98	1.17	0.88
8-9	02352017	Paranavai	02352019	Cianorte	-5.85	1.02	5.75	0.98	0.99
9-10	02352019	Cianorte	02353008	Umuarama	4.24	0.99	-4.28	1.01	0.99
10-11	02353008	Umuarama	02449013	Cerro Azul	13.53	0.99	-13.73	1.01	0.98
12-13	02450011	Telemaco	02451052	Candido Abreu	-4.51	1.14	3.96	0.88	0.98
13-5	02451052	Candido Abreu	02351003	Londrina	21.74	0.85	-25.66	1.18	0.96
14-15	02452050	Nova Cantu	02453003	Palotina	4.72	0.77	-6.16	1.31	0.93
15-16	02453003	Palotina	02453023	Cascavel	9.94	1.14	-8.72	0.88	0.93
17-18	02548038	Morretes	02548039	Guaraquecaba	2.04	0.96	-2.14	1.05	0.99
17-19	02548038	Morretes	02548070	Antonina	4.47	0.93	-4.79	1.07	0.99
17-20	02548038	Morretes	02549041	Piraquara	14.25	0.86	-16.54	1.18	0.91
17-21	02548038	Morretes	02549091	Lapa	4.47	1.02	-4.38	0.98	0.97
20-21	02549041	Piraquara	02549091	Lapa	-3.87	1.09	3.54	0.91	0.99
21-22	02549091	Lapa	02550024	Ponta Grossa	10.22	0.98	-10.39	1.02	0.99
22-23	02550024	Ponta Grossa	02550025	Teixeira	-17.08	0.99	17.22	1.01	0.98
23-24	02550025	Teixeira	02551010	Guarapuava	13.39	1.02	-13.12	0.98	0.98
25-27	02552009	Laranjeiras	02553018	Quedas	-5.19	1.09	4.78	0.92	0.97
26-27	02553015	Planalto	02553018	Quedas	4.10	0.90	-4.54	1.11	0.99
27-28	02553018	Quedas	02554026	Sao Miguel	-3.56	1.07	3.32	0.93	0.99
29-31	02651007	Porto Uniao	02652003	Clevelandia	2.92	1.09	-2.67	0.91	0.97
30-33	02651043	Palmas	02653012	Francisco	41.30	0.85	-48.31	1.17	0.78
31-32	02652003	Clevelandia	02652035	Pato Branco	12.69	0.98	-12.94	1.02	0.95
32-33	02652035	Pato Branco	02653012	Francisco	-3.06	1.00	3.05	1.00	0.99
33-27	02653012	Francisco	02553018	Quedas	6.76	0.97	-6.96	1.03	0.98

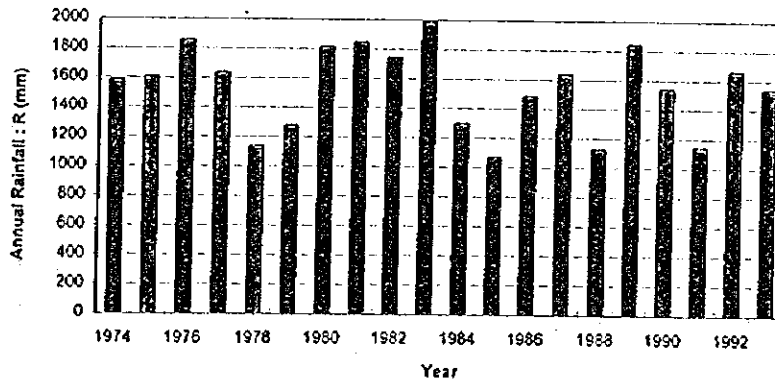
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02251027 (No.1)
 St. Name Bela Vista

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	236.6	95.2	222.6	29.5	85.9	162.4	4.7	28.6	42.1	253.8	95.0	332.8	132.4	1589.2
2 1975	58.2	194.8	192.4	55.6	55.4	33.9	135.1	17.6	70.6	256.4	343.4	196.3	134.1	1609.7
3 1976	147.4	176.9	102.6	166.3	112.9	104.2	68.6	215.8	190.4	172.8	147.5	255.0	155.0	1860.4
4 1977	286.2	160.9	189.8	116.0	17.2	114.7	40.4	26.0	85.8	62.1	248.8	291.1	136.5	1638.0
5 1978	74.6	111.7	158.6	25.4	92.2	9.4	178.8	14.9	147.3	51.0	119.3	158.6	95.2	1141.8
6 1979	108.4	142.6	71.4	49.8	190.7	0.2	68.0	30.8	173.1	135.3	144.8	163.2	106.5	1278.3
7 1980	245.3	233.5	86.0	246.8	95.6	112.6	19.6	48.0	185.2	107.0	93.1	339.7	151.5	1817.4
8 1981	352.4	156.3	66.3	209.8	10.5	113.3	21.5	7.0	10.8	276.1	214.6	409.3	154.0	1847.9
9 1982	124.2	162.9	106.1	30.4	97.2	168.9	134.4	47.7	24.4	171.0	357.0	321.3	145.5	1745.5
10 1983	277.2	50.0	323.0	93.2	250.2	250.5	4.5	0.0	289.1	143.2	151.0	152.4	165.8	1999.3
11 1984	209.0	60.3	71.1	189.5	38.2	2.5	0.8	69.1	135.6	48.2	154.2	323.5	108.5	1302.0
12 1985	114.4	146.0	165.7	169.1	137.3	29.0	28.3	2.8	19.5	24.9	192.8	42.3	89.3	1072.1
13 1986	234.9	143.3	145.7	131.7	217.2	0.1	16.2	176.5	72.4	74.4	74.6	199.9	124.0	1497.9
14 1987	179.5	196.1	61.1	66.9	187.6	200.2	47.9	10.5	71.2	182.8	331.3	105.1	136.7	1640.2
15 1988	98.2	67.8	58.4	162.5	256.8	39.2	0.0	0.0	26.6	271.4	30.4	119.7	94.3	1131.0
16 1989	371.7	176.9	106.1	52.6	40.3	96.6	98.0	92.2	151.6	82.6	178.8	367.6	153.8	1845.0
17 1990	361.5	32.4	127.4	158.9	109.5	34.6	79.4	120.8	135.0	156.4	144.2	83.8	128.7	1543.9
18 1991	205.3	35.6	204.4	76.6	7.6	132.7	20.2	6.9	70.2	95.9	71.4	219.8	95.6	1146.6
19 1992	69.7	122.8	356.2	195.8	238.1	45.8	15.5	30.0	238.9	172.1	95.7	83.0	138.6	1663.6
20 1993	375.6	261.4	55.5	101.6	125.6	79.5	33.6	15.9	87.5	159.6	51.7	188.6	128.5	1542.1
Mean	206.5	136.6	143.6	116.4	118.3	88.5	51.1	48.1	112.9	145.1	161.9	217.7	128.7	1544.6

Monthly Mean Rainfall (No.1)
 St. No. 02251027 Bela Vista
 1974 - 1993 (20 Years)



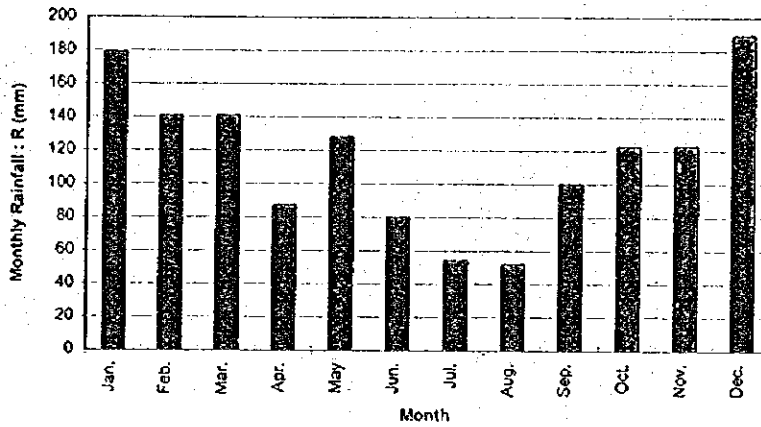
Annual Rainfall (No.1)
 St. No. 02251027 Bela Vista
 1974 - 1993 (20 Years)



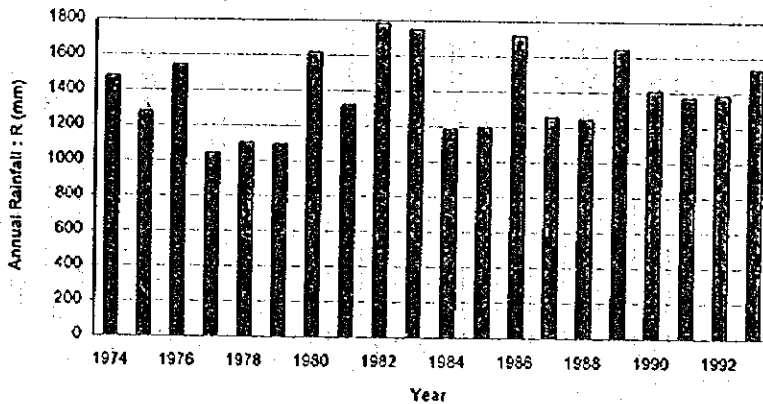
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02349030 (No.2)
 St. Name Joaquim

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	163.0	105.6	273.2	32.6	98.6	164.8	5.8	54.6	56.2	203.3	84.2	237.8	123.3	1479.7
2 1975	62.1	211.9	87.4	67.3	53.2	48.5	76.6	31.4	105.5	197.3	184.1	157.3	106.7	1290.6
3 1976	103.4	136.6	206.7	76.1	127.7	94.6	66.6	173.6	129.4	180.4	111.8	139.1	128.8	1546.0
4 1977	142.5	102.6	99.4	96.0	8.0	97.3	48.4	11.1	49.7	92.5	183.9	112.9	87.0	1044.3
5 1978	76.0	29.5	165.0	4.8	105.3	28.4	180.8	19.7	124.4	66.3	149.3	157.0	92.0	1104.5
6 1979	54.3	106.8	48.0	26.7	152.6	0.4	43.1	90.8	145.5	138.6	190.4	93.4	91.4	1096.6
7 1980	318.8	249.1	140.0	68.9	45.0	67.6	74.1	91.5	99.8	72.9	68.1	324.0	135.0	1619.8
8 1981	262.3	57.4	89.4	191.4	3.0	75.1	22.4	13.5	15.5	181.0	167.6	244.1	110.2	1322.7
9 1982	112.7	245.2	82.3	20.8	106.0	220.5	154.0	18.9	18.1	192.2	274.3	340.0	148.8	1785.0
10 1983	180.8	66.8	179.7	109.5	414.3	174.2	12.7	0.0	235.5	130.2	126.2	121.8	146.0	1751.5
11 1984	212.3	61.0	66.8	70.4	105.0	2.3	10.0	88.2	103.5	49.4	83.7	316.3	99.1	1188.9
12 1985	129.8	201.2	190.0	200.7	123.3	16.0	21.7	5.5	37.8	73.7	98.2	100.9	99.9	1198.8
13 1986	132.1	312.9	182.8	134.8	242.0	0.2	21.0	180.7	92.7	54.3	95.4	292.2	143.4	1721.1
14 1987	123.1	158.2	24.4	29.7	275.1	171.6	27.8	12.4	117.4	80.8	178.1	61.0	105.0	1259.6
15 1988	205.3	100.1	108.6	117.6	239.1	39.2	1.3	0.0	52.9	180.6	43.5	157.5	103.8	1245.7
16 1989	337.1	152.0	166.5	20.3	39.8	89.4	139.8	71.8	169.2	118.6	118.8	222.7	137.2	1645.8
17 1990	393.9	43.2	115.4	151.9	92.1	45.0	112.3	106.9	66.0	116.3	68.8	97.2	117.5	1410.0
18 1991	193.5	109.4	139.0	111.7	58.9	125.2	17.6	38.5	69.2	58.9	95.2	316.8	114.5	1373.6
19 1992	59.5	182.6	262.5	145.2	192.5	36.7	21.8	24.3	140.8	141.2	103.4	77.1	115.6	1387.6
20 1993	322.9	188.8	176.3	73.7	81.8	109.8	32.8	33.6	173.7	86.6	38.3	217.0	127.9	1535.3
Mean	179.3	141.0	141.2	87.5	128.2	80.2	54.5	52.3	100.2	122.8	123.2	169.6	116.7	1399.87

Monthly Mean Rainfall (No.2)
 St. No.02349030 Joaquim
 1974 - 1993 (20 Years)



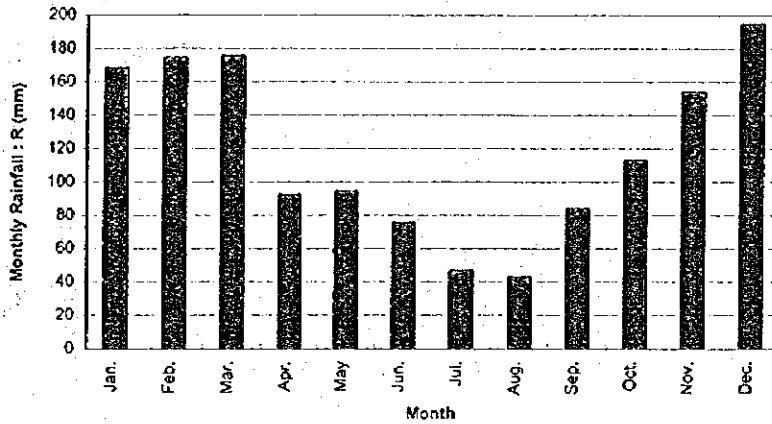
Annual Rainfall (No.2)
 St. No.02349030 Joaquim
 1974 - 1993 (20 Years)



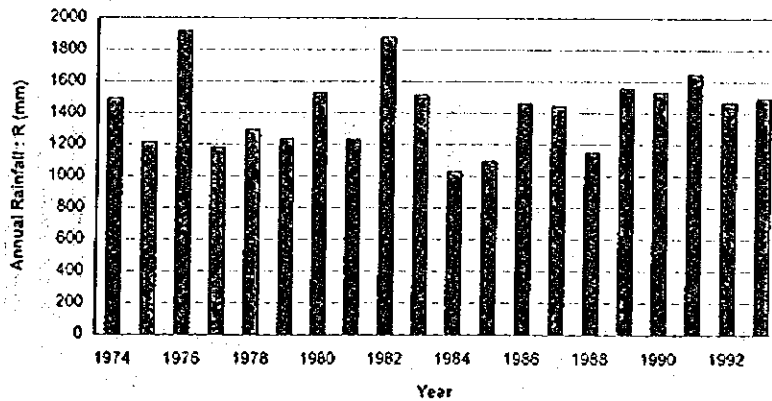
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02350017 (No. 3)
 St. Name Cambara

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	127.5	121.5	313.9	23.0	136.4	121.0	2.6	33.4	24.1	129.7	94.5	367.0	124.6	1494.6
2 1975	99.0	187.0	103.7	62.8	30.6	41.1	62.8	17.2	62.9	184.2	226.9	138.4	101.3	1215.6
3 1976	259.4	161.4	218.4	65.9	145.6	84.8	79.5	192.0	178.6	104.0	229.3	199.6	159.9	1918.5
4 1977	176.5	167.2	203.9	99.3	17.0	47.2	40.5	7.8	35.6	91.6	120.7	174.4	98.5	1181.7
5 1978	109.5	74.6	321.9	0.0	108.0	23.1	117.5	7.1	81.2	100.4	188.1	164.3	108.0	1295.7
6 1979	95.9	164.7	85.6	43.4	140.6	0.0	67.7	62.8	117.9	137.7	138.1	182.9	103.1	1237.3
7 1980	207.4	384.1	136.4	84.5	43.7	77.5	45.8	32.7	109.7	87.8	101.6	219.3	127.5	1530.5
8 1981	206.7	50.8	80.1	157.3	2.0	108.6	17.7	7.0	2.3	165.2	146.4	288.8	102.7	1232.9
9 1982	213.6	222.3	154.8	34.6	60.8	190.6	84.8	26.3	34.2	192.1	341.8	325.1	156.8	1881.0
10 1983	127.8	97.0	103.9	153.4	244.0	221.1	9.8	0.0	211.5	99.5	156.6	93.0	125.5	1517.6
11 1984	169.9	69.8	149.7	69.7	62.7	0.2	2.9	73.7	53.4	22.7	49.8	306.3	85.9	1030.8
12 1985	123.1	219.0	144.0	197.1	92.3	28.3	47.6	9.5	30.5	45.7	87.7	70.9	91.3	1095.7
13 1986	82.6	240.4	160.6	119.3	139.7	0.0	28.6	192.0	71.5	48.4	156.7	220.4	121.7	1460.2
14 1987	161.3	182.2	74.4	112.9	186.9	213.5	27.7	6.2	53.9	128.4	193.7	104.7	120.5	1445.8
15 1988	137.7	103.2	153.5	89.8	122.6	46.1	0.0	0.0	30.2	196.5	131.5	138.4	95.8	1149.5
16 1989	294.2	128.2	260.3	139.9	44.6	77.0	132.8	45.7	110.8	61.1	145.7	244.4	129.9	1558.7
17 1990	340.5	126.0	184.7	108.5	59.3	15.9	88.9	95.5	99.6	100.0	182.9	131.7	127.8	1533.5
18 1991	169.0	274.1	272.9	146.1	19.7	112.7	30.6	4.8	62.9	113.2	128.8	313.5	137.3	1648.1
19 1992	42.3	158.2	261.2	160.1	155.6	22.8	14.6	17.8	205.4	165.7	192.3	71.5	122.3	1467.5
20 1993	225.1	363.6	132.4	110.4	84.5	85.1	38.1	34.8	110.6	93.5	74.0	144.2	124.7	1456.3
Mean	168.4	174.8	175.8	92.6	94.8	75.8	47.0	43.3	84.3	113.4	154.3	194.9	118.3	1419.6

Monthly Mean Rainfall (No. 3)
 St. No. 02350017 Cambara
 1974 - 1993 (20 Years)



Annual Rainfall (No. 3)
 St. No. 02350017 Cambara
 1974 - 1993 (20 Years)

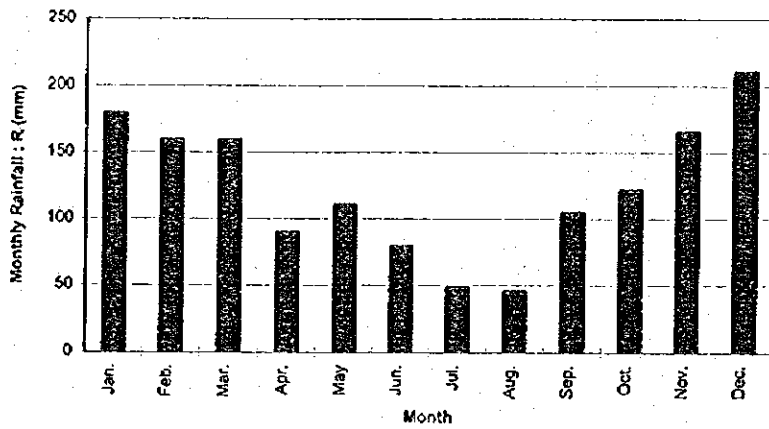


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02350018 (No.4)
 St. Name Bandeirantes

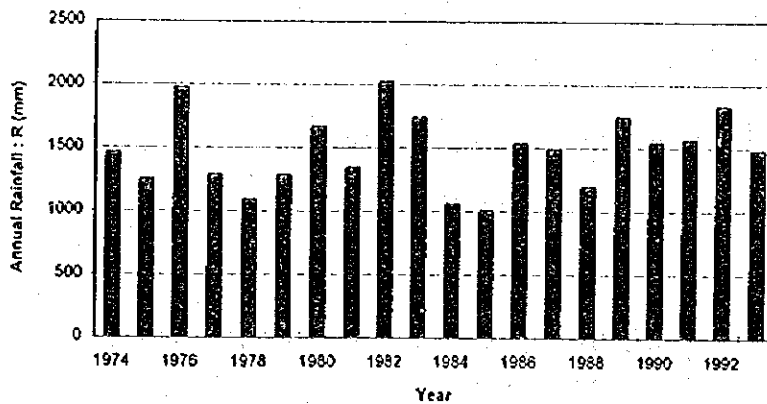
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(121.1)	(114.6)	(322.4)	79.1	85.8	(114.0)	8.0	(19.4)	(9.4)	(123.4)	(85.4)	(379.7)	121.9	1462.4
2 1975	(89.2)	(185.3)	(95.4)	(51.2)	(16.4)	(27.8)	(51.2)	18.4	80.0	184.3	304.5	153.2	104.7	1256.9
3 1976	182.6	266.1	139.1	87.8	148.1	78.6	93.9	(190.7)	(176.3)	165.4	223.6	224.9	164.8	1978.1
4 1977	303.2	95.4	104.5	58.2	16.4	97.2	28.2	12.3	61.8	146.4	142.8	224.2	107.6	1290.6
5 1978	64.5	48.9	198.4	0.0	85.5	23.3	158.1	14.0	132.5	67.2	139.2	162.2	91.2	1093.8
6 1979	66.8	115.3	119.0	34.9	223.1	0.9	54.5	66.0	143.0	117.4	138.1	208.5	107.3	1287.5
7 1980	168.3	279.4	175.0	113.8	44.5	65.3	48.6	47.7	89.9	107.8	155.5	376.7	139.4	1672.5
8 1981	208.1	117.9	36.4	176.5	1.7	89.5	15.2	9.3	6.8	191.0	199.6	296.4	112.3	1347.4
9 1982	103.9	331.6	127.9	26.2	77.6	226.4	121.2	28.7	33.1	157.4	436.7	356.4	168.9	2027.1
10 1983	203.9	80.1	151.1	149.7	320.3	284.7	3.7	0.5	226.1	128.6	109.7	87.7	145.5	1745.1
11 1984	144.9	116.5	91.3	64.3	68.9	0.2	1.5	71.7	102.1	31.1	76.4	292.7	88.5	1061.8
12 1985	82.0	170.3	180.2	154.5	136.5	21.3	22.2	4.4	43.2	22.0	126.0	47.3	84.2	1009.9
13 1986	204.3	203.7	160.4	119.9	161.7	0.1	9.5	195.2	113.6	51.2	145.9	174.8	128.4	1540.3
14 1987	204.5	249.8	33.8	30.8	232.4	183.7	24.8	12.4	99.5	129.5	195.1	96.4	124.4	1492.7
15 1988	172.8	44.2	83.3	154.5	122.3	61.6	0.0	0.0	38.8	184.5	112.6	223.4	99.8	1198.0
16 1989	329.0	111.0	216.3	53.3	57.2	88.5	121.0	50.0	147.7	119.1	245.3	212.2	145.9	1750.6
17 1990	362.0	29.6	133.5	123.0	102.2	22.2	114.2	86.6	115.7	173.0	106.2	176.2	128.7	1544.4
18 1991	233.1	115.7	307.6	120.7	18.0	80.3	20.6	10.9	75.8	133.5	160.7	287.9	130.8	1569.8
19 1992	59.5	281.9	413.0	135.4	200.9	24.1	47.9	22.9	281.4	136.0	148.8	84.9	153.1	1836.7
20 1993	293.7	244.6	115.7	73.5	99.3	103.4	47.8	65.7	128.7	78.2	74.7	162.0	123.9	1487.3
Mean	179.9	160.1	160.2	90.4	110.9	79.7	49.6	46.3	105.3	122.7	166.3	211.4	123.6	1482.7

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 4)
 St. No. 02350018 Bandeirantes
 1974 - 1993 (20 Years)



Annual Rainfall (No. 4)
 St. No. 02350018 Bandeirantes
 1974 - 1993 (20 Years)

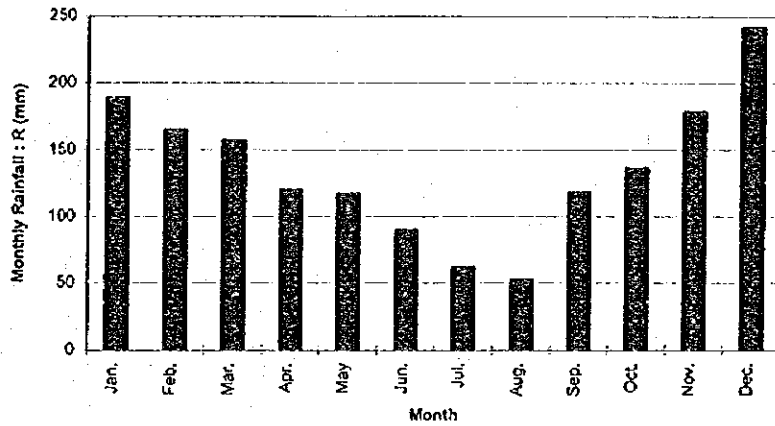


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02351003 (No 5)
 St. Name Londrina

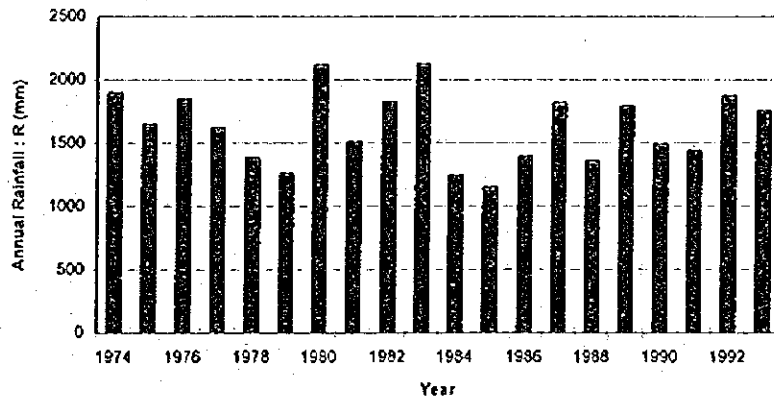
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(306.8)	(185.8)	(239.3)	(70.0)	(70.8)	(115.1)		(48.3)	(31.9)	(248.6)	(92.1)	(495.0)	172.9	1901.6
2 1975	(110.1)	(185.1)	(174.9)	(53.7)	(59.8)	(28.9)	(100.7)	(26.3)	(118.4)	(212.1)	(359.6)	(222.9)	137.7	1652.4
3 1976	134.6	258.3	84.9	99.4	123.0	96.8	65.5	213.7	155.0	249.2	148.2	220.6	154.5	1854.2
4 1977	235.2	75.3	232.5	159.9	12.4	150.9	25.1	22.0	103.9	71.6	183.1	283.7	135.6	1626.6
5 1978	81.6	64.6	145.0	26.0	90.3	17.3	193.9	10.9	215.8	90.0	171.0	281.6	115.7	1369.0
6 1979	71.3	156.0	32.4	94.9	137.4	0.6	85.2	44.8	153.1	197.0	153.2	136.9	105.3	1263.0
7 1980	272.3	359.5	267.5	144.7	117.7	85.3	69.2	92.9	165.5	95.6	122.6	329.8	176.9	2122.8
8 1981	223.2	155.4	69.2	144.3	1.7	112.5	21.8	9.0	7.2	263.1	154.8	351.8	126.2	1514.0
9 1982	123.5	182.1	132.3	25.5	58.7	259.0	155.0	36.7	21.6	151.7	323.1	358.7	152.3	1827.9
10 1983	238.4	67.5	291.6	102.7	308.8	260.5	18.7	0.0	277.2	174.8	232.2	159.7	177.5	2130.7
11 1984	125.1	82.9	136.4	213.2	64.8	3.3	3.0	70.2	140.9	44.7	102.4	259.0	103.8	1245.9
12 1985	53.9	206.6	162.9	266.8	143.5	22.5	25.2	4.0	27.4	35.0	155.5	50.1	96.1	1153.4
13 1986	166.3	195.4	109.9	99.1	133.3	0.5	22.0	153.2	83.0	97.2	96.5	241.1	116.5	1397.5
14 1987	210.7	202.2	74.7	157.0	228.9	150.5	47.1	9.0	81.0	134.9	347.0	182.6	152.0	1823.6
15 1988	205.6	114.4	180.1	183.9	246.7	49.9	0.2	0.0	50.9	178.6	30.7	120.9	113.4	1360.9
16 1989	346.5	165.0	131.6	58.9	31.0	117.2	67.4	95.7	136.4	87.5	138.6	419.3	149.6	1795.1
17 1990	267.0	26.5	81.4	137.6	104.8	48.8	181.7	147.8	146.8	81.4	173.0	97.1	124.5	1493.4
18 1991	223.6	58.0	179.3	92.4	11.1	155.1	24.0	18.1	96.2	47.1	272.8	264.4	120.2	1442.1
19 1992	45.4	277.5	362.9	149.3	288.6	27.6	41.5	39.6	193.4	157.2	236.2	59.4	156.4	1876.6
20 1993	296.9	291.2	65.1	128.7	125.9	97.8	43.0	14.8	171.4	120.8	89.7	313.4	145.6	1758.7
Mean	189.5	165.5	157.7	120.9	117.8	90.5	62.5	53.1	118.9	138.8	179.1	242.4	136.7	1631.4

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 5)
 St. No. 02351003 Londrina
 1974 - 1993 (20 Years)



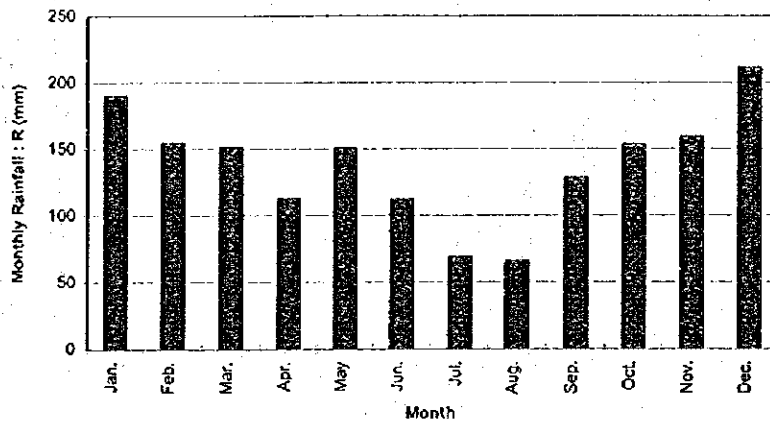
Annual Rainfall (No. 5)
 St. No. 02351003 Londrina
 1974 - 1993 (20 Years)



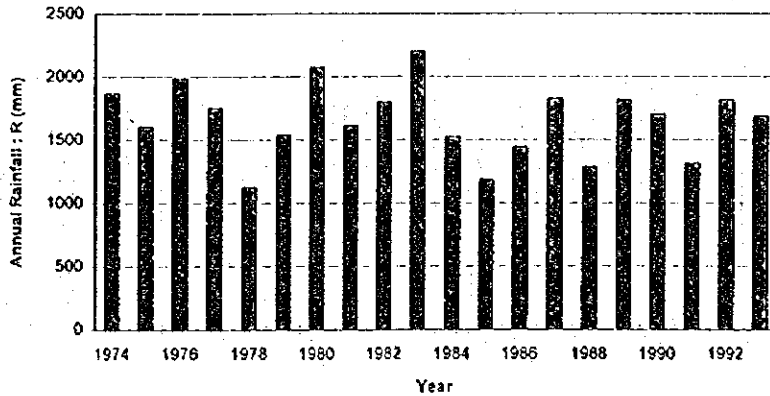
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02351008 (No.6)
 St. Name Apucarama

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	403.6	120.1	175.0	145.5	104.3	167.8	6.0	57.0	40.0	298.6	78.3	278.9	156.1	1873.1
2 1975	92.5	265.6	124.4	51.5	81.6	90.2	94.7	28.1	73.4	210.0	235.3	258.9	133.9	1606.2
3 1976	218.2	214.0	141.7	98.6	149.5	92.0	64.8	253.8	158.6	208.3	149.6	242.2	165.7	1589.3
4 1977	275.1	74.6	236.1	69.5	11.2	232.3	34.6	51.8	86.7	112.0	285.7	253.3	146.1	1752.9
5 1978	123.8	132.3	123.7	0.7	119.2	18.1	223.2	16.0	142.7	69.2	83.6	73.5	93.8	1128.0
6 1979	52.4	191.1	59.5	83.7	210.7	0.0	92.2	42.6	215.9	247.1	124.5	220.9	128.4	1540.6
7 1980	164.3	235.7	320.9	144.6	147.4	112.1	80.5	106.8	165.4	107.9	172.7	316.2	172.9	2074.7
8 1981	234.3	170.6	100.0	182.9	11.3	99.1	13.5	14.3	17.0	285.2	182.9	304.0	134.7	1616.1
9 1982	100.5	191.9	79.6	36.9	50.8	269.0	184.8	36.2	57.4	224.0	339.9	229.9	150.1	1800.9
10 1983	232.2	78.6	288.2	111.7	282.8	345.2	33.1	0.0	315.3	178.5	199.2	156.6	183.5	2201.4
11 1984	217.0	78.3	223.0	159.9	108.2	5.7	14.2	91.2	204.5	86.4	102.5	236.8	127.3	1527.7
12 1985	138.7	145.6	139.2	143.1	179.1	23.4	48.2	14.4	43.2	95.1	134.5	86.7	98.9	1187.2
13 1986	155.4	180.2	146.5	165.8	179.3	2.2	32.3	174.8	60.5	52.8	87.2	208.6	120.5	1445.6
14 1987	154.7	214.3	77.4	105.5	372.1	189.0	80.1	26.6	78.8	83.9	263.5	186.3	152.7	1832.2
15 1988	125.6	148.1	86.1	162.9	265.3	78.6	0.2	0.0	43.7	175.4	42.6	157.7	107.2	1285.2
16 1989	380.6	105.0	175.7	92.2	68.5	128.9	101.6	139.5	128.3	102.8	127.0	269.0	151.4	1911.1
17 1990	346.3	41.4	112.9	69.7	144.7	69.4	176.4	204.8	183.2	78.7	161.6	114.2	141.9	1703.3
18 1991	174.6	44.9	125.2	98.3	33.1	167.1	15.2	22.7	106.0	81.0	214.6	232.2	109.6	1314.9
19 1992	21.4	194.3	251.9	163.6	425.0	33.3	30.5	40.9	227.6	145.5	132.4	154.3	151.7	1820.7
20 1993	197.0	265.5	43.8	137.9	95.1	122.4	59.4	2.0	224.1	228.5	69.8	245.2	141.0	1651.7
Mean	190.3	154.6	151.5	112.7	151.0	112.2	69.2	66.2	129.6	153.6	159.1	211.3	138.4	1680.3

Monthly Mean Rainfall (No. 6)
 St. No. 02351008 Apucarama
 1974 - 1993 (20 Years)



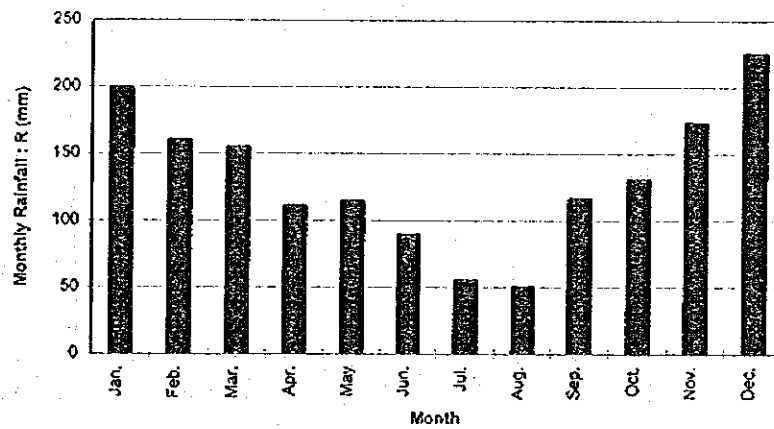
Annual Rainfall (No. 6)
 St. No. 02351008 Apucarama
 1974 - 1993 (20 Years)



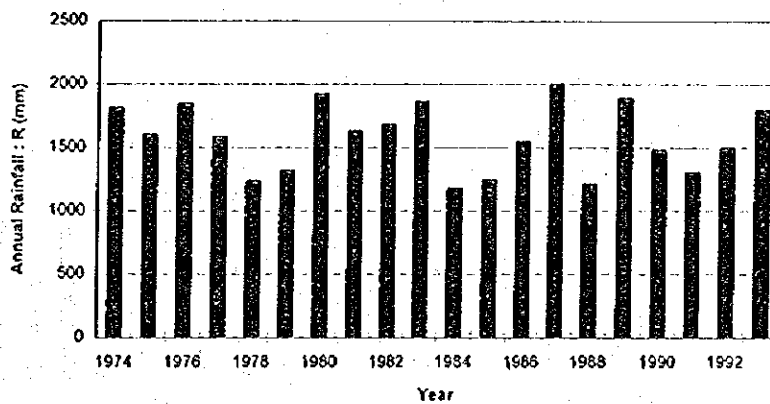
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02351011 (No. 7)
 St. Name Ibipora

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	282.9	176.4	223.5	74.5	75.2	114.2	4.2	55.4	41.0	229.9	93.9	448.9	151.6	1819.6
2 1975	109.8	175.8	168.8	60.1	65.5	38.3	101.5	38.0	117.1	199.5	329.3	209.0	134.1	1608.7
3 1976	148.7	136.0	92.9	137.8	123.2	136.7	55.8	195.4	174.1	188.5	234.9	231.8	154.5	1853.8
4 1977	239.5	131.2	211.0	184.7	15.5	182.5	10.1	29.7	86.5	51.1	210.7	239.4	132.7	1591.9
5 1978	120.0	118.2	133.3	3.8	58.5	19.5	205.4	14.2	155.2	52.9	152.2	206.5	103.3	1239.7
6 1979	25.8	188.3	72.9	37.6	170.1	1.1	90.5	39.3	245.4	215.2	131.0	103.8	110.1	1321.0
7 1980	266.9	330.4	172.5	113.4	92.1	92.0	55.8	78.7	165.2	81.6	95.9	382.0	160.5	1926.5
8 1981	396.5	123.5	42.8	116.1	2.3	74.4	16.4	6.5	11.7	306.3	238.2	296.7	136.0	1631.4
9 1982	145.4	223.1	81.3	12.4	68.6	194.9	149.4	50.2	32.4	142.0	305.6	280.6	140.5	1685.9
10 1983	205.8	88.1	293.5	93.7	314.0	240.8	10.5	0.0	209.7	125.8	139.3	146.2	155.5	1868.4
11 1984	95.5	52.4	169.1	160.5	53.1	5.8	7.8	92.1	122.4	52.3	133.3	235.1	98.4	1180.4
12 1985	135.6	128.4	147.0	244.9	189.6	22.5	19.2	3.8	35.5	32.6	201.4	92.7	104.3	1251.2
13 1986	226.9	206.2	145.5	102.4	154.7	0.2	23.2	161.3	92.9	64.5	76.9	297.0	129.4	1552.7
14 1987	247.3	290.8	65.3	143.5	231.1	159.3	44.3	8.7	91.1	200.5	376.1	147.0	167.1	2005.0
15 1988	118.6	69.1	145.1	162.9	182.8	78.6	0.3	0.0	53.9	174.4	54.0	174.6	101.3	1215.3
16 1989	387.1	217.3	169.4	34.4	57.9	107.4	75.4	89.3	141.3	96.4	145.1	374.7	158.0	1895.7
17 1990	287.5	72.4	111.5	151.8	97.1	49.6	173.7	108.5	141.2	97.4	116.3	79.5	123.8	1485.5
18 1991	163.4	65.5	231.9	122.1	9.1	143.1	11.1	8.9	96.3	64.7	182.4	208.3	109.0	1307.6
19 1992	60.9	159.9	296.2	145.7	250.4	22.4	25.8	24.6	194.9	109.9	147.2	66.7	125.4	1504.6
20 1993	336.4	262.7	133.6	129.4	95.3	121.9	36.0	12.8	132.9	138.6	109.0	293.2	150.2	1801.8
Mean	199.9	160.7	155.4	111.6	115.3	90.2	55.8	50.8	117.0	131.2	173.6	225.7	132.3	1587.2

Monthly Mean Rainfall (No. 7)
 St. No. 02351011 Ibipora
 1974 - 1993 (20 Years)



Annual Rainfall (No. 7)
 St. No. 02351011 Ibipora
 1974 - 1993 (20 Years)

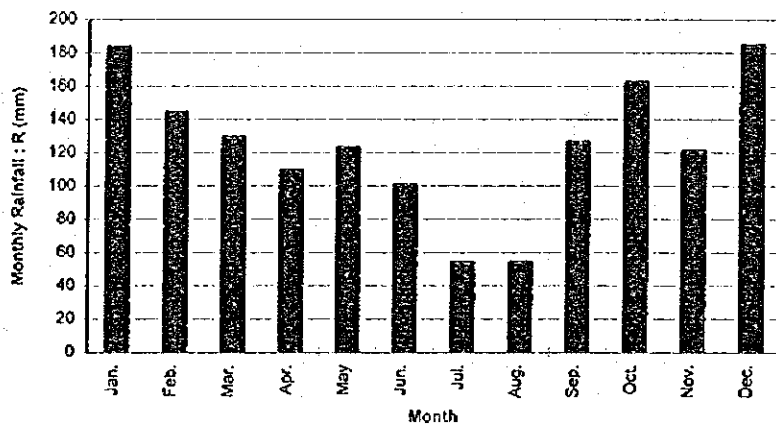


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02352017 (No.8)
 St. Name Paranaval

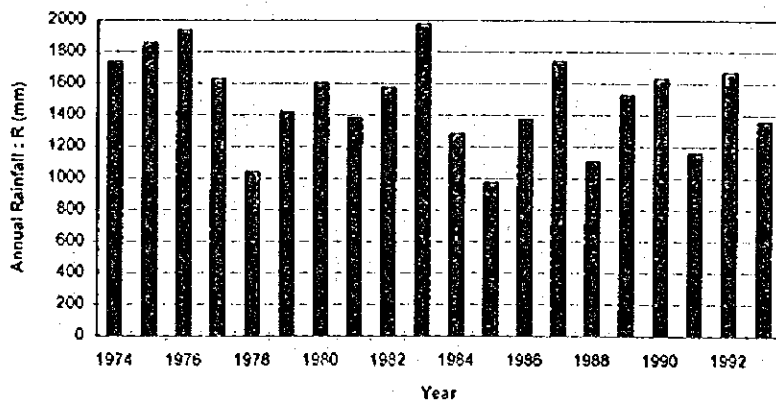
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	JUL.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(430.2)	(103.5)	(166.7)	(132.7)	(85.3)	(158.4)	(-28.6)	(30.8)	(11.2)	(309.2)	(53.0)	(286.5)	145.0	1739.5
2 1975	91.6	301.5	192.6	95.8	100.3	51.8	97.3	35.3	105.0	378.3	181.0	226.8	154.8	1857.3
3 1976	178.7	104.2	80.8	155.9	196.2	170.4	50.0	216.8	182.2	294.8	115.1	193.1	161.5	1938.2
4 1977	282.7	114.9	154.8	67.8	74.2	154.5	44.0	21.2	112.8	77.7	254.8	272.6	136.0	1632.0
5 1978	112.7	35.9	93.7	12.2	69.5	14.9	175.3	19.0	143.1	89.5	96.9	180.3	86.9	1943.0
6 1979	145.8	205.3	17.3	95.6	157.5	0.0	75.4	43.2	198.8	182.7	108.2	161.9	118.8	1421.7
7 1980	108.3	250.8	93.2	120.1	145.7	100.7	32.4	89.6	212.7	150.1	82.5	220.0	133.9	1607.1
8 1981	165.8	149.7	94.4	131.6	5.4	143.8	26.3	13.6	16.4	275.5	129.7	230.1	115.2	1382.3
9 1982	75.0	119.9	128.9	68.6	42.7	227.4	114.0	49.8	40.8	155.2	278.0	275.9	131.4	1578.2
10 1983	226.8	99.6	267.1	184.3	217.1	300.6	15.9	0.0	240.8	119.2	171.9	134.0	164.8	1977.3
11 1984	168.6	73.4	76.8	122.4	50.1	8.1	5.7	58.5	164.0	35.4	167.5	355.0	107.1	1285.6
12 1985	84.3	201.5	134.3	112.1	110.1	29.8	48.1	21.4	43.4	82.0	44.0	66.2	81.4	977.2
13 1986	228.1	200.7	152.6	78.1	166.4	2.2	21.4	187.6	77.4	59.7	26.8	175.8	114.8	1374.8
14 1987	181.9	200.5	22.1	164.8	256.3	128.1	126.4	10.2	105.6	168.2	211.3	167.1	145.2	1742.3
15 1988	142.4	167.7	127.4	87.3	133.8	63.3	0.0	0.0	36.0	232.0	49.7	66.3	92.8	1110.9
16 1989	306.2	174.8	119.0	55.4	34.4	134.5	79.7	178.8	194.2	65.0	78.0	110.9	127.4	1529.9
17 1990	308.1	29.0	190.0	108.7	154.4	95.6	109.8	83.7	199.0	202.3	95.5	51.6	136.3	1635.7
18 1991	200.1	54.6	165.8	68.4	29.3	136.8	7.4	7.7	67.1	58.8	122.3	242.8	96.8	1161.2
19 1992	230.0	125.3	259.5	251.2	350.7	34.8	37.3	(12.2)	260.1	142.6	85.3	91.5	139.6	1673.6
20 1993	222.3	186.5	66.2	90.8	92.7	67.4	52.5	17.4	132.7	184.8	90.2	156.8	113.4	1360.3
Mean	184.1	145.0	130.2	110.0	123.7	101.4	54.5	54.8	127.2	163.1	122.0	185.3	125.1	1561.2

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 8)
 St. No. 02352017 Paranaval
 1974 - 1993 (20 Years)



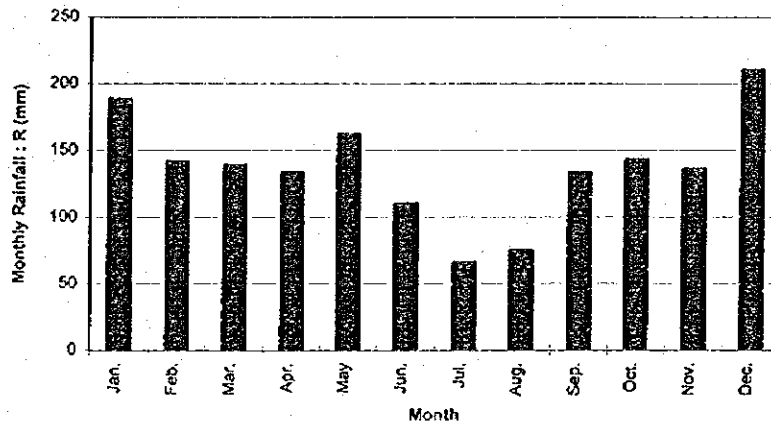
Annual Rainfall (No. 8)
 St. No. 02352017 Paranaval
 1974 - 1993 (20 Years)



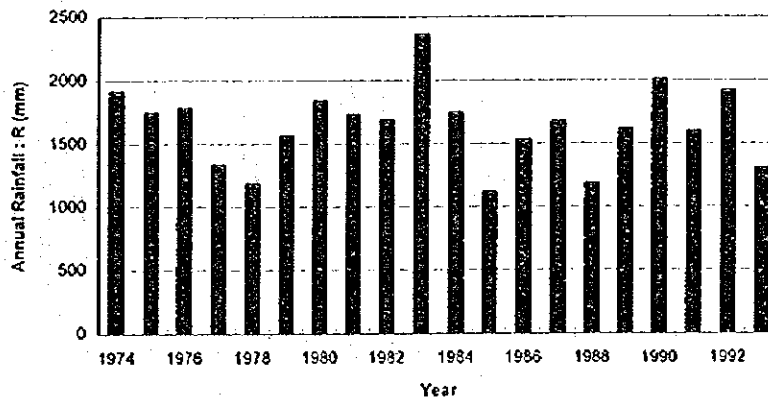
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02352019 (No.9)
 St. Name Cianorte

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	421.8	133.1	131.3	65.9	94.0	217.9	8.7	81.4	45.6	352.7	153.1	210.1	159.8	1917.0
2 1975	143.3	202.5	203.4	143.6	54.4	81.9	59.0	47.5	88.8	225.0	140.4	351.4	145.9	1751.2
3 1976	184.9	149.6	130.4	128.1	147.9	152.3	43.0	201.4	105.8	151.3	109.8	273.9	149.0	1788.4
4 1977	213.5	70.4	85.9	48.2	22.6	125.3	47.0	38.3	85.2	89.9	243.6	264.5	111.2	1334.4
5 1978	191.2	29.3	85.8	38.5	27.9	10.2	197.8	32.0	189.0	48.1	177.8	170.0	99.0	1187.6
6 1979	154.4	155.2	53.6	76.0	235.8	0.5	53.3	57.2	269.2	153.9	129.5	230.5	130.8	1569.1
7 1980	93.0	328.2	141.6	143.3	173.4	71.5	174.9	99.3	145.9	106.1	103.7	262.3	153.6	1843.2
8 1981	152.1	166.4	103.7	231.7	5.5	149.1	40.4	55.5	37.8	248.5	77.3	466.4	144.5	1734.4
9 1982	35.6	149.8	67.2	110.6	59.4	310.6	109.5	59.7	56.0	165.1	238.7	332.1	141.2	1694.7
10 1983	291.3	124.6	340.1	283.3	272.2	320.1	50.8	0.0	311.8	178.7	109.1	93.0	197.1	2365.0
11 1984	154.0	145.1	227.3	164.7	116.8	11.8	21.1	113.5	208.9	103.0	153.8	331.5	146.0	1751.5
12 1985	63.1	150.6	88.3	151.8	268.2	39.6	83.8	28.5	46.9	126.2	30.2	43.2	93.4	1120.4
13 1986	220.8	186.2	190.9	64.5	238.2	8.4	30.8	223.4	61.8	35.1	29.1	227.3	128.0	1535.5
14 1987	168.3	181.8	64.4	110.3	302.5	85.4	76.0	28.0	75.7	105.4	353.4	130.5	140.2	1682.7
15 1988	127.9	169.1	55.2	250.9	194.1	52.7	0.0	0.1	15.0	202.2	20.2	81.6	98.9	1187.0
16 1989	298.4	146.7	79.3	147.5	46.4	86.4	49.5	177.0	239.9	118.1	130.9	102.5	135.2	1622.6
17 1990	371.2	84.8	297.6	137.1	170.2	100.5	109.5	147.5	242.6	125.9	94.6	131.9	167.8	2013.4
18 1991	229.3	33.5	147.5	47.5	251.7	253.1	18.5	35.0	142.7	66.4	137.3	237.5	133.3	1600.0
19 1992	70.1	119.7	227.4	253.0	456.2	27.4	67.0	86.0	136.0	134.9	199.9	136.1	160.3	1923.7
20 1993	218.3	113.2	68.9	69.9	105.4	98.7	91.1	3.9	176.9	119.3	103.8	136.3	108.9	1306.7
Mean	189.1	142.0	139.5	134.4	162.7	110.7	66.6	75.8	134.1	143.7	136.8	211.1	137.2	1646.5

Monthly Mean Rainfall (No. 9)
 St. No. 02352019 Cianorte
 1974 - 1993 (20 Years)



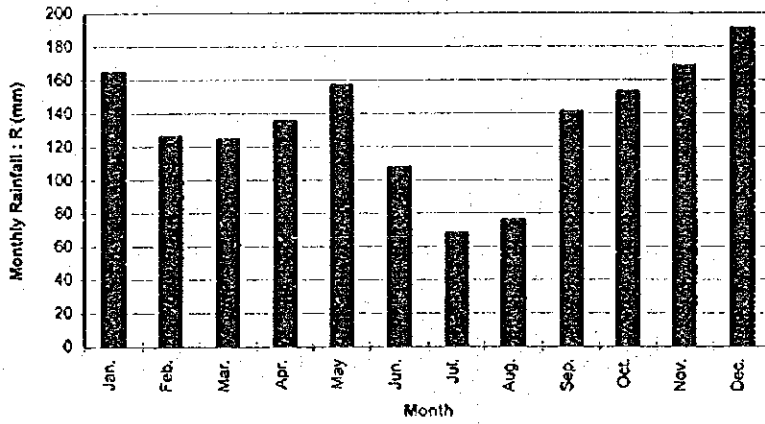
Annual Rainfall (No. 9)
 St. No. 02352019 Cianorte
 1974 - 1993 (20 Years)



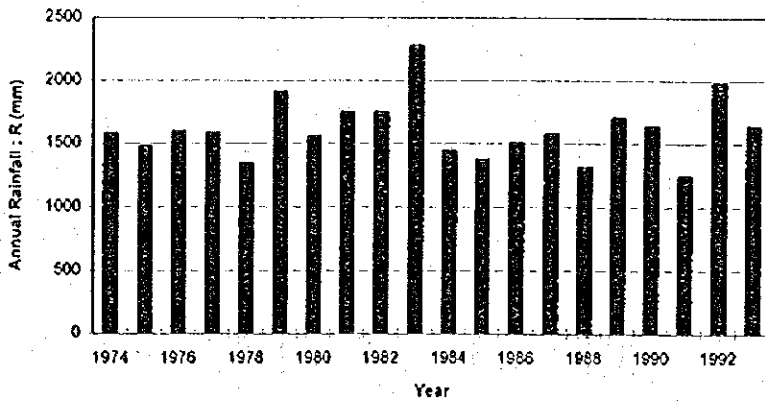
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02353008 (No.10)
 St. Name Umuarama

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	363.1	110.4	63.5	52.5	83.1	145.5	14.2	141.1	81.5	207.9	122.3	197.0	131.8	1582.1
2 1975	106.6	140.5	138.6	185.1	30.1	95.4	116.2	45.9	99.1	204.5	215.7	105.7	123.5	1482.4
3 1976	134.9	96.9	133.5	150.1	66.4	151.4	43.3	201.9	84.7	197.6	125.0	214.2	133.3	1599.9
4 1977	249.9	130.5	129.5	51.6	36.5	154.4	42.4	77.4	96.4	84.6	362.8	173.6	132.5	1589.5
5 1978	92.3	102.0	131.9	78.0	50.9	42.2	184.1	58.2	158.9	96.1	184.2	170.1	112.4	1348.9
6 1979	194.0	191.4	70.9	123.4	244.6	2.1	61.3	60.7	217.8	204.2	285.5	259.7	159.7	1916.6
7 1980	58.8	231.2	90.4	61.5	243.3	34.5	100.9	74.5	130.4	199.8	92.5	243.2	130.1	1561.0
8 1981	139.4	117.6	199.7	203.7	23.4	161.2	35.9	42.6	101.8	202.4	112.6	409.5	145.8	1749.8
9 1982	73.6	115.7	104.3	12.3	117.3	377.2	93.8	56.6	93.7	172.4	322.1	215.8	146.2	1754.8
10 1983	159.4	125.5	206.8	260.3	363.2	222.9	69.6	0.3	277.4	317.7	191.2	85.7	190.3	2283.0
11 1984	216.0	60.7	106.1	74.0	104.3	24.6	10.5	66.9	209.0	81.6	196.0	298.6	120.7	1443.3
12 1985	107.5	187.5	156.0	243.3	200.5	55.0	89.7	29.7	96.4	74.9	60.1	76.3	114.7	1376.5
13 1986	246.7	144.9	103.8	69.2	278.8	17.3	45.7	213.0	60.1	53.6	95.3	185.5	126.0	1511.9
14 1987	113.1	185.4	47.8	152.7	269.6	58.3	75.7	34.9	100.2	156.1	240.2	148.8	131.9	1582.8
15 1988	147.4	163.2	50.7	327.9	154.5	79.8	0.0	3.5	12.2	195.9	39.5	145.4	110.0	1320.0
16 1989	228.6	133.3	107.0	122.1	93.8	121.7	61.0	189.3	256.7	121.9	117.5	158.1	142.6	1711.0
17 1990	278.0	60.6	142.6	167.6	105.2	104.5	92.3	68.5	209.8	144.0	169.5	102.1	137.1	1644.7
18 1991	161.2	55.5	138.7	53.0	58.0	121.2	4.3	36.9	125.9	46.4	150.5	300.0	104.3	1251.6
19 1992	31.4	105.7	200.5	294.1	432.6	59.0	113.0	124.0	237.7	170.8	138.0	83.3	165.8	1990.1
20 1993	197.2	75.1	179.6	35.7	189.2	131.3	115.7	2.6	177.0	134.5	155.2	248.9	136.8	1642.0
Mean	165.0	126.7	125.0	136.0	157.2	108.0	68.5	76.4	141.3	153.3	168.8	191.2	134.8	1617.4

Monthly Mean Rainfall (No. 10)
 St. No. 02353008 Umuarama
 1974 - 1993 (20 Years)



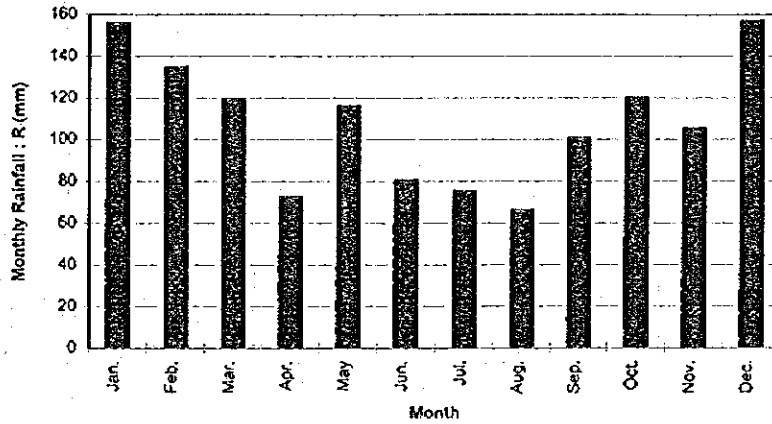
Annual Rainfall (No. 10)
 St. No. 02353008 Umuarama
 1974 - 1993 (20 Years)



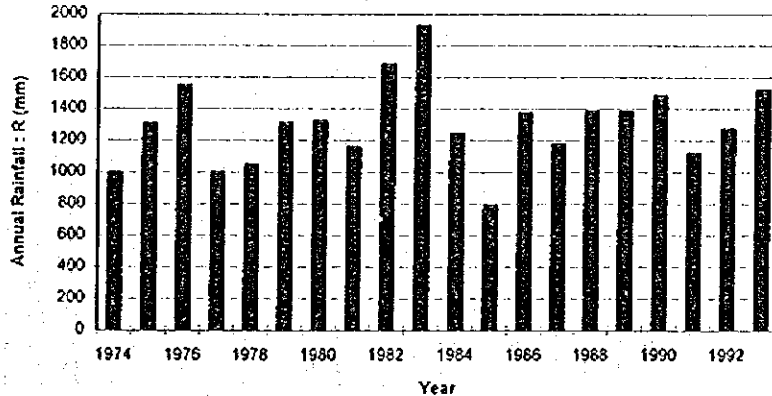
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02449013 (No.11)
 St. Name Cerro Azul

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	132.0	46.9	124.6	33.8	39.0	131.7	3.2	111.6	47.1	159.4	59.5	114.5	83.6	1003.7
2 1975	86.5	239.5	132.8	26.5	41.4	61.1	114.1	68.2	90.5	130.8	90.8	229.4	109.3	1311.6
3 1976	225.2	137.0	161.0	51.7	148.8	73.3	107.5	119.2	109.5	181.3	115.4	124.2	129.5	1554.1
4 1977	124.1	95.6	165.8	94.7	9.5	36.9	45.2	43.0	43.2	132.8	113.5	101.9	83.9	1006.2
5 1978	92.1	32.6	138.7	1.1	61.8	50.2	142.7	90.4	117.2	91.7	144.5	88.4	87.6	1051.4
6 1979	108.2	101.4	69.0	71.7	167.5	21.7	66.2	72.4	176.3	183.3	113.3	166.3	109.8	1317.3
7 1980	224.1	118.2	75.9	58.0	32.8	63.0	116.1	83.6	165.8	63.6	69.1	253.2	110.7	1328.4
8 1981	203.7	94.9	93.4	59.4	45.2	32.4	44.0	30.7	91.0	152.3	85.7	230.0	96.9	1162.7
9 1982	54.1	235.7	130.8	65.5	81.8	175.6	130.2	64.0	16.0	195.1	299.5	239.8	140.7	1688.3
10 1983	272.8	132.7	113.2	198.4	335.3	269.1	88.8	0.1	244.2	70.7	54.5	130.1	160.8	1929.9
11 1984	139.9	100.2	125.6	108.5	66.4	64.0	55.9	143.3	106.2	13.0	164.0	159.7	103.9	1246.7
12 1985	91.0	97.3	139.2	113.2	27.8	21.8	19.2	6.6	64.9	87.6	69.1	58.0	66.3	755.7
13 1986	146.8	216.0	98.8	69.1	115.9	4.8	13.4	132.6	40.3	120.4	148.9	269.4	114.7	1376.4
14 1987	165.1	105.0	48.3	71.8	225.1	117.2	46.7	29.1	87.8	106.4	110.1	69.7	58.5	1182.3
15 1988	217.7	148.6	104.1	91.8	292.2	92.1	11.5	2.8	47.6	97.0	71.0	213.3	115.8	1389.7
16 1989	147.6	164.8	71.6	136.4	88.4	97.5	137.2	39.9	111.5	56.0	89.8	247.3	115.7	1388.0
17 1990	266.5	119.4	126.7	33.1	126.6	70.8	171.3	99.3	158.7	154.8	115.8	45.7	124.1	1488.9
18 1991	106.6	114.2	180.8	52.1	58.5	85.7	13.5	45.4	48.2	140.4	52.7	227.8	93.8	1125.9
19 1992	106.4	131.9	179.3	77.0	253.5	11.3	80.6	110.6	77.7	71.9	99.4	73.7	106.5	1278.3
20 1993	211.4	270.9	119.5	45.5	107.1	115.7	104.4	33.6	177.0	197.9	49.0	94.5	127.2	1526.5
Mean	156.1	135.1	120.0	73.0	115.2	60.8	75.6	66.6	101.0	120.3	105.8	157.1	109.0	1307.6

Monthly Mean Rainfall (No. 11)
 St. No. 02449013 Cerro Azul
 1974 - 1993 (20 Years)



Annual Rainfall (No. 11)
 St. No. 02449013 Cerro Azul
 1974 - 1993 (20 Years)

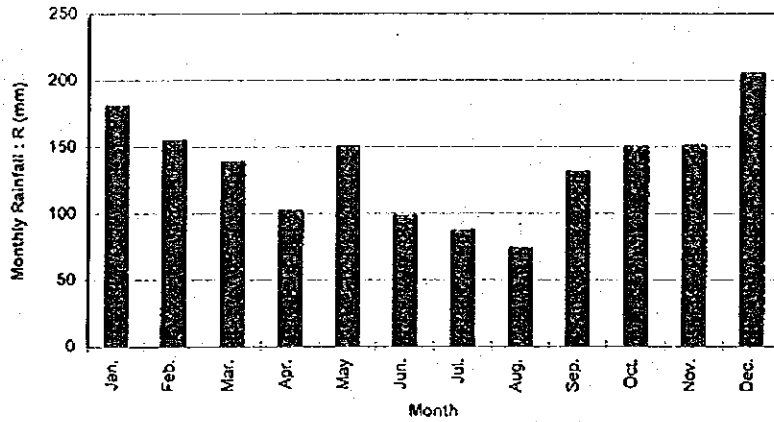


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02450011 (No.12)
 St. Name Telemaco

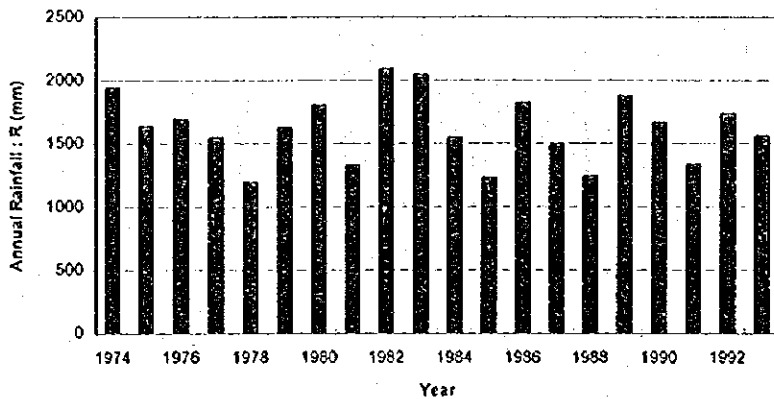
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(329.4)	(191.5)	(252.5)	(59.6)	(60.5)	(111.0)	(12.7)	(34.9)	(18.2)	(260.7)	(84.7)	(543.7)	176.8	1944.6
2 1975	(105.3)	(190.7)	(179.1)	(40.9)	(47.9)	(12.7)	(94.5)	(9.7)	(114.7)	(221.4)	(389.4)	(233.7)	136.7	1640.1
3 1976	(153.0)	(139.2)	(83.4)	(141.5)	(122.6)	(140.1)	(35.4)	(216.1)	(188.5)	110.3	140.8	222.1	141.1	1693.0
4 1977	255.8	90.0	260.0	166.1	32.0	126.3	56.0	52.9	67.5	118.6	140.5	184.0	129.1	1549.7
5 1978	118.3	102.0	113.4	0.0	97.3	14.6	213.0	56.1	175.8	65.7	148.9	94.6	100.0	1199.7
6 1979	83.4	134.9	22.7	47.5	282.2	2.4	118.3	112.4	243.3	233.0	150.2	199.0	135.8	1629.3
7 1980	282.6	123.5	133.5	128.7	86.9	95.4	106.1	118.2	192.8	70.8	116.9	349.5	150.4	1804.9
8 1981	164.6	95.3	90.1	99.4	22.7	65.9	8.4	19.5	39.6	266.8	126.6	332.5	111.0	1331.4
9 1982	73.3	242.4	116.7	8.1	64.1	301.5	204.3	81.6	57.5	292.8	479.3	171.9	174.5	2093.5
10 1983	165.7	87.6	188.1	228.5	384.7	312.2	61.0	1.5	267.0	152.7	105.8	92.1	170.6	2046.9
11 1984	192.1	40.8	121.7	149.4	101.0	46.3	100.5	136.6	170.4	70.9	193.2	224.0	128.9	1546.9
12 1985	79.3	163.2	232.6	176.0	117.4	34.6	38.0	16.5	115.3	57.9	123.2	77.4	102.6	1231.4
13 1986	140.6	356.7	164.6	94.9	291.4	6.5	10.9	202.6	63.8	119.2	168.5	201.0	152.1	1825.7
14 1987	114.8	195.7	101.6	103.9	316.1	130.3	58.4	23.2	104.0	97.7	128.4	126.4	125.0	1500.5
15 1988	151.1	141.8	74.4	75.4	267.2	57.6	4.9	0.3	60.6	90.1	73.4	246.9	103.6	1243.7
16 1989	429.0	241.2	75.7	79.2	53.7	123.1	143.1	96.4	147.6	129.2	85.4	272.5	155.4	1877.1
17 1990	303.0	59.8	75.7	110.5	157.9	110.5	182.6	139.2	134.4	140.4	116.7	86.9	139.0	1667.6
18 1991	134.7	103.6	93.8	101.0	72.0	117.5	59.0	79.2	81.1	169.5	85.3	243.3	111.7	1340.0
19 1992	43.7	211.3	340.3	171.3	310.6	34.5	85.2	69.9	96.4	197.7	107.5	71.6	145.0	1740.0
20 1993	301.1	194.4	61.3	70.4	128.1	126.8	78.2	15.3	243.2	146.0	63.8	135.7	130.4	1564.3
Mean	181.0	155.3	139.1	102.6	150.8	99.5	87.3	74.1	131.7	150.6	151.4	205.4	136.0	1623.5

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 12)
 St. No. 02450011 Telemaco
 1974 - 1993 (20 Years)



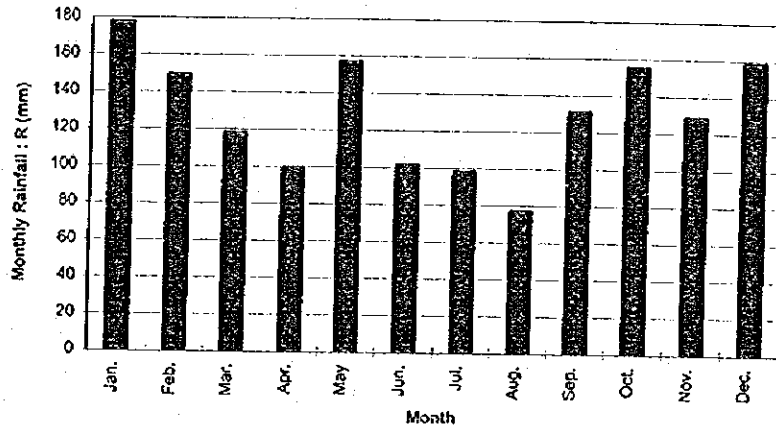
Annual Rainfall (No. 12)
 St. No. 02450011 Telemaco
 1974 - 1993 (20 Years)



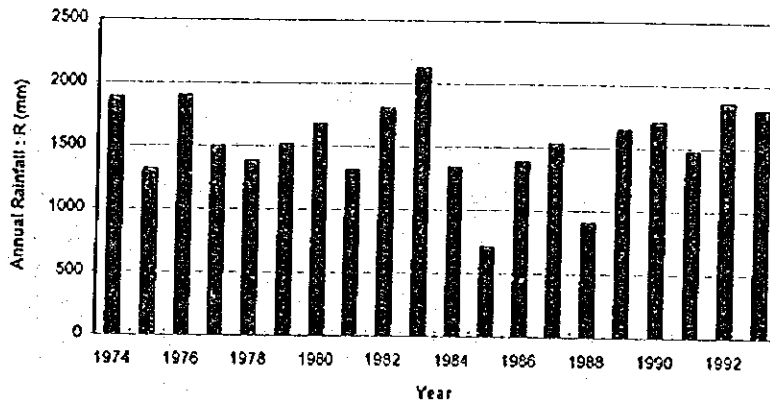
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02451051 (No.13)
 St. Name Candido Abreu

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(496.4)	(101.3)	(177.8)	(136.7)	(79.3)	(167.8)		(13.4)		(350.1)	(40.3)	(322.6)	188.6	1885.8
2 1975	(82.9)	(304.1)	(107.3)	(5.7)	(41.7)	(59.7)	(65.9)		(36.2)	(226.6)	246.8	158.2	120.1	1321.1
3 1976	276.6	200.5	64.3	66.7	201.3	121.2	58.5	140.2	117.3	114.5	136.1	375.6	158.6	1902.8
4 1977	317.9	176.8	274.9	99.5	20.6	116.4	44.8	41.8	69.0	147.0	127.8	65.5	125.2	1502.0
5 1978	126.6	68.5	219.2	0.0	97.8	39.9	262.5	90.6	145.4	78.5	139.9	119.7	115.6	1387.6
6 1979	42.4	135.6	14.2	78.5	272.5	4.6	52.2	190.1	230.8	145.4	148.9	155.5	126.7	1520.1
7 1980	215.4	83.9	162.6	103.1	112.3	106.3	147.2	83.8	217.1	105.4	143.4	197.8	139.9	1679.3
8 1981	111.5	188.3	27.4	113.3	4.0	88.2	5.2	22.6	66.7	250.6	76.3	363.0	109.8	1317.1
9 1982	31.0	207.1	82.1	12.5	95.8	351.8	203.8	49.8	24.8	247.7	333.8	169.0	150.8	1809.2
10 1983	111.1	118.8	209.4	203.6	392.3	245.1	118.5	0.0	291.3	225.2	94.7	117.9	177.3	2127.9
11 1984	200.4	80.6	132.3	183.9	187.8	45.9	73.5	162.0	155.1	68.0	68.4	2.8	111.7	1340.7
12 1985	12.4	(136.9)	49.6	9.4	123.6	57.0	28.4	4.9	78.1	94.3	55.4	66.3	59.5	714.3
13 1986	177.5	125.4	56.0	127.7	267.8	11.7	42.7	209.8	83.5	70.2	85.7	133.6	115.0	1391.6
14 1987	220.6	334.5	84.2	125.2	267.9	82.7	39.6	40.0	39.5	65.3	138.3	99.1	128.1	1535.9
15 1988	68.5	128.8	51.4	149.2	193.0	42.9	9.1	1.1	17.7	78.5	24.2	144.2	75.7	908.6
16 1989	296.5	106.2	81.9	87.5	104.4	90.4	240.4	117.9	181.4	147.5	89.9	106.6	137.6	1650.6
17 1990	397.7	28.4	72.1	156.8	109.7	129.4	(179.8)	116.9	222.5	140.1	107.0	50.2	142.5	1710.6
18 1991	169.4	124.9	94.7	47.9	65.0	133.0	7.3	77.8	98.2	173.1	(233.0)	(257.6)	123.5	1491.9
19 1992	35.6	220.7	241.8	197.0	345.0	50.4	124.6	106.2	121.2	187.5	145.9	90.8	155.6	1866.7
20 1993	188.6	128.8	167.9	86.8	162.6	97.2	172.6	7.2	259.0	201.9	151.8	185.7	150.8	1810.1
Mean	178.0	149.9	118.6	100.1	157.5	102.1	98.8	77.7	131.8	155.9	129.4	159.1	130.7	1543.2

Monthly Mean Rainfall (No. 13)
 St. No. 02451051 Candido Abreu
 1974 - 1993 (20 Years)



Annual Rainfall (No. 13)
 St. No. 02451051 Candido Abreu
 1974 - 1993 (20 Years)

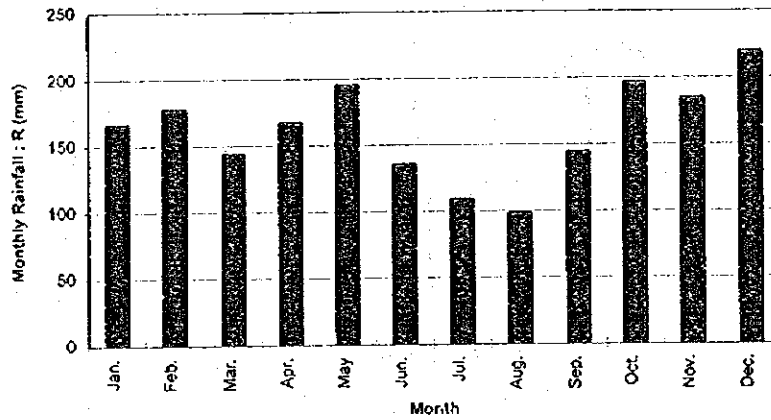


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02452050 (No. 14)
 St. Name Nova Cantu

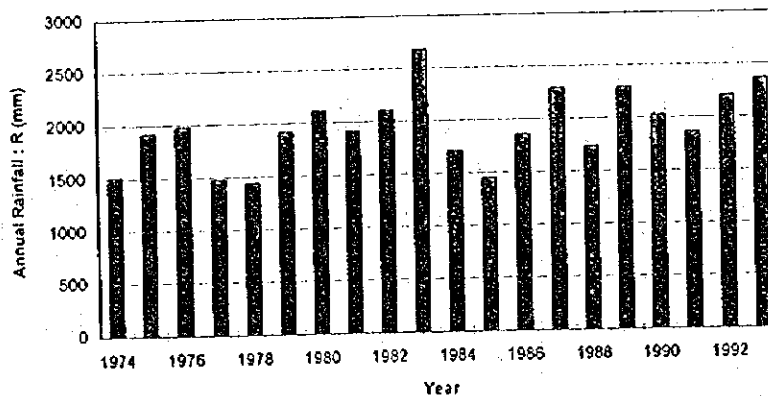
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(133.6)	(319.0)	(50.5)	(43.8)	(105.0)	(163.5)	(22.8)	(192.3)	(22.8)	(131.7)	(180.6)	(145.3)	125.9	1511.0
2 1975	(128.5)	(184.8)	(173.4)	(227.8)	(78.8)	(116.5)	(44.8)	(55.9)	(190.8)	(196.8)	(284.9)	(237.2)	160.0	1922.1
3 1976	(243.4)	195.7	148.7	170.1	154.7	121.3	39.2	101.0	117.4	211.2	177.1	299.7	165.0	1975.5
4 1977	229.7	85.7	186.6	91.4	44.5	185.6	39.6	58.0	122.9	109.9	204.6	120.8	123.3	1472.3
5 1978	75.0	14.1	117.7	0.8	150.6	86.3	259.3	101.8	132.6	100.1	237.4	166.7	120.2	1442.4
6 1979	97.2	197.0	45.2	141.5	323.5	6.8	97.8	189.8	197.5	292.6	143.7	189.0	160.1	1921.6
7 1980	290.0	167.9	162.9	56.7	284.1	100.4	141.0	157.8	257.8	148.2	133.8	213.0	178.1	2113.6
8 1981	202.8	240.7	70.8	209.2	35.2	154.3	4.8	42.4	86.0	301.2	81.3	487.0	159.7	1913.7
9 1982	61.5	154.5	74.3	50.9	76.8	343.1	260.9	108.8	89.1	302.0	416.4	167.1	175.5	2105.4
10 1983	114.8	174.3	231.4	293.2	381.0	312.2	174.5	3.5	349.1	273.4	172.5	199.7	223.3	2675.6
11 1984	271.9	114.7	141.8	115.2	123.8	66.0	36.0	135.3	136.0	76.3	200.1	297.5	142.9	1714.6
12 1985	99.8	253.6	184.4	293.1	113.9	58.4	69.8	32.1	58.9	115.3	103.5	69.8	121.1	1452.6
13 1986	140.5	300.1	202.1	205.2	288.8	21.2	62.3	158.2	99.6	98.1	104.0	178.4	154.9	1855.5
14 1987	144.5	312.5	85.5	248.6	396.0	207.8	65.3	57.1	56.2	190.1	250.5	279.3	191.1	2293.2
15 1988	108.1	215.1	135.0	355.0	260.4	83.6	8.8	2.6	11.7	194.3	138.6	224.3	144.8	1737.5
16 1989	365.0	192.9	179.3	163.4	122.0	95.4	212.2	164.4	195.8	232.4	205.8	164.6	181.1	2293.5
17 1990	0.0	62.6	109.3	168.4	188.2	165.3	257.2	180.8	335.4	249.8	186.3	124.8	169.0	2021.1
18 1991	226.8	21.6	168.4	119.1	98.7	196.2	39.6	81.8	102.5	264.8	187.9	357.1	155.4	1864.3
19 1992	54.6	117.6	273.7	191.0	413.8	148.2	148.5	156.2	133.5	194.1	166.0	210.8	184.0	2208.0
20 1993	343.4	237.8	143.2	212.5	274.4	89.9	202.6	2.4	206.6	254.6	130.0	266.6	197.0	2364.2
Mean	166.5	178.1	144.2	167.8	195.8	138.1	109.4	99.1	145.1	196.8	185.3	220.0	162.0	1944.2

(Note) (....) : correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 14)
 St. No. 02452050 Nova Cantu
 1974 - 1993 (20 Years)



Annual Rainfall (No. 14)
 St. No. 02452050 Nova Cantu
 1974 - 1993 (20 Years)

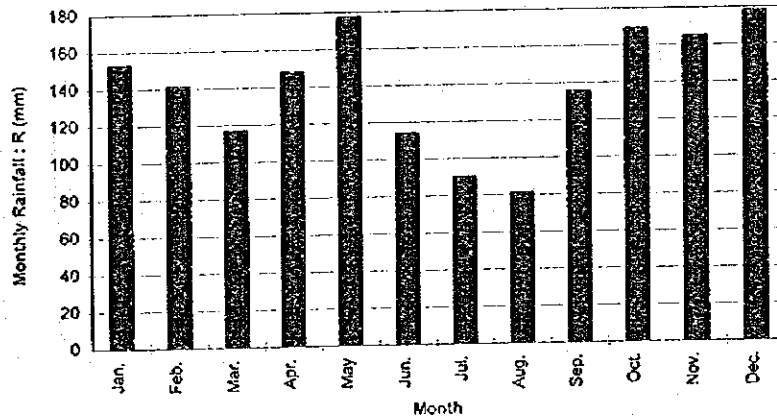


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02453003 (No.15)
 St. Name Palotina

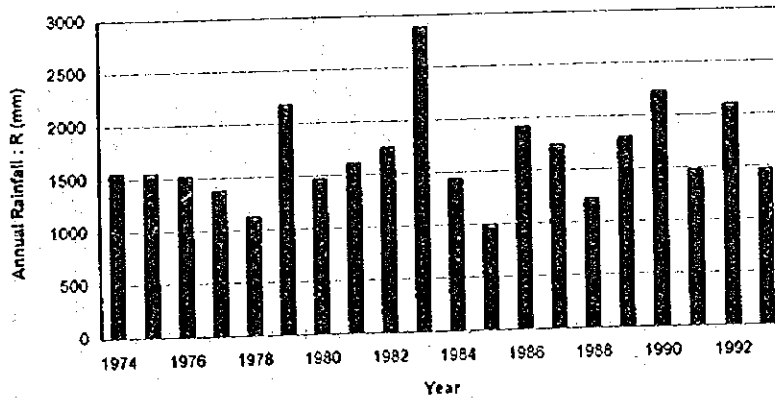
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	278.1	154.2	77.1	60.2	82.3	114.8	13.4	168.1	26.3	154.3	281.1	165.9	129.7	1555.8
2 1975	128.5	144.6	116.9	194.9	103.9	116.3	39.3	45.6	94.6	216.0	212.6	139.0	129.4	1552.2
3 1976	139.0	164.2	68.5	123.0	113.6	110.6	30.3	99.5	72.9	177.4	138.0	282.2	126.6	1519.2
4 1977	225.6	115.0	92.1	76.9	36.5	184.6	14.2	44.0	114.6	35.8	264.6	175.0	114.9	1378.9
5 1978	64.8	29.8	54.1	0.1	79.3	54.9	259.4	71.7	140.9	83.2	155.0	134.9	93.8	1126.1
6 1979	60.3	71.3	186.5	192.4	297.9	8.0	79.5	131.2	268.5	301.0	239.9	342.6	181.6	2179.1
7 1980	155.4	144.1	71.5	24.9	233.2	43.8	49.5	115.4	190.9	208.7	144.0	80.2	122.2	1466.6
8 1981	83.6	67.5	153.0	165.5	30.3	108.6	0.7	34.9	27.9	222.6	178.8	536.7	134.2	1610.1
9 1982	37.0	158.2	85.5	52.5	90.9	203.4	297.6	53.9	83.2	237.9	354.7	100.8	146.3	1755.6
10 1983	211.1	266.2	240.3	370.0	412.7	290.6	113.3	3.6	301.6	318.1	206.9	153.4	240.7	2837.8
11 1984	221.3	51.5	169.5	183.8	128.6	35.3	55.8	66.2	60.2	41.7	155.0	252.6	120.1	1441.5
12 1985	38.7	166.6	70.7	130.6	160.4	40.6	111.7	30.6	33.8	109.5	34.9	69.6	83.1	997.7
13 1986	221.4	294.6	106.9	172.7	319.9	37.1	46.5	145.9	167.2	96.2	84.0	227.2	160.0	1919.6
14 1987	141.6	312.3	58.5	192.3	285.0	130.1	103.2	46.4	24.8	140.8	149.7	155.7	145.0	1740.4
15 1988	144.3	136.7	63.7	222.0	167.2	108.0	3.4	13.6	14.2	151.9	89.8	111.5	102.2	1226.3
16 1989	208.3	151.0	102.0	143.8	162.8	117.9	145.6	203.7	259.8	172.0	102.9	32.9	150.2	1602.7
17 1990	(328.9)	73.0	225.4	205.2	202.8	162.3	146.7	190.6	283.5	162.2	145.9	101.4	165.0	2231.9
18 1991	199.6	8.3	115.2	87.2	53.2	211.0	31.8	38.7	242.9	146.6	97.8	248.5	123.4	1480.8
19 1992	6.3	260.8	148.7	252.3	433.1	131.9	136.7	104.2	134.2	230.4	108.4	150.5	174.8	2097.5
20 1993	171.1	58.8	135.9	117.4	159.4	69.3	127.4	1.8	168.1	130.7	179.9	105.4	122.6	1475.2
Mean	153.1	141.4	117.1	148.4	177.7	114.2	90.3	81.5	135.8	169.4	165.1	178.3	139.4	1672.3

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 15)
 St. No. 02453003 Palotina
 1974 - 1993 (20 Years)



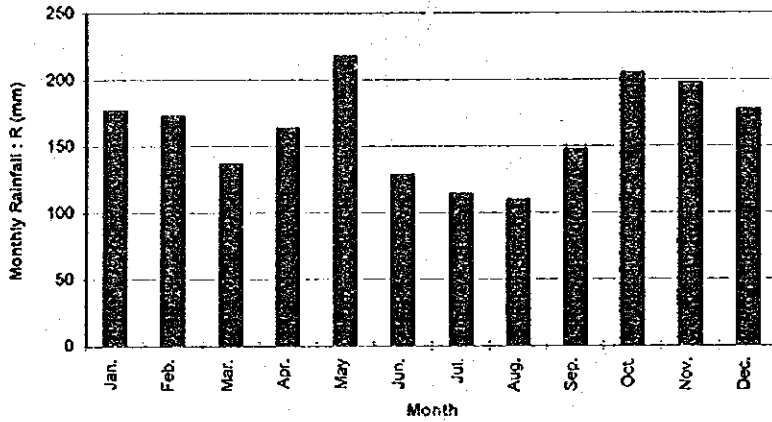
Annual Rainfall (No. 15)
 St. No. 02453003 Palotina
 1974 - 1993 (20 Years)



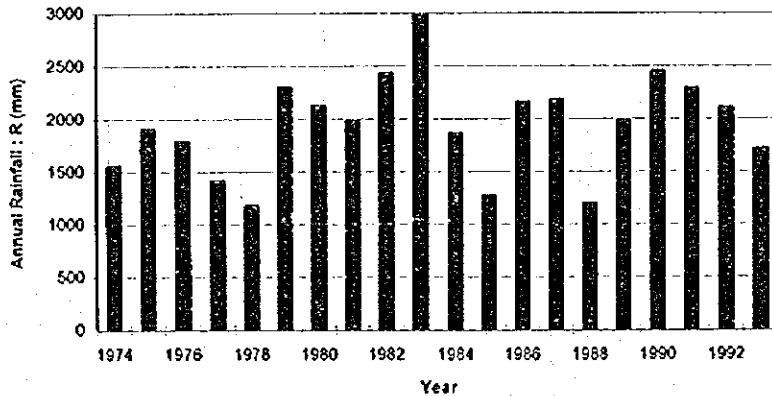
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02453023 (No.16)
 St. Name Cascavel

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	JUL.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	136.9	296.3	65.5	59.7	112.3	162.6	41.7	187.4	41.7	135.3	177.3	147.0	130.3	1563.7
2 1975	132.5	190.9	171.1	217.9	89.8	122.2	60.6	70.1	186.1	191.2	267.0	226.0	159.6	1915.4
3 1976	231.3	158.7	82.0	141.4	121.6	105.0	90.1	97.1	106.0	305.2	217.6	141.0	149.8	1797.0
4 1977	183.5	58.1	158.8	67.2	26.9	182.2	38.2	64.3	101.4	73.7	312.4	154.7	118.5	1421.4
5 1978	120.2	36.0	134.5	2.3	103.3	55.2	194.2	85.5	135.2	98.8	111.3	111.9	99.0	1188.4
6 1979	80.6	255.8	132.9	170.4	381.4	14.8	131.9	254.9	199.8	355.0	148.9	182.5	192.4	2308.9
7 1980	309.8	143.9	182.2	43.8	326.0	77.8	122.3	113.9	300.6	177.8	120.9	213.5	177.7	2132.5
8 1981	168.8	249.1	119.0	302.6	34.4	133.4	2.9	41.6	75.3	222.3	131.5	509.3	166.1	1993.2
9 1982	114.7	352.0	69.0	91.5	98.8	232.4	288.8	116.7	70.9	380.1	492.9	134.1	203.5	2441.9
10 1983	266.1	166.1	265.2	272.9	458.1	260.4	265.9	13.4	360.5	342.3	187.6	92.5	248.4	2981.0
11 1984	363.9	106.0	282.0	134.2	60.0	41.2	70.5	220.6	86.0	97.8	190.8	215.3	155.7	1868.3
12 1985	61.8	211.5	89.0	272.1	125.9	51.9	60.7	41.7	41.8	154.3	90.0	78.9	106.6	1279.6
13 1986	141.3	255.3	135.9	211.4	354.1	25.0	87.1	159.8	255.5	149.6	186.2	203.9	180.4	2165.1
14 1987	69.3	292.0	146.7	223.4	438.0	159.7	116.9	49.8	23.4	227.5	237.4	204.2	182.4	2188.3
15 1988	154.2	161.5	24.2	202.3	230.6	69.2	14.5	24.1	13.4	140.9	61.2	110.3	100.5	1206.4
16 1989	172.8	221.4	125.9	175.7	134.9	151.7	180.5	235.2	220.2	195.1	81.5	94.6	165.6	1989.7
17 1990	323.5	45.0	158.7	213.6	164.1	165.9	133.9	210.9	266.4	242.2	394.0	124.8	204.4	2453.0
18 1991	302.2	50.3	112.6	193.0	333.5	343.8	46.7	30.8	134.1	210.9	189.0	349.3	191.4	2296.2
19 1992	27.2	160.8	199.2	202.2	407.5	107.0	184.0	174.7	109.9	203.0	192.6	144.1	176.0	2112.2
20 1993	183.3	59.3	77.3	77.2	332.0	116.6	156.2	1.1	227.6	203.8	165.4	120.8	143.4	1720.6
Mean	177.2	173.0	137.1	163.7	218.2	128.9	114.4	109.8	147.8	205.3	197.8	177.9	162.6	1951.1

Monthly Mean Rainfall (No. 16)
 St. No. 02453023 Cascavel
 1974 - 1993 (20 Years)



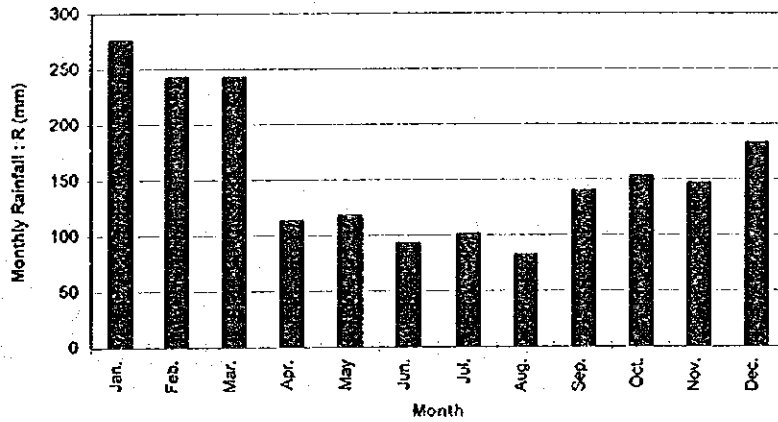
Annual Rainfall (No. 16)
 St. No. 02453023 Cascavel
 1974 - 1993 (20 Years)



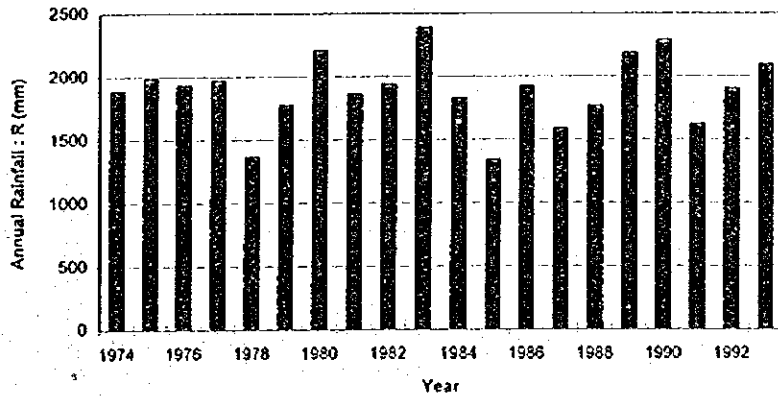
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02548038 (No.17)
 St. Name Morretes

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	205.4	197.5	604.8	114.3	26.4	119.0	57.2	27.6	106.1	103.9	133.1	192.4	157.4	1883.7
2 1975	185.6	281.0	229.2	91.1	158.8	86.9	96.9	109.5	168.5	195.9	250.4	135.0	165.7	1998.8
3 1976	388.6	222.4	176.5	66.3	178.8	94.7	127.7	113.0	126.0	195.9	122.7	122.7	161.3	1935.3
4 1977	392.4	322.6	289.7	104.9	41.7	53.0	41.1	74.5	111.4	235.0	124.1	180.1	164.3	1971.5
5 1978	161.5	121.7	176.2	19.5	62.3	71.8	47.6	121.4	113.1	87.8	253.5	134.0	114.2	1370.4
6 1979	240.1	232.2	224.9	99.8	196.3	31.0	57.4	58.8	150.7	221.1	124.6	142.1	148.1	1777.0
7 1980	360.6	298.2	132.8	84.9	21.0	72.2	201.3	137.6	190.5	228.4	32.9	449.1	184.1	2209.5
8 1981	377.3	244.1	256.0	99.1	73.6	15.6	102.8	67.4	67.2	184.7	162.9	216.9	155.6	1867.6
9 1982	101.0	314.8	209.1	127.4	130.0	216.7	85.8	85.9	30.8	208.2	243.1	189.8	161.9	1942.6
10 1983	290.4	241.1	146.2	220.7	341.1	216.5	278.0	18.6	226.7	126.4	112.9	172.9	199.1	2389.5
11 1984	202.8	140.6	216.9	161.1	72.5	144.5	57.3	214.7	83.0	63.5	322.5	153.5	152.7	1832.9
12 1985	141.0	321.3	223.2	100.2	58.9	43.1	17.5	3.6	169.9	95.0	98.4	65.5	111.9	1342.8
13 1986	313.1	336.3	194.3	138.3	33.4	4.4	69.9	94.5	82.4	146.2	188.7	325.8	160.6	1927.3
14 1987	308.0	204.2	141.8	207.5	0.0	154.5	26.0	64.0	125.9	149.1	61.3	148.4	132.5	1589.7
15 1988	265.8	149.4	245.6	129.0	278.9	142.3	20.2	7.9	128.0	170.9	55.4	175.6	147.4	1769.0
16 1989	494.1	220.8	214.6	160.5	142.3	43.3	155.3	29.6	210.9	86.8	124.9	306.7	182.5	2189.8
17 1990	432.3	191.4	390.2	162.7	99.9	87.2	262.4	159.2	128.4	163.5	147.8	65.4	190.9	2290.4
18 1991	181.2	152.8	311.2	53.3	70.5	148.5	4.4	49.3	52.1	206.1	199.3	193.0	135.1	1621.7
19 1992	94.2	279.3	289.0	41.9	244.8	57.3	193.2	182.1	186.7	80.1	132.0	118.9	158.7	1904.5
20 1993	391.4	332.9	184.2	87.8	136.9	63.2	122.5	35.0	345.5	117.9	51.8	176.1	174.6	2053.2
Mean	276.4	242.7	242.8	113.5	118.4	93.5	101.4	82.6	140.2	153.3	147.1	183.2	157.9	1855.2

Monthly Mean Rainfall (No. 17)
 St. No. 02548038 Morretes
 1974 - 1993 (20 Years)



Annual Rainfall (No. 17)
 St. No. 02548038 Morretes
 1974 - 1993 (20 Years)

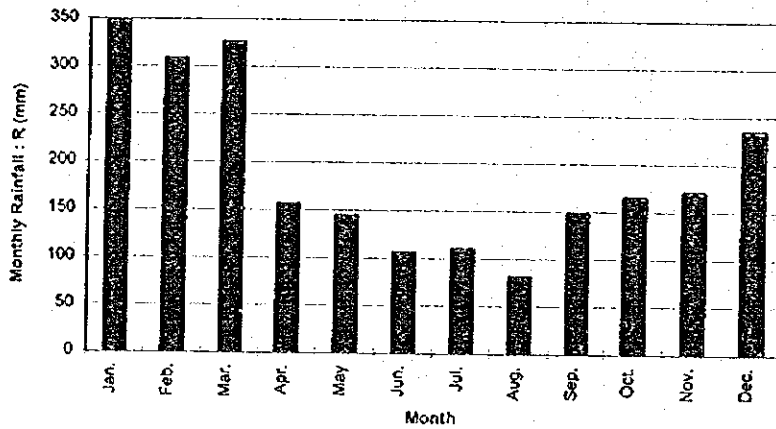


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02548039 (No. 18)
 St. Name Guaraquecaba

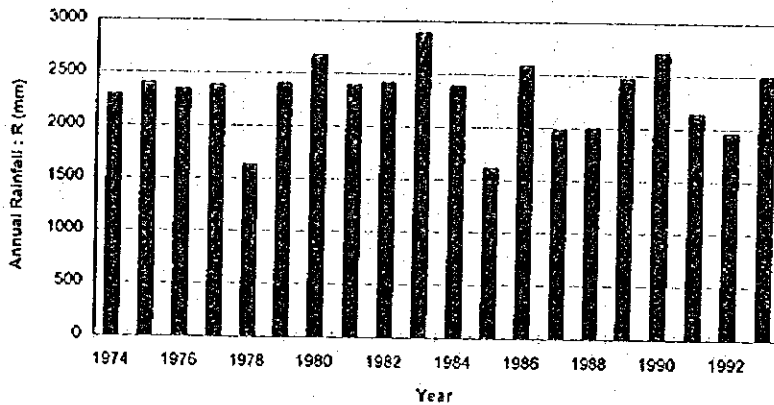
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(245.1)	(236.1)	(694.7)	(142.4)	(43.5)	(147.7)	(78.1)	(44.8)	(133.2)	(130.7)	(163.6)	(230.4)	190.9	2291.4
2 1975	(222.7)	(330.1)	(271.8)	(118.3)	(192.5)	(111.6)	(122.8)	(137.0)	(203.5)	(234.3)	(295.7)	(165.7)	200.3	2404.1
3 1976	(451.3)	(264.1)	(212.5)	(88.4)	(215.0)	(120.4)	(157.5)	(141.0)	(155.6)	(234.3)	(151.9)	(151.9)	195.3	2343.8
4 1977	(455.5)	(377.0)	(339.9)	(131.8)	(60.7)	(73.4)	(60.0)	(97.6)	(139.2)	(279.5)	(153.5)	(216.5)	198.7	2384.6
5 1978	184.0	177.1	228.5	48.0	74.2	76.0	85.0	123.4	77.9	124.4	269.7	(164.6)	136.1	1632.6
6 1979	(284.1)	244.4	283.9	225.8	214.7	46.3	95.1	63.5	192.5	220.8	178.8	353.3	200.3	2403.2
7 1980	428.6	452.8	220.5	82.2	42.3	160.2	216.5	103.7	115.7	231.2	74.7	536.6	222.9	2675.0
8 1981	659.6	142.7	489.6	176.7	145.2	47.1	89.5	78.9	60.0	147.4	115.8	240.1	199.4	2392.6
9 1982	245.2	318.8	381.7	197.6	113.0	272.6	95.3	52.0	72.4	210.0	271.9	184.2	201.1	2412.7
10 1983	415.6	309.1	209.5	218.6	361.0	205.8	206.8	25.3	240.4	131.7	203.7	365.9	241.1	2893.4
11 1984	401.0	140.7	554.4	140.0	117.6	100.7	57.0	159.2	116.0	61.4	324.4	218.6	199.3	2391.0
12 1985	201.2	449.6	250.7	130.3	32.0	43.5	15.6	13.4	148.7	105.8	166.0	58.4	134.6	1615.2
13 1986	362.8	598.0	265.5	189.0	64.0	10.5	115.3	94.8	136.2	136.1	259.4	358.4	215.8	2590.0
14 1987	326.2	261.1	71.4	183.7	257.0	177.7	20.9	70.2	154.6	157.4	78.9	225.6	165.4	1984.7
15 1988	299.5	254.2	263.8	159.4	308.8	82.7	35.1	21.9	166.9	136.1	70.0	165.1	167.0	2003.5
16 1989	494.6	389.0	331.3	162.7	94.5	111.0	150.7	35.0	164.5	156.4	67.7	314.1	206.0	2471.5
17 1990	639.3	163.2	376.2	356.9	118.5	67.5	251.9	147.4	112.6	160.5	152.6	168.8	226.3	2715.4
18 1991	231.1	277.3	400.8	132.3	82.5	173.0	8.1	68.4	56.3	206.9	191.5	278.4	178.6	2145.6
19 1992	128.4	295.3	253.1	85.1	261.1	22.4	221.0	117.1	106.4	138.3	191.8	144.1	163.7	1964.1
20 1993	303.0	451.1	436.3	173.8	107.0	91.5	141.0	44.9	400.1	119.1	56.7	177.8	208.5	2502.3
Mean	349.0	309.0	326.8	157.1	145.3	107.1	111.2	82.0	149.6	166.1	171.9	235.9	132.6	2310.8

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 18)
 St. No. 02548039 Guaraquecaba
 1974 - 1993 (20 Years)



Annual Rainfall (No. 18)
 St. No. 02548039 Guaraquecaba
 1974 - 1993 (20 Years)

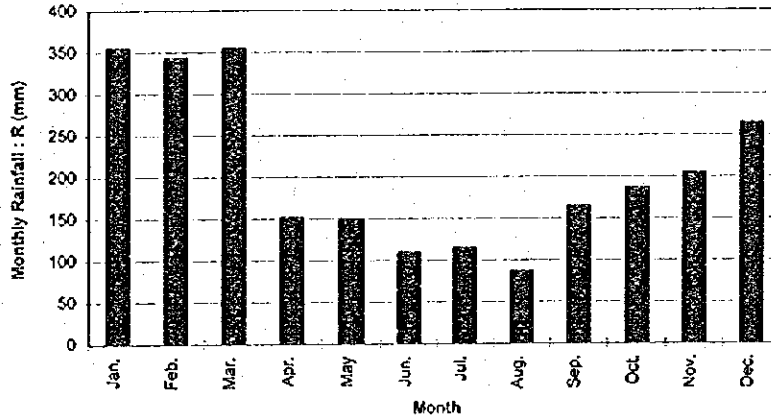


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02548070 (No.19)
 St. Name Antonina

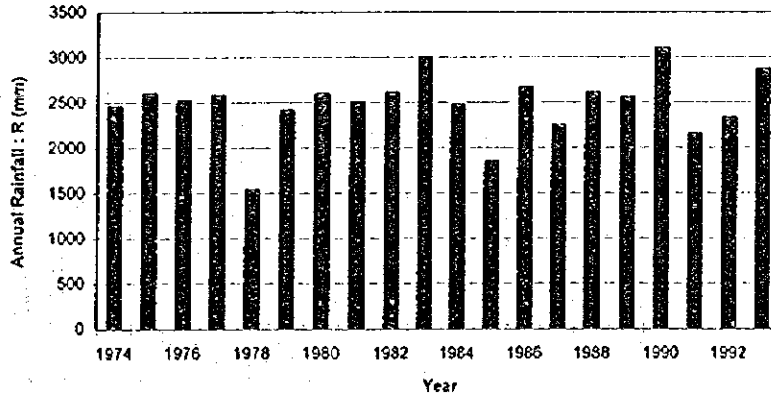
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(277.4)	(264.3)	(863.2)	(142.0)	(12.7)	(148.9)	(58.0)	(14.5)	(129.9)	(126.7)	(169.6)	(256.8)	205.3	2463.8
2 1975	(248.8)	(387.1)	(310.9)	(107.8)	(207.4)	(101.7)	(116.4)	(134.9)	(221.6)	(261.9)	(342.1)	(172.4)	217.6	2610.9
3 1976	(545.3)	(300.9)	(233.4)	(71.4)	(236.8)	(113.1)	(161.7)	(140.0)	(159.2)	(261.9)	(154.3)	(154.3)	211.0	2532.3
4 1977	(550.9)	(445.2)	(399.9)	(128.1)	(35.2)	(51.8)	(34.3)	(83.4)	(137.7)	(320.9)	(156.4)	(238.7)	215.5	2585.5
5 1978	60.5	211.6	230.8	83.6	68.9	68.4	47.4	84.3	43.2	127.0	258.7	257.5	128.5	1542.4
6 1979	239.0	(315.3)	319.3	139.9	202.4	65.6	63.7	90.4	222.7	252.9	217.3	292.4	201.7	2420.9
7 1980	389.6	401.0	256.8	111.1	29.3	103.1	252.6	114.5	136.2	230.4	97.3	482.4	217.0	2604.3
8 1981	523.6	267.3	430.6	189.1	124.6	54.4	113.6	79.0	81.7	188.3	224.4	232.5	209.1	2509.1
9 1982	207.0	494.1	383.6	144.5	116.8	273.3	107.7	83.9	74.9	231.6	282.0	209.2	217.8	2613.6
10 1983	397.4	445.5	294.5	214.2	374.7	230.8	228.0	21.6	266.3	141.5	122.7	269.1	250.5	3006.3
11 1984	313.5	204.7	406.9	133.2	116.0	113.6	80.1	213.5	120.3	84.3	358.5	335.9	208.7	2480.5
12 1985	280.2	441.6	261.7	161.8	34.4	51.0	11.4	29.4	173.3	130.4	202.9	80.8	154.9	1858.9
13 1986	388.0	412.2	316.9	179.5	69.4	6.5	119.0	92.0	147.8	166.3	312.3	462.1	222.7	2672.0
14 1987	406.2	210.8	185.4	223.6	323.5	179.4	31.4	69.6	157.8	150.7	137.8	181.9	183.2	2258.3
15 1988	505.7	273.8	359.2	201.8	363.8	93.0	40.4	18.4	196.2	200.2	112.1	251.2	218.0	2615.8
16 1989	430.5	425.0	368.8	144.5	117.4	101.2	162.0	49.3	220.7	106.9	109.5	339.8	213.6	2563.6
17 1990	656.7	232.8	443.5	236.4	104.4	93.3	286.6	172.5	158.0	227.0	299.9	195.8	258.9	3106.9
18 1991	240.0	268.3	313.7	120.4	82.6	217.2	10.1	79.5	98.2	203.3	208.5	316.6	179.9	2158.6
19 1992	168.8	341.5	384.2	78.2	273.0	27.9	228.8	113.3	118.8	181.4	238.0	182.6	194.7	2336.5
20 1993	282.5	531.0	350.5	229.7	114.5	105.2	158.6	58.2	435.0	143.9	89.8	378.9	239.7	2875.8
Mean	355.5	343.8	355.3	152.1	150.4	110.0	115.6	87.1	165.0	186.9	204.7	264.5	207.6	2490.8

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 19)
 St. No. 02548070 Antonina
 1974 - 1993 (20 Years)



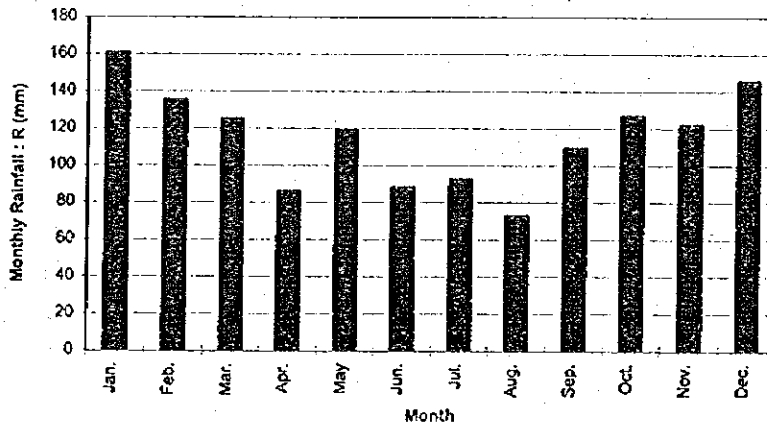
Annual Rainfall (No. 19)
 St. No. 02548070 Antonina
 1974 - 1993 (20 Years)



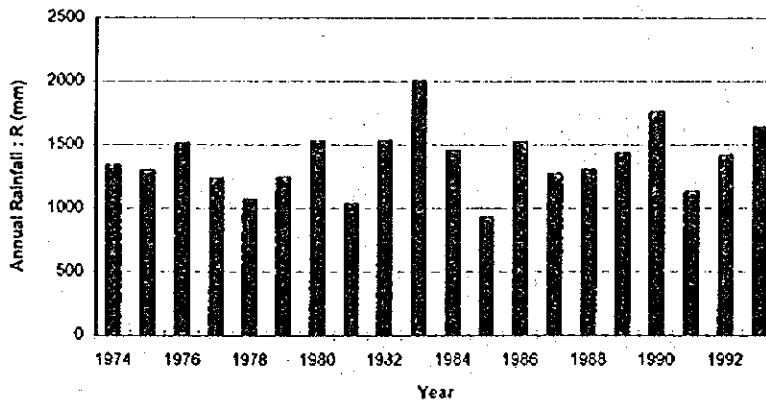
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02549041 (No 20)
 St. Name Piraquara

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	203.3	144.6	143.9	79.1	23.1	134.1	58.7	56.2	118.1	118.9	100.8	164.2	112.1	1345.6
2 1975	77.4	167.6	71.1	41.5	60.8	77.1	98.9	84.0	142.8	152.8	164.2	165.5	108.6	1303.7
3 1976	269.9	125.5	157.8	63.2	143.2	94.9	116.0	127.6	99.8	156.8	86.5	76.8	126.4	1517.0
4 1977	158.6	99.8	244.7	43.7	18.3	108.8	74.8	65.1	50.3	132.1	126.0	117.1	103.3	1239.4
5 1978	109.0	68.1	118.1	15.8	82.6	35.0	76.7	99.8	116.2	115.7	157.7	78.5	89.4	1073.2
6 1979	124.3	47.1	70.2	55.0	178.4	22.0	51.9	46.3	127.1	251.2	141.4	134.2	104.1	1249.1
7 1980	142.6	170.4	99.7	66.3	33.2	70.6	180.6	93.3	156.7	143.5	60.4	318.2	128.0	1535.5
8 1981	157.4	77.4	105.7	64.4	63.5	22.3	33.0	73.4	61.0	124.9	127.7	129.9	86.7	1040.6
9 1982	43.6	265.8	49.3	27.7	68.1	220.1	114.1	79.4	28.6	234.1	217.6	189.9	128.2	1538.3
10 1983	196.9	127.6	112.7	202.2	296.7	210.7	255.4	8.3	225.5	66.1	81.2	220.8	167.4	2006.1
11 1984	148.9	54.9	174.0	173.9	91.5	108.8	46.9	171.7	110.1	38.9	218.5	120.8	121.6	1458.9
12 1985	86.4	239.9	94.9	68.1	13.9	43.8	20.4	6.9	139.0	101.6	49.0	72.2	78.0	936.1
13 1986	264.4	114.9	108.9	132.3	76.8	12.8	44.0	107.4	67.0	109.0	240.6	250.0	127.3	1528.1
14 1987	101.0	133.7	40.7	145.8	284.9	112.0	40.7	49.3	99.1	100.5	53.8	113.5	106.3	1275.0
15 1988	144.6	128.0	147.5	114.2	284.9	97.7	15.4	1.6	83.4	110.0	17.7	104.3	109.1	1302.3
16 1989	236.9	142.9	100.7	141.3	105.7	52.8	133.9	33.9	157.6	69.1	42.8	222.0	120.0	1438.8
17 1990	293.4	100.3	173.7	119.4	81.1	112.3	232.2	133.2	122.2	132.3	206.1	63.6	147.5	1769.8
18 1991	122.4	111.7	189.7	38.2	44.9	133.2	2.0	71.2	35.0	162.8	62.2	162.2	94.6	1134.9
19 1992	97.3	157.2	175.7	21.4	255.2	21.1	151.6	128.9	53.5	46.4	219.5	91.7	118.3	1419.5
20 1993	(247.5)	179.0	122.4	113.9	183.7	80.1	107.9	26.3	(203.1)	177.5	74.6	127.6	137.0	1543.6
Mean	161.3	135.8	125.3	86.4	119.5	88.5	92.8	73.2	109.7	127.2	122.4	146.2	115.7	1388.3

Monthly Mean Rainfall (No. 20)
 St. No. 02549041 Piraquara
 1974 - 1993 (20 Years)



Annual Rainfall (No. 20)
 St. No. 02549041 Piraquara
 1974 - 1993 (20 Years)

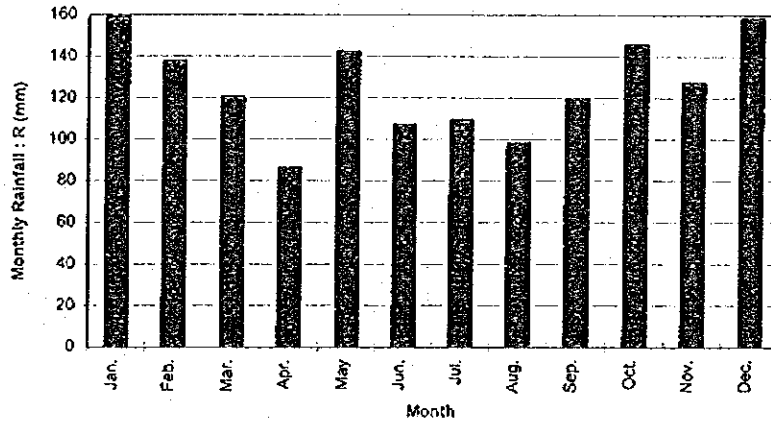


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02549025 (No 21)
 St. Name Lapa

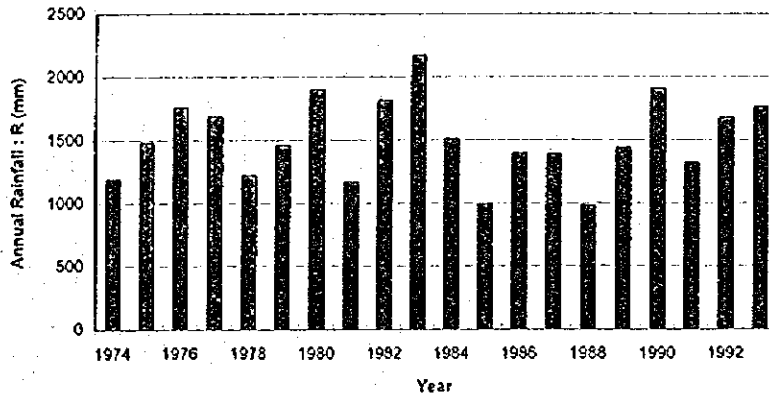
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	170.6	89.6	113.7	89.0	38.9	219.0	32.7	64.3	48.5	106.7	93.7	147.1	99.3	1191.8
2 1975	100.5	110.6	59.7	47.8	50.0	85.8	94.6	180.1	119.2	142.1	229.7	252.1	123.6	1483.2
3 1976	205.4	125.9	198.2	78.9	182.5	118.6	102.7	149.3	131.0	133.0	137.9	197.9	146.8	1761.3
4 1977	193.2	172.3	304.0	133.3	39.2	80.9	94.9	100.6	65.9	233.5	101.5	170.9	140.9	1690.2
5 1978	110.1	87.0	162.4	0.0	58.2	94.6	112.3	138.0	120.1	92.4	182.1	87.4	102.1	1224.6
6 1979	61.2	45.0	68.3	75.2	264.6	53.4	48.5	64.4	164.9	257.2	145.8	204.7	121.9	1483.2
7 1980	229.3	201.2	91.0	167.1	44.0	111.7	222.5	194.7	197.8	106.7	55.1	241.5	158.6	1902.6
8 1981	239.3	67.1	87.5	73.0	32.8	22.5	55.3	85.7	77.1	148.8	162.7	117.7	97.5	1169.5
9 1982	32.0	223.9	95.2	14.1	99.6	249.6	177.9	74.3	11.4	282.5	360.2	195.2	151.4	1816.9
10 1983	207.2	178.0	137.1	150.1	287.5	213.3	414.3	19.8	205.4	65.2	59.4	206.1	181.1	2173.4
11 1984	92.0	93.3	106.2	82.6	128.6	156.0	64.7	249.7	106.3	99.2	179.9	153.3	126.0	1511.8
12 1985	44.6	226.4	115.3	127.3	32.5	38.6	40.1	2.8	109.0	121.9	42.1	96.4	83.1	997.0
13 1986	245.7	70.5	61.2	77.0	87.9	7.0	12.8	91.1	98.0	148.8	181.1	316.7	116.6	1398.8
14 1987	164.4	145.2	35.6	119.4	403.8	77.2	34.7	61.8	69.4	106.0	69.6	104.7	116.0	1391.8
15 1988	159.2	134.3	24.0	63.6	239.5	70.4	10.7	4.0	93.4	78.6	8.0	96.3	81.8	982.0
16 1989	225.6	197.4	106.0	103.6	113.6	27.0	171.5	50.1	223.4	69.0	75.9	73.9	120.1	1441.0
17 1990	340.3	120.1	190.9	144.0	77.6	143.7	226.0	185.8	111.2	150.6	155.4	63.7	159.1	1909.3
18 1991	121.3	136.2	124.4	35.3	53.7	211.1	9.9	81.2	65.8	249.1	60.8	175.2	110.3	1324.0
19 1992	73.0	183.2	245.5	37.3	441.8	83.0	135.0	151.2	70.8	101.2	84.1	68.7	140.1	1580.8
20 1993	158.6	172.5	87.6	109.9	174.3	75.2	127.8	17.9	310.5	(191.0)	(148.1)	(192.5)	147.2	1766.0
Mean	153.0	138.0	120.8	85.4	142.5	107.2	109.4	98.3	119.9	146.1	127.7	158.6	126.2	1514.0

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 21)
 St. No. 02549025 Lapa
 1974 - 1993 (20 Years)



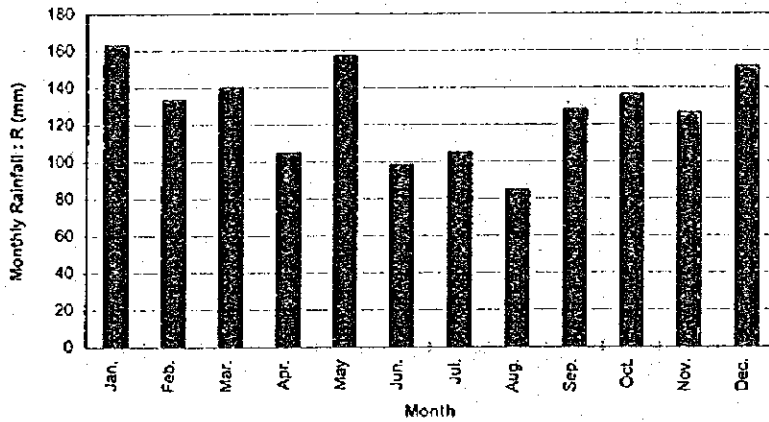
Annual Rainfall (No. 21)
 St. No. 02549025 Lapa
 1974 - 1993 (20 Years)



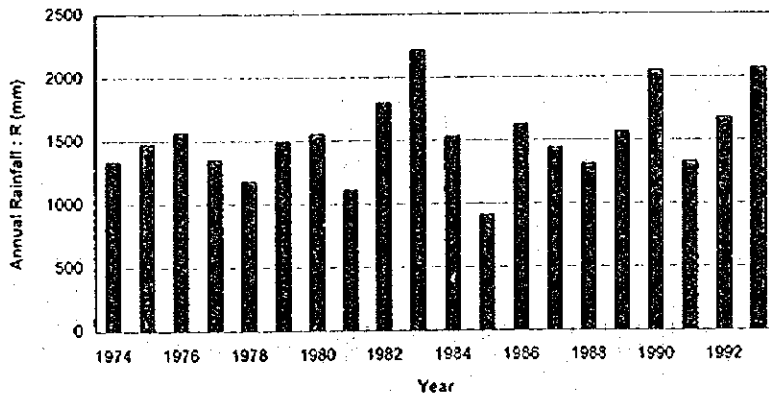
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02550024 (No 22)
 St. Name Ponta Grossa

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	290.8	108.0	130.7	95.9	61.0	132.2	42.5	88.2	38.3	137.5	75.5	131.5	111.1	1333.1
2 1975	108.9	268.9	194.2	36.6	37.4	64.6	76.1	105.5	131.7	96.6	201.9	152.1	122.9	1474.5
3 1976	207.7	104.7	89.2	50.4	203.9	71.1	37.6	164.3	101.1	130.6	165.7	191.0	130.6	1567.3
4 1977	188.7	107.4	255.2	85.1	18.4	81.3	85.9	56.5	72.0	143.7	158.1	100.1	112.7	1352.4
5 1978	142.9	45.0	210.7	1.4	86.1	61.9	145.2	88.6	125.7	77.5	148.0	46.1	98.3	1180.1
6 1979	80.5	62.7	132.8	71.6	203.6	12.8	71.0	57.4	202.5	288.8	117.3	196.5	124.8	1497.5
7 1980	155.6	144.1	138.2	131.2	55.3	83.9	201.5	94.1	188.1	93.9	47.9	216.1	129.6	1554.9
8 1981	148.1	124.7	28.3	86.8	57.4	48.3	26.2	49.5	71.6	145.2	145.3	179.8	92.6	1111.2
9 1982	54.2	268.6	92.3	48.0	71.6	308.4	151.8	87.0	14.2	270.6	304.8	130.7	150.2	1802.2
10 1983	147.0	93.6	232.2	207.8	398.4	257.7	267.1	2.1	268.7	107.0	97.8	141.8	184.8	2217.0
11 1984	183.9	15.6	144.0	97.1	135.1	108.1	42.8	191.4	170.2	36.0	216.9	191.0	127.7	1532.1
12 1985	59.6	160.4	134.8	125.3	27.9	41.0	34.1	4.9	87.5	113.0	83.1	38.7	75.9	910.3
13 1986	275.0	113.1	66.0	127.0	201.7	9.4	29.9	129.0	68.8	109.3	125.4	374.3	135.7	1628.9
14 1987	89.4	164.4	19.4	145.4	350.7	126.9	58.1	81.8	74.7	119.7	59.2	150.9	120.1	1440.6
15 1988	114.0	111.7	145.2	172.4	302.4	67.9	11.6	4.8	106.0	127.1	23.6	122.6	109.2	1310.3
16 1989	210.4	109.2	56.5	222.2	134.4	92.6	183.7	65.0	219.6	92.5	62.2	101.4	130.8	1569.7
17 1990	366.9	119.3	164.0	141.6	89.4	111.1	277.3	167.3	196.3	145.2	220.4	55.9	171.2	2054.7
18 1991	108.9	157.0	122.6	143.9	66.1	155.4	10.6	66.4	45.0	195.8	45.3	212.3	110.9	1330.3
19 1992	68.5	193.5	215.1	55.6	423.5	31.4	153.0	145.2	80.7	109.4	84.4	119.0	139.9	1679.3
20 1993	263.7	202.3	233.5	55.3	228.6	96.6	144.6	31.4	307.5	181.1	146.2	182.3	172.6	2071.1
Mean	163.2	133.7	140.3	105.0	157.4	98.1	105.1	85.0	128.4	136.3	126.5	151.7	127.6	1530.9

Monthly Mean Rainfall (No. 22)
 St. No. 02550024 Ponta Grossa
 1974 - 1993 (20 Years)



Annual Rainfall (No. 22)
 St. No. 02550024 Ponta Grossa
 1974 - 1993 (20 Years)

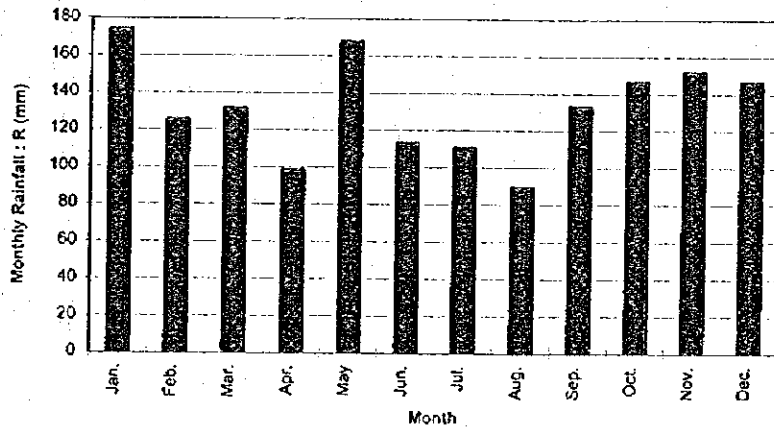


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02550025 (No 23)
 St. Name Teixeira

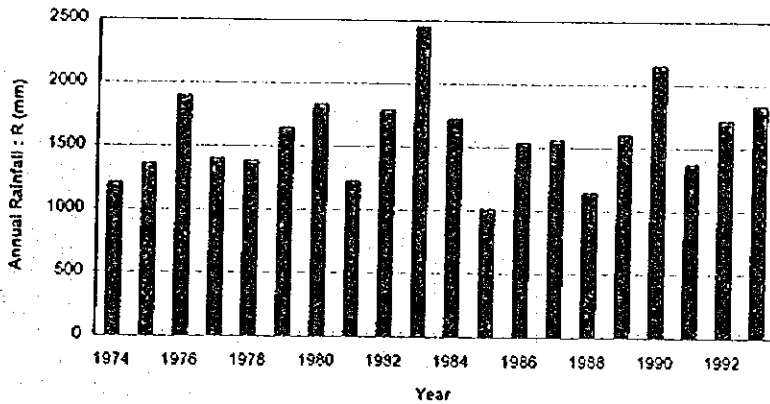
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	174.7	131.4	143.6	69.3	53.0	162.8	43.5	84.2	31.4	143.2	98.2	65.4	100.6	1256.7
2 1975	103.7	104.7	99.1	79.5	37.5	76.4	61.8	137.6	171.5	151.8	202.2	136.4	113.5	1362.2
3 1976	264.2	126.8	149.3	90.3	178.7	145.4	95.2	168.2	130.6	124.3	184.4	243.7	158.4	1901.1
4 1977	129.2	170.2	287.4	105.8	16.6	99.1	61.0	61.7	57.4	135.7	179.0	99.9	118.9	1403.0
5 1978	115.7	45.1	225.6	0.0	103.8	97.8	194.9	112.0	114.3	90.4	133.8	152.7	115.5	1386.1
6 1979	149.2	128.0	48.3	65.1	288.5	21.7	60.1	97.7	265.4	276.4	150.2	97.7	137.4	1643.3
7 1980	270.3	145.2	89.8	87.2	82.8	88.8	182.0	158.4	249.6	159.6	124.6	196.0	152.9	1834.3
8 1981	201.8	105.4	83.3	117.0	49.6	62.8	17.5	33.9	78.0	135.4	152.7	189.3	102.2	1225.7
9 1982	42.2	108.9	106.4	69.8	87.0	297.8	170.7	56.8	21.6	265.4	409.6	157.3	149.5	1793.5
10 1983	253.1	89.5	240.0	167.9	384.6	216.0	448.2	3.1	250.4	171.0	139.5	90.6	204.3	2451.6
11 1984	130.8	67.6	239.2	160.0	98.7	190.0	64.0	195.7	128.6	38.6	223.4	186.7	143.6	1723.3
12 1985	65.5	142.4	143.0	193.2	35.8	29.6	61.5	6.2	68.3	79.8	120.4	50.1	84.4	1012.8
13 1986	264.2	70.2	142.8	89.5	192.9	2.6	12.9	91.0	113.6	119.0	98.3	340.5	128.1	1537.5
14 1987	183.6	166.5	23.0	89.8	411.9	118.7	65.0	59.8	60.0	123.8	119.7	141.2	130.3	1563.0
15 1988	154.6	80.9	35.0	107.6	298.1	59.6	14.6	19.4	71.6	124.0	23.8	157.6	95.5	1143.8
16 1989	239.6	263.8	103.4	89.4	185.8	45.5	159.6	96.3	176.6	110.9	71.0	65.8	134.0	1607.5
17 1990	379.3	135.1	106.4	189.7	98.8	148.4	208.4	208.0	169.2	176.4	268.6	65.4	179.5	2153.7
18 1991	131.5	57.8	72.6	106.1	39.0	258.3	16.3	56.7	51.6	215.6	103.9	265.0	114.5	1374.4
19 1992	85.2	191.7	209.5	60.1	461.1	66.0	125.4	130.2	97.1	140.0	97.4	57.6	143.4	1721.3
20 1993	154.6	189.5	93.0	41.7	262.4	86.8	162.0	21.1	347.2	153.3	(148.5)	(180.0)	153.3	1840.1
Mean	174.7	126.0	132.0	99.0	168.3	113.7	111.1	89.9	133.6	147.0	152.5	145.9	132.9	1534.7

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 23)
 St. No. 02550025 Teixeira
 1974 - 1993 (20 Years)



Annual Rainfall (No. 23)
 St. No. 02550025 Teixeira
 1974 - 1993 (20 Years)



Monthly Rainfall Table Period 1974 - 1993 (20 years)

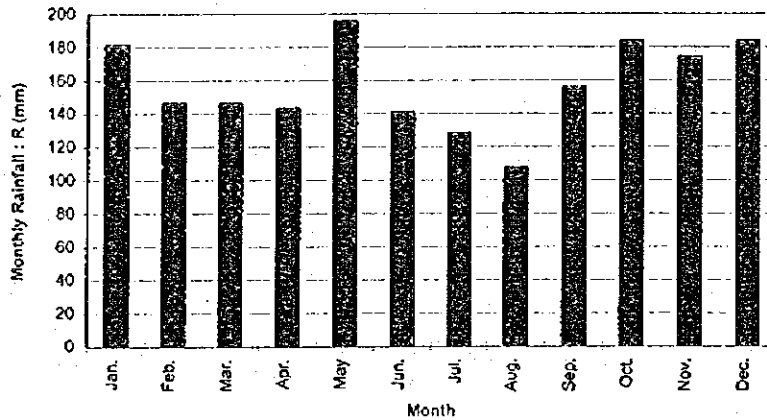
St. No. 02551010 (No 24)

St. Name Guarapuava

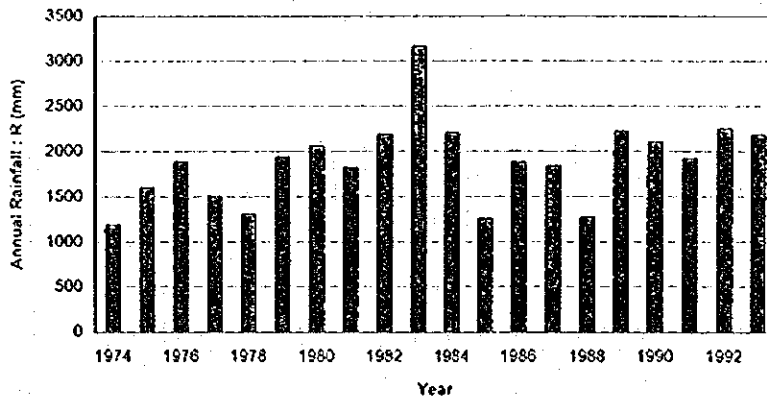
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	135.8	102.0	107.7	(45.0)	(38.3)	(115.2)	(54.3)	(153.2)	(62.3)	(111.5)	(134.0)	(129.8)	99.2	1190.2
2 1975	(139.6)	(145.9)	(108.9)	(80.0)	(51.2)	(194.4)	(36.4)	(74.5)	(229.9)	(209.9)	(215.4)	117.3	133.6	1603.4
3 1976	189.3	83.7	259.2	198.8	157.2	137.2	94.2	158.4	154.2	138.8	131.7	270.9	157.4	1838.6
4 1977	153.1	159.0	241.3	89.1	38.9	137.1	79.3	94.4	65.0	117.1	160.2	171.2	125.5	1505.7
5 1978	145.0	64.7	132.4	0.6	122.8	77.1	236.6	66.3	86.5	92.0	122.7	163.0	109.1	1309.7
6 1979	123.7	214.6	57.2	103.2	228.6	25.1	99.5	161.0	220.8	318.0	140.8	248.0	161.5	1938.5
7 1980	265.1	78.1	152.9	79.3	253.8	116.6	140.7	135.4	285.6	185.3	102.2	257.8	171.9	2062.8
8 1981	189.1	248.3	187.1	213.1	46.9	144.2	9.4	52.9	101.2	233.6	108.2	289.7	152.0	1823.7
9 1982	53.9	127.2	120.5	27.8	87.8	400.0	228.5	71.8	49.4	294.9	492.8	233.5	182.3	2188.1
10 1983	249.2	180.8	177.0	319.8	470.5	308.4	471.8	8.7	335.0	240.6	239.4	167.2	264.0	3168.4
11 1984	265.8	74.0	192.9	150.5	100.5	159.3	61.0	287.4	163.4	69.2	377.8	271.7	184.4	2213.3
12 1985	36.5	229.3	130.7	220.1	66.8	51.3	112.3	38.0	123.7	121.2	86.5	45.7	105.2	1262.1
13 1986	284.4	201.1	104.8	184.2	249.9	12.9	32.2	148.5	132.0	127.4	189.0	218.2	157.1	1884.6
14 1987	82.2	158.7	60.2	139.8	443.3	119.9	105.8	78.2	95.4	192.1	166.3	193.5	153.4	1840.4
15 1988	113.5	143.0	83.8	210.8	283.3	85.6	19.1	16.1	29.4	134.0	25.1	126.3	106.3	1276.0
16 1989	381.4	230.8	148.3	211.9	130.2	62.6	188.1	125.0	225.5	238.2	126.5	104.5	185.3	2223.0
17 1990	331.9	71.2	105.0	230.7	75.9	192.1	208.7	213.9	224.8	221.1	153.5	77.3	175.5	2106.1
18 1991	147.0	67.3	170.2	193.1	271.9	291.0	31.8	58.0	67.2	208.1	139.0	276.7	160.1	1921.3
19 1992	153.5	125.6	221.8	140.4	512.8	91.7	163.3	194.7	175.9	202.6	160.0	112.5	187.9	2254.8
20 1993	201.0	174.2	174.3	125.5	288.6	66.3	198.6	19.1	291.8	222.2	(217.0)	(208.6)	182.3	2187.2
Mean	182.0	147.1	146.8	143.7	196.1	141.4	128.6	107.8	156.4	183.9	174.4	184.2	157.7	1892.4

(Note) (...) correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 24)
St. No. 02551010 Guarapuava
1974 - 1993 (20 Years)



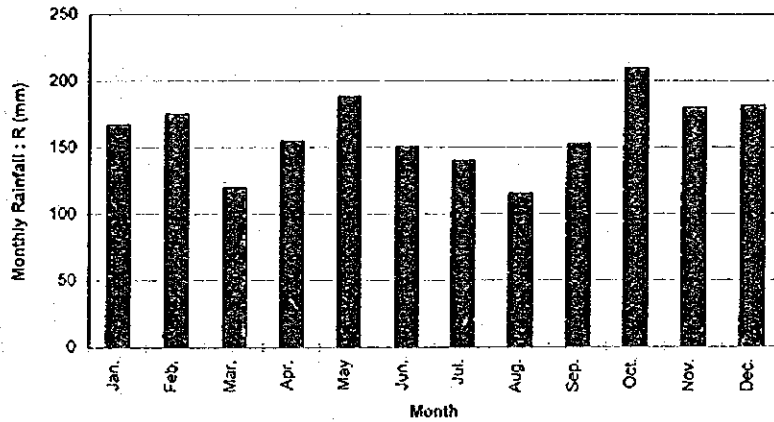
Annual Rainfall (No. 24)
St. No. 02551010 Guarapuava
1974 - 1993 (20 Years)



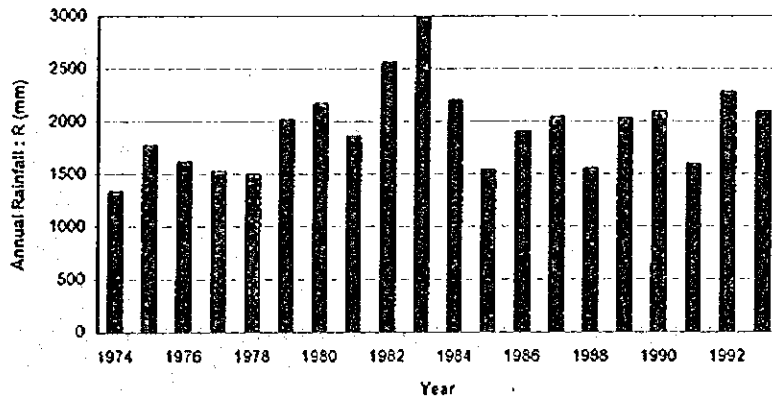
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02552009 (No 25)
 St. Name Laranjeiras

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	160.6	161.5	67.1	63.0	56.2	123.8	70.3	157.3	77.3	120.6	140.4	136.7	111.2	1334.8
2 1975	145.3	151.7	118.3	92.9	67.5	193.5	54.5	88.0	224.0	207.2	212.0	220.8	148.0	1775.7
3 1976	210.6	94.2	42.6	143.9	139.3	122.1	119.1	132.1	116.8	179.6	172.7	144.2	134.8	1617.2
4 1977	197.5	102.2	91.7	77.6	37.8	252.4	28.8	142.9	70.0	177.9	240.6	107.8	127.3	1527.2
5 1978	112.9	59.3	121.8	0.2	117.9	105.6	320.2	103.4	103.1	112.0	192.8	153.6	125.2	1502.8
6 1979	79.3	218.0	58.5	239.5	304.6	4.0	91.9	154.3	187.3	299.6	196.8	186.5	168.4	2020.3
7 1980	201.8	201.4	158.0	55.9	253.3	112.1	164.4	132.3	283.4	180.0	106.4	326.5	181.3	2175.5
8 1981	208.1	236.5	78.9	232.0	31.4	169.6	7.9	69.0	32.0	218.5	158.0	419.0	155.1	1860.9
9 1982	56.5	188.1	194.3	48.3	89.0	383.1	340.6	92.7	72.3	418.9	533.8	147.9	213.6	2565.5
10 1983	168.1	197.4	179.3	268.3	391.9	276.6	452.1	33.3	350.2	328.0	218.4	122.5	248.8	2986.1
11 1984	242.1	158.3	225.9	138.2	58.4	212.5	62.7	227.5	140.1	106.2	320.7	314.3	183.9	2206.9
12 1985	37.0	433.6	107.8	283.0	99.6	41.2	107.2	59.8	44.6	154.4	116.7	58.0	128.6	1542.9
13 1986	232.6	281.9	126.4	151.0	290.4	17.8	63.8	146.4	172.7	104.0	116.5	203.8	158.9	1907.3
14 1987	141.9	229.7	57.9	198.7	460.1	138.8	129.8	71.4	55.0	225.6	176.9	160.0	170.5	2045.6
15 1988	177.8	102.8	65.9	227.8	286.4	118.6	12.0	14.9	26.5	237.8	62.1	224.4	129.4	1553.0
16 1989	244.3	192.5	176.8	157.1	73.2	89.2	206.5	185.0	303.1	283.1	68.7	54.0	169.5	2033.5
17 1990	272.2	110.4	168.5	221.0	128.4	127.2	211.4	227.7	243.1	168.4	112.3	104.2	174.6	2094.8
18 1991	101.9	83.5	87.3	263.7	50.5	286.2	42.1	57.0	61.9	182.7	139.0	238.0	132.8	1593.8
19 1992	121.7	201.2	170.3	153.0	502.9	163.5	160.2	206.4	180.9	209.6	103.1	108.8	190.1	2281.6
20 1993	229.7	102.9	101.8	81.7	326.2	74.7	162.4	10.7	310.2	277.8	213.4	206.0	174.8	2097.5
Mean	167.1	175.4	120.0	154.8	188.3	150.6	140.4	115.6	152.7	209.6	180.1	181.7	161.3	1936.1

Monthly Mean Rainfall (No. 25)
 St. No. 02552009 Laranjeiras
 1974 - 1993 (20 Years)



Annual Rainfall (No. 25)
 St. No. 02552009 Laranjeiras
 1974 - 1993 (20 Years)

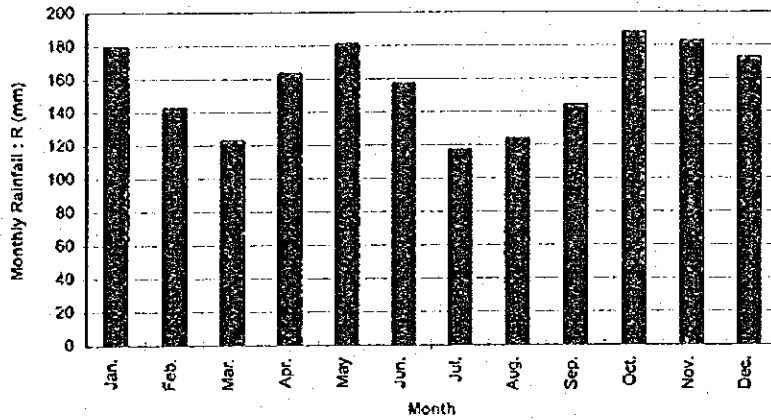


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02553015 (No.26)
 St. Name Planalto

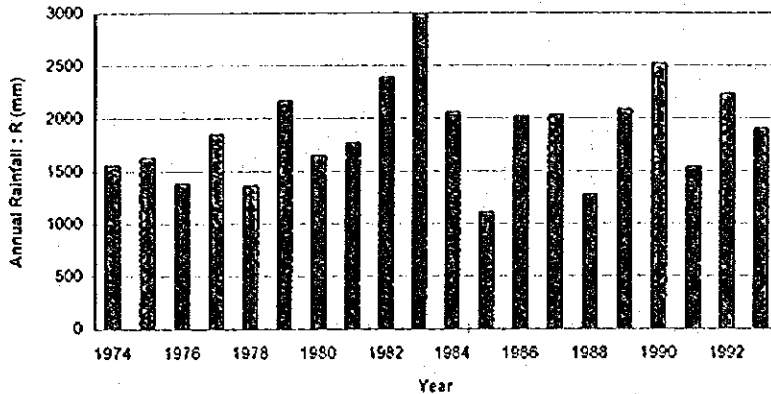
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(248.3)	(167.2)	(98.9)	(84.6)	(59.4)	(134.1)	(52.4)	147.1	34.8	161.7	191.7	171.7	130.2	1551.8
2 1975	136.0	242.9	125.1	98.9	66.3	116.6	72.7	98.5	210.1	170.4	102.4	192.9	135.1	1832.8
3 1976	257.6	67.9	78.2	139.5	104.9	87.4	44.4	106.8	79.8	185.3	103.9	131.6	115.6	1387.3
4 1977	194.5	149.0	214.8	81.8	23.6	231.6	57.2	140.4	120.9	160.6	326.1	152.4	154.4	1852.6
5 1978	141.5	53.3	84.0	1.6	62.0	182.4	198.7	85.0	143.8	71.4	176.0	167.8	114.0	1367.5
6 1979	69.1	202.3	74.4	231.8	317.4	37.0	81.4	165.0	165.1	341.6	210.4	274.4	180.8	2159.6
7 1980	172.4	128.1	134.3	38.2	264.8	63.6	77.0	149.4	170.1	203.4	124.8	119.0	137.5	1850.1
8 1981	180.8	120.2	120.8	298.6	61.6	85.6	1.3	65.2	85.8	200.4	133.8	334.5	147.5	1759.6
9 1982	23.4	351.6	67.4	82.8	113.0	287.2	209.0	156.8	61.2	286.4	620.4	132.4	199.3	2391.6
10 1983	191.8	167.8	234.7	286.4	483.9	193.1	485.3	38.8	266.0	231.5	300.5	110.9	249.2	2690.7
11 1984	295.1	73.5	308.5	138.8	40.5	256.7	77.5	208.0	126.5	83.4	202.8	249.8	171.8	2061.1
12 1985	55.3	177.0	107.2	152.6	84.1	28.8	93.8	73.3	75.8	114.3	35.5	73.6	92.6	1111.3
13 1986	188.3	153.4	138.3	192.3	320.5	76.2	71.9	175.2	230.2	172.0	92.4	209.6	168.4	2020.3
14 1987	129.1	242.6	59.2	265.7	319.9	110.1	154.5	40.5	25.1	204.4	264.2	222.4	169.8	2037.7
15 1988	92.4	85.6	28.8	186.7	222.4	167.8	5.3	8.8	45.1	234.8	49.5	155.4	106.9	1232.6
16 1989	397.3	123.8	94.7	97.0	120.5	122.3	129.1	302.8	268.7	200.7	99.8	128.4	173.7	2624.6
17 1990	323.6	65.0	83.1	383.0	149.2	173.0	134.3	311.0	293.0	206.0	216.8	183.6	210.1	2521.6
18 1991	197.4	57.8	59.2	213.1	56.7	374.4	31.8	29.0	109.3	90.2	67.8	258.8	128.8	1545.5
19 1992	48.0	151.4	235.5	170.4	500.1	181.8	170.4	149.5	123.9	273.6	181.1	47.0	186.1	2232.7
20 1993	249.1	82.7	119.8	91.5	258.2	237.8	186.9	9.6	252.2	173.0	156.6	85.7	158.6	1903.1
Mean	179.8	143.2	123.3	163.8	181.4	157.4	117.2	124.0	144.4	188.3	182.8	173.1	158.6	1878.8

(Note) correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 26)
 St. No. 02553015 Planalto
 1974 - 1993 (20 Years)



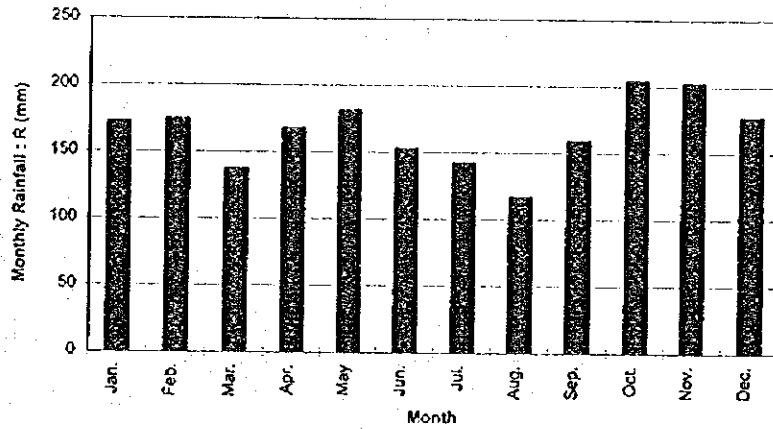
Annual Rainfall (No. 26)
 St. No. 02553015 Planalto
 1974 - 1993 (20 Years)



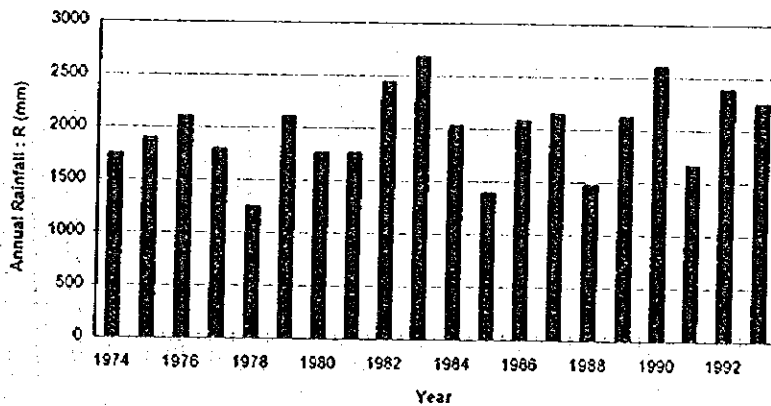
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02553018 (No 27)
 St. Name Quedas

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	245.0	175.0	115.2	102.7	80.6	148.0	83.2	194.3	45.3	167.1	182.7	210.3	145.8	1749.4
2 1975	158.2	254.0	138.6	138.2	46.6	125.5	57.0	107.1	230.8	173.1	207.2	283.5	158.3	1899.8
3 1976	285.8	106.3	183.1	136.1	206.3	148.9	143.1	101.0	140.7	272.9	266.5	116.8	175.9	2110.5
4 1977	189.6	134.6	208.4	121.2	34.1	244.4	38.4	116.9	83.5	115.4	292.8	221.7	150.1	1801.0
5 1978	100.3	32.4	60.2	2.2	99.2	139.9	268.2	80.1	120.1	98.2	149.8	102.8	104.5	1253.4
6 1979	94.5	217.8	54.2	178.6	358.4	11.5	106.1	199.6	202.6	359.4	165.1	162.5	175.9	2110.3
7 1980	195.4	144.7	137.6	44.9	191.4	88.9	134.9	142.6	197.0	199.3	118.7	172.6	147.3	1768.0
8 1981	131.2	241.9	83.1	270.6	31.4	129.6	25.8	46.3	87.6	177.1	142.0	402.8	147.5	1769.6
9 1982	48.2	275.0	90.3	66.4	102.8	306.6	251.2	102.6	121.8	334.4	642.1	105.2	203.9	2446.6
10 1983	128.1	147.5	266.5	297.6	258.4	188.9	533.2	17.5	274.8	282.2	221.1	72.1	224.0	2687.9
11 1984	292.2	78.6	271.6	145.9	40.5	256.7	77.5	208.0	126.5	83.4	202.8	249.8	169.5	2033.5
12 1985	22.2	297.6	156.2	242.7	99.4	29.4	81.4	73.7	51.5	207.0	89.4	46.4	116.4	1396.9
13 1986	260.3	306.2	133.4	188.4	250.4	59.5	75.2	151.5	199.6	145.0	161.6	156.6	174.0	2087.7
14 1987	74.1	431.6	72.3	234.7	356.7	136.6	144.6	58.4	29.6	226.3	259.4	131.3	179.6	2155.6
15 1988	230.0	70.0	71.3	169.2	263.1	199.3	13.9	17.7	20.2	193.4	53.5	176.5	123.2	1478.1
16 1989	248.7	208.0	142.7	114.2	49.5	103.0	206.7	206.6	329.3	245.0	136.8	137.1	177.3	2127.6
17 1990	297.8	88.1	112.0	314.4	158.1	173.8	202.6	282.2	327.9	199.2	284.6	168.1	217.4	2608.8
18 1991	106.6	52.7	92.6	237.0	68.3	301.6	54.7	60.2	69.9	145.5	159.7	318.3	138.9	1667.1
19 1992	86.7	180.4	202.7	191.4	558.4	156.0	142.0	160.2	177.1	237.9	220.1	84.0	199.7	2396.9
20 1993	254.7	52.1	162.3	164.4	375.0	116.4	209.1	14.4	349.2	225.7	99.1	238.1	188.4	2260.5
Mean	172.5	174.7	138.0	168.1	181.4	153.0	142.4	117.0	159.3	204.4	202.8	176.8	165.9	1990.5

Monthly Mean Rainfall (No. 27)
 St. No. 02553018 Quedas
 1974 - 1993 (20 Years)



Annual Rainfall (No. 27)
 St. No. 02553018 Quedas
 1974 - 1993 (20 Years)

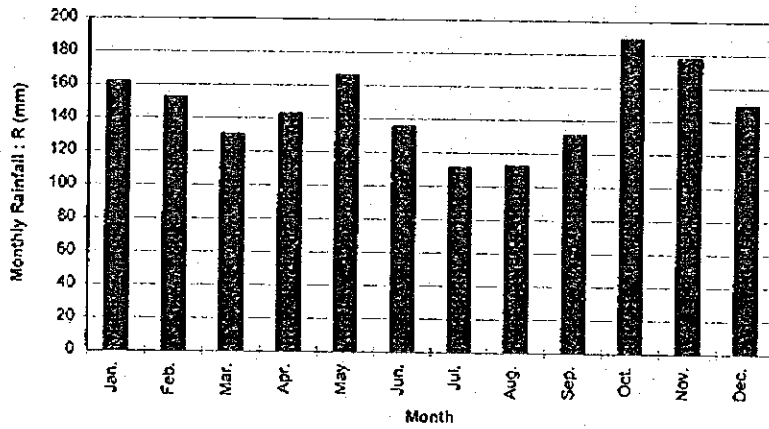


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02554026 (No. 28)
 St. Name Sao Miguel

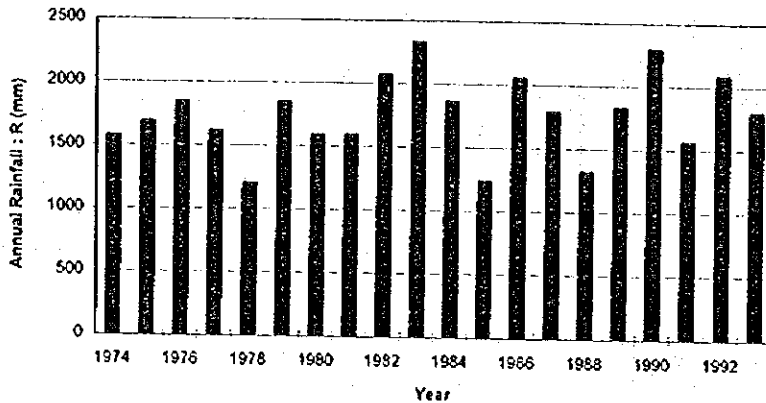
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(207.2)	(153.7)	(108.6)	(99.2)	(82.6)	(131.8)	(84.5)	(166.2)	(56.7)	(147.7)	(159.5)	(180.3)	131.7	1560.0
2 1975	(141.0)	(213.2)	(126.3)	(126.0)	(56.9)	(116.4)	(64.8)	(102.5)	(195.7)	(152.3)	(177.9)	(220.4)	141.1	1693.4
3 1976	(237.2)	(101.9)	(163.6)	(124.4)	(177.3)	(132.5)	(129.6)	(97.9)	(127.8)	(227.5)	(222.6)	(109.8)	154.3	1852.1
4 1977	(164.7)	(123.2)	(178.9)	(113.1)	(47.5)	(206.0)	(50.8)	(109.9)	(84.7)	(108.8)	(242.4)	(188.9)	134.9	1618.9
5 1978	(97.4)	(46.2)	(67.2)	(23.9)	(96.6)	(127.2)	(223.9)	(82.2)	(112.3)	(95.8)	(134.7)	(99.3)	100.5	1206.3
6 1979	(93.0)	(185.9)	(82.7)	(156.4)	(291.9)	(30.5)	(101.8)	(172.2)	(174.5)	(292.6)	(146.2)	(144.3)	154.3	1852.0
7 1980	(169.1)	(130.9)	(125.5)	(55.7)	(166.0)	(88.8)	(123.5)	(129.3)	(170.3)	(172.0)	(111.3)	(151.9)	132.8	1594.0
8 1981	(120.7)	(204.1)	(84.4)	(225.9)	(45.5)	(119.5)	(41.3)	(56.7)	(87.8)	(155.3)	(128.8)	(325.3)	132.9	1595.3
9 1982	(58.1)	(229.0)	(89.9)	(71.9)	(99.3)	(252.8)	(211.1)	118.1	46.0	320.1	531.7	45.8	172.8	2073.8
10 1983	185.8	101.5	141.1	310.6	304.6	198.1	365.8	12.2	230.1	260.3	157.8	66.6	194.6	2334.6
11 1984	258.5	45.3	252.2	160.4	21.9	135.5	57.1	137.0	122.5	127.9	238.7	311.7	155.7	1858.7
12 1985	48.3	189.8	123.1	176.2	109.3	35.6	129.7	55.2	67.1	175.7	52.6	79.4	103.5	1242.0
13 1986	175.9	245.7	251.1	109.7	326.9	70.1	52.4	174.6	205.2	168.7	121.2	171.7	171.7	2060.4
14 1987	84.3	329.1	82.7	170.4	319.0	81.8	98.1	40.6	7.7	270.6	201.7	110.2	149.7	1796.2
15 1988	159.9	136.6	30.5	275.1	171.9	136.2	4.2	14.7	38.1	175.3	48.9	129.9	110.1	1321.3
16 1989	330.8	153.6	85.6	60.1	18.4	136.6	79.8	265.7	205.6	224.5	158.5	108.1	153.1	1837.1
17 1990	373.5	59.5	116.5	271.8	145.7	158.4	99.0	325.0	298.2	153.8	149.8	148.9	191.5	2258.1
18 1991	208.2	22.1	132.6	125.7	76.5	239.2	34.4	32.8	140.0	126.6	162.1	265.8	130.5	1566.0
19 1992	5.8	272.2	246.6	175.1	467.2	123.4	132.0	146.3	104.8	208.2	153.0	55.9	174.2	2090.5
20 1993	120.9	97.4	142.0	31.1	302.7	189.1	149.4	14.9	154.6	229.6	227.0	135.8	150.4	1804.5
Mean	162.0	152.6	130.5	143.1	166.4	136.0	111.6	112.8	131.5	189.7	178.2	149.9	147.0	1764.3

[Note] (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 28)
 St. No. 02554026 Sao Miguel
 1974 - 1993 (20 Years)



Annual Rainfall (No. 28)
 St. No. 02554026 Sao Miguel
 1974 - 1993 (20 Years)

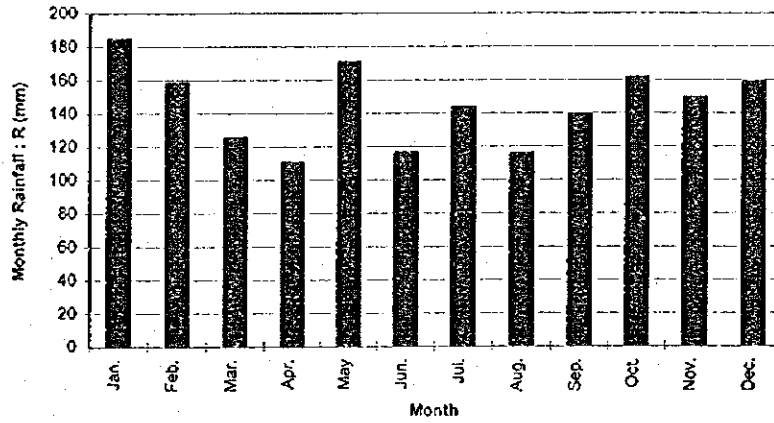


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02651000 (No.29)
 St. Name Porto Uniao

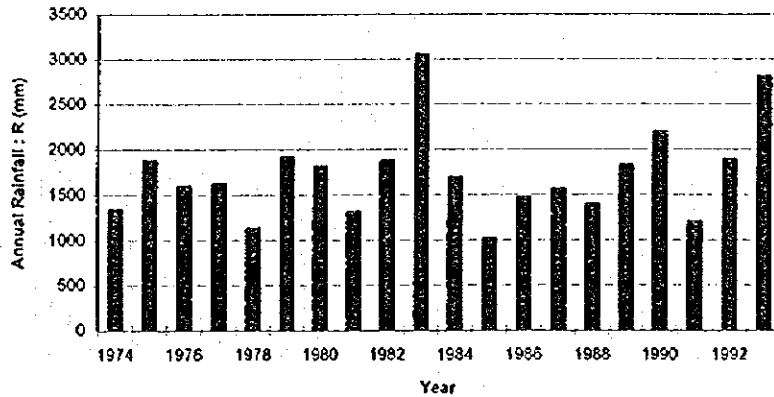
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	130.1	171.0	91.4	65.0	50.2	156.6	143.1	110.8	44.4	100.0	93.5	190.0	112	1343.1
2 1975	172.6	144.9	189.3	63.9	60.4	93.9	52.9	129.6	252.8	157.8	263.3	306.0	157	1887.4
3 1976	117.5	97.6	159.9	92.6	166.4	112.2	116.9	137.4	107.0	145.0	178.8	172.7	134	1602.0
4 1977	244.5	94.6	225.1	58.0	16.7	138.4	106.0	124.0	80.8	256.2	169.8	121.1	136	1635.2
5 1978	53.5	88.9	189.6	3.0	49.8	49.7	152.8	65.6	89.6	109.7	164.2	120.7	95	1137.1
6 1979	40.2	140.2	87.2	182.1	353.6	8.2	68.8	119.9	173.8	336.1	146.8	268.4	160	1925.3
7 1980	158.3	233.5	(112.1)	(67.8)	(148.8)	(101.2)	(242.2)	(112.7)	(171.1)	(119.1)	99.8	255.0	152	1821.5
8 1981	93.8	147.7	50.8	152.9	41.7	97.6	24.5	101.7	73.6	204.1	128.0	208.4	110	1322.8
9 1982	55.3	245.3	58.0	21.3	126.3	243.3	198.5	150.2	26.4	261.4	330.7	168.1	157	1885.8
10 1983	201.3	241.0	152.1	141.1	447.4	162.4	800.7	42.3	363.4	184.2	178.9	145.6	255	3060.4
11 1984	71.0	37.5	166.2	104.0	126.5	215.7	70.0	349.0	133.5	59.7	233.3	134.8	142	1701.2
12 1985	41.2	268.8	91.1	206.1	(22.3)	21.9	64.3	25.5	83.8	75.4	75.4	50.8	85	1024.6
13 1986	161.3	233.5	122.6	122.7	156.5	24.9	30.6	140.7	134.2	119.9	119.2	111.0	123	1477.1
14 1987	121.0	200.5	30.0	138.7	313.6	174.0	114.8	101.7	67.0	139.4	97.2	74.7	131	1572.6
15 1988	135.7	126.6	61.5	158.0	321.1	129.6	2.7	21.2	52.3	198.6	47.1	150.5	117	1464.9
16 1989	323.8	243.0	103.2	106.7	98.9	59.0	227.4	104.1	302.3	151.9	78.7	40.7	153	1839.7
17 1990	242.1	84.6	160.7	228.5	159.8	235.0	217.6	275.3	181.9	206.2	155.3	52.6	183	2200.6
18 1991	54.8	23.0	83.7	104.4	61.0	200.4	40.3	(68.8)	29.8	164.1	90.4	293.6	101	1214.3
19 1992	116.9	206.4	286.0	82.6	466.9	35.1	63.5	138.3	120.5	106.2	210.1	60.8	158	1894.3
20 1993	1162.2	143.7	96.5	116.4	231.7	78.3	145.4	6.4	302.9	145.6	130.2	259.1	235	2813.4
Mean	184.9	158.6	125.8	110.8	171.0	116.9	144.2	116.3	139.6	162.0	149.6	159.1	144.9	1738.7

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 29)
 St. No. 02651000 Porto Uniao
 1974 - 1993 (20 Years)



Annual Rainfall (No. 29)
 St. No. 02651000 Porto Uniao
 1974 - 1993 (20 Years)

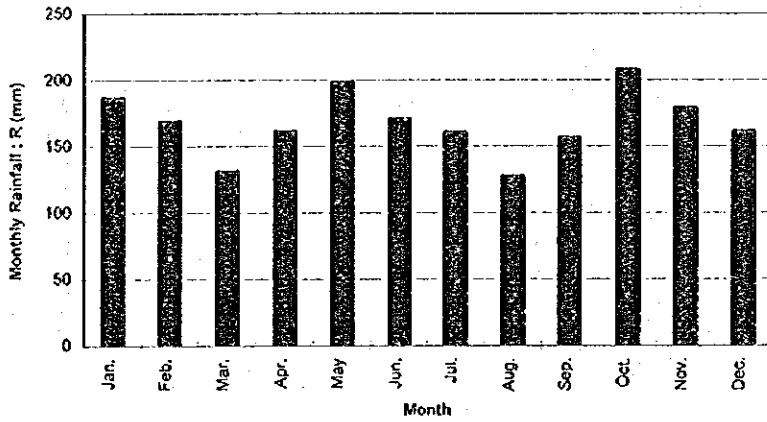


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02651043 (No.30)
 St. Name Palmas

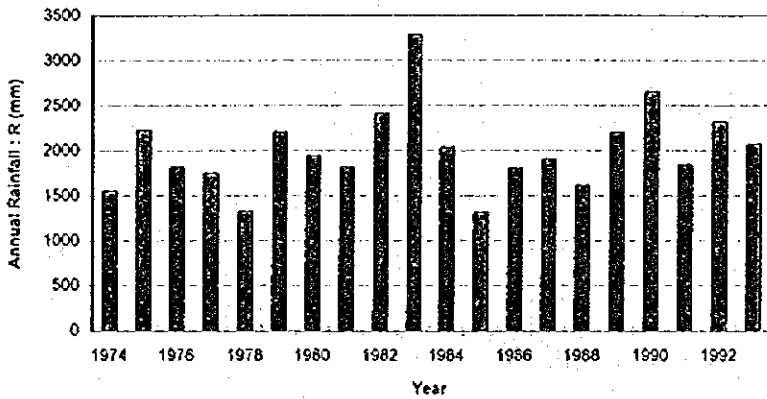
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(129.8)	(100.9)	(109.0)	(143.1)	(161.0)	(154.5)	(79.0)	(129.0)	(85.9)	(142.8)	(204.1)	(115.1)	129.5	1554.2
2 1975	(299.8)	(191.8)	(181.7)	(124.1)	(62.4)	(143.7)	(113.2)	(109.1)	(234.9)	(310.5)	(199.2)	(256.0)	186.0	2231.5
3 1976	(329.6)	(133.6)	(77.2)	(91.9)	(175.7)	(129.6)	(80.1)	(114.4)	(128.6)	(225.3)	(199.8)	(137.8)	152.0	1823.6
4 1977	(208.0)	(118.7)	(270.7)	(65.6)	(32.6)	(169.1)	(128.4)	(181.6)	(98.2)	(194.2)	(212.6)	(72.5)	146.0	1752.3
5 1978	(67.2)	(70.0)	(84.0)		(92.9)	(124.4)	(272.0)	(81.6)	(150.2)	(103.3)	(179.5)	(105.9)	121.0	1331.0
6 1979	78.0	127.8	72.9	230.8	397.0	45.2	153.0	138.3	156.6	402.9	141.4	263.8	184.0	2207.7
7 1980	236.4	144.6	145.0	84.4	182.0	89.2	163.5	174.6	139.6	189.7	120.4	274.6	162.0	1944.0
8 1981	194.5	238.8	88.8	232.7	44.2	156.6	20.0	113.3	76.2	163.1	279.2	204.1	151.6	1819.6
9 1982	71.4	225.3	102.7	59.4	142.1	313.6	307.3	167.3	59.9	303.6	456.7	206.3	201.3	2415.6
10 1983	184.6	342.3	231.6	245.7	387.2	225.2	805.3	39.5	283.5	228.4	214.9	58.8	274.2	3290.0
11 1984	211.3	197.8	156.7	208.3	106.8	221.6	81.4	271.1	166.2	54.8	238.1	127.5	170.1	2041.6
12 1985	101.3	257.8	93.3	134.2	71.4	51.8	76.6	82.9	107.5	176.8	90.9	75.1	110.0	1319.6
13 1986	212.1	286.5	114.7	166.7	235.5	35.0	52.2	118.0	194.4	160.6	124.6	110.9	150.9	1811.2
14 1987	151.7	203.5	78.5	150.8	466.7	143.6	98.8	110.3	66.2	200.6	110.3	129.5	159.2	1910.5
15 1988	91.8	138.5	65.0	218.2	395.8	191.0	11.6	25.2	46.0	245.2	46.8	139.2	134.6	1614.6
16 1989	282.5	180.4	240.8	159.6	132.0	98.6	164.7	139.1	406.4	183.6	114.2	105.4	184.0	2207.5
17 1990	306.1	93.6	161.4	363.3	225.2	329.8	166.8	260.6	238.8	168.6	135.6	206.8	221.4	2656.6
18 1991	193.4	45.6	75.5	160.4	51.4	360.0	92.8	91.8	68.2	292.2	193.8	221.4	153.9	1848.3
19 1992	150.2	132.7	187.2	122.6	364.2	279.4	151.4	201.2	193.6	176.0	196.6	190.3	193.8	2325.4
20 1993	244.0	160.1	119.3	108.5	258.6	142.8	205.4	17.6	241.8	249.4	131.7	197.8	173.1	2077.0
Mean	187.2	169.5	131.7	161.8	199.3	171.0	161.2	128.3	157.1	208.6	179.5	161.9	167.9	2009.0

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 30)
 St. No. 02651043 Palmas
 1974 - 1993 (20 Years)



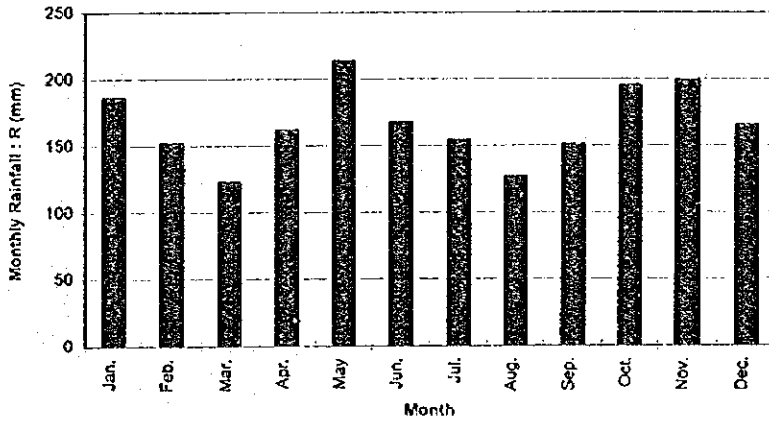
Annual Rainfall (No. 30)
 St. No. 02651043 Palmas
 1974 - 1993 (20 Years)



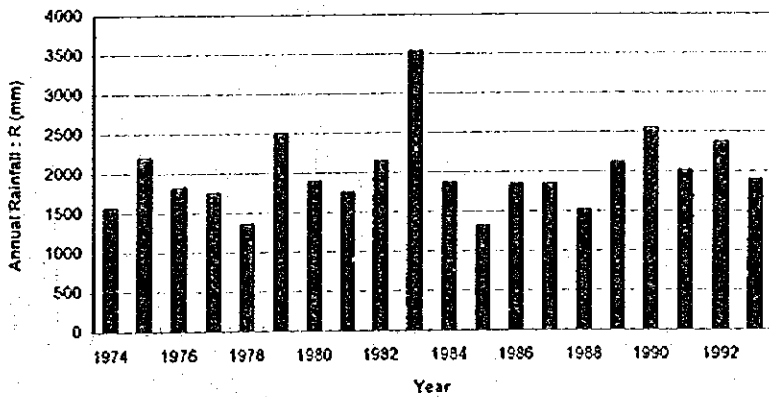
Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02652003 (No 31)
 St. Name Clevelandia

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	131.2	104.1	111.7	143.7	190.5	154.4	83.6	130.5	90.1	143.4	200.9	117.4	131.0	1571.5
2 1975	290.7	189.4	179.9	125.9	68.0	149.0	115.7	111.8	229.8	300.7	196.3	249.6	183.9	2206.8
3 1976	318.6	134.8	81.9	95.7	174.3	131.0	84.6	116.8	130.1	220.8	196.9	138.7	152.0	1824.2
4 1977	204.6	120.8	263.4	71.0	40.1	168.1	129.9	179.8	101.6	191.6	208.9	77.5	145.4	1757.3
5 1978	72.5	75.1	88.3	7.2	96.6	128.2	264.6	85.0	150.4	106.4	177.8	108.8	113.3	1359.6
6 1979	171.5	148.3	96.7	218.2	453.7	50.4	140.4	185.0	188.3	427.6	196.4	231.6	209.1	2509.1
7 1980	215.2	133.7	84.3	52.7	178.4	83.3	217.6	135.4	164.6	166.5	145.6	320.9	158.2	1893.2
8 1981	184.5	121.0	78.2	234.2	20.0	132.2	10.1	80.4	80.1	143.5	314.7	354.3	145.1	1753.2
9 1982	43.3	108.8	58.9	38.7	122.4	334.8	207.5	145.4	75.7	298.1	553.3	162.8	179.2	2150.7
10 1983	220.0	352.3	310.8	317.4	427.2	238.7	775.4	44.3	261.5	171.2	295.1	126.7	295.1	3540.6
11 1984	204.3	63.0	115.6	191.6	99.5	197.4	80.4	280.5	157.9	78.6	283.6	121.9	155.9	1871.3
12 1985	40.0	208.4	81.8	168.3	88.2	63.3	92.3	91.2	112.5	191.9	104.3	81.7	110.3	1323.9
13 1986	217.8	211.3	111.2	193.5	280.0	31.9	71.4	122.7	167.3	137.8	165.5	142.1	154.4	1852.3
14 1987	55.2	220.8	59.4	196.2	394.4	162.8	96.6	115.3	41.1	211.7	136.4	162.5	154.4	1852.3
15 1988	54.1	99.7	72.3	221.1	352.5	199.6	14.0	10.8	55.0	246.1	73.9	126.8	127.2	1525.9
16 1989	294.4	248.1	86.1	163.8	155.9	96.6	159.5	169.6	359.1	177.9	139.7	71.0	176.8	2121.7
17 1990	280.8	128.0	155.2	384.9	192.2	327.7	122.9	238.1	242.0	160.9	152.1	169.8	212.9	2554.7
18 1991	272.5	63.4	55.5	178.5	315.5	303.6	97.8	83.7	75.3	172.9	149.3	249.4	168.0	2015.4
19 1992	145.7	208.5	234.4	132.3	401.5	246.3	142.1	194.5	158.8	177.0	157.3	176.5	197.9	2374.9
20 1993	307.2	108.8	137.2	111.0	257.5	154.0	124.9	12.8	180.6	185.3	134.6	121.9	158.0	1895.8
Mean	186.2	152.4	123.1	162.2	213.8	167.6	154.6	126.8	151.1	195.5	199.1	165.6	168.5	1998.0

Monthly Mean Rainfall (No. 31)
 St. No. 02652003 Clevelandia
 1974 - 1993 (20 Years)



Annual Rainfall (No. 31)
 St. No. 02652003 Clevelandia
 1974 - 1993 (20 Years)

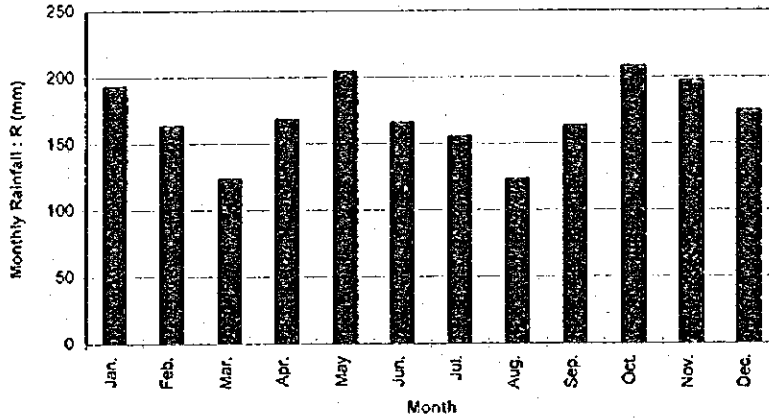


Monthly Rainfall Table Period 1974 - 1993 (20 years)
 St. No. 02652035 (No. 32)
 St. Name Pato Branco

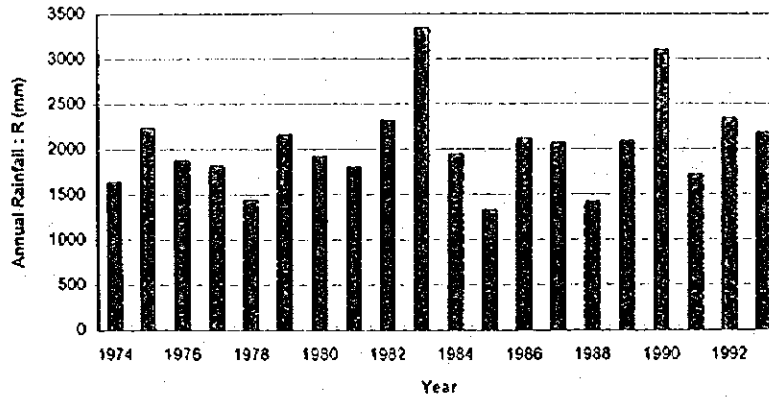
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	(137.1)	(111.5)	(118.7)	(148.9)	(164.8)	(159.0)	(92.2)	(136.5)	(98.3)	(148.6)	(202.9)	(124.1)	136.9	1542.7
2 1975	(287.6)	(192.0)	(183.1)	(132.1)	(77.5)	(153.9)	(122.5)	(118.8)	(230.2)	(297.1)	(158.6)	(249.9)	186.9	2242.2
3 1976	(314.0)	(140.5)	(90.6)	(103.6)	(177.8)	(136.9)	(93.1)	(123.5)	(136.1)	(221.7)	(199.1)	(144.2)	156.8	1831.2
4 1977	(206.4)	(127.3)	(261.9)	(80.3)	(51.1)	(171.9)	(135.9)	(183.0)	(109.2)	(194.1)	(210.4)	(86.4)	151.5	1833.0
5 1978	(81.7)	(84.2)	(96.6)	(20.1)	(104.5)	(132.4)	(263.0)	(94.5)	(155.2)	(113.7)	(181.1)	(116.0)	120.2	1443.0
6 1979	55.2	155.0	62.5	179.0	437.4	20.7	102.7	167.3	203.1	404.1	203.7	174.0	180.4	2164.7
7 1980	270.5	90.8	123.1	45.8	160.7	63.1	190.6	172.7	156.4	181.6	158.7	306.6	160.1	1920.8
8 1981	92.6	108.4	109.3	262.7	25.9	120.7	14.4	63.3	80.5	153.4	388.7	383.1	150.3	1803.0
9 1982	24.5	271.6	64.2	34.4	114.5	362.3	259.7	133.0	85.2	295.0	575.7	53.4	193.2	2313.5
10 1983	155.7	284.7	283.1	245.3	572.7	194.5	723.4	43.1	303.8	177.9	183.8	170.4	278.8	3345.4
11 1984	189.8	156.1	177.4	208.8	74.3	227.9	72.5	251.6	152.6	93.5	209.3	142.4	162.3	1947.2
12 1985	20.7	255.5	84.8	208.2	72.3	44.0	74.8	76.0	119.6	224.4	82.5	64.3	110.6	1327.1
13 1986	249.7	257.8	141.8	266.4	259.8	52.6	79.2	133.5	217.1	131.0	170.2	161.4	176.7	2120.5
14 1987	131.0	179.9	122.0	244.7	379.8	150.0	97.2	119.2	59.4	212.5	201.7	172.2	172.5	2069.6
15 1988	137.1	130.5	19.8	233.5	264.2	188.1	12.4	8.9	40.4	171.1	28.4	187.1	118.5	1421.5
16 1989	437.9	203.0	118.7	96.2	93.0	73.4	188.4	153.1	259.1	238.6	97.4	132.5	174.3	2051.3
17 1990	472.1	113.3	73.1	375.9	226.6	326.0	169.6	243.4	330.3	322.5	261.2	187.2	258.4	3101.2
18 1991	113.9	56.2	58.4	259.4	34.9	320.1	74.1	44.3	118.0	221.1	140.8	282.2	143.5	1721.4
19 1992	177.4	215.5	187.1	165.4	453.7	241.6	146.8	187.2	127.4	165.9	162.3	112.6	195.3	2343.9
20 1993	318.6	140.8	96.8	64.2	346.2	185.0	201.2	17.7	293.9	202.4	102.9	210.5	181.7	2180.2
Mean	193.7	163.7	123.9	168.8	204.6	166.2	155.7	123.5	163.7	208.5	197.5	175.2	170.4	2045.2

(Note) (...): correlated value, blank is uncorrelated value

Monthly Mean Rainfall (No. 32)
 St. No. 02652035 Pato Branco
 1974 - 1993 (20 Years)



Annual Rainfall (No. 32)
 St. No. 02652035 Pato Branco
 1974 - 1993 (20 Years)



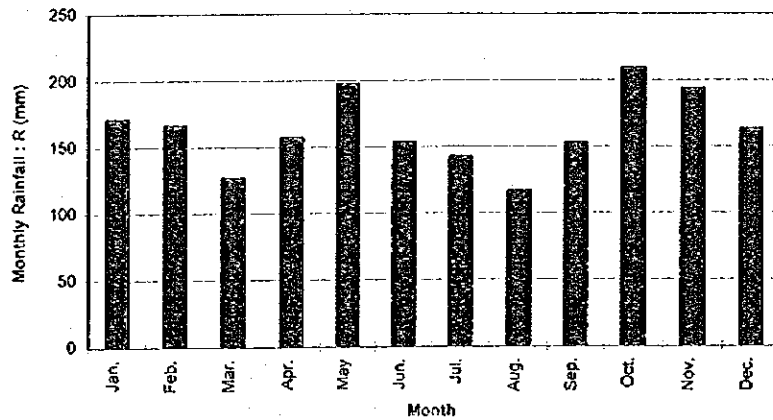
Monthly Rainfall Table Period 1974 - 1993 (20 years)

St. No. 02653012 (No 33)

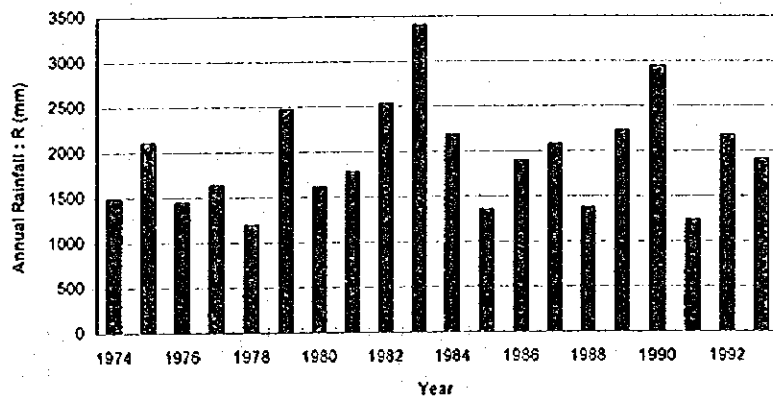
St. Name Francisco

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	133.1	112.9	112.5	112.3	51.4	142.2	34.0	145.1	60.9	185.5	208.9	190.6	124.1	1489.4
2 1975	171.4	187.1	128.2	133.8	80.6	122.1	108.0	106.4	250.8	389.7	243.6	189.1	175.8	2110.8
3 1976	220.8	92.0	88.6	105.1	181.0	128.8	44.7	99.8	59.1	174.0	129.6	128.8	121.0	1452.3
4 1977	150.5	178.9	132.2	44.5	30.6	171.4	57.1	140.3	134.8	153.1	302.1	142.1	136.5	1637.6
5 1978	81.6	35.1	23.7	0.5	70.4	129.8	255.6	77.4	143.9	111.0	173.2	95.5	99.8	1197.7
6 1979	58.6	150.6	67.2	220.2	471.5	9.3	192.6	192.1	206.2	478.3	185.8	245.2	208.5	2477.6
7 1980	221.6	217.8	109.6	51.6	161.9	51.0	110.9	150.6	126.0	181.8	99.8	133.9	134.7	1616.5
8 1981	125.6	180.8	99.6	239.7	28.0	121.5	8.2	78.1	96.9	138.8	270.3	395.2	148.6	1782.7
9 1982	71.1	250.3	128.5	40.7	136.8	397.7	296.6	176.5	54.0	264.3	540.7	182.5	211.6	2539.7
10 1983	92.8	262.4	357.2	265.3	610.8	211.5	668.2	24.8	312.4	180.2	220.0	199.7	283.8	3405.3
11 1984	280.9	218.7	203.2	137.6	77.9	261.3	82.5	226.9	129.9	153.1	227.0	189.9	182.4	2188.9
12 1985	40.4	228.7	169.4	141.5	94.7	36.5	119.1	64.9	103.2	140.3	172.9	44.2	113.0	1355.8
13 1986	197.5	171.1	169.3	195.9	303.1	41.4	91.5	129.8	258.1	127.8	145.8	69.9	158.4	1901.3
14 1987	138.5	212.7	84.5	345.8	340.2	141.0	120.4	77.8	43.8	197.1	228.2	154.9	173.6	2082.9
15 1988	156.1	62.8	102.7	219.8	206.1	199.5	3.9	9.1	30.9	205.9	2.8	149.3	114.7	1375.9
16 1989	474.3	243.0	109.9	131.3	111.9	118.9	132.9	174.3	275.3	246.4	134.6	80.7	186.1	2233.5
17 1990	421.6	157.8	110.1	356.3	274.4	302.9	192.5	242.5	279.1	267.9	125.7	218.6	245.8	2949.4
18 1991	114.8	79.7	58.1	236.7	0.0	0.0	39.7	62.2	120.0	158.2	125.8	256.1	103.4	1241.3
19 1992	41.8	212.2	214.0	125.7	388.1	273.8	124.0	153.5	121.4	229.7	214.5	84.3	181.9	2183.0
20 1993	239.9	84.1	75.6	51.0	339.1	221.4	180.1	19.2	264.2	211.8	105.0	125.6	153.8	1917.0
Mean	171.6	166.9	127.2	157.8	197.9	154.1	143.1	117.1	153.5	209.7	194.1	163.8	163.1	1958.9

Monthly Mean Rainfall (No. 33)
St. No. 02653012 Francisco
1974 - 1993 (20 Years)

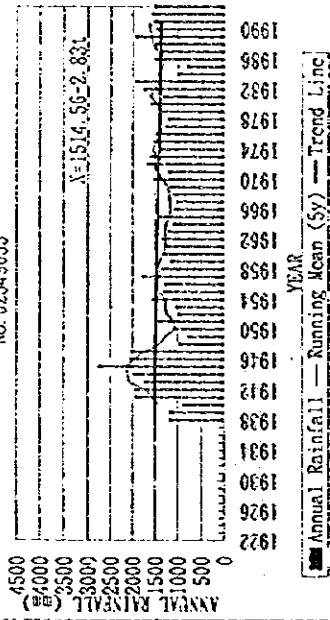


Annual Rainfall (No. 33)
St. No. 02653012 Francisco
1974 - 1993 (20 Years)



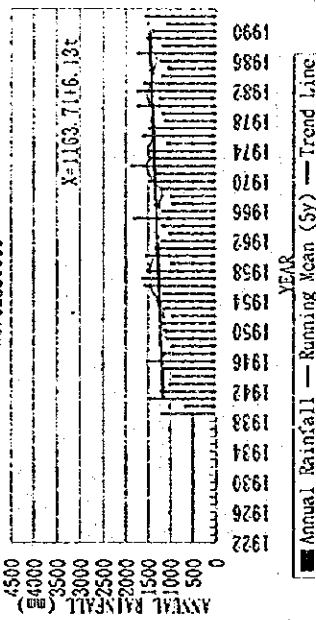
ESTACIONAMENTO ANUAL QUANTIDADE DE CHUVA

No. 02349033



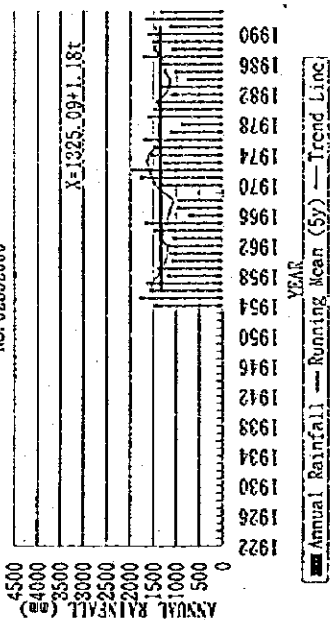
JATAIZINHO STATION

No. 02350000

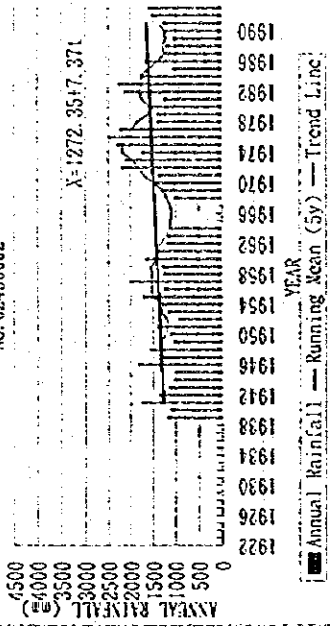


PORTO PARAISO DO NORTE STATION

No. 02352000

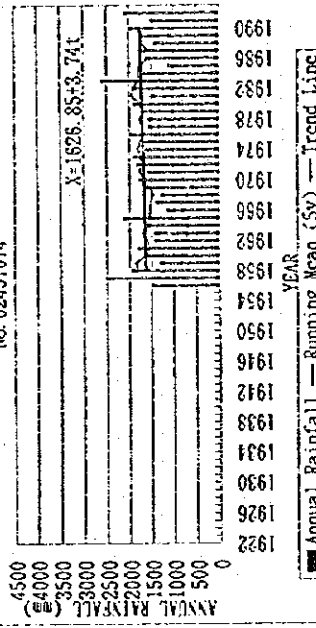


No. 02450002



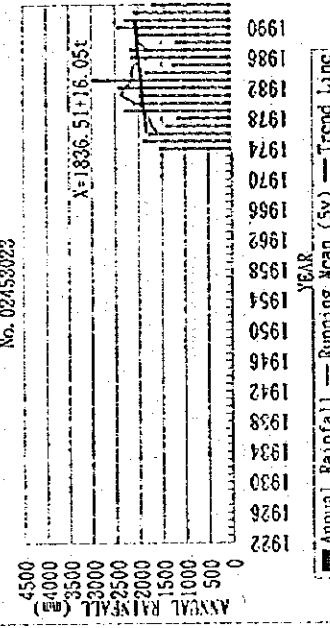
ITAIPORA STATION

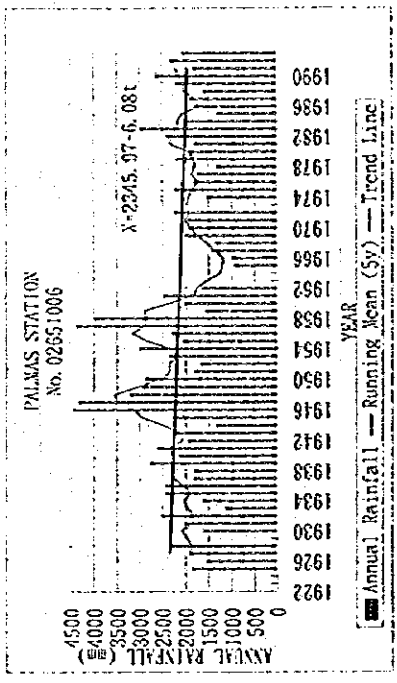
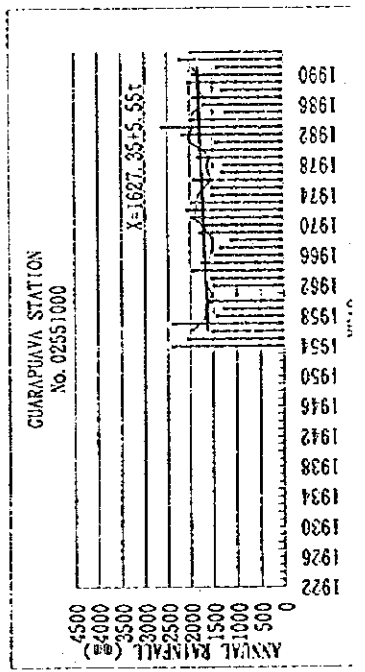
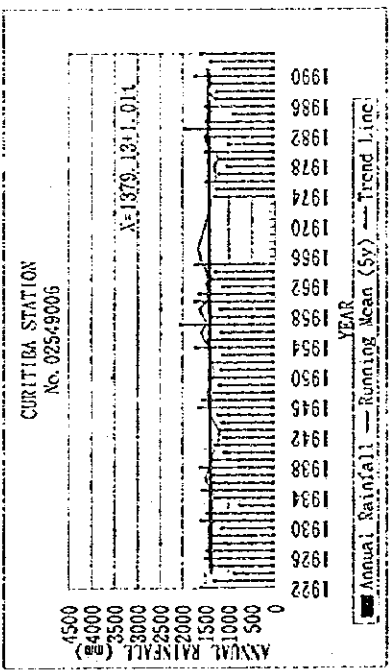
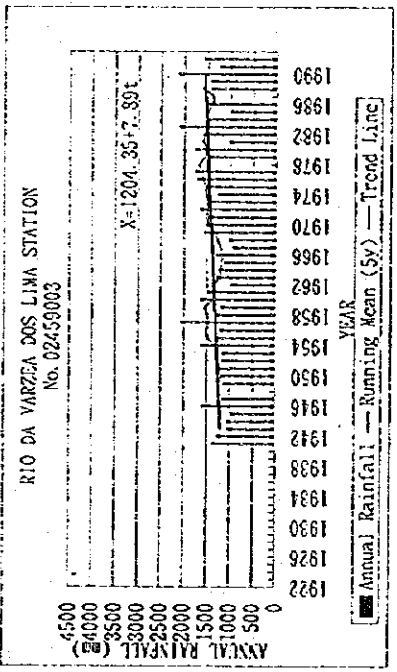
No. 02451014



CASCAVEL STATION

No. 02453022

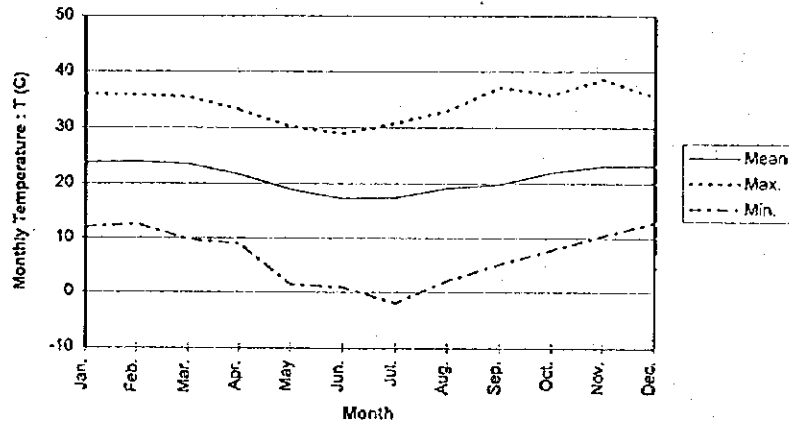




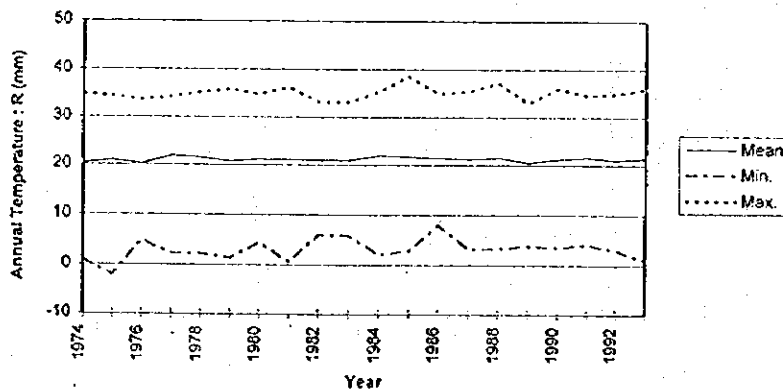
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02251027 (No.1)
 St. Name Bela Vista

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	22.6	23.8	22.5	20.1	17.5	16.0	18.6	18.3	20.8	20.4	22.1	21.4	20.3
2 1975	23.0	23.9	23.7	21.3	18.1	17.5	15.6	21.9	21.5	20.7	21.4	22.8	21.0
3 1976	23.9	22.4	22.9	20.4	18.0	16.7	16.8	17.9	17.9	20.4	22.4	22.8	20.2
4 1977	23.3	25.3	24.7	21.0	19.8	17.7	21.0	20.0	21.1	23.3	22.4	22.1	21.8
5 1978	24.7	25.1	23.9	21.8	18.6	17.9	18.9	17.6	19.5	23.4	23.2	23.4	21.5
6 1979	22.6	24.4	23.3	20.9	18.3	17.8	16.2	20.4	18.9	22.4	21.5	22.9	20.8
7 1980	22.9	23.3	24.7	22.0	19.6	17.0	18.7	19.3	17.4	22.5	22.5	24.1	21.2
8 1981	23.8	24.6	24.1	21.1	20.7	16.5	15.5	19.9	21.6	20.1	23.7	22.1	21.1
9 1982	23.0	23.9	22.9	20.6	18.7	18.2	18.3	19.7	20.6	21.7	23.0	21.8	21.0
10 1983	24.1	24.3	22.6	21.8	19.8	16.0	19.4	19.5	17.6	20.9	23.0	23.4	21.0
11 1984	25.4	26.0	24.0	20.8	21.1	19.4	19.4	18.1	19.8	23.6	23.3	22.5	22.0
12 1985	23.3	24.5	23.5	22.2	18.9	16.3	16.2	20.6	21.2	23.8	24.8	25.4	21.7
13 1986	24.8	23.7	23.2	23.0	19.7	18.3	17.0	19.0	19.5	22.2	24.0	23.2	21.5
14 1987	24.4	22.9	23.2	22.8	17.3	16.6	20.1	18.4	19.5	22.1	23.8	23.9	21.3
15 1988	25.1	23.4	24.6	22.3	18.5	16.2	15.6	20.6	22.8	21.7	23.1	24.6	21.5
16 1989	22.7	23.1	23.5	22.6	18.4	16.8	16.5	17.7	19.1	20.6	22.3	23.3	20.6
17 1990	23.5	24.6	24.7	23.8	17.9	17.1	14.8	17.7	18.3	23.4	24.6	24.1	21.2
18 1991	23.9	23.8	22.6	21.8	19.4	18.6	17.5	20.0	20.8	22.5	24.1	23.9	21.6
19 1992	25.0	24.5	22.4	20.7	19.4	19.4	16.4	17.5	18.7	22.0	23.0	24.0	21.1
20 1993	24.7	22.2	24.2	22.7	19.0	17.0	17.1	18.6	20.0	23.1	24.8	23.7	21.4
Mean	23.8	24.0	23.6	21.7	18.9	17.4	17.5	19.1	19.8	22.0	23.2	23.3	21.2

Monthly Mean Temperature (No. 1)
 St. No. 02251027 Bela Vista
 1974 - 1993 (20 Years)



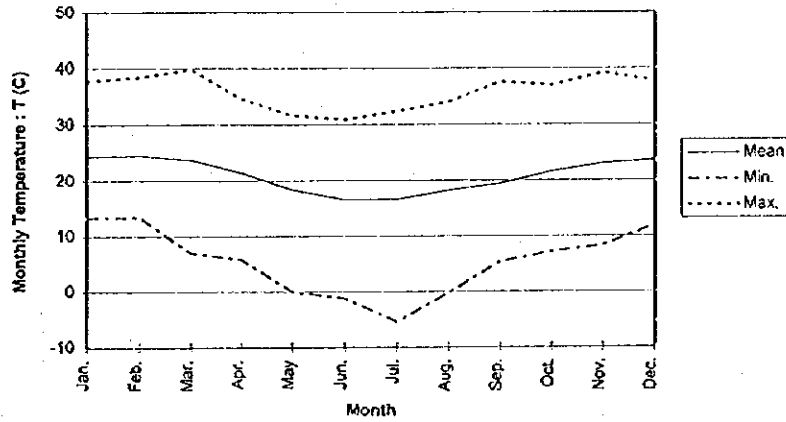
Annual Temperature (No. 1)
 St. No. 02251027 Bela Vista
 1974 - 1993 (20 Years)



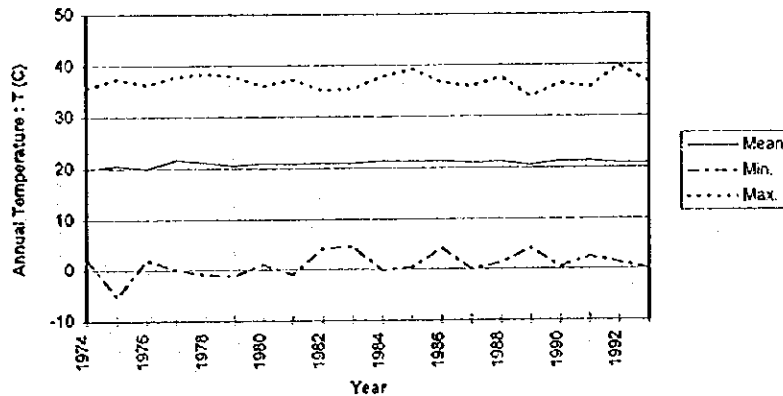
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02349030 (No 2)
 St. Name Joaquim

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	22.8	23.7	22.4	19.4	18.5	15.4	17.0	17.2	20.2	20.5	21.8	22.0	19.9
2 1975	23.3	24.4	24.0	20.6	17.6	16.9	14.2	20.1	20.9	20.3	21.4	23.3	20.6
3 1976	24.0	22.9	22.6	19.6	17.3	15.0	16.3	17.5	17.9	20.1	22.8	23.5	20.0
4 1977	24.3	26.0	25.1	20.6	18.8	17.3	19.5	19.2	20.8	22.9	22.7	22.8	21.7
5 1978	25.2	25.6	23.9	21.1	17.6	16.6	18.0	16.9	19.2	23.1	22.9	23.6	21.1
6 1979	22.9	24.9	23.4	20.9	17.7	16.2	15.2	19.1	18.7	22.3	21.8	23.7	20.6
7 1980	23.7	23.8	24.6	22.2	19.2	16.0	17.9	18.8	17.6	21.7	22.5	24.2	21.0
8 1981	24.4	25.3	24.0	21.0	20.1	15.7	14.5	18.4	20.9	20.0	23.8	22.7	20.9
9 1982	23.5	24.4	23.3	20.5	18.0	18.5	17.5	19.2	20.4	21.3	22.9	22.7	21.0
10 1983	24.8	24.8	22.8	21.6	19.8	16.1	18.6	18.2	17.6	20.8	22.7	23.7	21.0
11 1984	25.4	26.5	24.3	20.8	19.7	17.3	17.8	17.1	18.8	22.7	23.4	23.0	21.4
12 1985	23.7	24.8	23.7	22.3	17.5	14.9	15.8	19.3	20.6	23.5	24.4	25.2	21.3
13 1986	25.6	24.4	23.6	22.5	19.5	17.4	16.1	18.4	19.3	21.5	24.0	23.8	21.3
14 1987	25.1	23.5	23.4	22.8	17.0	15.2	13.9	17.5	19.0	21.7	23.2	24.6	21.0
15 1988	25.9	23.7	24.5	22.0	18.5	16.2	15.4	19.0	21.4	21.2	22.3	24.5	21.2
16 1989	23.6	24.0	23.8	22.7	18.2	16.4	15.5	17.6	19.0	19.9	22.2	23.6	20.5
17 1990	24.6	25.2	25.1	23.9	17.7	16.5	15.1	17.6	17.9	22.8	24.8	24.2	21.3
18 1991	24.7	24.2	23.1	21.6	18.7	17.7	16.6	19.1	20.0	22.0	23.6	24.3	21.3
19 1992	25.1	24.8	23.0	20.2	19.1	18.8	16.2	17.1	18.8	21.4	22.5	23.8	20.9
20 1993	24.5	22.9	23.6	22.1	18.7	15.8	16.0	17.3	19.1	22.5	24.2	24.0	20.9
Mean	24.4	24.5	23.7	21.4	18.4	16.5	16.6	18.2	19.4	21.6	23.0	23.7	20.9

Monthly Mean Temperature (No.2)
 St. No. 02349030 Joaquim
 1974 - 1993 (20 Years)



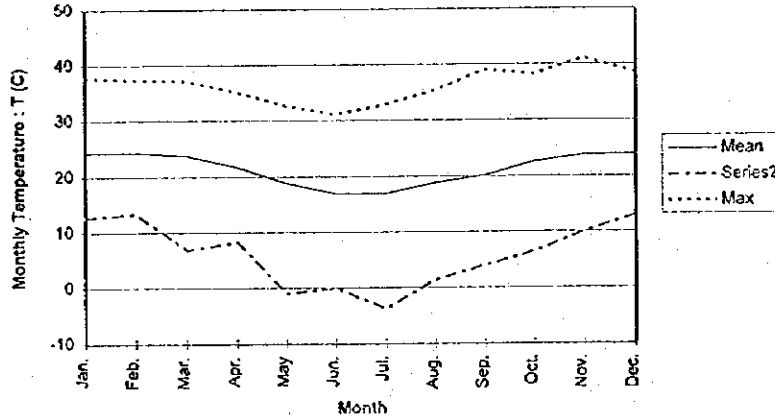
Annual Temperature (No. 2)
 St. No. 02349030 Joaquim
 1974 - 1993 (20 Years)



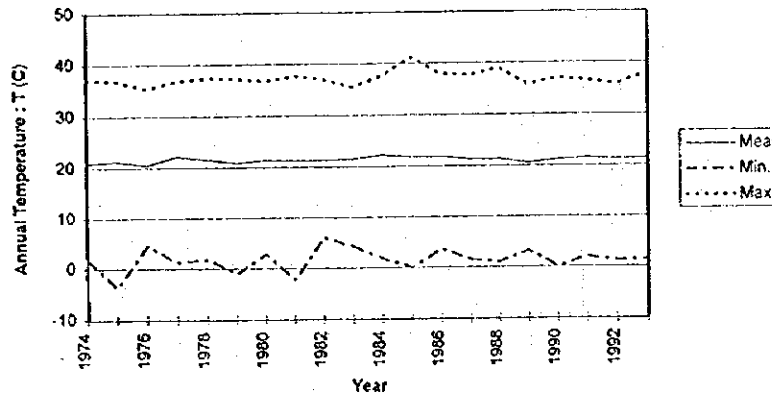
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02350017 (No 3)
 St. Name Cambara

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	24.0	25.1	23.6	21.2	17.9	15.7	17.1	17.6	20.9	21.3	23.1	22.5	20.9
2 1975	23.3	24.4	24.3	21.5	18.4	17.3	14.5	20.8	22.2	21.8	22.6	24.0	21.3
3 1976	24.1	22.8	22.8	20.6	18.2	16.4	16.5	18.1	18.4	21.3	23.4	23.7	20.5
4 1977	24.0	25.3	25.1	21.1	19.6	18.1	20.4	20.5	21.8	24.1	23.3	23.3	22.2
5 1978	25.3	25.6	24.0	21.0	17.9	17.0	18.5	17.6	20.2	23.8	23.8	23.9	21.6
6 1979	22.6	24.8	23.4	21.0	18.2	16.7	15.6	19.6	19.5	23.3	22.4	23.8	20.9
7 1980	23.3	23.6	24.7	22.2	19.4	16.6	18.3	19.7	18.5	22.7	23.4	24.5	21.4
8 1981	24.3	25.1	24.3	21.1	20.2	16.1	15.0	19.0	21.6	20.9	24.5	22.9	21.3
9 1982	23.3	24.5	23.5	20.6	18.1	18.7	17.7	19.7	21.0	22.3	24.1	22.6	21.3
10 1983	25.0	23.0	23.3	22.2	20.4	16.5	18.9	19.0	18.5	21.7	23.3	24.1	21.5
11 1984	26.0	26.5	24.7	21.4	20.8	18.4	18.6	18.2	19.8	24.3	24.7	23.4	22.2
12 1985	23.6	25.1	23.9	22.8	18.0	15.2	15.8	19.9	21.4	24.5	25.3	26.0	21.8
13 1986	25.9	24.5	23.8	23.1	20.1	17.7	16.8	18.9	20.4	22.5	24.4	23.9	21.8
14 1987	25.2	23.3	22.9	22.9	17.4	15.8	19.3	18.1	19.8	22.6	23.9	24.4	21.3
15 1988	25.1	23.6	24.2	22.2	18.7	15.6	15.4	19.2	22.3	22.0	23.0	24.8	21.3
16 1989	23.2	23.5	23.4	22.7	18.3	16.5	15.5	17.5	19.2	20.8	22.4	23.9	20.6
17 1990	24.1	24.4	24.4	23.6	17.6	16.4	15.2	17.6	18.3	23.5	24.8	24.0	21.2
18 1991	24.5	23.6	23.2	21.6	19.1	18.2	16.5	19.7	20.6	22.6	24.3	24.3	21.5
19 1992	25.1	24.3	22.8	20.6	19.6	19.1	16.6	17.8	19.4	22.4	23.3	24.4	21.3
20 1993	25.1	22.6	23.8	22.3	19.0	16.5	16.6	17.8	20.1	23.5	25.1	24.2	21.4
Mean	24.4	24.4	23.8	21.8	18.8	17.0	16.9	18.8	20.2	22.6	23.8	23.9	21.4

Monthly Mean Temperature (No. 3)
 St. No. 02350017 Cambara
 1974 - 1993 (20 Years)



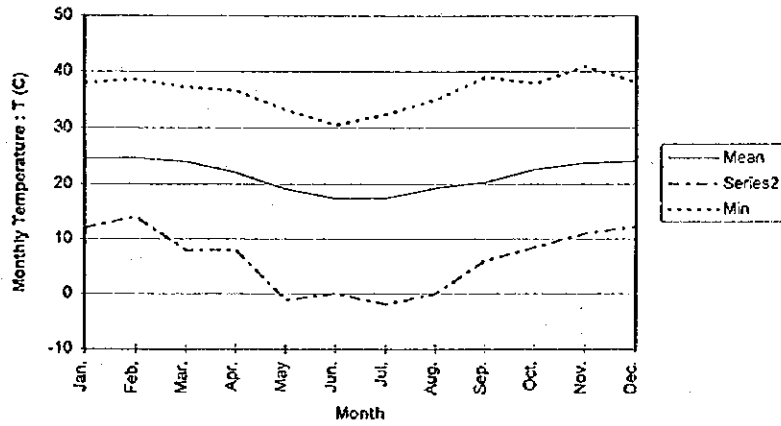
Annual Temperature (No. 3)
 St. No. 02350017 Cambara
 1974 - 1993 (20 Years)



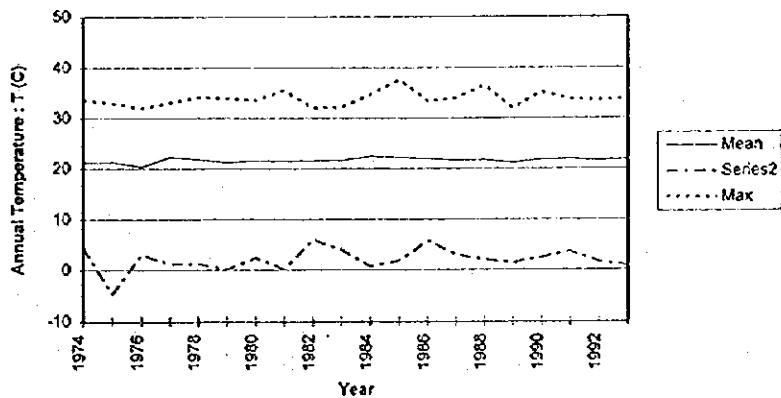
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02350018 (No.4)
 St. Name Bandedirantes

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(24.2)	(25.2)	23.8	21.2	18.2	(17.1)	17.8	(18.0)	(21.2)	(21.6)	(23.3)	(22.7)	21.2
2 1975	(23.5)	(24.5)	(24.5)	(21.8)	(18.8)	(17.7)	(15.0)	21.1	21.8	21.2	22.0	23.5	21.3
3 1976	23.9	22.6	22.8	20.0	17.7	16.0	16.6	(18.5)	(18.8)	21.0	23.2	23.4	20.4
4 1977	24.1	25.8	25.3	21.0	19.7	18.2	21.0	20.6	22.1	23.8	23.0	23.0	22.3
5 1978	25.5	26.0	24.2	21.6	18.3	17.3	18.7	18.0	20.3	24.2	23.6	24.0	21.8
6 1979	23.2	24.9	23.7	21.4	18.3	17.3	15.9	20.0	19.7	23.3	22.4	24.1	21.2
7 1980	23.8	23.9	24.5	22.3	19.5	16.8	18.7	19.7	18.4	22.9	23.3	24.6	21.5
8 1981	24.4	25.3	24.5	21.4	20.6	16.3	15.4	19.6	21.9	20.9	24.4	23.0	21.6
9 1982	23.5	24.5	23.7	21.1	18.5	18.9	18.3	20.1	21.1	22.3	23.8	22.8	21.6
10 1983	25.1	25.1	23.3	22.2	20.3	18.7	19.2	19.6	18.3	21.8	23.7	24.2	21.6
11 1984	26.2	26.6	24.5	21.5	21.0	18.8	19.3	18.5	20.0	24.3	24.6	23.8	22.4
12 1985	24.1	25.3	24.1	22.9	18.4	16.2	16.7	20.7	21.8	24.7	25.5	26.0	22.2
13 1986	25.7	24.5	23.8	23.3	20.2	18.3	17.3	19.3	20.2	22.6	24.5	24.0	22.0
14 1987	25.2	23.5	23.7	23.4	18.1	16.5	19.9	18.8	20.0	22.5	23.8	24.6	21.7
15 1988	25.6	24.0	24.8	22.5	19.0	15.6	15.8	20.1	22.7	22.3	23.1	25.0	21.7
16 1989	23.7	24.1	23.9	23.0	18.7	17.2	16.4	18.3	19.9	21.1	22.9	24.4	21.1
17 1990	24.6	25.6	25.1	24.3	18.3	17.2	15.6	18.2	18.6	23.8	25.3	24.8	21.8
18 1991	24.8	24.4	23.3	22.2	19.7	18.7	17.4	20.2	21.0	22.8	24.3	24.5	21.9
19 1992	25.5	25.0	22.9	21.0	19.9	19.7	17.3	18.1	19.4	22.5	23.4	24.4	21.6
20 1993	25.0	23.0	24.3	23.1	19.7	17.2	17.3	18.7	20.1	23.5	25.4	24.7	21.8
Mean	24.6	24.7	24.0	22.1	19.1	17.4	17.5	19.3	20.4	22.7	23.8	24.1	21.6

Monthly Mean Temperature (No. 4)
 St. No. 02350018 Bandedirantes
 1974 - 1993 (20 Years)



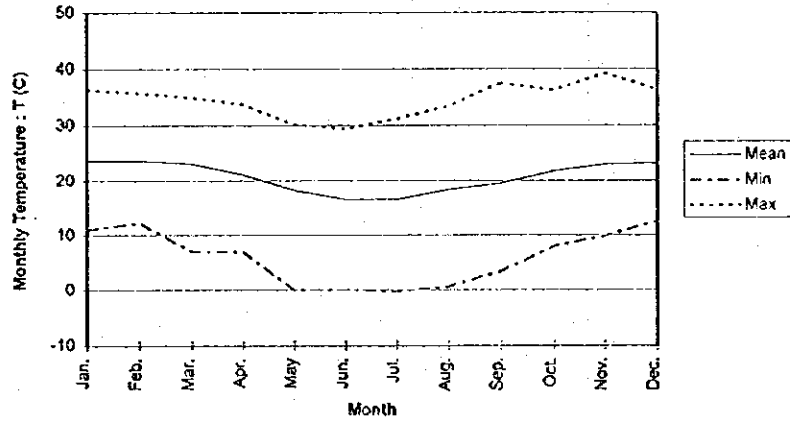
Annual Temperature (No. 4)
 St. No. 02350018 Bandedirantes
 1974 - 1993 (20 Years)



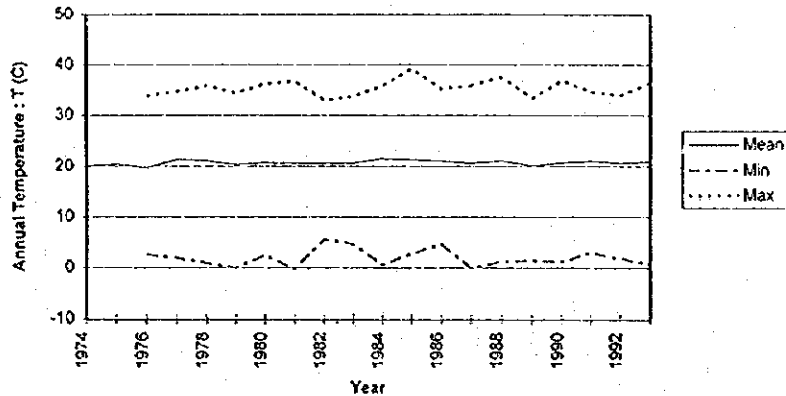
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02351003 (No.5)
 St. Name Londrina

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(22.8)	(24.0)	(22.2)	(19.9)	(17.0)	(15.5)	(17.4)	(17.1)	(20.4)	(20.2)	(22.1)	(21.3)	20.0
2 1975	(22.7)	(23.7)	(23.3)	(20.8)	(17.6)	(16.7)	(14.4)	(20.5)	(20.9)	(20.5)	(21.2)	(22.7)	20.4
3 1976	23.5	22.2	22.1	19.7	17.4	15.6	15.9	17.2	17.4	20.3	22.4	22.7	19.7
4 1977	23.1	24.6	24.1	20.2	18.9	17.0	19.8	19.3	20.6	23.0	22.5	22.3	21.3
5 1978	24.5	24.8	23.8	21.1	17.7	16.9	18.1	18.9	19.2	23.0	23.3	23.2	21.0
6 1979	22.8	23.9	22.9	20.1	17.5	16.9	15.4	19.3	18.7	22.1	21.6	23.0	20.4
7 1980	22.0	22.9	24.0	21.7	18.9	16.1	18.0	18.5	17.0	22.3	22.6	23.6	20.7
8 1981	23.4	24.1	23.5	20.6	19.9	15.7	14.8	19.1	21.1	20.2	23.3	21.9	20.6
9 1982	22.9	23.5	22.8	20.2	17.9	17.6	17.2	18.9	20.5	21.2	22.7	21.8	20.6
10 1983	24.0	24.0	22.2	21.4	19.3	15.4	18.6	18.7	17.4	20.9	22.6	23.3	20.7
11 1984	25.1	25.6	23.8	20.2	20.0	18.0	18.4	17.6	19.5	23.5	23.3	22.6	21.5
12 1985	23.7	24.1	23.1	21.8	17.9	15.3	15.5	19.7	21.0	23.4	24.6	25.3	21.3
13 1986	24.8	23.2	22.8	22.4	19.1	17.2	16.2	18.3	19.5	21.9	24.0	23.3	21.1
14 1987	24.1	22.6	22.7	22.1	18.7	15.0	18.8	17.5	19.3	21.7	23.3	23.5	20.6
15 1988	24.6	22.9	24.2	21.7	17.8	16.3	14.9	19.7	22.0	21.5	23.0	24.5	21.1
16 1989	22.5	23.0	22.9	21.9	17.9	16.1	15.5	17.2	18.7	20.6	22.2	23.3	20.2
17 1990	23.4	24.6	24.2	23.3	17.3	16.1	14.1	17.0	17.8	22.9	24.1	24.1	20.7
18 1991	23.9	23.4	22.3	21.2	18.7	17.7	16.3	19.1	20.5	22.1	23.4	23.8	21.0
19 1992	24.7	24.2	22.0	20.2	18.8	18.6	15.7	16.9	18.7	21.7	22.5	24.0	20.7
20 1993	24.2	22.2	23.5	22.3	18.5	16.0	16.3	18.2	19.6	22.8	24.4	23.8	21.0
Mean	23.7	23.7	23.1	21.1	18.2	16.5	16.6	18.3	19.5	21.8	23.0	23.2	20.7

Monthly Mean Temperature (No. 5)
 St. No. 02351003 Londrina
 1974 - 1993 (20 Years)



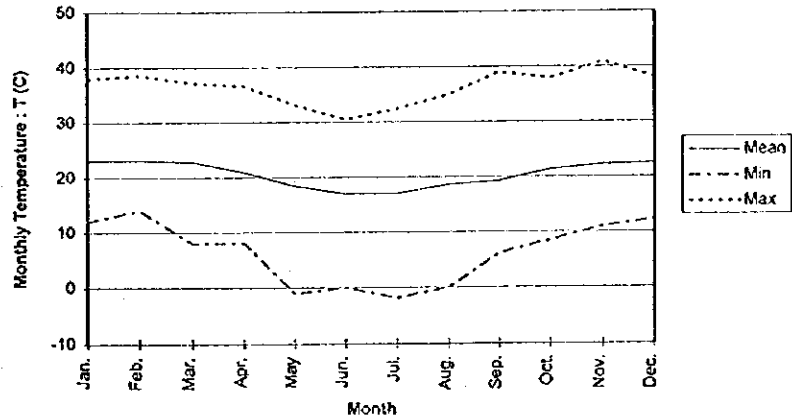
Annual Temperature (No. 5)
 St. No. 02351003 Londrina
 1974 - 1993 (20 Years)



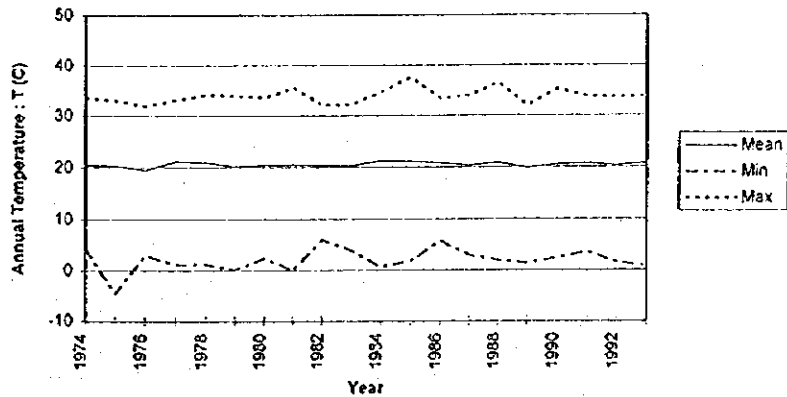
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02351008 (No. 6)
 St. Name Apucarana

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	22.2	23.5	22.3	20.7	18.2	16.3	18.8	18.3	21.3	20.1	21.8	21.4	20.4
2 1975	22.4	23.2	22.9	20.7	17.7	16.9	15.4	21.2	20.7	20.1	20.7	21.9	20.3
3 1976	22.7	21.7	21.9	19.7	17.5	16.1	16.1	17.2	17.1	20.0	21.7	22.3	19.5
4 1977	22.7	24.7	23.9	20.0	19.3	17.5	20.4	19.0	20.7	22.5	21.7	21.7	21.2
5 1978	23.9	24.3	23.5	21.6	18.2	17.7	18.5	17.0	19.0	22.6	22.2	22.7	20.9
6 1979	22.3	23.4	22.6	19.8	17.5	17.9	15.8	19.8	18.2	21.6	20.7	22.1	20.1
7 1980	22.3	22.4	24.1	21.3	19.1	16.2	18.0	18.7	16.7	21.7	21.6	22.9	20.4
8 1981	23.0	23.7	22.8	20.4	20.2	15.8	15.1	19.6	21.2	19.7	22.9	21.3	20.5
9 1982	22.4	23.0	22.2	20.1	18.2	17.5	17.8	19.3	20.0	20.7	22.1	21.2	20.4
10 1983	23.4	23.4	21.8	21.1	19.1	15.2	18.7	19.0	17.0	20.4	21.9	22.7	20.3
11 1984	24.4	25.0	22.9	19.9	20.5	18.9	19.0	17.3	19.2	23.3	22.3	21.8	21.2
12 1985	23.3	23.5	22.7	21.2	18.8	16.3	15.7	19.9	20.5	22.6	23.9	24.6	21.1
13 1986	24.0	22.5	22.4	22.0	19.0	18.2	16.7	18.5	19.0	21.3	23.4	22.6	20.8
14 1987	23.5	21.8	22.6	21.8	16.2	16.0	19.5	17.5	18.8	21.3	22.8	22.7	20.4
15 1988	24.2	22.3	24.1	21.4	17.7	15.9	14.9	20.5	22.1	20.9	22.3	23.6	20.8
16 1989	21.5	22.4	22.7	21.5	17.8	16.5	16.2	17.3	18.4	20.2	21.6	22.7	19.9
17 1990	22.8	23.9	24.0	23.0	17.4	16.6	14.1	17.4	17.8	22.4	23.4	23.0	20.5
18 1991	23.2	22.8	21.8	20.7	18.8	18.0	16.6	19.2	20.6	21.4	22.5	22.8	20.7
19 1992	24.4	23.7	21.6	19.8	18.7	18.9	15.4	16.9	18.1	21.2	21.7	23.3	20.3
20 1993	23.6	21.4	23.4	21.8	18.5	16.6	17.0	18.5	19.4	22.2	23.6	22.9	20.7
Mean	23.1	23.1	22.8	20.9	18.4	17.0	17.0	18.6	19.3	21.3	22.2	22.5	20.6

Monthly Mean Temperature (No. 6)
 St. No. 02351008 Apucarana
 1974 - 1993 (20 Years)



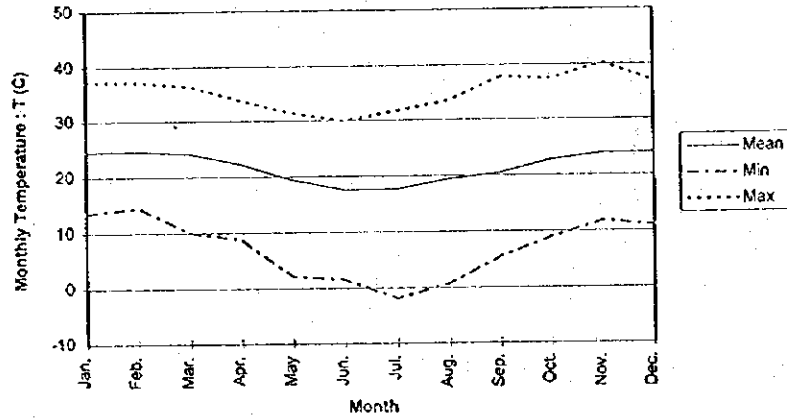
Annual Temperature (No. 6)
 St. No. 02351008 Apucarana
 1974 - 1993 (20 Years)



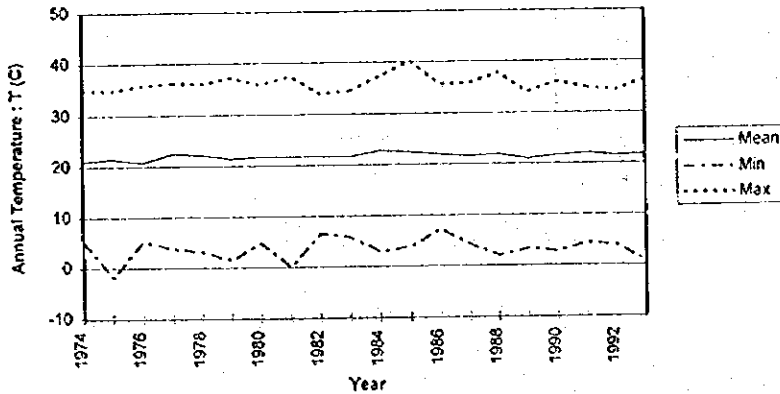
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02351011 (No.7)
 St. Name Ibipora

	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1	1974	23.7	24.9	23.1	20.9	18.1	15.6	18.5	18.2	21.4	21.2	23.0	22.3	21.0
2	1975	23.6	24.6	24.2	21.8	18.7	17.8	15.6	21.5	21.9	21.5	22.2	23.6	21.4
3	1976	24.5	23.3	23.4	20.9	18.4	16.6	16.9	18.2	18.4	21.2	23.3	23.5	20.7
4	1977	24.0	25.9	25.4	21.4	20.2	18.2	21.0	20.4	21.9	24.0	23.3	23.1	22.4
5	1978	25.5	25.9	24.8	22.6	18.9	18.2	19.3	17.9	20.2	24.3	24.1	24.0	22.1
6	1979	23.6	25.0	24.0	21.5	18.7	17.9	16.5	20.4	19.6	23.3	22.6	23.8	21.4
7	1980	23.6	23.9	25.0	22.9	20.1	17.3	18.8	19.6	18.0	23.1	23.5	24.5	21.7
8	1981	24.2	25.2	24.7	21.8	21.4	16.9	15.8	20.3	22.3	21.0	24.3	22.7	21.7
9	1982	23.8	24.4	23.9	21.5	19.2	18.6	18.4	20.1	21.4	22.2	23.6	22.7	21.7
10	1983	24.9	24.8	23.2	22.5	20.4	16.4	19.5	19.7	18.3	22.1	23.8	24.1	21.6
11	1984	26.3	27.0	24.9	21.7	21.5	19.4	19.6	18.8	20.6	24.7	24.3	23.5	22.7
12	1985	24.7	25.2	24.2	22.8	19.2	18.6	16.9	20.9	22.1	24.8	25.4	26.1	22.4
13	1986	25.1	23.9	23.6	23.3	20.0	18.7	17.3	19.3	20.4	22.8	24.7	23.9	21.9
14	1987	24.6	23.3	23.9	23.1	17.7	16.4	19.8	18.6	20.1	22.5	24.1	24.6	21.6
15	1988	25.4	23.8	25.1	22.6	18.7	15.9	15.1	20.6	22.9	22.4	23.7	25.2	21.9
16	1989	23.1	23.6	23.7	23.0	19.1	17.2	16.5	18.2	19.6	21.3	23.0	23.8	21.0
17	1990	23.9	25.4	25.1	24.1	18.3	17.0	15.3	18.1	18.7	23.7	25.1	24.7	21.6
18	1991	24.7	24.3	23.0	22.1	19.9	18.8	17.6	20.2	21.5	22.9	24.3	24.4	22.0
19	1992	25.4	24.9	22.8	21.1	19.5	19.6	16.8	18.1	19.5	22.5	23.4	24.7	21.5
20	1993	24.8	22.7	24.4	23.2	19.5	16.9	17.3	19.0	20.3	23.4	25.3	24.2	21.8
	Mean	24.5	24.6	24.1	22.2	19.4	17.6	17.7	19.4	20.5	22.7	23.9	24.0	21.7

Monthly Mean Temperature (No. 7)
 St. No. 02351011 Ibipora
 1974 - 1993 (20 Years)



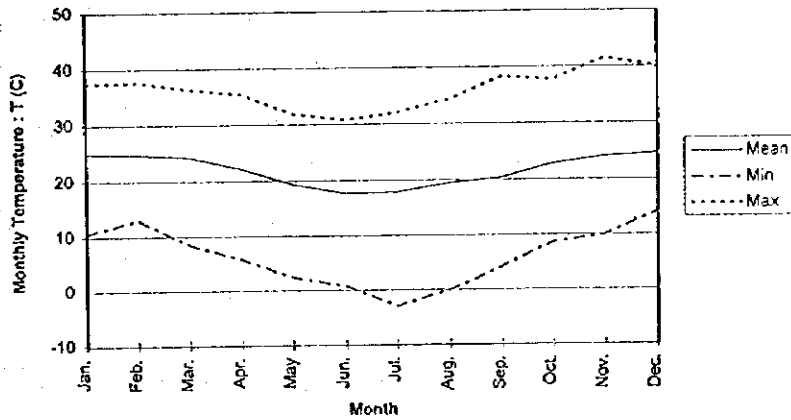
Annual Temperature (No. 7)
 St. No. 02351011 Ibipora
 1974 - 1993 (20 Years)



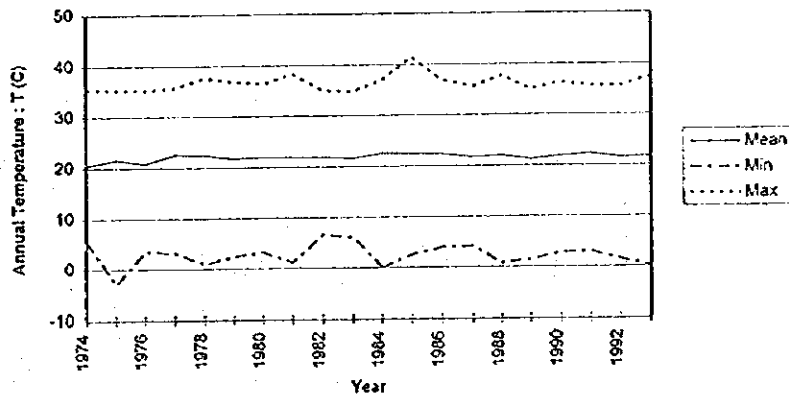
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02352017 (No.8)
 St. Name Paranaval

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(21.3)	(22.6)	(21.4)	(19.8)	(17.3)	17.0	18.9	19.0	21.7	21.3	22.6	23.3	20.5
2 1975	24.2	25.1	24.3	21.7	18.6	19.0	16.0	21.7	21.8	21.4	22.6	23.7	21.6
3 1976	24.8	23.5	23.5	20.7	18.6	18.8	17.3	18.3	18.1	21.3	23.2	23.6	20.8
4 1977	24.5	26.3	25.5	21.4	20.3	18.4	21.4	20.0	21.8	24.1	23.8	23.7	22.6
5 1978	26.0	26.4	25.2	22.2	19.0	18.5	19.9	18.0	20.4	24.1	24.4	25.3	22.5
6 1979	24.4	25.3	24.5	21.2	18.8	18.5	17.2	21.3	19.6	23.4	22.9	24.2	21.8
7 1980	24.5	24.4	25.7	23.0	20.2	17.4	18.9	19.9	17.6	23.2	23.7	25.2	22.0
8 1981	25.1	25.2	24.6	22.0	21.6	16.8	16.0	20.6	21.9	21.4	24.7	23.5	22.0
9 1982	24.8	24.8	24.0	21.6	19.2	18.5	19.1	20.3	21.3	22.6	24.0	22.9	21.9
10 1983	25.6	25.1	23.3	22.5	20.6	15.8	19.4	19.7	18.4	22.0	23.3	24.4	21.7
11 1984	26.0	26.3	24.8	21.4	21.2	19.5	19.9	18.3	20.3	25.0	24.3	23.7	22.6
12 1985	25.1	25.1	24.0	22.9	19.6	17.0	16.8	20.0	21.7	24.1	25.9	27.1	22.4
13 1986	26.0	24.5	24.0	23.7	20.2	19.1	17.7	19.9	20.2	22.6	25.4	24.9	22.4
14 1987	25.5	23.5	24.3	23.3	17.5	16.8	20.6	18.4	20.1	22.4	24.6	24.4	21.8
15 1988	26.3	23.7	25.2	23.1	18.9	14.0	15.8	21.6	23.4	22.5	23.7	25.8	22.0
16 1989	23.3	24.2	24.0	22.9	19.0	17.5	17.0	18.3	19.3	21.5	23.4	24.8	21.3
17 1990	24.4	25.2	25.5	24.0	18.2	17.6	14.9	18.6	18.6	23.9	25.5	25.4	21.8
18 1991	25.3	24.4	23.6	22.6	19.7	19.0	17.7	20.5	22.2	23.2	24.7	24.8	22.3
19 1992	26.2	25.8	23.5	20.7	19.7	20.2	16.0	(16.0)	19.3	22.6	23.7	25.5	21.6
20 1993	25.4	22.9	24.2	22.6	19.1	16.8	16.8	18.9	20.6	23.7	25.0	24.8	21.7
Mean	24.9	24.7	24.3	22.2	19.4	17.7	17.9	19.5	20.4	22.8	24.1	24.6	21.9

Monthly Mean Temperature (No. 8)
 St. No. 02352017 Paranaval
 1974 - 1993 (20 Years)



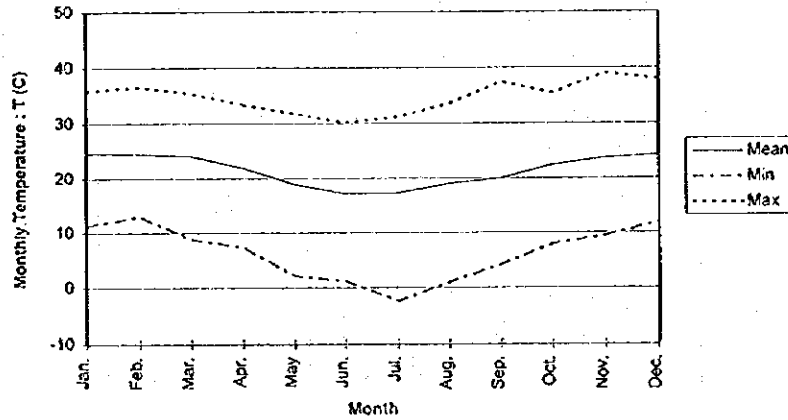
Annual Temperature (No. 8)
 St. No. 02352017 Paranaval
 1974 - 1993 (20 Years)



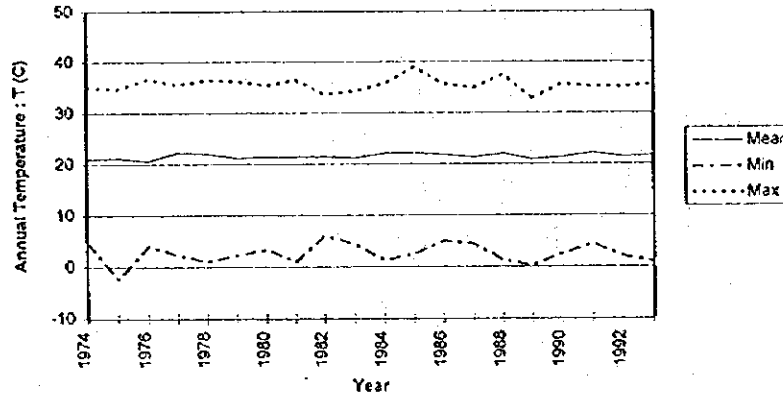
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02352019 (No.9)
 St. Name Cianorte

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	23.5	24.5	23.3	21.5	18.8	16.1	18.5	18.0	21.5	20.9	22.1	23.3	21.0
2 1975	23.6	24.6	23.8	21.2	18.2	17.3	15.7	21.3	21.2	21.1	22.5	23.6	21.2
3 1976	24.5	23.6	23.3	20.6	18.4	16.2	16.9	18.0	18.0	21.4	23.0	23.7	20.6
4 1977	24.0	25.8	25.1	21.2	20.0	18.1	20.8	19.5	21.4	23.8	23.4	23.4	22.2
5 1978	25.5	25.9	25.0	21.9	18.7	18.1	19.4	17.6	20.2	23.6	23.8	24.5	22.0
6 1979	24.1	24.9	24.0	20.6	17.7	18.0	16.3	20.4	18.8	22.9	22.4	23.7	21.2
7 1980	23.9	24.0	25.3	22.7	19.5	16.6	18.2	19.2	17.2	22.6	23.2	24.5	21.4
8 1981	24.7	24.5	24.2	21.7	21.1	16.1	15.6	19.9	21.2	21.0	24.1	22.6	21.4
9 1982	24.4	24.1	23.8	21.5	18.7	17.7	18.5	20.0	21.0	21.7	23.1	22.8	21.4
10 1983	25.1	24.8	23.0	22.0	19.9	15.1	18.6	19.2	17.8	21.6	23.1	24.1	21.2
11 1984	25.6	26.1	24.3	20.9	20.7	18.8	19.4	17.6	20.0	24.4	23.7	23.3	22.1
12 1985	25.0	24.6	24.0	22.4	19.2	16.5	16.2	19.8	21.3	23.7	25.7	28.9	22.1
13 1986	25.6	23.9	23.6	22.9	19.6	18.4	17.2	19.3	19.9	22.2	25.0	24.2	21.8
14 1987	25.0	23.0	23.9	22.7	16.6	16.1	19.9	17.8	19.6	22.2	24.4	24.2	21.3
15 1988	25.8	23.4	25.4	22.5	18.2	16.9	15.3	21.0	22.9	22.2	23.9	25.6	21.9
16 1989	22.8	23.7	23.9	22.6	18.6	16.9	16.3	17.8	18.8	21.4	23.3	24.6	20.9
17 1990	23.9	24.9	25.1	23.5	17.7	16.7	14.4	18.0	18.2	23.6	25.0	24.8	21.3
18 1991	25.0	24.7	23.8	22.6	19.7	18.7	17.1	19.8	21.7	22.4	24.6	24.7	22.1
19 1992	25.8	25.2	23.0	20.8	19.3	19.5	15.3	17.6	19.3	22.6	23.2	25.3	21.4
20 1993	24.8	23.0	24.5	23.1	19.0	16.8	15.8	18.9	19.9	23.4	25.0	24.8	21.7
Mean	24.6	24.5	24.1	21.9	19.0	17.2	17.3	19.0	20.0	22.4	23.7	24.2	21.5

Monthly Mean Temperature (No. 9)
 St. No. 02352019 Cianorte
 1974 - 1993 (20 Years)



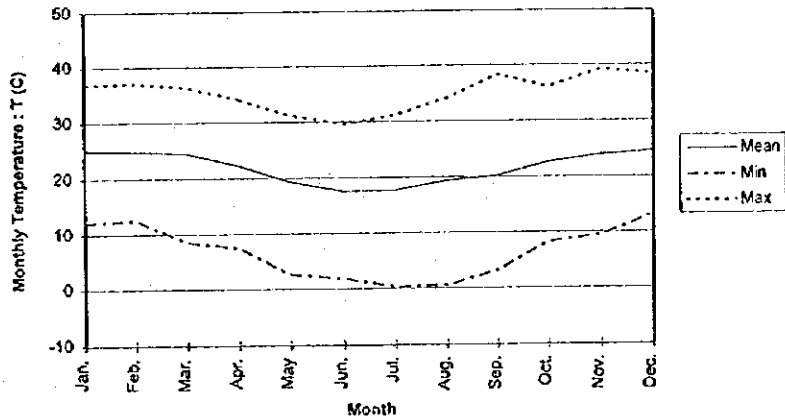
Annual Temperature (No. 9)
 St. No. 02352019 Cianorte
 1974 - 1993 (20 Years)



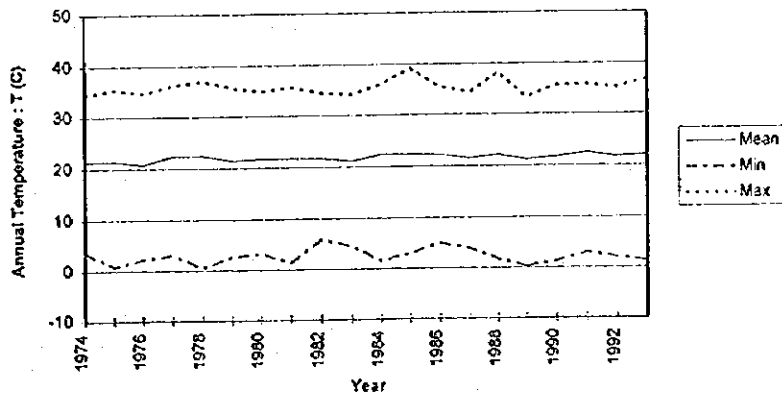
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02353008 (No. 10)
 St. Name Umuarama

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	23.8	25.2	23.9	22.1	19.0	18.3	18.6	18.4	21.2	21.3	22.6	23.7	21.3
2 1975	24.1	24.9	24.1	21.6	18.5	17.8	16.2	21.2	21.4	20.7	22.8	23.8	21.4
3 1976	24.7	23.9	23.5	20.7	19.5	16.3	17.3	18.1	18.0	21.5	23.2	23.8	20.8
4 1977	24.2	25.8	25.3	21.3	20.2	18.5	21.3	19.3	21.8	23.9	23.3	23.9	22.4
5 1978	26.1	26.6	25.5	22.0	18.9	18.6	20.1	17.7	20.5	23.5	23.9	25.2	22.4
6 1979	24.8	25.1	24.2	20.5	17.8	18.2	16.9	21.1	19.0	22.9	22.8	24.2	21.5
7 1980	24.5	24.3	25.7	23.2	20.2	17.0	18.1	19.4	17.6	22.8	23.3	24.7	21.7
8 1981	25.2	24.8	24.5	22.2	21.8	16.4	16.1	20.7	21.3	21.3	24.2	22.9	21.6
9 1982	25.0	24.5	23.7	22.2	19.1	17.8	19.1	20.3	21.1	22.1	23.1	23.0	21.8
10 1983	25.2	24.8	23.2	22.2	20.0	14.8	18.4	19.2	17.9	21.6	22.9	24.4	21.2
11 1984	25.7	25.2	24.6	21.2	20.9	19.2	19.9	17.5	20.7	24.9	23.8	23.6	22.4
12 1985	25.4	24.9	24.0	22.5	19.7	17.0	16.8	19.9	21.1	23.9	26.1	27.5	22.4
13 1986	26.0	24.1	23.9	23.2	19.9	19.3	18.0	19.9	20.0	22.4	25.1	24.7	22.2
14 1987	25.2	23.3	24.3	22.9	16.8	16.7	20.4	18.0	19.8	22.2	24.9	24.5	21.6
15 1988	26.0	23.9	25.9	22.7	18.3	16.2	15.5	21.8	23.5	22.2	24.3	25.9	22.2
16 1989	23.0	24.1	24.2	22.9	19.0	17.3	16.8	18.3	18.9	21.7	23.5	25.0	21.2
17 1990	24.2	25.1	(25.4)	(23.8)	18.2	17.2	14.5	18.8	18.5	23.9	25.3	25.4	21.7
18 1991	25.8	24.9	24.4	23.0	20.3	19.2	18.0	20.4	22.3	22.5	24.8	24.7	22.5
19 1992	26.2	26.0	23.5	21.1	19.5	20.0	15.3	17.8	19.7	22.9	23.4	25.7	21.8
20 1993	25.4	23.7	25.0	23.8	19.6	17.5	17.2	19.2	20.4	23.6	25.0	24.7	22.1
Mean	25.0	24.8	24.4	22.3	19.3	17.6	17.7	19.4	20.2	22.6	23.9	24.6	21.8

Monthly Mean Temperature (No. 10)
 St. No. 02353008 Umuarama
 1974 - 1993 (20 Years)



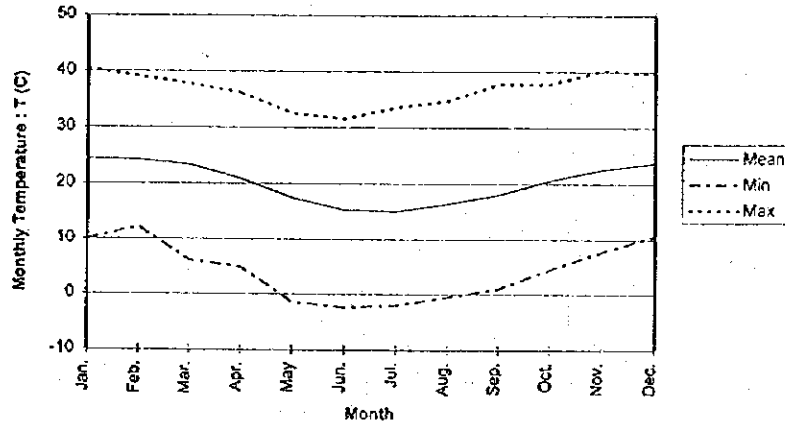
Annual Temperature (No. 10)
 St. No. 02353008 Umuarama
 1974 - 1993 (20 Years)



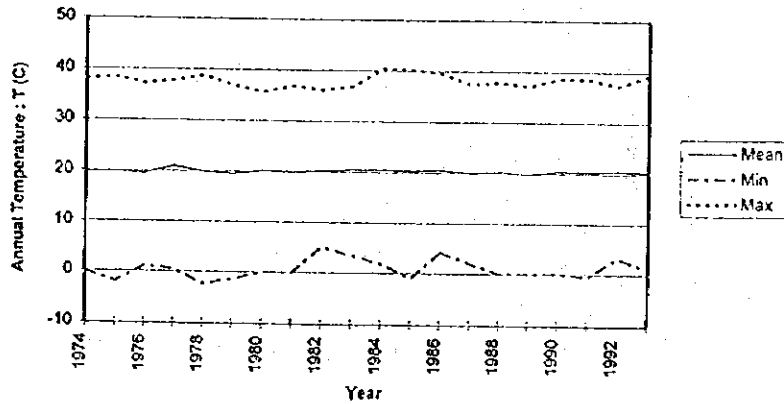
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02449013 (No. 11)
 St. Name Cerro Azul

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	24.0	25.0	24.0	20.1	16.7	14.5	15.6	15.1	18.2	19.9	21.4	22.8	19.8
2 1975	23.5	24.7	23.7	20.0	17.0	15.4	12.3	17.8	19.3	19.7	21.5	23.4	19.9
3 1976	24.2	23.3	22.5	19.0	17.3	14.5	15.2	16.1	17.1	19.2	22.6	24.1	19.6
4 1977	24.5	25.6	24.0	20.0	17.9	16.3	17.7	17.8	19.6	22.2	22.6	23.0	20.9
5 1978	24.6	24.5	23.2	19.7	15.2	14.6	16.2	15.5	18.2	21.7	22.5	23.6	20.0
6 1979	22.5	23.9	22.2	19.8	16.4	14.2	13.5	17.9	17.6	21.3	21.1	23.8	19.5
7 1980	23.5	23.7	24.8	21.7	18.3	14.0	15.9	16.8	16.6	20.6	22.0	24.4	20.2
8 1981	24.6	24.7	23.3	20.0	18.7	14.9	13.3	16.5	18.5	19.3	23.9	22.4	20.0
9 1982	23.5	23.9	23.1	19.8	16.6	17.0	16.2	17.7	19.0	20.2	22.8	23.1	20.2
10 1983	25.5	24.6	22.6	21.6	19.7	14.9	17.1	16.4	16.5	20.3	23.3	24.2	20.6
11 1984	25.8	26.5	23.6	20.2	19.5	16.1	15.8	14.8	17.3	21.7	22.2	23.0	20.5
12 1985	23.6	24.3	23.9	22.1	16.5	14.0	13.9	17.4	19.2	21.9	23.3	24.7	20.4
13 1986	25.6	24.1	23.5	21.8	19.0	15.5	15.2	17.3	18.1	20.2	22.6	24.1	20.6
14 1987	25.4	23.3	22.7	22.2	16.3	13.9	17.1	15.5	17.2	20.1	22.5	23.9	20.0
15 1988	25.8	23.3	23.9	21.4	17.1	17.0	13.5	16.2	19.0	20.1	21.7	24.1	20.3
16 1989	23.8	23.8	23.3	22.0	17.1	15.6	13.4	16.4	18.0	19.0	21.7	23.4	19.8
17 1990	24.2	24.5	24.6	23.1	16.3	15.3	14.1	15.8	17.0	21.9	24.3	24.3	20.5
18 1991	24.4	23.6	22.6	21.1	17.9	16.0	14.7	17.1	18.3	20.6	23.2	24.5	20.3
19 1992	24.8	24.6	23.0	20.5	18.7	18.0	15.2	15.8	18.7	21.1	22.4	23.8	20.6
20 1993	24.6	23.3	23.6	22.1	18.0	15.1	15.2	15.1	17.7	21.0	23.6	24.4	20.3
Mean	24.4	24.3	23.4	20.9	17.5	15.3	15.1	16.5	18.1	20.6	22.6	23.8	20.2

Monthly Mean Temperature (No. 11)
 St. No. 02449013 Cerro Azul
 1974 - 1993 (20 Years)



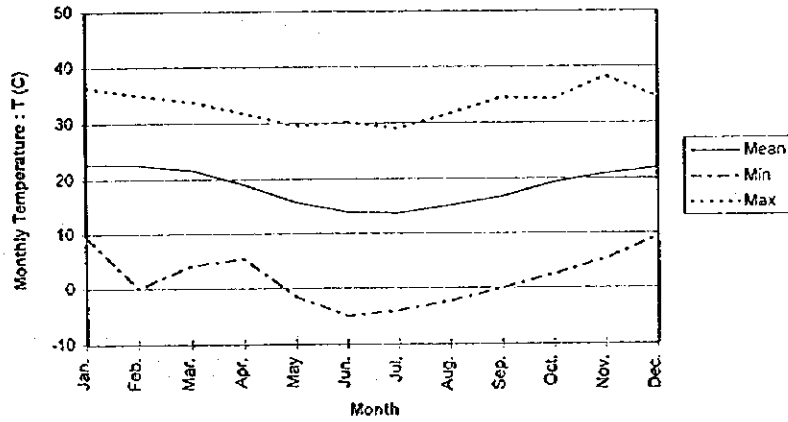
Annual Temperature (No. 11)
 St. No. 02449013 Cerro Azul
 1974 - 1993 (20 Years)



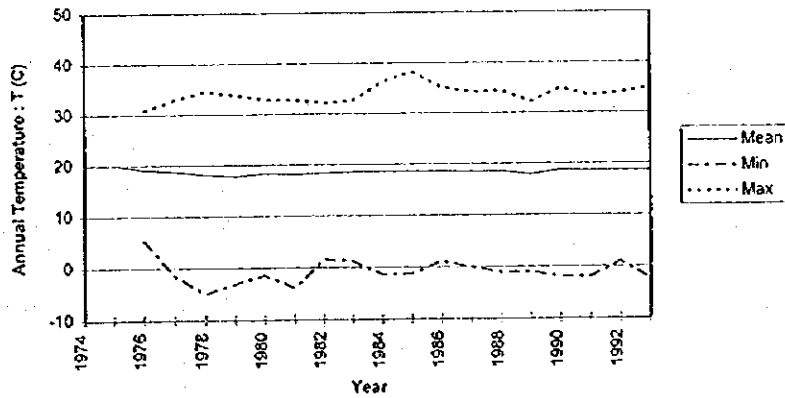
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02450011 (No.12)
 St. Name Telemaco

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(24.2)	(25.2)	(24.2)	(20.3)	(18.9)	(14.7)	(15.8)	(15.3)	(18.4)	(20.1)	(21.6)	(23.0)	19.9
2 1975	(23.7)	(24.9)	(23.9)	(20.2)	(17.2)	(15.6)	(12.5)	(18.0)	(19.5)	(19.9)	(21.7)	(23.6)	20.0
3 1976	(24.4)	(23.5)	(22.7)	(19.2)	(17.5)	(14.7)	(15.4)	(16.3)	(17.3)	18.0	20.1	21.2	19.2
4 1977	22.0	23.1	21.9	17.6	15.6	14.1	16.2	15.7	17.3	20.1	20.3	20.8	18.7
5 1978	22.6	22.2	21.5	17.4	13.3	13.0	14.6	13.1	16.4	19.9	21.0	21.7	18.1
6 1979	21.2	22.3	20.6	17.5	14.2	13.0	12.4	15.5	16.1	19.9	19.2	21.8	17.8
7 1980	21.4	21.7	22.1	19.3	16.3	12.7	14.9	15.6	14.5	19.0	20.5	21.8	18.3
8 1981	22.4	22.8	21.2	18.1	16.5	12.9	11.7	14.8	17.2	17.9	21.4	20.4	18.1
9 1982	21.5	22.0	21.2	17.7	14.4	15.4	14.3	15.9	17.3	18.8	20.6	20.7	18.3
10 1983	22.8	22.4	20.3	19.4	17.6	13.7	15.7	14.8	15.2	18.8	20.2	21.6	18.5
11 1984	23.3	23.9	21.4	18.1	17.0	14.4	14.4	14.1	15.5	19.6	20.7	20.9	18.6
12 1985	22.0	22.6	21.5	19.9	14.4	12.6	12.1	15.7	17.2	20.2	22.0	22.7	18.6
13 1986	23.6	21.8	21.4	19.8	16.6	13.8	12.9	15.5	16.4	18.8	21.1	21.8	18.6
14 1987	23.0	23.0	20.5	19.7	14.6	12.6	16.0	14.0	16.1	19.1	20.9	22.0	18.5
15 1988	23.4	20.7	22.0	19.5	15.6	13.9	11.9	15.2	18.0	19.0	20.6	22.4	18.5
16 1989	21.4	21.8	21.3	19.8	14.8	13.4	11.9	14.3	16.1	17.8	19.8	21.9	17.8
17 1990	(24.4)	22.3	22.2	20.8	14.5	13.6	11.9	14.4	15.2	20.6	22.4	22.3	18.7
18 1991	22.6	21.8	21.1	19.2	15.7	15.0	12.7	15.4	17.1	19.2	21.1	22.3	18.6
19 1992	23.0	22.8	20.7	17.9	17.0	16.1	13.2	14.2	16.8	19.5	20.2	22.3	18.6
20 1993	22.5	21.0	21.5	19.9	15.6	13.3	13.7	14.4	17.2	20.2	21.5	22.5	18.6
Mean	22.8	22.6	21.7	19.1	15.8	13.9	13.7	15.1	16.7	19.3	20.8	21.9	18.6

Monthly Mean Temperature (No. 12)
 St. No. 02450011 Telemaco
 1974 - 1993 (20 Years)



Annual Temperature (No. 12)
 St. No. 02450011 Telemaco
 1974 - 1993 (20 Years)



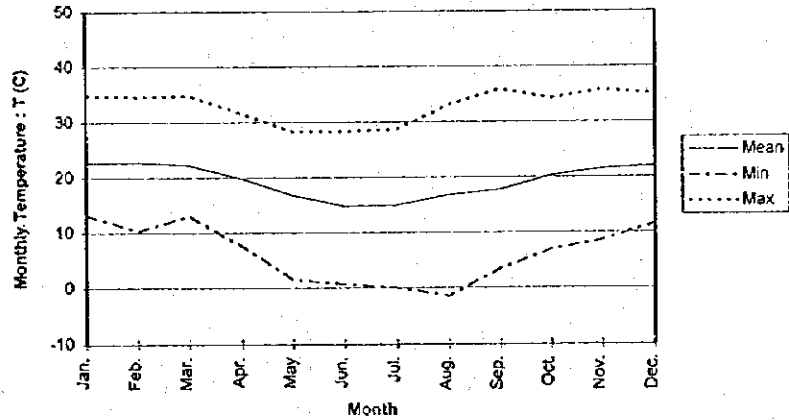
Monthly Temperature Table Period 1974 - 1993 (20 years)

St. No. 02451052 (No.13)

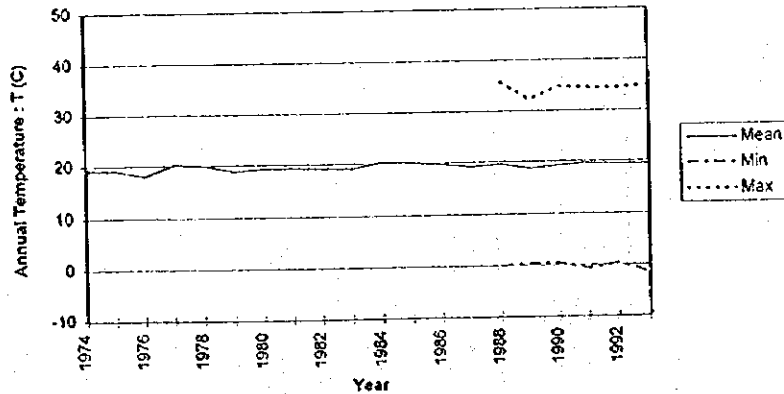
St. Name Candido Abreu

	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1	1974	(21.5)	(23.1)	(21.6)	(19.6)	(15.4)	(14.0)	(17.1)	(16.5)	(20.3)	(18.8)	(21.0)	(20.5)	19.2
2	1975	(21.7)	(22.8)	(22.4)	(19.6)	(15.7)	(14.7)	(12.8)	(20.2)	(19.6)	(18.8)	(19.6)	(21.1)	19.1
3	1976	(22.1)	(20.8)	(21.1)	(18.3)	(15.9)	(13.7)	(13.7)	(15.1)	(15.0)	(18.7)	(20.8)	(21.6)	18.6
4	1977	(22.1)	(24.7)	(23.6)	(18.7)	(17.8)	(15.5)	(19.2)	(17.4)	(19.6)	(21.9)	(20.8)	(20.8)	20.2
5	1978	(23.6)	(24.2)	(23.1)	(20.7)	(16.4)	(15.7)	(16.8)	(14.9)	(17.4)	(22.0)	(21.5)	(22.1)	19.9
6	1979	(21.6)	(23.0)	(22.0)	(18.4)	(15.5)	(18.0)	(13.3)	(18.4)	(16.4)	(20.7)	(19.6)	(21.4)	18.9
7	1980	(21.6)	(21.7)	(23.9)	(20.3)	(17.5)	(13.8)	(16.1)	(17.0)	(14.5)	(20.8)	(20.7)	(22.4)	19.2
8	1981	(22.5)	(23.4)	(22.2)	(19.2)	(18.9)	(13.3)	(12.4)	(18.2)	(20.2)	(18.3)	(22.4)	(20.3)	19.3
9	1982	(21.7)	(22.5)	(21.5)	(18.8)	(16.4)	(15.5)	(15.9)	(17.8)	(18.7)	(19.6)	(21.4)	(20.2)	19.2
10	1983	(23.0)	(23.0)	(21.0)	(20.1)	(17.5)	(12.6)	(17.0)	(17.4)	(14.9)	(19.2)	(21.1)	(22.1)	19.1
11	1984	(24.3)	(25.0)	(22.4)	(18.5)	(19.3)	(17.3)	(17.4)	(15.2)	(17.7)	(22.9)	(21.6)	(21.0)	20.2
12	1985	(22.9)	(23.1)	(22.1)	(20.2)	(17.1)	(14.0)	(13.2)	(18.5)	(19.3)	(22.0)	(23.5)	(24.5)	20.1
13	1986	(23.8)	(21.9)	(21.7)	(21.2)	(17.4)	(16.4)	(14.5)	(16.8)	(17.4)	(20.3)	(23.0)	(22.0)	19.7
14	1987	(23.1)	(21.0)	(22.0)	(21.0)	(13.8)	(13.6)	(18.0)	(15.5)	(17.1)	(20.3)	(22.2)	(22.1)	19.2
15	1988	(24.0)	(21.6)	(23.9)	(20.5)	(15.7)	(13.5)	13.1	17.1	19.4	20.1	21.8	23.6	19.5
16	1989	22.0	22.5	22.0	20.3	16.1	14.4	13.2	15.7	16.8	18.6	20.7	(22.1)	18.7
17	1990	22.6	23.1	23.1	21.5	15.3	14.1	12.5	15.4	16.3	21.2	22.9	22.8	19.2
18	1991	23.3	22.3	21.7	19.9	17.0	16.1	13.9	16.7	16.6	20.2	22.0	23.1	15.6
19	1992	23.6	23.8	21.7	18.8	17.8	17.0	13.9	15.1	17.7	20.2	20.8	22.9	19.4
20	1993	23.1	21.8	22.2	20.8	16.6	14.2	14.3	16.0	17.5	21.1	22.3	22.9	19.4
	Mean	22.7	22.8	22.3	19.8	16.7	14.8	14.9	16.7	17.7	20.3	21.5	22.0	19.3

Monthly Mean Temperature (No. 13)
St. No. 02451052 Candido Abreu
1974 - 1993 (20 Years)



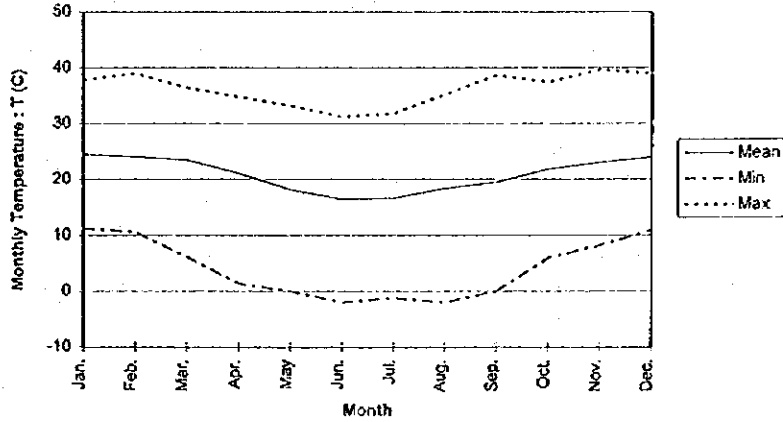
Annual Temperature (No. 13)
St. No. 02451052 Candido Abreu
1974 - 1993 (20 Years)



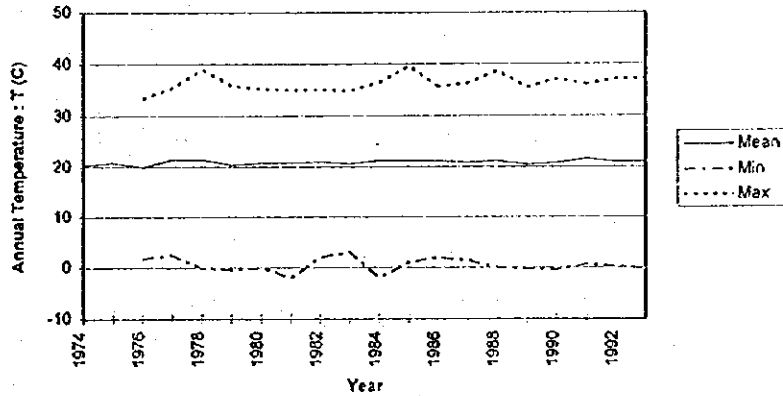
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02452050 (No.14)
 St Name Nova Cantu

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(24.0)	(24.1)	(23.2)	(20.5)	(17.6)	(15.6)	(16.6)	(17.2)	(19.0)	(20.1)	(21.5)	(24.1)	20.3
2 1975	(23.7)	(24.5)	(23.7)	(21.1)	(17.7)	(17.4)	(14.6)	(19.1)	(20.4)	(21.1)	(22.7)	(23.8)	20.8
3 1976	(24.5)	23.0	22.4	19.5	17.5	15.1	16.3	17.3	17.7	20.7	22.2	23.3	20.0
4 1977	23.8	25.0	23.9	20.0	18.8	17.3	20.4	18.4	20.7	23.1	22.7	23.5	21.5
5 1978	25.7	25.6	24.7	20.9	17.4	17.3	18.6	16.8	19.7	23.0	23.0	24.4	21.4
6 1979	23.9	24.3	23.0	19.4	16.4	15.7	15.6	19.3	18.4	22.4	21.9	23.8	20.4
7 1980	23.2	23.8	24.3	22.2	18.8	15.8	17.7	18.5	16.7	21.9	22.6	23.8	20.8
8 1981	24.6	23.9	23.2	21.0	20.3	15.4	15.1	19.4	20.8	20.7	23.2	22.3	20.8
9 1982	24.3	23.8	23.4	20.8	18.0	17.4	17.8	19.6	20.5	21.0	22.4	22.6	21.0
10 1983	24.8	24.3	22.4	21.3	19.6	14.7	17.9	18.6	17.4	20.9	21.9	23.5	20.6
11 1984	25.0	25.4	23.5	19.7	19.5	17.8	18.2	16.7	19.4	23.7	22.7	22.7	21.2
12 1985	24.4	24.0	22.8	21.3	17.8	15.9	15.7	19.0	20.6	22.7	24.9	25.9	21.3
13 1986	25.2	23.6	22.8	21.9	19.1	18.1	16.5	18.8	19.2	21.3	24.1	23.8	21.2
14 1987	25.0	22.6	23.3	21.8	18.0	15.6	20.0	17.3	19.3	21.8	23.7	23.6	20.8
15 1988	25.5	23.0	25.0	21.5	17.1	12.7	14.9	20.3	22.7	21.7	24.0	25.7	21.2
16 1989	22.9	23.6	23.5	21.6	17.9	16.1	15.4	17.7	18.4	20.7	22.8	24.8	20.5
17 1990	(23.9)	24.2	24.3	22.9	17.0	16.0	13.5	17.6	17.7	23.3	24.4	24.7	20.8
18 1991	25.2	24.3	23.5	21.6	19.3	18.1	16.6	19.2	21.6	21.8	23.7	24.5	21.6
19 1992	25.2	25.2	22.7	20.4	18.9	19.3	14.6	17.0	18.9	22.0	22.5	24.7	21.0
20 1993	24.3	22.5	23.7	22.4	18.3	16.2	16.2	18.7	19.3	22.8	23.9	24.2	21.0
Mean	24.5	24.0	23.5	21.1	18.2	16.4	15.6	18.3	19.4	21.8	23.0	24.0	20.9

Monthly Mean Temperature (No. 14)
 St. No. 02452050 Nova Cantu
 1974 - 1993 (20 Years)



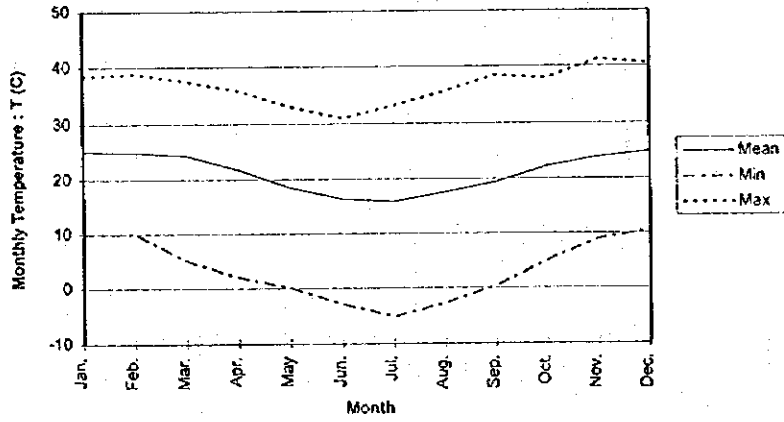
Annual Temperature (No. 14)
 St. No. 02452050 Nova Cantu
 1974 - 1993 (20 Years)



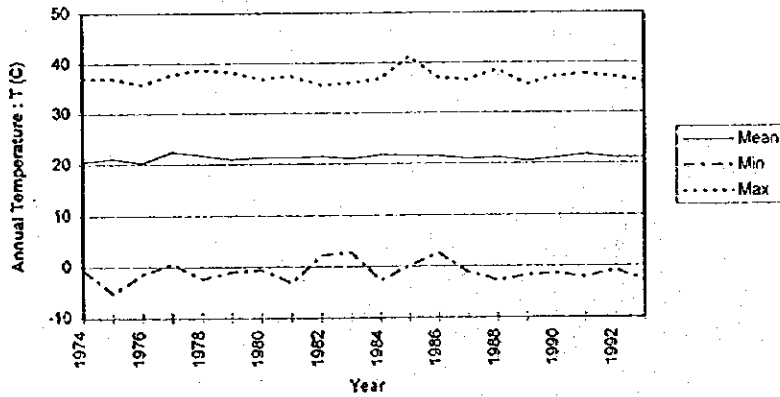
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02453003 (No. 15)
 St. Name Palotina

	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1	1974	24.8	24.9	23.8	20.8	17.5	15.2	16.3	17.0	19.1	20.3	21.9	24.9	20.5
2	1975	24.4	25.3	24.4	21.4	17.6	17.2	14.0	19.2	20.7	21.5	23.3	24.5	21.1
3	1976	25.3	23.5	23.0	19.9	18.1	14.9	15.5	18.3	17.4	21.4	23.5	24.4	20.3
4	1977	24.8	26.0	25.4	21.5	19.1	17.8	20.4	18.7	21.9	24.3	24.5	24.8	22.4
5	1978	26.3	26.3	28.0	21.2	17.6	17.2	18.5	15.7	20.2	23.3	24.3	24.5	21.8
6	1979	24.3	25.6	24.6	20.2	16.4	15.5	15.4	19.5	18.9	23.1	23.0	24.9	21.0
7	1980	23.8	24.7	25.6	23.4	19.7	15.9	16.4	18.4	17.2	22.4	23.7	24.8	21.3
8	1981	25.7	25.4	24.3	22.4	20.7	15.2	14.0	18.6	20.3	21.3	24.0	23.4	21.3
9	1982	24.6	25.0	23.7	21.6	18.6	17.4	17.6	19.4	20.6	22.1	23.5	23.7	21.5
10	1983	25.3	25.1	23.1	22.3	20.2	14.8	17.5	17.4	17.6	21.9	22.8	24.9	21.1
11	1984	25.8	26.3	24.6	20.8	20.3	17.6	17.6	16.2	19.0	24.7	24.3	23.6	21.8
12	1985	25.3	25.9	24.2	22.6	18.6	15.4	14.7	17.3	20.1	23.0	25.8	28.8	21.6
13	1986	26.2	24.5	23.5	22.3	19.3	17.4	15.9	18.1	18.7	21.4	25.1	25.1	21.5
14	1987	26.0	23.2	23.3	22.6	16.3	15.3	18.9	16.0	19.5	21.9	24.8	24.0	21.0
15	1988	25.8	23.6	25.2	22.3	17.7	15.9	12.9	17.8	21.7	21.3	23.9	28.0	21.2
16	1989	23.8	24.2	23.7	22.0	17.9	16.1	13.8	16.7	17.9	20.9	23.4	25.7	20.5
17	1990	(24.6)	24.2	25.0	23.6	17.1	15.7	13.2	16.9	17.5	23.7	25.7	25.5	21.1
18	1991	25.7	24.5	25.0	22.3	19.1	17.6	15.7	18.2	21.3	22.2	24.0	24.9	21.7
19	1992	25.5	25.8	23.7	20.2	19.2	19.1	14.0	16.5	19.0	22.3	22.9	25.1	21.1
20	1993	25.1	23.5	24.4	22.6	18.1	15.8	15.3	17.0	19.4	22.8	23.5	24.8	21.0
	Mean	25.2	24.9	24.3	21.8	18.5	16.4	15.9	17.5	19.4	22.3	23.9	24.8	21.2

Monthly Mean Temperature (No. 15)
 St. No. 02453003 Palotina
 1974 - 1993 (20 Years)



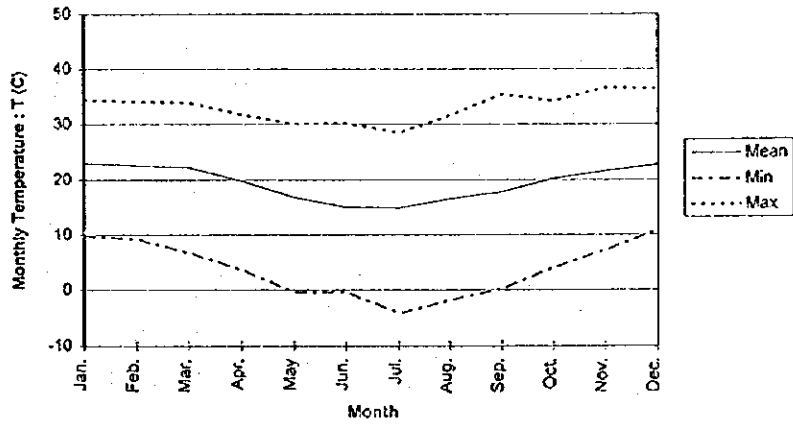
Annual Temperature (No. 15)
 St. No. 02453003 Palotina
 1974 - 1993 (20 Years)



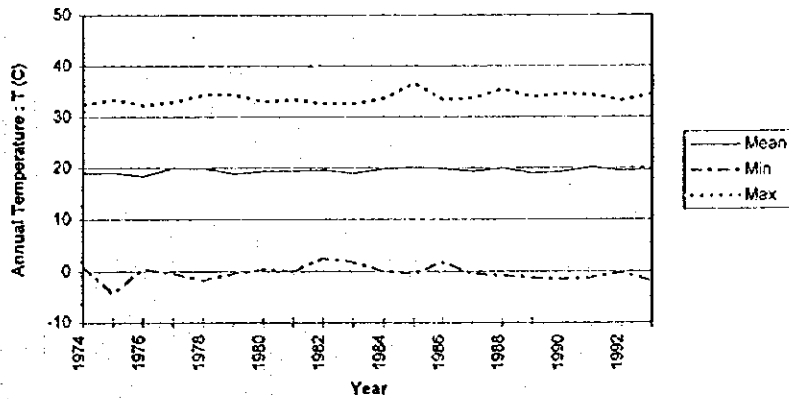
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02453023 (No.16)
 St. Name Cascavel

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	22.3	22.7	21.8	19.4	16.8	13.3	16.1	15.6	18.7	18.8	19.9	21.9	18.9
2 1975	21.8	22.7	21.8	19.2	15.8	15.4	13.4	18.5	18.5	18.8	20.7	21.9	19.0
3 1976	22.8	21.7	21.4	18.3	16.2	13.4	14.4	15.3	15.9	18.8	20.6	21.9	18.4
4 1977	22.3	23.8	22.5	18.6	17.7	16.0	18.1	15.6	19.5	21.4	21.0	22.1	20.0
5 1978	23.9	23.8	23.1	19.5	16.0	15.7	17.2	15.0	18.3	21.5	21.7	23.1	19.9
6 1979	22.6	22.9	21.4	17.9	14.7	15.3	14.1	17.7	16.4	20.5	20.4	22.2	18.8
7 1980	22.2	22.4	23.3	20.8	17.7	14.3	15.3	16.7	15.2	20.1	21.1	22.4	19.3
8 1981	23.0	22.8	22.3	20.0	19.0	13.8	13.3	17.8	18.8	19.1	21.8	21.0	19.4
9 1982	23.1	22.3	22.0	20.1	16.5	15.3	16.2	17.8	19.1	19.8	20.7	21.6	19.5
10 1983	23.6	22.9	21.4	19.8	17.7	12.5	15.5	16.3	15.5	19.2	20.6	22.7	19.0
11 1984	23.4	24.2	22.0	18.4	18.0	16.3	16.6	14.6	19.4	22.6	21.2	21.8	19.8
12 1985	23.6	23.1	22.1	20.0	17.3	14.7	14.0	17.1	18.7	21.4	23.9	25.0	20.1
13 1986	24.0	22.5	21.7	20.5	17.5	16.5	15.4	17.3	17.6	20.0	22.5	22.9	19.9
14 1987	23.9	21.3	22.6	20.5	14.3	14.2	17.6	15.0	17.5	20.3	22.8	22.3	19.4
15 1988	24.1	21.7	24.0	20.0	15.5	15.3	12.6	18.6	20.6	19.6	22.5	24.6	19.9
16 1989	21.4	22.2	21.9	20.4	16.6	14.7	13.8	15.7	16.5	19.4	21.6	23.3	19.0
17 1990	22.4	22.0	22.7	21.6	16.0	14.4	11.8	15.9	15.6	22.0	(23.4)	23.3	19.3
18 1991	23.4	22.4	22.7	20.5	18.0	16.3	14.8	17.4	19.9	20.5	22.5	23.0	20.1
19 1992	23.6	23.3	21.5	19.2	17.8	17.8	12.7	15.1	17.3	20.6	21.2	23.5	19.5
20 1993	22.9	21.1	22.6	21.6	17.3	15.1	14.7	16.6	17.6	21.5	22.4	23.1	19.7
Mean	23.0	22.6	22.2	19.8	16.8	15.0	14.9	16.5	17.8	20.3	21.6	22.7	19.4

Monthly Mean Temperature (No. 16)
 St. No. 02453023 Cascavel
 1974 - 1993 (20 Years)



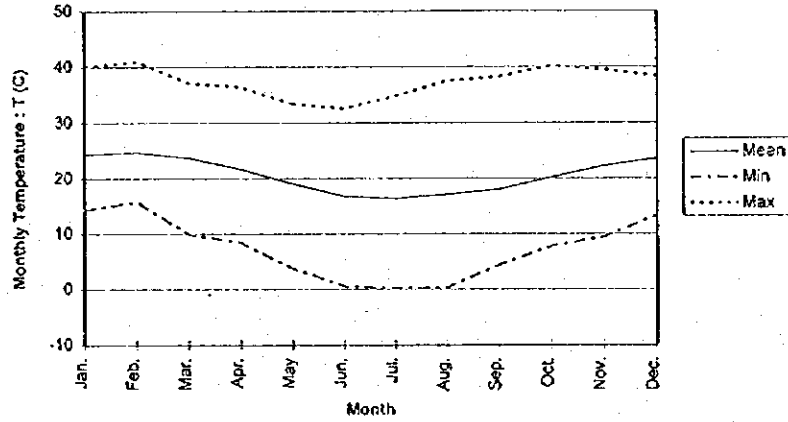
Annual Temperature (No. 16)
 St. No. 02453023 Cascavel
 1974 - 1993 (20 Years)



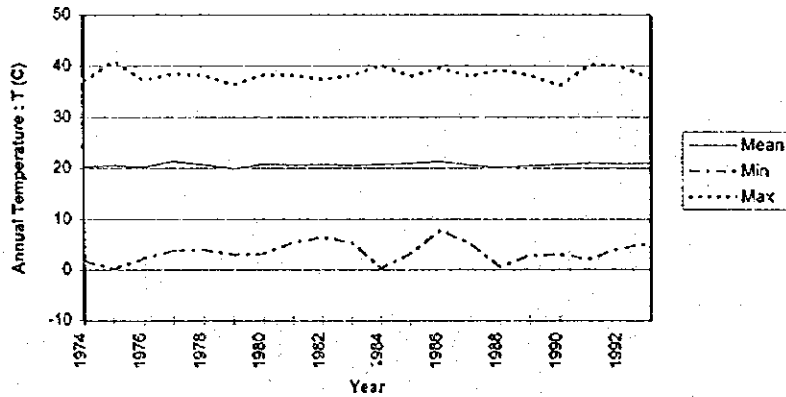
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02549038 (No.17)
 St. Name Morretes

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	24.5	25.1	24.3	20.8	18.9	15.9	16.4	16.7	17.4	19.3	21.4	22.9	20.3
2 1975	23.8	24.9	24.2	21.2	18.6	17.0	14.2	18.1	18.9	19.9	21.7	24.2	20.6
3 1976	24.6	23.8	23.3	21.3	18.6	15.6	15.8	16.1	17.4	19.9	22.1	24.3	20.2
4 1977	24.6	26.3	24.0	20.6	19.3	17.7	19.0	18.5	19.6	21.5	21.6	23.1	21.3
5 1978	24.1	24.4	24.1	20.6	17.7	16.4	18.3	16.7	18.7	21.1	22.3	23.3	20.5
6 1979	22.0	24.2	22.3	20.5	17.8	15.1	15.4	18.0	17.6	21.2	21.4	23.7	19.9
7 1980	23.7	24.3	25.7	22.7	20.2	16.5	16.5	17.0	16.6	19.9	22.0	24.3	20.8
8 1981	24.1	25.3	23.4	21.0	20.9	17.0	15.6	17.2	19.0	18.6	22.6	22.7	20.5
9 1982	23.2	24.3	22.8	20.5	18.5	19.0	17.4	18.0	19.2	20.1	21.9	23.3	20.7
10 1983	25.1	24.7	22.7	21.4	20.0	15.8	16.5	16.8	16.4	20.0	23.2	24.1	20.6
11 1984	26.1	26.4	23.3	21.0	20.5	17.7	17.0	15.0	17.9	20.5	21.3	22.1	20.7
12 1985	23.3	24.7	24.4	22.5	18.6	16.7	16.7	18.4	18.5	21.1	22.3	23.9	20.9
13 1986	25.4	24.9	23.8	22.8	20.9	17.7	16.9	18.4	18.4	20.0	22.4	23.6	21.3
14 1987	25.5	24.7	23.5	22.7	(17.7)	15.4	18.3	16.5	17.2	19.3	22.5	24.0	20.5
15 1988	25.9	23.4	24.5	21.3	17.5	14.3	14.7	17.4	18.1	19.5	21.8	23.7	20.2
16 1989	24.2	24.6	23.6	22.6	18.9	17.4	15.2	17.2	18.0	19.0	22.4	23.0	20.5
17 1990	24.2	25.0	24.3	23.4	18.0	16.7	15.1	16.2	17.3	21.2	23.6	23.8	20.7
18 1991	23.8	24.1	23.0	22.1	20.0	17.5	16.3	17.6	18.6	20.9	23.0	25.1	21.0
19 1992	24.9	25.2	23.7	21.8	19.5	19.3	15.9	15.8	18.3	20.7	21.7	23.4	20.9
20 1993	25.1	24.0	24.1	23.2	19.5	16.8	16.7	16.3	17.3	20.8	24.0	24.3	21.0
Mean	24.4	24.7	23.8	21.7	19.1	16.8	16.4	17.1	18.0	20.2	22.3	23.6	20.7

Monthly Mean Temperature (No. 17)
 St. No. 02548038 Morretes
 1974 - 1993 (20 Years)



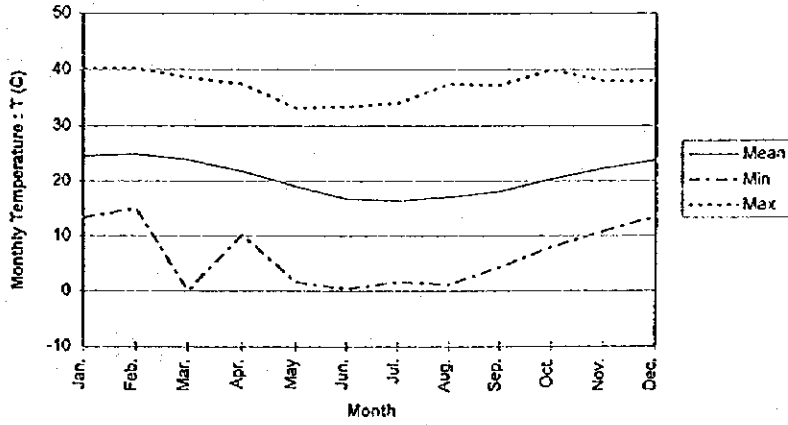
Annual Temperature (No. 17)
 St. No. 0548038 Morretes
 1974 - 1993 (20 Years)



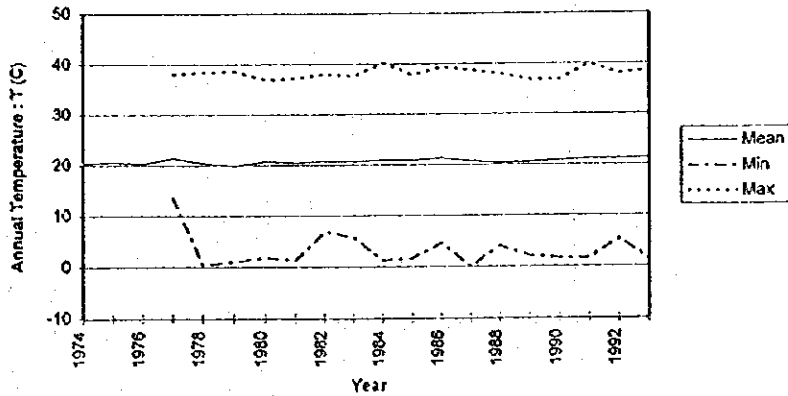
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02548039 (No.18)
 St. Name Guaraquecaba

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(24.7)	(25.3)	(24.4)	(20.9)	(18.9)	(15.9)	(16.4)	(16.7)	(17.4)	(19.3)	(21.5)	(23.0)	20.4
2 1975	(23.9)	(25.1)	(24.3)	(21.3)	(18.6)	(17.0)	(14.1)	(18.1)	(18.9)	(20.0)	(21.8)	(24.3)	20.6
3 1976	(24.8)	(23.9)	(23.4)	(21.4)	(18.6)	(15.6)	(15.6)	(16.1)	(17.4)	(20.0)	(22.2)	(24.4)	20.3
4 1977	(25.0)	(26.5)	(24.1)	(20.7)	(19.3)	(17.7)	(19.0)	(18.5)	(19.6)	(21.6)	21.6	23.1	21.4
5 1978	24.2	24.2	23.9	20.3	17.2	16.2	18.1	16.3	18.5	21.0	22.2	(23.4)	20.5
6 1979	(22.1)	24.4	22.1	20.4	17.6	15.1	15.2	17.6	17.8	21.1	21.1	23.9	19.9
7 1980	23.6	24.2	25.9	22.2	20.2	16.0	16.5	16.9	16.8	20.1	21.8	24.4	20.7
8 1981	24.3	25.4	23.4	20.9	20.5	16.2	15.2	17.0	18.6	18.8	22.8	22.8	20.5
9 1982	23.0	24.5	23.0	20.4	18.5	19.1	17.6	18.1	19.0	20.2	22.0	23.3	20.7
10 1983	25.3	25.1	22.9	21.6	20.3	15.9	16.5	16.8	16.5	20.0	23.2	24.2	20.7
11 1984	26.3	26.7	23.6	21.3	21.0	17.7	15.7	15.0	18.1	20.8	21.7	22.4	20.9
12 1985	23.3	25.1	24.7	23.1	19.3	16.4	16.4	17.9	18.6	21.1	22.1	24.0	20.9
13 1986	25.7	25.2	23.8	23.0	20.6	17.4	16.8	18.4	18.4	20.0	22.7	24.0	21.3
14 1987	25.6	25.0	22.9	23.3	17.7	15.3	18.2	16.7	17.4	19.6	22.6	24.1	20.7
15 1988	26.1	23.4	24.7	21.8	18.1	15.0	14.7	17.3	18.3	19.7	21.7	23.5	20.4
16 1989	24.4	24.7	23.7	22.8	18.9	17.3	15.0	17.3	17.9	18.9	21.9	23.1	20.5
17 1990	24.6	25.1	24.6	23.5	17.7	16.6	15.0	16.3	17.4	21.5	24.0	23.9	20.9
18 1991	24.0	24.1	23.6	22.3	19.6	17.7	16.2	17.8	18.5	21.4	23.4	25.0	21.1
19 1992	25.1	25.3	24.2	22.2	20.0	19.8	16.4	16.3	18.7	20.8	21.7	23.4	21.2
20 1993	25.4	24.5	24.5	23.2	19.3	17.1	17.1	16.3	17.8	21.4	24.2	24.7	21.3
Mean	24.6	24.9	23.9	21.8	19.1	16.7	16.3	17.1	18.1	20.4	22.3	23.7	20.7

Monthly Mean Temperature (No. 18)
 St. No. 02548039 Guaraquecaba
 1974 - 1993 (20 Years)



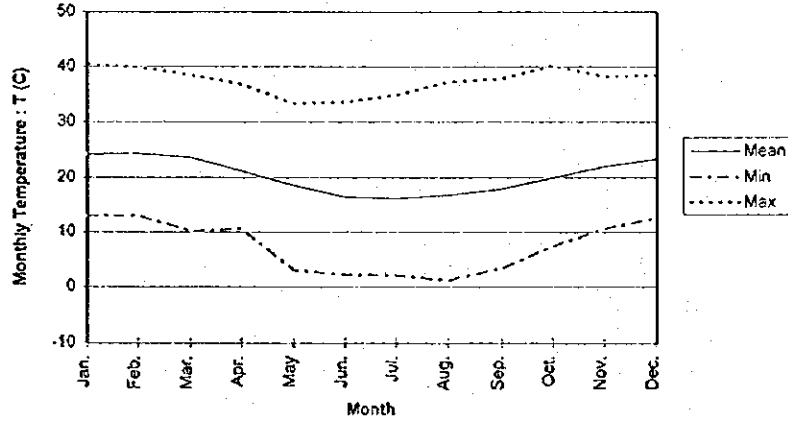
Annual Temperature (No. 18)
 St. No. 02548039 Guaraquecaba
 1974 - 1993 (20 Years)



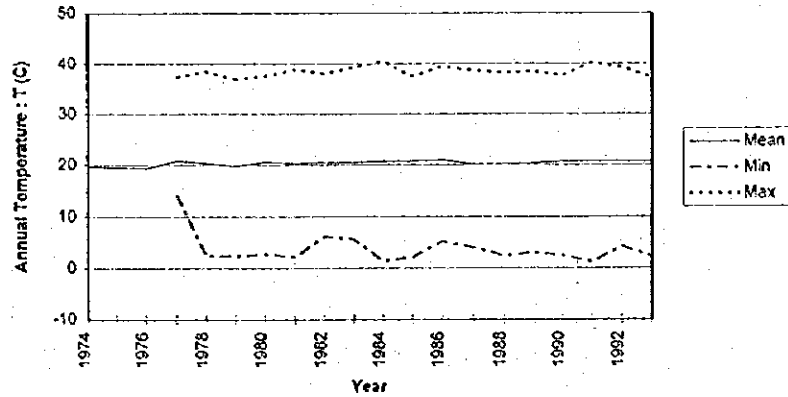
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02548070 (No. 19)
 St. Name Antonina

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(23.2)	(26.6)	(25.3)	(19.0)	(17.2)	(14.8)	(16.1)	(16.1)	(18.0)	(18.5)	(19.9)	(21.4)	19.7
2 1975	(22.4)	(24.5)	(23.0)	(19.0)	(16.8)	(15.8)	(13.4)	(18.7)	(18.5)	(18.8)	(20.4)	(22.9)	19.5
3 1976	(24.1)	(23.1)	(23.1)	(18.8)	(17.3)	(15.4)	(15.4)	(15.3)	(17.0)	(18.2)	(21.3)	(23.0)	19.3
4 1977	(24.0)	(25.7)	(23.9)	(19.5)	(17.8)	(16.3)	(19.3)	(18.2)	(19.3)	(20.2)	21.9	23.6	20.8
5 1978	24.8	24.2	23.7	20.1	17.0	16.2	17.8	16.2	18.7	20.9	21.9	22.9	20.4
6 1979	22.3	(24.4)	22.1	20.3	17.4	14.9	14.9	17.5	17.8	21.1	21.0	23.6	19.8
7 1980	23.6	24.1	25.7	22.4	19.8	16.0	15.4	15.8	16.5	19.8	21.6	24.2	20.6
8 1981	24.1	25.2	23.2	20.7	20.2	16.3	15.2	16.7	18.1	18.7	22.7	22.4	20.3
9 1982	22.9	24.2	22.7	20.4	18.2	18.9	17.0	17.9	18.9	20.0	21.8	23.2	20.5
10 1983	25.0	24.7	22.6	21.5	20.0	15.7	16.5	16.5	15.3	20.0	23.1	24.0	20.6
11 1984	26.1	26.3	23.3	20.8	20.4	17.6	16.6	14.9	17.9	20.7	21.5	22.1	20.7
12 1985	23.3	24.7	24.4	22.5	18.3	16.0	16.2	17.9	18.5	21.2	22.2	24.0	20.8
13 1986	25.3	24.5	23.7	22.6	20.4	17.0	16.4	18.1	18.3	20.0	22.4	23.5	21.0
14 1987	25.4	19.5	23.3	22.7	17.8	15.2	18.0	16.4	17.3	19.4	22.4	24.1	20.1
15 1988	26.0	23.1	24.3	21.2	17.7	15.3	14.6	17.0	18.1	19.5	21.6	23.7	20.2
16 1989	24.4	24.5	23.8	22.8	18.7	17.1	14.9	15.8	18.1	18.9	22.1	23.1	20.4
17 1990	24.3	25.0	24.5	23.6	17.8	16.3	15.1	16.0	17.1	21.2	23.8	23.6	20.7
18 1991	23.6	23.8	23.0	21.8	19.5	17.2	16.0	17.3	18.4	20.8	23.1	24.7	20.8
19 1992	24.8	25.0	23.5	21.4	19.6	19.2	15.9	15.7	18.3	20.7	21.6	23.3	20.8
20 1993	24.8	23.4	23.8	22.9	18.9	16.9	16.4	15.8	17.0	20.8	23.8	24.0	20.7
Mean	24.2	24.3	23.6	21.2	18.5	16.4	16.1	16.7	17.9	20.0	22.0	23.4	20.4

Monthly Mean Temperature (No. 19)
 St. No. 02548070 Antonina
 1974 - 1993 (20 Years)



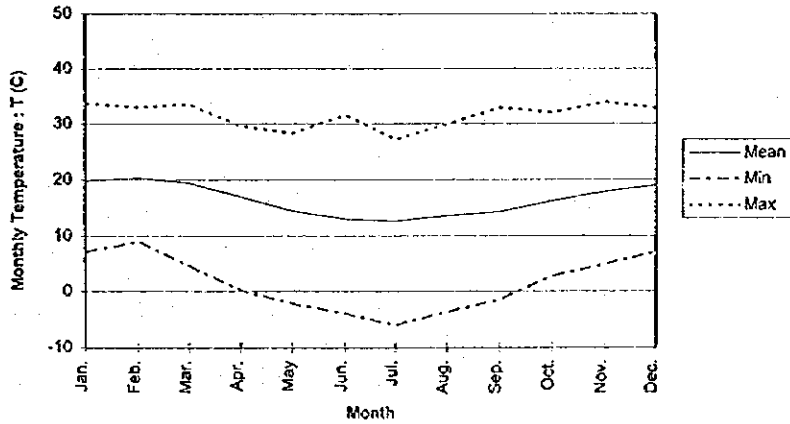
Annual Temperature (No. 19)
 St. No. 02548070 Antonina
 1974 - 1993 (20 Years)



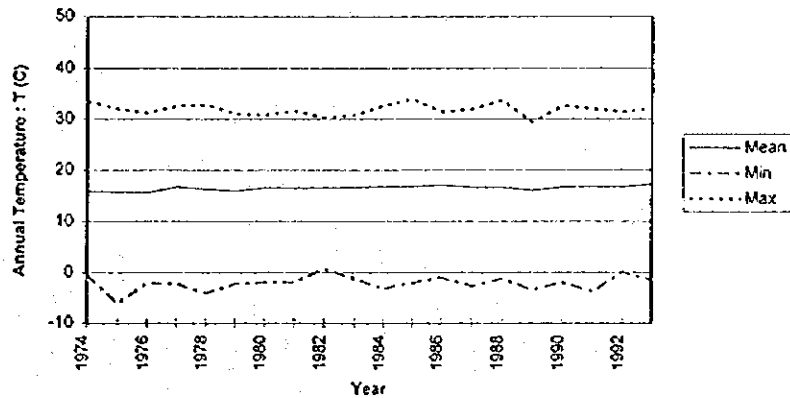
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02549041 (No.20)
 St. Name Piraquecaba

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	19.0	22.0	20.8	15.3	13.7	11.6	12.7	12.7	14.4	14.8	16.1	17.4	15.9
2 1975	18.3	20.1	18.8	15.3	13.3	12.4	10.3	15.0	14.8	15.1	16.5	18.7	15.7
3 1976	19.8	18.9	18.9	15.1	13.8	12.1	12.1	12.0	13.5	14.6	17.3	18.8	15.6
4 1977	19.7	21.2	19.6	15.7	14.2	12.9	15.5	14.6	15.5	16.3	17.4	17.9	16.7
5 1978	20.0	20.3	20.0	15.3	12.3	12.6	13.9	12.8	14.4	17.4	18.1	18.9	16.3
6 1979	17.5	20.0	17.8	16.0	13.7	12.0	11.7	15.0	14.2	17.2	16.8	19.2	15.9
7 1980	19.0	19.8	21.0	17.8	15.9	12.2	13.1	13.5	12.5	16.6	17.2	20.1	16.6
8 1981	20.1	20.9	19.1	16.3	16.1	12.7	11.4	14.0	15.5	14.7	18.7	18.3	16.5
9 1982	18.5	20.3	18.6	15.8	13.9	14.9	13.6	15.0	15.0	16.2	18.2	18.5	16.5
10 1983	20.8	20.5	18.4	17.3	15.7	12.2	14.1	13.9	12.4	15.9	18.8	19.7	16.6
11 1984	21.7	22.1	18.9	16.5	16.5	14.1	13.3	11.9	14.0	17.1	17.4	18.2	16.8
12 1985	18.7	20.5	19.9	18.3	14.1	12.6	12.4	15.0	14.7	17.1	18.3	19.7	16.8
13 1986	21.1	20.4	19.4	18.3	16.0	13.5	12.6	14.5	14.5	16.2	18.8	19.6	17.1
14 1987	21.4	19.9	18.8	18.5	13.2	12.0	15.5	13.0	13.8	16.3	13.2	19.6	16.7
15 1988	21.8	18.9	20.1	17.1	13.6	15.3	11.0	14.0	15.8	15.6	17.2	19.2	16.6
16 1989	20.0	20.0	19.2	18.3	13.9	12.7	11.2	13.3	14.0	14.9	17.4	18.5	16.1
17 1990	(19.9)	20.5	20.5	19.0	13.7	12.8	11.1	12.4	13.5	17.8	19.7	19.2	16.7
18 1991	19.3	19.4	18.8	17.4	15.2	13.9	12.5	14.1	14.7	17.0	18.7	20.5	16.8
19 1992	20.5	20.9	19.7	17.0	15.6	15.6	12.2	12.0	14.6	16.7	17.3	18.9	16.8
20 1993	(20.4)	19.6	19.8	18.6	14.8	12.7	13.0	13.2	17.6	17.6	19.6	19.5	17.2
Mean	19.9	20.3	19.4	16.9	14.5	13.0	12.7	13.6	14.3	16.2	17.9	19.0	16.5

Monthly Mean Temperature (No. 20)
 St. No. 02549041 Piraquara
 1974 - 1993 (20 Years)



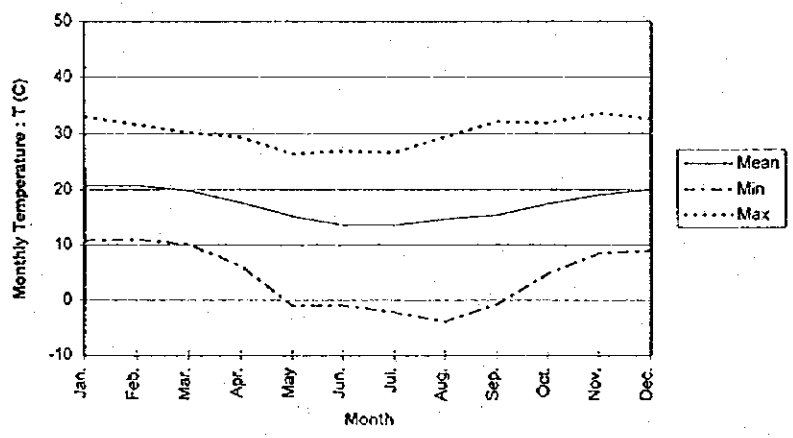
Annual Temperature (No. 20)
 St. No. 02549041 Piraquara
 1974 - 1993 (20 Years)



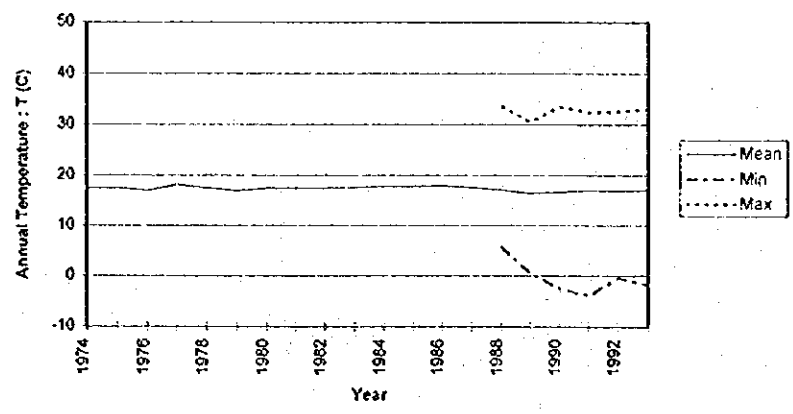
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02549081 (No 21)
 St. Name Lapa

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(20.8)	(21.3)	(20.0)	(17.3)	(15.0)	(13.4)	(15.4)	(14.8)	(16.6)	(16.8)	(19.2)	(19.2)	17.5
2 1975	(20.1)	(21.1)	(20.3)	(17.3)	(15.4)	(14.4)	(12.2)	(17.0)	(16.5)	(16.8)	(18.2)	(20.5)	17.5
3 1976	(21.7)	(20.3)	(19.5)	(16.7)	(14.8)	(13.4)	(13.6)	(14.0)	(14.6)	(16.5)	(19.2)	(19.9)	17.0
4 1977	(20.8)	(22.0)	(20.5)	(16.8)	(16.0)	(14.5)	(17.2)	(15.6)	(17.3)	(18.7)	(18.9)	(19.5)	18.1
5 1978	(20.8)	(20.8)	(20.4)	(17.1)	(14.0)	(14.1)	(15.2)	(13.8)	(15.7)	(19.0)	(19.1)	(20.0)	17.5
6 1979	(18.9)	(20.8)	(18.9)	(16.5)	(14.4)	(13.4)	(12.7)	(15.9)	(15.1)	(18.5)	(18.2)	(20.1)	16.9
7 1980	(19.9)	(20.3)	(21.1)	(18.7)	(16.3)	(13.0)	(14.4)	(14.9)	(13.4)	(17.7)	(18.5)	(20.8)	17.4
8 1981	(20.8)	(21.1)	(19.6)	(17.4)	(16.8)	(13.3)	(12.3)	(15.3)	(17.2)	(16.3)	(20.2)	(19.0)	17.4
9 1982	(19.6)	(20.7)	(19.3)	(16.6)	(14.6)	(15.2)	(14.6)	(16.0)	(16.7)	(17.3)	(19.3)	(19.5)	17.4
10 1983	(21.5)	(20.8)	(19.0)	(18.1)	(16.8)	(13.2)	(15.4)	(15.3)	(13.8)	(17.1)	(19.4)	(20.3)	17.5
11 1984	(22.0)	(22.6)	(19.6)	(16.9)	(17.1)	(15.0)	(14.4)	(13.0)	(15.4)	(18.9)	(18.6)	(19.5)	17.8
12 1985	(20.0)	(20.9)	(20.1)	(18.7)	(14.8)	(13.2)	(13.0)	(16.5)	(16.3)	(18.4)	(20.2)	(21.4)	17.8
13 1986	(21.7)	(20.6)	(19.9)	(17.4)	(16.8)	(14.7)	(13.4)	(15.9)	(13.6)	(17.8)	(19.9)	(20.2)	17.9
14 1987	(21.8)	(20.0)	(20.1)	(19.0)	(13.8)	(12.7)	(16.6)	(14.1)	(15.2)	(17.9)	(19.5)	(20.1)	17.6
15 1988	(22.3)	(19.7)	(20.9)	(17.9)	(14.4)	(12.1)	(11.9)	(15.6)	15.9	16.1	17.9	20.0	17.1
16 1989	19.9	20.2	19.5	18.2	13.8	12.8	(12.4)	13.4	14.2	14.9	18.0	19.4	16.4
17 1990	20.2	20.7	20.3	18.8	13.5	12.1	10.5	12.4	13.2	18.1	20.4	19.8	16.7
18 1991	20.0	20.0	19.1	17.3	15.1	13.5	12.2	14.3	15.3	17.1	19.3	21.2	17.0
19 1992	20.9	21.3	19.5	16.9	15.1	15.4	11.7	12.2	14.6	17.1	17.9	20.0	16.9
20 1993	21.3	19.7	19.7	18.6	14.6	12.4	12.6	13.1	14.3	18.0	20.0	20.0	17.0
Mean	20.8	20.7	19.9	17.7	15.1	13.6	13.6	14.6	15.3	17.4	19.1	20.0	17.3

Monthly Mean Temperature (No. 21)
 St. No. 02549091 Lapa
 1974 - 1993 (20 Years)



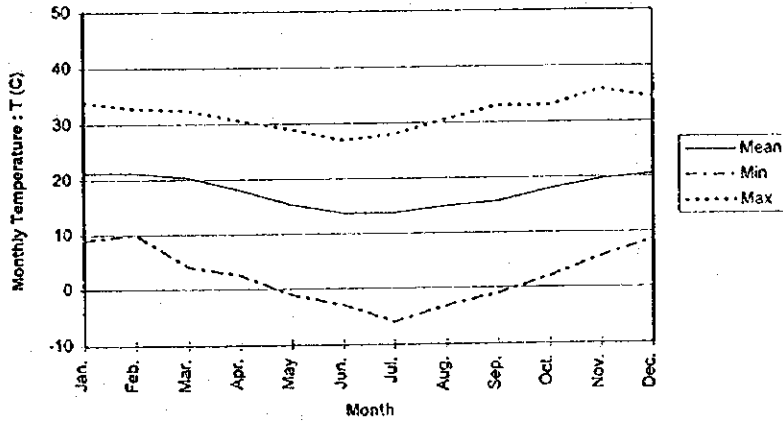
Annual Temperature (No. 21)
 St. No. 02549091 Lapa
 1974 - 1993 (20 Years)



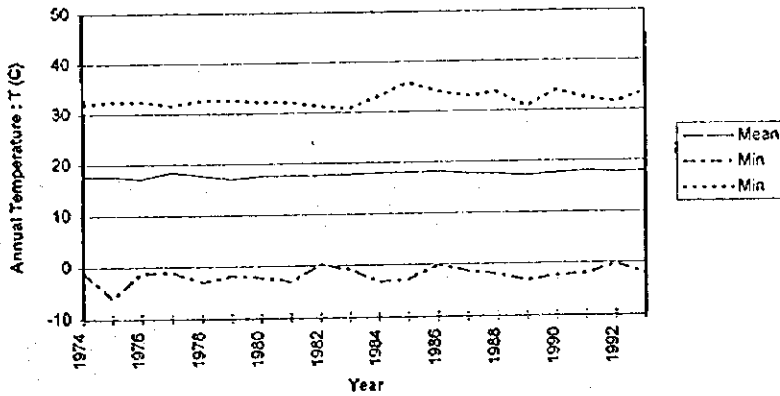
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02550024 (No 22)
 St. Name Ponta Grossa

	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1	1974	21.2	21.8	20.4	17.5	15.0	13.3	15.4	14.8	16.7	17.0	19.5	19.5	17.7
2	1975	20.5	21.6	20.7	17.5	15.4	14.4	12.0	17.2	16.6	16.9	18.5	20.9	17.7
3	1976	22.2	20.7	19.9	16.8	14.8	13.3	13.5	14.0	14.8	16.6	19.5	20.3	17.2
4	1977	21.2	22.5	20.9	17.0	16.1	14.5	17.4	15.7	17.5	19.0	19.2	19.8	18.4
5	1978	21.3	21.3	20.8	17.3	13.9	14.1	15.2	13.7	15.8	19.3	19.4	20.4	17.7
6	1979	19.2	21.2	19.2	16.6	14.4	13.3	12.5	16.0	15.1	18.8	18.5	20.5	17.1
7	1980	20.3	20.7	21.6	19.0	16.4	12.9	14.4	14.9	13.3	17.9	18.8	21.2	17.6
8	1981	21.3	21.6	20.0	17.6	16.9	13.2	12.1	15.3	17.4	16.4	20.6	19.3	17.6
9	1982	20.0	21.1	19.6	16.7	14.6	15.2	14.6	16.1	16.8	17.5	19.6	19.8	17.6
10	1983	22.0	21.2	19.3	18.4	16.9	13.1	15.5	15.3	13.7	17.3	19.7	20.7	17.8
11	1984	22.5	23.2	20.0	17.1	17.3	15.0	14.4	12.9	15.4	19.2	18.9	19.8	18.0
12	1985	20.4	21.4	20.5	19.0	14.8	13.1	12.9	16.6	16.4	18.7	20.6	21.9	18.0
13	1986	22.2	21.0	20.3	19.3	16.6	14.7	13.3	15.6	15.7	18.0	20.3	20.6	18.1
14	1987	22.3	20.4	20.5	19.3	13.7	12.6	16.7	14.1	15.2	18.1	19.8	20.5	17.8
15	1988	22.9	20.1	21.4	18.1	14.4	11.9	11.7	15.7	17.6	17.2	19.1	21.0	17.6
16	1989	20.6	20.9	20.3	19.2	14.7	13.5	12.2	14.4	15.3	16.2	18.9	20.2	17.2
17	1990	20.9	21.2	21.4	19.7	14.4	13.1	11.6	13.6	14.4	19.3	21.3	21.0	17.7
18	1991	21.1	20.7	19.6	18.1	15.9	14.8	13.5	15.1	16.5	18.2	20.5	21.7	18.0
19	1992	21.8	21.5	20.1	17.7	16.3	16.4	12.8	13.0	15.6	18.2	18.9	20.9	17.8
20	1993	21.7	20.1	20.5	19.5	15.5	13.5	13.6	14.1	15.4	19.0	21.0	20.8	17.9
	Mean	21.3	21.2	20.4	18.1	15.4	13.8	13.8	14.9	15.8	17.9	19.6	20.5	17.7

Monthly Mean Temperature (No. 22)
 St. No. 02550024 Ponta Grossa
 1974 - 1993 (20 Years)



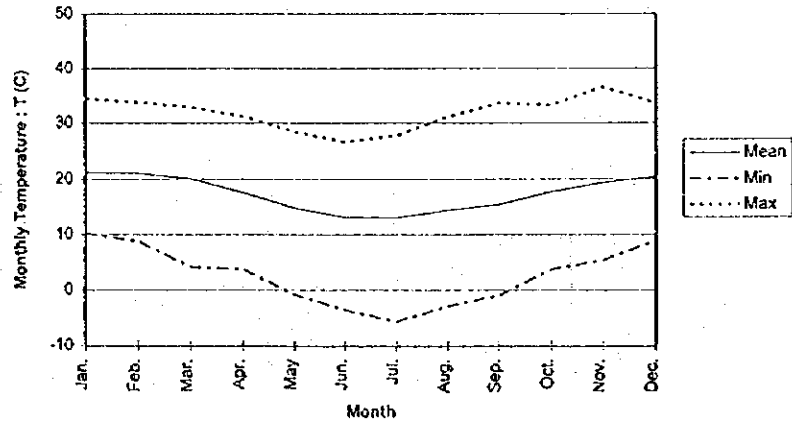
Annual Temperature (No. 22)
 St. No. 02550024 Ponta Grossa
 1974 - 1993 (20 Years)



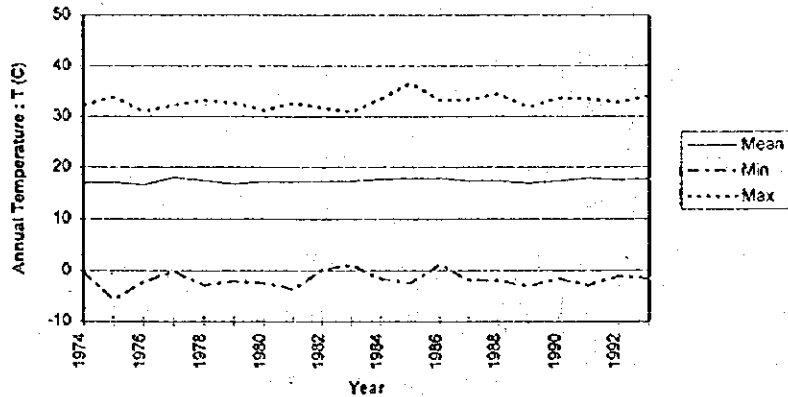
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02550025 (No 23)
 St. Name Teixeira

	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1	1974	20.9	21.4	20.1	16.8	14.5	11.6	13.8	13.9	16.1	17.3	18.4	19.2	17.0
2	1975	20.1	21.6	20.1	16.9	14.1	13.1	11.2	16.3	16.0	16.6	18.0	20.1	17.0
3	1976	20.9	20.1	19.1	16.2	14.2	12.5	12.8	13.3	14.1	16.1	19.2	20.2	16.6
4	1977	21.1	22.5	20.4	16.5	15.7	13.8	16.1	14.6	17.2	19.0	19.2	19.8	18.0
5	1978	21.4	21.1	20.6	16.8	13.5	13.5	14.3	13.2	15.8	19.1	19.4	20.4	17.4
6	1979	19.6	20.9	19.0	16.2	13.4	12.8	12.0	15.6	14.7	15.4	18.0	20.5	16.8
7	1980	20.0	20.5	21.5	13.4	15.7	12.2	13.7	14.4	13.1	17.7	18.7	20.6	17.2
8	1981	21.2	21.4	19.9	17.1	16.3	12.4	11.4	15.0	16.5	16.2	20.1	19.1	17.2
9	1982	20.2	21.0	19.2	16.4	14.1	14.2	13.8	15.4	16.6	17.2	19.2	19.7	17.3
10	1983	21.8	20.8	19.0	18.1	16.1	12.2	14.6	14.7	19.3	17.1	19.6	20.3	17.3
11	1984	22.5	22.9	19.6	16.7	16.4	14.2	14.1	12.5	15.2	19.1	18.7	19.7	17.6
12	1985	20.8	21.2	20.5	13.5	14.6	12.7	12.1	16.0	16.2	18.9	20.6	21.7	17.8
13	1986	22.1	21.2	20.0	18.7	16.1	14.1	13.0	15.2	15.3	17.7	20.2	20.5	17.8
14	1987	22.2	20.2	20.1	18.7	13.0	12.1	15.8	13.3	14.8	17.9	19.9	20.4	17.4
15	1988	22.7	20.0	21.5	17.7	14.0	12.5	11.1	15.0	16.7	17.2	19.1	21.0	17.4
16	1989	20.5	20.6	20.0	13.4	14.2	13.1	11.7	13.9	14.9	16.2	18.8	20.4	15.9
17	1990	20.7	21.5	21.1	19.2	13.8	12.5	10.8	13.2	14.1	19.3	21.1	21.0	17.4
18	1991	21.3	20.9	19.8	17.9	15.6	14.3	13.0	14.8	16.4	19.0	20.4	21.8	17.9
19	1992	21.7	21.9	19.9	17.6	15.6	15.8	12.1	12.9	15.4	18.1	18.7	21.2	17.6
20	1993	21.8	20.0	20.6	19.3	15.0	12.8	13.0	14.5	15.1	18.9	(20.8)	(20.6)	17.7
	Mean	21.2	21.1	20.1	17.6	14.8	13.1	13.0	14.4	15.4	17.8	19.4	20.4	17.4

Monthly Mean Temperature (No. 23)
 St. No. 02550025 Teixeira
 1974 - 1993 (20 Years)



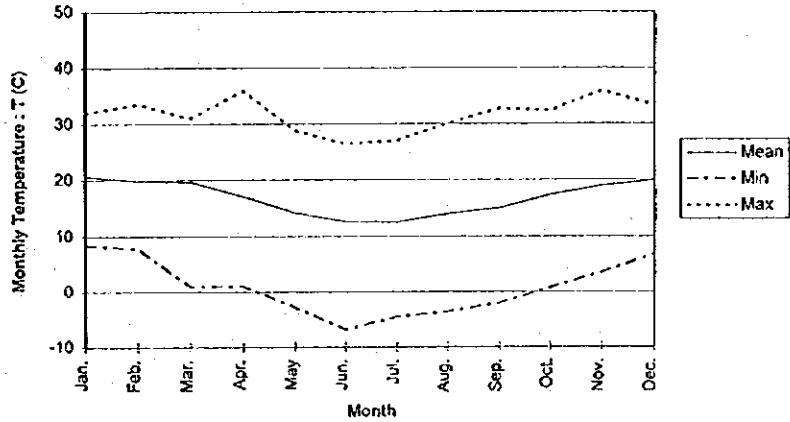
Annual Temperature (No. 23)
 St. No. 02550025 Teixeira
 1974 - 1993 (20 Years)



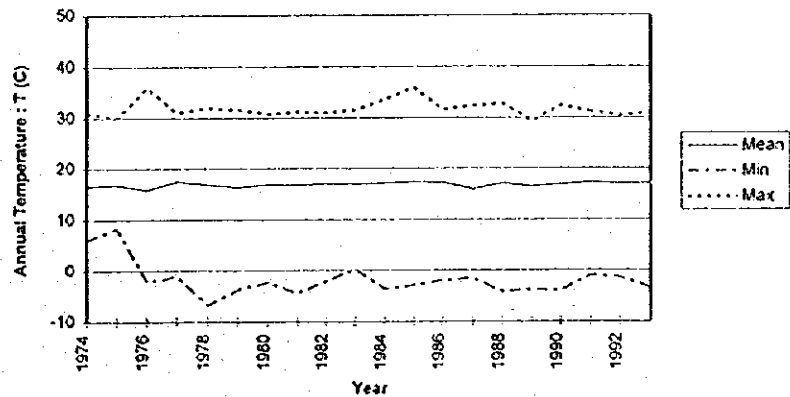
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02551010 (No. 24)
 St. Name Guarapuava

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	19.3	19.9	19.2	(16.6)	(14.0)	(12.3)	(14.4)	(13.8)	(15.8)	(16.1)	(18.7)	(18.7)	16.6
2 1975	(19.7)	(20.8)	(19.9)	(16.5)	(14.4)	(13.4)	(11.0)	(16.3)	(15.7)	(16.0)	(17.6)	(19.7)	16.8
3 1976	20.3	19.5	18.3	15.3	13.6	11.1	12.1	12.6	13.4	16.1	18.4	19.6	15.9
4 1977	20.5	21.8	20.2	16.1	14.9	13.3	15.8	13.9	16.3	18.4	18.7	19.4	17.4
5 1978	21.1	20.3	20.2	15.8	12.1	12.6	13.9	12.5	15.4	18.7	19.1	20.2	16.8
6 1979	19.4	20.6	18.8	15.5	12.6	12.2	11.3	15.2	14.3	18.0	17.8	20.0	16.3
7 1980	19.7	20.3	20.7	18.0	14.9	11.8	13.6	14.4	12.8	17.4	18.5	20.0	16.8
8 1981	20.9	21.0	19.3	16.8	15.9	11.6	10.6	14.4	16.1	16.2	19.5	18.7	16.8
9 1982	20.1	20.6	19.4	16.2	13.5	13.7	13.3	15.4	16.5	17.0	18.9	19.0	17.0
10 1983	21.3	20.7	18.6	17.8	15.6	12.0	14.5	14.3	13.4	16.9	18.3	19.9	16.9
11 1984	21.5	22.3	19.5	16.2	15.7	13.7	13.5	12.4	14.6	18.5	18.6	19.0	17.2
12 1985	20.7	20.7	19.6	17.9	13.9	12.2	11.8	15.1	16.1	18.4	20.2	21.4	17.3
13 1986	21.6	20.5	19.4	18.3	15.2	13.6	12.3	14.5	14.7	16.7	19.5	20.0	17.2
14 1987	21.9	7.3	19.3	18.1	12.5	11.8	15.8	13.2	14.6	17.6	19.2	19.8	15.5
15 1988	21.8	19.3	20.7	17.4	13.5	12.1	10.5	15.0	17.2	16.8	19.1	21.1	17.0
16 1989	19.8	20.2	19.8	17.9	13.7	12.5	11.1	13.5	14.4	15.9	18.2	20.1	16.4
17 1990	20.4	20.4	20.5	18.8	13.1	12.0	10.2	13.0	13.8	18.8	20.5	20.5	16.8
18 1991	20.9	20.0	19.5	17.4	14.6	13.7	12.1	14.5	16.2	17.5	19.3	20.9	17.2
19 1992	20.7	21.1	19.3	16.6	15.4	15.4	11.5	12.7	14.9	17.8	18.0	20.6	17.0
20 1993	21.0	19.2	19.8	18.4	14.1	12.4	12.3	14.1	15.1	18.7	(20.2)	(20.0)	17.1
Mean	20.5	19.8	19.6	17.1	14.2	12.7	12.6	14.0	15.1	17.4	18.9	19.9	16.6

Monthly Mean Temperature (No. 24)
 St. No. 02551010 Guarapuava
 1974 - 1993 (20 Years)



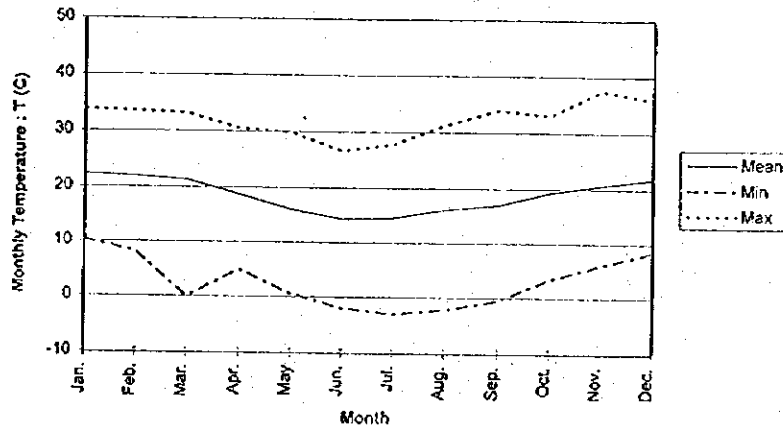
Annual Temperature (No. 24)
 St. No. 02551010 Guarapuava
 1974 - 1993 (20 Years)



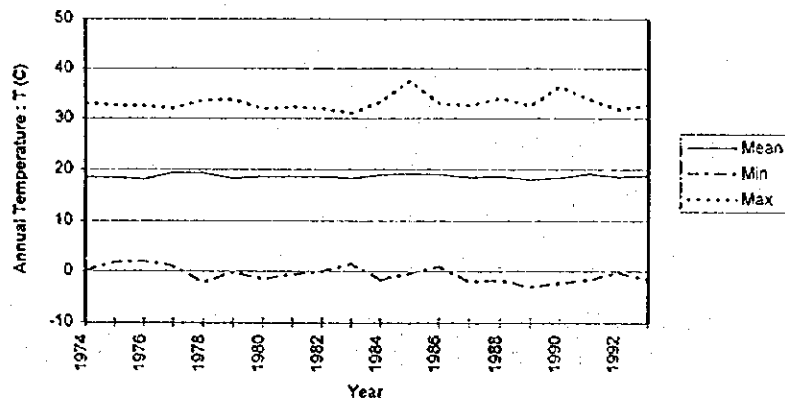
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02552009 (No 25)
 St. Name Laranjeiras

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	22.0	22.4	21.2	18.3	15.9	12.4	15.5	15.4	18.3	18.6	(19.7)	23.0	18.6
2 1975	(21.2)	22.4	20.9	18.5	15.1	14.5	13.2	18.7	17.8	18.2	19.7	21.2	18.4
3 1976	22.2	21.3	20.6	17.8	15.9	14.0	14.7	15.2	15.9	18.1	20.6	21.6	18.2
4 1977	22.0	23.0	21.9	17.7	17.0	15.4	18.3	16.1	18.7	20.5	20.5	21.6	19.4
5 1978	23.6	22.9	22.5	18.6	15.5	15.3	16.5	14.7	17.6	20.7	20.8	22.3	19.3
6 1979	21.8	22.4	20.9	17.2	14.5	14.7	13.7	17.6	16.0	19.7	19.6	21.8	18.3
7 1980	21.4	22.1	22.8	19.9	16.9	13.6	15.2	16.2	14.4	19.3	20.4	21.7	18.7
8 1981	22.5	22.1	21.3	18.7	18.0	13.4	13.1	17.0	18.2	18.2	20.9	20.2	18.6
9 1982	21.9	21.5	20.9	18.1	15.4	14.9	15.8	17.5	18.3	18.9	20.1	20.5	18.7
10 1983	22.6	22.0	20.2	19.0	17.1	12.6	15.5	16.4	14.8	18.5	19.6	21.8	18.3
11 1984	23.0	23.4	21.2	17.5	17.7	15.8	15.8	14.0	17.1	21.4	20.2	20.8	19.0
12 1985	22.9	22.2	21.2	19.1	16.5	14.3	13.6	16.9	17.5	20.0	22.6	23.6	19.2
13 1986	23.1	21.7	21.0	19.5	16.9	15.8	14.6	16.7	16.8	18.9	21.5	21.9	19.0
14 1987	23.0	20.5	20.3	19.6	13.5	14.0	18.1	14.7	16.4	19.2	21.6	21.5	18.5
15 1988	23.4	20.9	22.9	19.0	14.8	11.7	12.0	17.9	19.5	18.5	21.0	22.7	18.7
16 1989	21.0	21.5	21.1	19.3	15.3	14.1	13.4	15.2	15.8	17.8	20.2	22.0	18.1
17 1990	21.5	22.0	21.7	20.2	15.0	13.7	11.2	15.1	15.3	20.6	22.4	22.1	18.4
18 1991	22.9	22.0	21.4	19.0	16.9	15.6	14.6	16.6	18.7	19.3	21.0	22.4	19.2
19 1992	22.6	22.5	21.0	18.1	16.7	16.9	12.6	14.2	16.6	19.5	20.0	22.4	18.6
20 1993	22.4	20.2	21.4	20.2	15.9	14.3	14.2	16.3	16.6	20.4	21.4	22.1	18.8
Mean	22.3	22.0	21.3	18.8	16.0	14.4	14.6	16.1	17.0	19.3	20.7	21.9	18.7

Monthly Mean Temperature (No. 25)
 St. No. 02552009 Laranjeiras
 1974 - 1993 (20 Years)



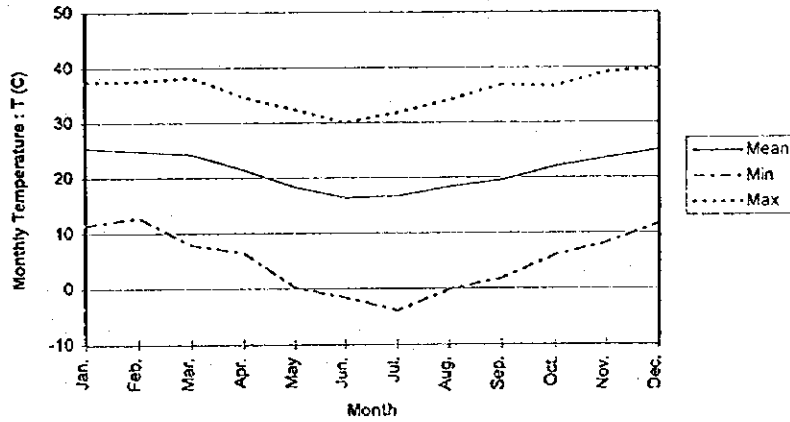
Annual Temperature (No. 25)
 St. No. 02552009 Laranjeiras
 1974 - 1993 (20 Years)



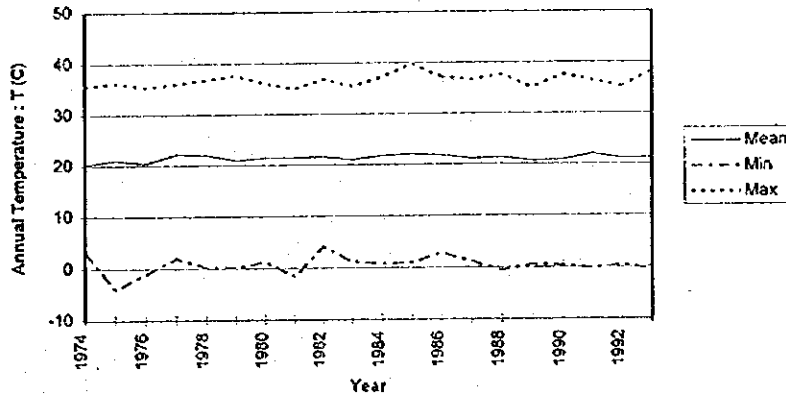
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02553015 (No.26)
 St. Name Planalto

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(23.8)	(24.3)	(22.9)	(20.4)	(17.6)	(14.2)	(16.4)	17.2	19.4	20.0	21.9	24.7	20.2
2 1975	24.1	25.2	23.8	20.9	18.0	17.0	15.2	19.9	20.0	20.4	22.9	24.6	21.0
3 1976	24.9	24.2	23.1	19.9	17.5	15.1	16.4	17.1	18.0	21.2	23.2	24.6	20.4
4 1977	24.9	26.0	24.7	20.7	19.3	18.1	20.9	18.2	21.5	23.2	23.4	25.2	22.2
5 1978	26.4	26.1	25.6	21.3	17.9	17.5	19.1	16.9	20.6	23.3	23.6	25.6	22.0
6 1979	25.3	25.4	23.7	19.8	16.4	15.4	16.2	19.8	19.3	22.2	22.6	24.4	20.9
7 1980	24.7	25.1	25.4	23.3	19.6	16.1	16.8	18.6	17.2	22.1	23.1	24.5	21.4
8 1981	25.6	24.9	24.1	21.8	21.2	15.2	15.8	19.9	20.2	21.5	23.9	23.4	21.4
9 1982	25.8	24.4	24.3	22.2	18.4	16.7	18.2	20.0	21.3	21.4	22.3	23.9	21.6
10 1983	25.9	25.2	23.2	21.6	19.3	14.5	15.6	18.4	17.4	22.0	22.3	25.4	21.0
11 1984	25.0	26.6	24.2	20.2	20.0	17.6	18.2	16.2	20.0	24.8	23.3	23.8	21.7
12 1985	26.3	25.4	24.3	21.8	18.7	16.6	16.3	18.7	20.0	22.8	25.9	27.6	22.0
13 1986	26.4	24.7	23.7	22.1	19.1	18.4	17.2	18.9	19.6	21.7	24.6	24.9	21.8
14 1987	25.7	23.1	24.2	22.2	15.5	16.0	19.8	17.1	19.4	21.5	24.5	24.0	21.1
15 1988	26.1	23.7	26.0	21.4	16.1	13.6	14.5	20.1	21.9	21.4	24.5	26.5	21.3
16 1989	23.6	24.2	23.5	21.6	18.2	16.1	15.3	17.5	18.0	20.9	23.2	25.3	20.6
17 1990	24.3	24.3	24.7	22.3	17.2	15.2	13.4	18.0	17.6	23.1	24.9	24.9	20.8
18 1991	23.6	24.8	25.1	22.0	19.4	17.4	16.5	19.1	21.8	22.1	24.1	25.0	21.9
19 1992	25.7	25.3	23.1	20.6	18.7	19.0	13.9	16.7	19.0	21.9	22.8	26.1	21.1
20 1993	25.1	23.2	24.0	22.8	18.5	16.3	16.1	18.1	18.6	22.8	23.7	25.2	21.2
Mean	25.3	24.8	24.2	21.4	18.3	16.3	16.6	18.3	19.5	22.0	23.5	25.0	21.3

Monthly Mean Temperature (No. 26)
 St. No. 02553015 Planalto
 1974 - 1993 (20 Years)



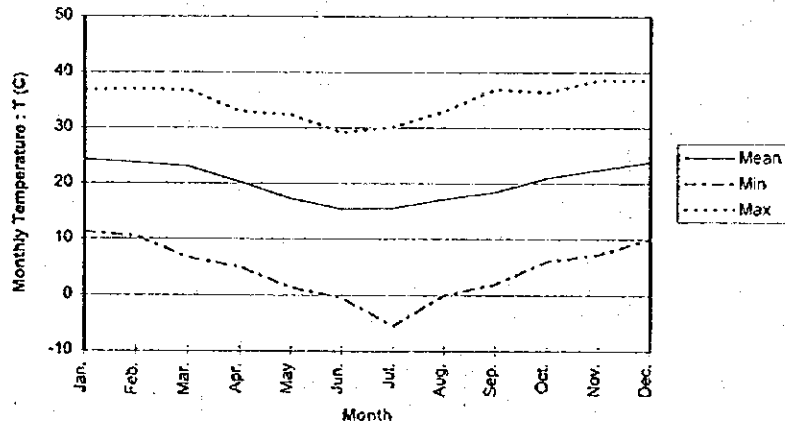
Annual Temperature (No. 26)
 St. No. 02553015 Planalto
 1974 - 1993 (20 Years)



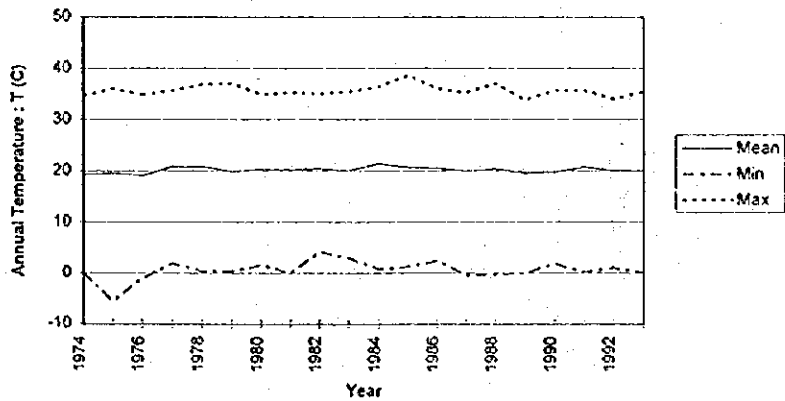
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02553018 (No. 27)
 St. Name Quedas

	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1	1974	22.7	23.2	21.8	19.3	16.6	13.2	15.4	15.6	19.1	19.5	21.3	23.4	19.3
2	1975	22.9	24.1	22.8	19.4	16.2	15.3	13.2	18.7	18.7	19.3	21.4	23.0	19.6
3	1976	24.0	23.0	21.9	18.5	16.2	13.6	14.9	15.8	16.8	19.9	21.6	23.3	19.1
4	1977	23.8	24.7	23.5	19.4	17.9	16.2	19.3	16.8	19.9	22.1	22.4	23.9	20.8
5	1978	25.7	25.0	24.6	19.9	16.1	16.0	17.6	15.9	19.6	22.1	22.8	24.6	20.8
6	1979	24.6	24.6	22.9	19.0	15.4	14.9	14.8	18.6	17.5	21.2	21.7	23.9	19.9
7	1980	23.7	24.1	24.4	22.0	18.4	14.8	16.1	17.6	16.0	20.9	22.4	23.7	20.3
8	1981	24.6	23.6	23.2	20.7	19.6	14.7	14.1	18.0	19.2	20.3	22.8	22.4	20.3
9	1982	24.2	23.7	23.2	20.5	17.0	16.2	16.9	18.7	19.9	20.6	21.5	22.9	20.4
10	1983	25.1	24.1	22.2	20.8	18.9	14.0	16.3	17.2	16.5	20.6	21.3	23.8	20.1
11	1984	25.0	25.3	23.2	19.1	20.0	17.6	18.2	16.2	20.0	24.8	23.3	23.8	21.4
12	1985	25.1	23.8	22.9	20.8	17.1	15.3	15.0	17.5	18.8	21.5	24.4	25.7	20.7
13	1986	25.0	23.7	22.6	20.9	18.2	16.7	15.7	17.7	18.4	20.3	23.2	23.7	20.5
14	1987	24.9	22.3	22.9	21.2	14.9	14.4	18.8	16.2	18.0	20.6	23.1	22.9	20.0
15	1988	24.7	22.7	24.3	20.4	16.0	15.3	13.2	18.4	20.9	20.4	23.1	25.2	20.4
16	1989	23.1	23.1	22.6	20.6	16.8	15.3	14.1	16.5	17.3	19.7	22.1	24.0	19.6
17	1990	23.2	23.6	23.0	21.4	16.2	14.6	(12.9)	16.7	16.4	22.0	23.8	23.8	19.8
18	1991	24.8	23.6	23.6	20.9	18.2	16.3	15.6	17.9	20.4	21.0	22.8	23.8	20.7
19	1992	24.4	23.9	22.3	19.6	18.0	18.0	13.6	15.7	18.1	21.1	21.5	24.5	20.1
20	1993	23.8	22.2	22.8	21.6	17.2	15.1	15.1	17.0	17.7	21.8	22.5	23.9	20.1
	Mean	24.3	23.7	23.0	20.3	17.2	15.4	15.5	17.1	18.5	21.0	22.5	23.8	20.2

Monthly Mean Temperature (No. 27)
 St. No. 02553018 Quedas
 1974 - 1993 (20 Years)



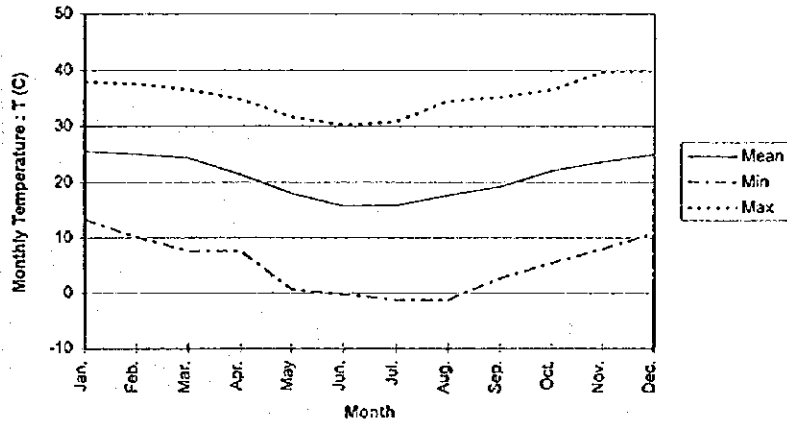
Annual Temperature (No. 27)
 St. No. 02553018 Quedas
 1974 - 1993 (20 Years)



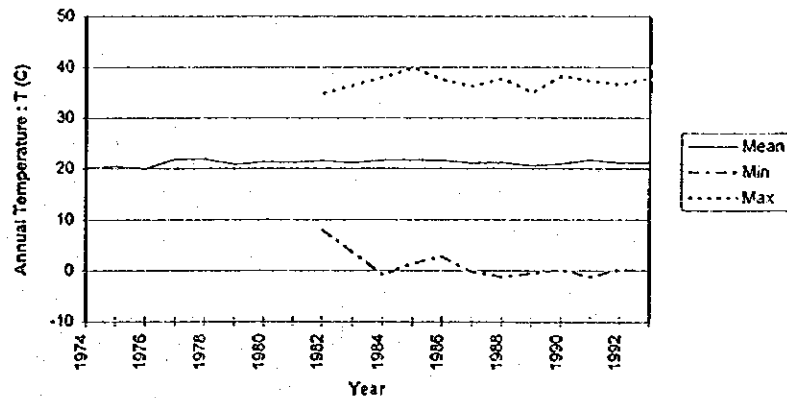
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02554026 (No 28)
 St. Name - Sao Miguel

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(23.9)	(24.5)	(22.9)	(20.2)	(17.2)	(13.4)	(15.8)	(16.1)	(19.9)	(20.4)	(22.4)	(24.7)	20.1
2 1975	(24.1)	(25.5)	(24.0)	(20.3)	(16.7)	(15.7)	(13.4)	(19.5)	(19.5)	(20.2)	(22.5)	(24.3)	20.5
3 1976	(25.4)	(24.3)	(23.0)	(19.3)	(16.7)	(13.8)	(15.3)	(16.3)	(17.4)	(20.8)	(22.7)	(24.6)	20.0
4 1977	(25.1)	(26.1)	(24.8)	(20.3)	(18.6)	(16.7)	(20.2)	(17.4)	(20.8)	(23.3)	(23.6)	(25.3)	21.8
5 1978	(27.2)	(26.5)	(26.0)	(20.8)	(16.6)	(16.5)	(18.3)	(16.4)	(20.5)	(23.3)	(24.0)	(26.0)	21.8
6 1979	(26.0)	(26.0)	(24.1)	(19.8)	(15.8)	(15.3)	(15.2)	(19.4)	(18.2)	(22.3)	(22.8)	(25.3)	20.9
7 1980	(25.0)	(25.5)	(25.8)	(23.2)	(19.2)	(15.2)	(16.6)	(18.3)	(16.5)	(21.9)	(23.6)	(25.0)	21.3
8 1981	(26.0)	(25.1)	(24.5)	(21.7)	(20.9)	(15.1)	(14.4)	(18.7)	(20.1)	(21.3)	(24.0)	(23.6)	21.2
9 1982	(25.6)	(25.0)	(24.5)	(21.5)	(17.6)	(16.7)	(17.5)	20.4	21.0	21.9	22.9	24.0	21.6
10 1983	26.4	25.8	23.8	22.2	19.7	14.5	16.5	17.8	17.5	22.0	22.4	25.4	21.2
11 1984	26.4	27.0	24.8	20.2	19.8	17.2	17.6	15.8	19.2	24.7	23.5	23.4	21.6
12 1985	25.5	26.0	24.6	22.0	18.4	15.8	15.3	17.7	19.8	22.4	25.6	27.4	21.7
13 1986	26.5	25.0	23.7	22.2	19.0	17.6	16.3	18.5	19.1	21.5	24.5	25.1	21.6
14 1987	26.1	23.6	24.3	22.4	15.7	15.1	19.5	16.5	19.3	21.8	24.7	24.1	21.1
15 1988	26.2	24.0	28.0	21.5	16.2	14.3	13.4	18.8	21.2	21.4	24.6	26.5	21.2
16 1989	24.1	24.4	23.4	21.7	18.1	15.7	14.4	16.9	17.8	21.1	23.6	25.4	20.6
17 1990	(24.5)	24.3	25.1	22.9	17.1	14.7	13.1	17.3	17.5	23.6	25.7	24.8	20.9
18 1991	25.5	24.5	25.3	22.1	19.2	16.7	15.6	18.2	21.8	22.3	24.0	25.3	21.7
19 1992	26.0	25.9	23.7	20.7	18.9	18.8	13.4	16.1	18.8	22.2	23.0	26.0	21.1
20 1993	25.6	23.4	24.4	23.0	18.7	16.0	15.5	16.9	18.5	22.9	24.0	24.9	21.2
Mean	25.6	25.1	24.4	21.4	18.0	15.8	15.9	17.6	19.2	22.1	23.7	25.1	21.2

Monthly Mean Temperature (No. 28)
 St. No. 02554026 Sao Miguel
 1974 - 1993 (20 Years)



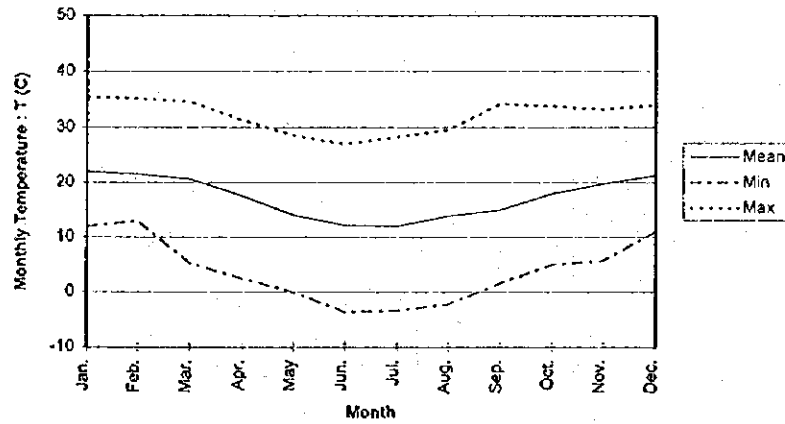
Annual Temperature (No. 28)
 St. No. 02554026 Sao Miguel
 1974 - 1993 (20 Years)



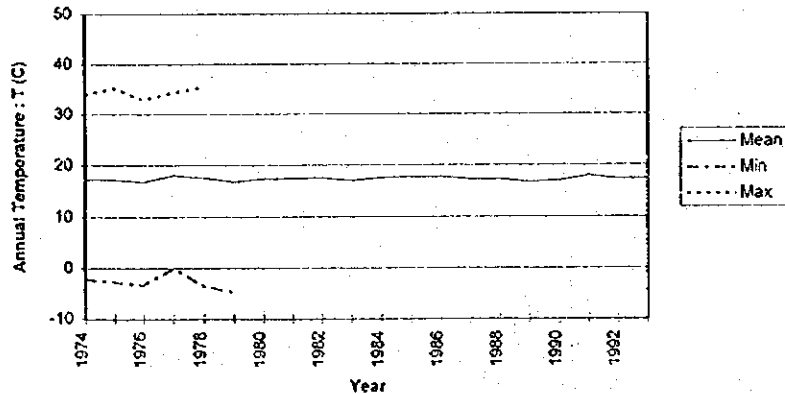
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02651007 (No. 29)
 St. Name Porto Uniao

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	22.0	22.2	21.3	17.5	14.3	11.1	12.8	12.8	15.9	17.7	19.0	20.4	17.3
2 1975	21.2	22.3	20.7	16.9	14.0	13.1	10.4	15.3	15.8	16.8	18.6	20.8	17.2
3 1976	22.0	21.4	19.6	16.1	14.1	11.4	12.0	12.7	14.0	16.9	19.7	21.3	16.8
4 1977	21.8	22.9	20.7	16.8	15.1	13.3	14.5	14.3	17.1	18.9	19.9	21.1	18.0
5 1978	22.6	21.3	21.4	16.2	12.2	12.0	14.0	12.9	16.5	19.4	20.4	21.7	17.6
6 1979	(21.3)	(21.8)	(19.4)	(15.7)	(12.0)	(12.1)	(11.8)	(15.7)	(13.8)	(18.4)	(18.5)	(21.0)	16.8
7 1980	(20.6)	(21.3)	(22.1)	(19.0)	(15.5)	(11.6)	(12.6)	(14.2)	(12.4)	(17.9)	(19.7)	(21.1)	17.3
8 1981	(22.5)	(22.4)	(20.4)	(17.5)	(16.8)	(11.2)	(10.5)	(15.0)	(16.2)	(16.8)	(20.0)	(19.8)	17.4
9 1982	(21.4)	(21.4)	(20.6)	(17.3)	(13.6)	(13.1)	(13.7)	(15.5)	(16.8)	(17.1)	(19.2)	(20.3)	17.5
10 1983	(22.4)	(21.4)	(19.2)	(17.7)	(15.5)	(10.6)	(12.8)	(14.0)	(12.7)	(17.8)	(18.6)	(21.3)	17.0
11 1984	(22.4)	(23.4)	(20.6)	(16.3)	(15.7)	(13.5)	(13.1)	(11.0)	(14.8)	(20.6)	(19.1)	(19.9)	17.5
12 1985	(22.1)	(21.7)	(20.6)	(18.0)	(14.1)	(11.7)	(11.4)	(14.5)	(15.2)	(18.5)	(21.8)	(22.8)	17.7
13 1986	(22.8)	(21.4)	(19.9)	(18.3)	(15.2)	(14.1)	(12.3)	(14.5)	(15.0)	(17.2)	(20.5)	(21.5)	17.7
14 1987	(23.2)	(20.1)	(20.6)	(18.7)	(11.5)	(11.4)	(15.9)	(12.2)	(14.1)	(17.6)	(20.8)	(21.0)	17.3
15 1988	(23.3)	(20.1)	(22.4)	(17.3)	(12.3)	(10.2)	(9.5)	(15.5)	(17.3)	(16.9)	(19.8)	(22.1)	17.2
16 1989	(20.6)	(21.1)	(20.1)	(18.3)	(13.6)	(12.2)	(10.6)	(13.3)	(13.5)	(16.1)	(19.3)	(21.8)	16.7
17 1990	(21.2)	(21.3)	(21.3)	(19.0)	(12.1)	(11.2)	(8.8)	(13.6)	(13.0)	(19.6)	(21.7)	(21.5)	17.0
18 1991	(21.9)	(21.2)	(21.1)	(18.2)	(15.7)	(13.1)	(12.2)	(14.7)	(16.9)	(18.2)	(20.0)	(22.1)	17.9
19 1992	(22.0)	(22.0)	(20.1)	(17.0)	(14.9)	(15.2)	(10.1)	(12.0)	(15.1)	(18.3)	(18.7)	(22.2)	17.3
20 1993	(21.8)	(19.8)	(20.6)	(19.2)	(14.2)	(12.2)	(11.6)	(13.8)	(14.1)	(19.6)	(20.4)	(21.7)	17.4
Mean	22.0	21.5	20.6	17.5	14.1	12.2	12.0	13.9	15.0	18.0	19.8	21.3	17.3

Monthly Mean Temperature (No. 29)
 St. No. 02651007 Porto Uniao
 1974 - 1993 (20 Years)



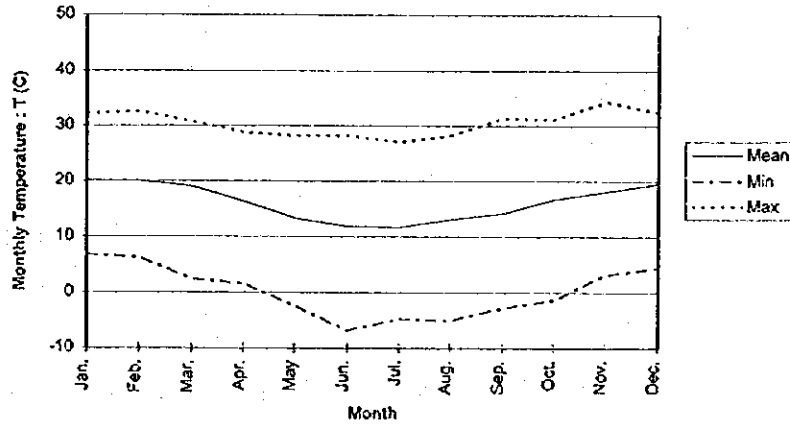
Annual Temperature (No. 29)
 St. No. 02651007 Sao Miguel
 1974 - 1993 (20 Years)



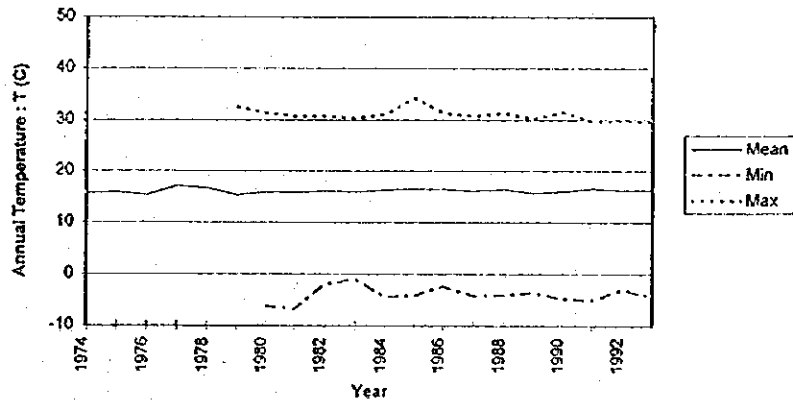
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02651043 (No.30)
 St Name Palmas

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(19.8)	(20.1)	(19.2)	(15.7)	(13.4)	(9.4)	(12.8)	(12.5)	(14.8)	(15.6)	(16.7)	(19.0)	15.8
2 1975	(18.9)	(20.4)	(19.0)	(15.8)	(13.0)	(12.3)	(9.9)	(14.9)	(14.7)	(15.4)	(17.3)	(19.2)	15.9
3 1976	(20.0)	(19.1)	(18.0)	(14.8)	(12.6)	(10.2)	(11.1)	(12.1)	(13.3)	(15.5)	(17.8)	(19.2)	15.3
4 1977	(20.3)	(21.5)	(19.5)	(15.6)	(14.3)	(12.9)	(15.4)	(13.4)	(16.3)	(17.8)	(18.5)	(19.8)	17.1
5 1978	(21.2)	(20.6)	(20.2)	(15.7)	(12.1)	(12.0)	(14.0)	(12.1)	(15.4)	(18.2)	(18.4)	(20.0)	16.7
6 1979	19.2	20.2	18.0	14.4	11.1	10.6	10.6	14.5	12.8	16.7	17.0	19.2	15.4
7 1980	18.9	20.0	20.0	17.2	13.8	10.4	11.9	12.9	11.8	16.5	17.9	19.3	15.9
8 1981	20.6	20.5	18.5	15.9	14.9	10.4	9.6	13.1	14.7	15.5	18.1	18.3	15.8
9 1982	19.5	19.7	18.8	15.7	12.4	12.6	12.6	14.4	15.3	16.1	17.8	18.6	16.1
10 1983	20.6	19.8	17.7	16.8	14.7	10.8	12.7	13.1	12.3	16.3	17.4	19.7	16.0
11 1984	20.7	21.3	18.8	15.1	14.7	13.1	12.6	10.8	13.6	18.7	17.6	18.6	16.3
12 1985	20.5	20.2	19.2	16.8	12.8	11.4	11.1	14.0	14.5	17.3	19.8	20.7	16.5
13 1986	21.1	19.9	18.6	17.0	14.2	12.9	11.6	13.4	14.1	15.9	18.9	19.8	16.5
14 1987	20.9	19.0	18.9	17.6	11.5	10.9	15.0	12.0	13.3	16.5	18.7	19.1	16.1
15 1988	21.3	18.9	20.4	16.0	12.1	14.9	9.9	14.1	15.9	15.8	17.9	20.0	16.4
16 1989	19.2	19.8	18.7	17.2	12.9	11.7	10.1	12.8	13.4	15.0	17.7	19.9	15.7
17 1990	19.8	19.9	19.8	17.7	12.4	11.0	8.9	12.5	12.7	18.2	19.8	19.7	16.0
18 1991	20.1	19.6	19.2	16.7	14.6	12.5	11.5	13.5	15.3	16.9	18.4	20.4	16.6
19 1992	20.2	20.6	19.0	15.8	14.2	14.4	10.2	11.6	14.4	17.0	17.2	20.2	16.2
20 1993	20.2	18.6	19.1	17.7	13.3	11.8	11.3	12.9	13.7	18.2	18.7	19.9	16.3
Mean	20.2	20.0	19.0	16.3	13.2	11.8	11.6	13.0	14.1	16.7	18.1	19.5	16.1

Monthly Mean Temperature (No. 30)
 St. No. 02651043 Palmas
 1974 - 1993 (20 Years)



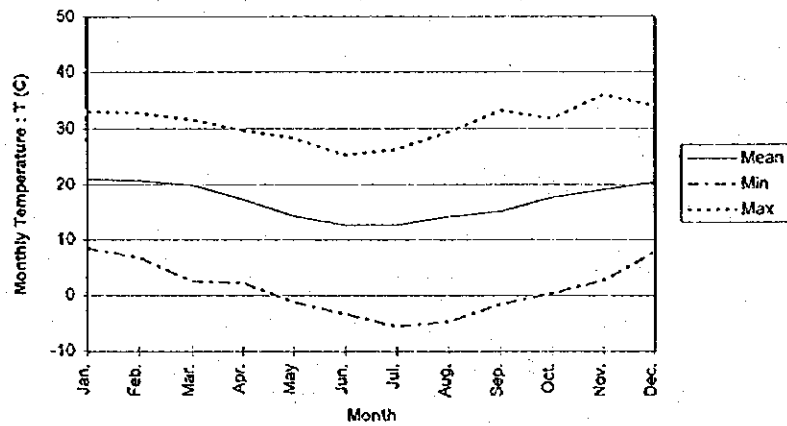
Annual Temperature (No. 30)
 St. No. 02651043 Palmas
 1974 - 1993 (20 Years)



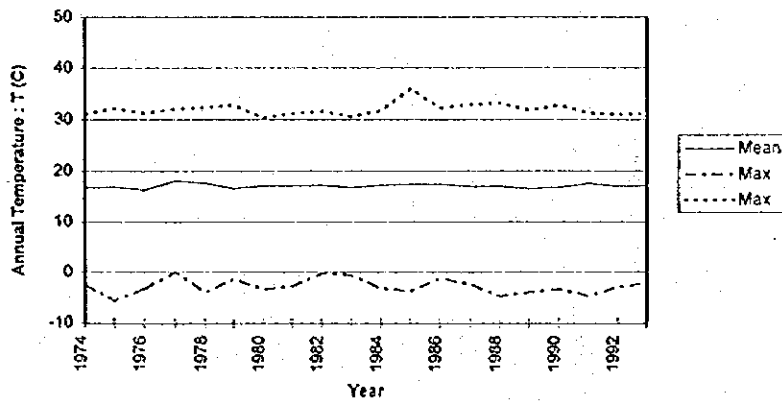
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02652003 (No.31)
 St. Name Clevelandia

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	20.7	21.0	20.1	16.7	14.4	10.5	13.8	13.5	15.8	16.6	17.7	19.9	16.7
2 1975	19.8	21.3	19.9	16.8	14.0	13.3	11.0	15.9	15.7	16.4	19.2	20.1	16.9
3 1976	20.9	20.0	18.9	15.8	13.6	11.3	12.2	13.2	14.3	16.5	16.7	20.1	16.3
4 1977	21.2	22.3	20.4	16.6	15.3	13.9	16.4	14.4	17.3	18.7	19.4	20.7	18.1
5 1978	22.1	21.5	21.1	16.7	13.2	15.1	15.0	13.2	16.4	19.1	19.3	20.9	17.6
6 1979	20.5	20.9	18.9	15.7	12.5	12.6	12.2	15.7	14.1	18.0	18.1	20.2	16.6
7 1980	19.9	20.5	21.2	18.5	15.5	12.2	13.0	14.4	12.9	17.6	19.1	20.3	17.1
8 1981	21.5	21.4	19.7	17.2	16.6	11.6	11.2	15.1	16.1	16.6	19.4	19.2	17.2
9 1982	20.6	20.6	19.9	17.1	13.9	13.5	14.0	15.5	16.6	16.9	18.7	19.6	17.2
10 1983	21.4	20.6	18.7	17.4	15.5	11.3	13.2	14.2	13.1	17.5	18.2	20.5	16.6
11 1984	21.4	22.3	19.9	16.2	15.7	13.6	13.5	11.7	14.9	19.9	18.6	19.3	17.3
12 1985	21.2	20.8	19.9	17.7	14.3	12.3	12.0	14.7	15.3	18.1	20.9	21.8	17.4
13 1986	21.8	20.6	19.3	17.9	15.3	14.3	12.8	14.7	15.1	17.0	19.8	20.7	17.4
14 1987	22.1	19.5	19.9	18.3	12.1	12.0	15.9	12.7	14.3	17.3	20.1	20.2	17.0
15 1988	22.2	19.5	21.4	17.1	12.8	11.0	10.4	15.5	17.1	16.7	19.2	21.2	17.0
16 1989	19.9	20.3	19.5	17.9	13.9	12.7	11.3	13.6	13.8	18.0	18.8	20.9	16.6
17 1990	20.4	20.5	20.5	18.5	12.6	11.8	9.8	13.9	13.4	19.0	20.8	20.7	16.8
18 1991	21.0	20.4	20.3	17.8	15.7	13.5	12.7	14.8	16.7	17.8	19.4	21.2	17.6
19 1992	21.1	21.1	19.5	16.8	15.0	15.3	10.9	12.5	15.2	17.9	18.3	21.3	17.1
20 1993	20.9	19.2	19.9	18.7	14.4	12.7	12.2	14.1	14.3	19.0	19.7	20.8	17.2
Mean	21.0	20.7	19.9	17.3	14.3	12.6	12.7	14.2	15.1	17.6	19.1	20.5	17.1

Monthly Mean Temperature (No. 31)
 St. No. 02652003 Clevelandia
 1974 - 1993 (20 Years)



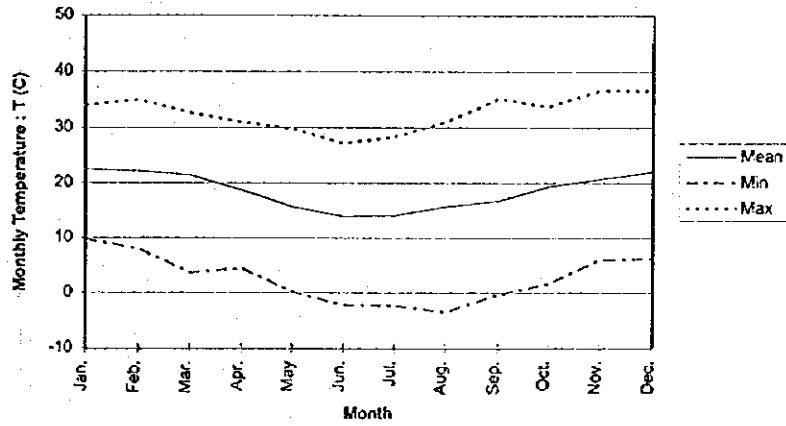
Annual Temperature (No. 31)
 St. No. 02652003 Clevelandia
 1974 - 1993 (20 Years)



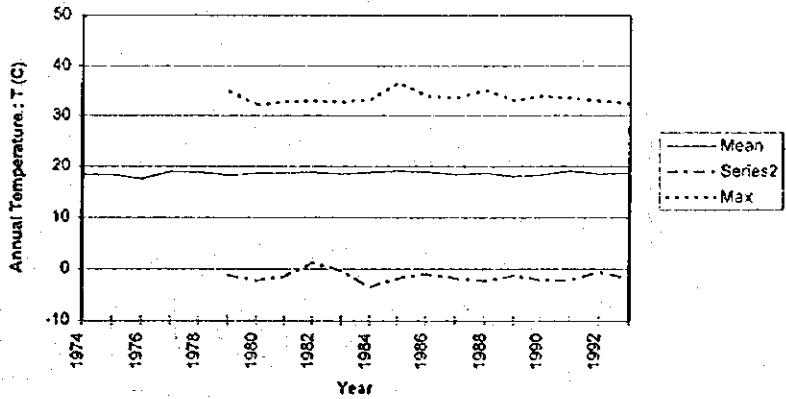
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02652035 (No 32)
 St. Name Pato Branco

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	(22.3)	(22.6)	(21.4)	(18.2)	(15.9)	(12.4)	(14.7)	(15.1)	(17.6)	(18.6)	(19.4)	(22.1)	18.4
2 1975	(21.6)	(22.8)	(21.6)	(18.1)	(15.1)	(14.3)	(12.2)	(17.0)	(17.4)	(18.0)	(20.0)	(21.6)	18.3
3 1976	(22.3)	(21.3)	(19.9)	(17.0)	(15.1)	(12.8)	(13.7)	(14.4)	(15.4)	(18.1)	(19.8)	(21.4)	17.6
4 1977	(22.1)	(22.9)	(21.3)	(17.4)	(16.1)	(14.8)	(17.2)	(15.3)	(17.8)	(20.0)	(20.5)	(22.1)	19.0
5 1978	(23.3)	(22.6)	(22.4)	(17.9)	(14.2)	(14.4)	(18.1)	(14.5)	(18.1)	(20.1)	(20.7)	(22.4)	18.5
6 1979	22.1	22.5	20.8	17.2	13.8	13.8	13.7	17.3	15.9	19.8	20.0	22.0	19.2
7 1980	21.4	22.4	22.8	20.2	16.8	13.5	14.6	15.7	14.6	19.4	20.7	21.8	18.7
8 1981	23.0	22.8	21.5	19.8	18.0	13.2	12.8	16.7	17.7	18.7	20.9	20.8	18.7
9 1982	22.4	22.1	21.5	18.7	15.4	14.9	15.4	17.2	18.4	18.8	20.1	21.2	18.8
10 1983	23.4	22.4	20.3	19.1	17.1	12.9	14.8	16.0	14.9	19.2	19.8	22.1	18.5
11 1984	22.9	23.4	21.4	17.5	17.0	15.2	15.3	13.5	16.8	21.8	20.4	20.9	18.8
12 1985	23.2	22.5	21.4	19.3	15.6	14.0	13.8	16.5	17.3	20.0	22.5	23.6	19.1
13 1986	23.2	22.1	20.8	19.4	16.6	15.5	14.3	16.2	16.7	18.6	21.4	22.2	18.9
14 1987	23.0	20.8	21.1	19.7	13.5	13.1	17.4	14.3	16.2	19.1	21.7	21.3	18.4
15 1988	23.4	21.2	23.1	18.7	14.2	11.7	12.3	17.1	19.2	18.6	21.3	23.1	18.7
16 1989	21.3	21.7	21.0	19.4	15.4	14.1	12.8	15.1	15.6	17.9	20.4	22.5	18.1
17 1990	21.8	21.8	22.0	19.9	14.7	13.0	11.2	15.2	15.1	20.6	22.4	22.2	18.3
18 1991	22.7	22.0	22.0	19.2	16.8	14.8	14.1	16.4	18.5	19.5	21.1	22.4	19.1
19 1992	22.5	22.5	20.9	18.1	15.9	16.5	12.2	14.2	16.5	19.6	20.0	23.0	18.5
20 1993	22.1	20.8	21.4	20.1	15.8	13.9	14.0	15.8	16.2	20.5	21.2	22.1	18.7
Mean	22.5	22.2	21.4	18.7	15.7	13.9	14.1	15.7	16.8	19.3	20.7	22.0	18.6

Monthly Mean Temperature (No. 32)
 St. No. 02652035 Pato Branco
 1974 - 1993 (20 Years)



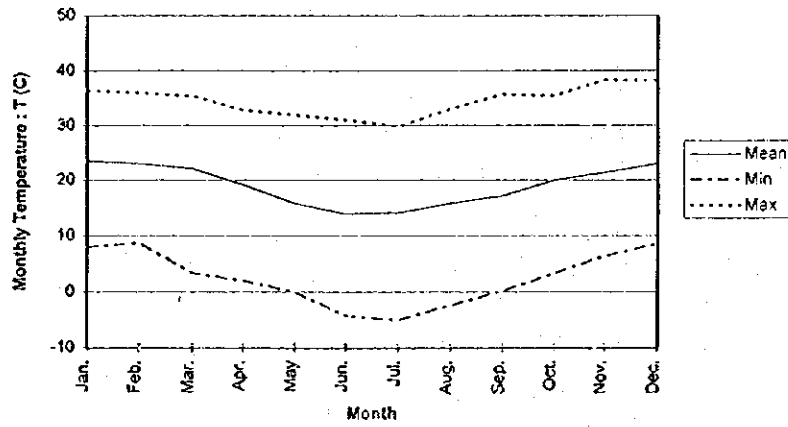
Annual Temperature (No. 32)
 St. No. 02652035 Pato Branco
 1974 - 1993 (20 Years)



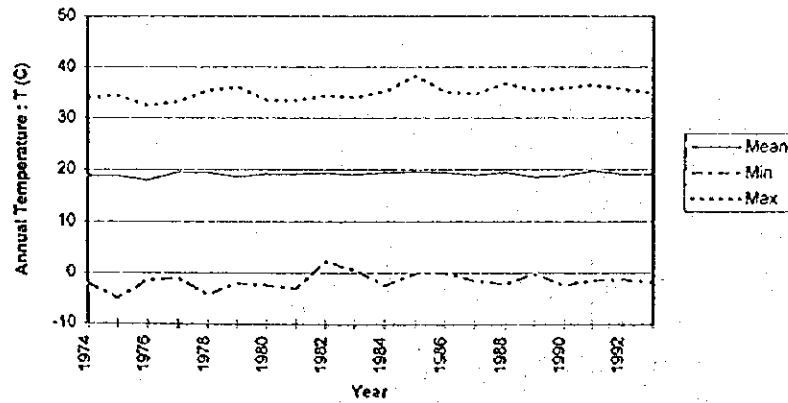
Monthly Temperature Table Period 1974 - 1993 (20 years)
 St. No. 02653012 (No.33)
 St. Name Francisco

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean
1 1974	23.2	23.5	22.2	18.7	16.1	12.3	14.8	15.2	18.0	19.1	20.0	23.0	18.8
2 1975	22.4	23.7	22.4	18.6	15.3	14.4	12.1	17.3	17.8	18.4	20.6	22.4	18.8
3 1976	23.2	22.1	20.5	17.3	15.3	12.7	13.7	14.5	15.6	18.5	20.4	22.2	18.0
4 1977	23.0	23.8	22.1	17.8	16.4	14.9	17.6	15.5	18.2	20.7	21.2	23.0	19.5
5 1978	24.3	23.5	23.3	18.3	14.3	14.5	16.3	14.6	18.5	20.8	21.4	23.3	19.4
6 1979	23.4	23.4	21.6	17.8	14.2	13.3	13.3	17.2	16.1	20.2	20.6	22.7	18.7
7 1980	22.5	23.1	23.3	20.6	16.8	13.3	14.6	16.2	15.0	20.0	21.6	22.9	19.2
8 1981	24.0	23.5	21.9	19.2	17.9	13.2	13.1	16.7	17.6	19.4	21.6	21.5	19.1
9 1982	23.3	22.6	22.1	19.3	15.5	15.0	15.4	17.5	18.8	19.5	20.6	21.9	19.3
10 1983	24.2	23.5	21.1	19.6	17.6	13.0	14.9	16.1	15.5	20.1	20.4	23.0	19.1
11 1984	23.9	24.4	22.3	18.0	17.2	15.3	15.2	13.6	17.2	22.3	21.4	21.9	19.4
12 1985	24.2	23.4	22.1	19.9	15.6	13.7	13.7	16.3	17.7	20.5	23.1	24.7	19.6
13 1986	24.3	23.0	21.6	19.8	16.7	15.3	14.2	16.2	17.0	19.3	22.3	23.1	19.4
14 1987	24.0	21.8	21.8	20.3	13.4	12.9	17.5	14.8	16.8	19.7	22.5	22.4	19.0
15 1988	24.4	22.3	23.7	19.1	14.5	13.2	12.4	17.0	19.6	19.4	22.4	24.4	19.4
16 1989	22.1	22.6	21.7	19.7	15.4	14.0	12.4	15.1	16.1	18.7	21.3	23.6	18.6
17 1990	22.8	22.8	22.5	20.2	14.6	13.0	11.6	15.4	15.4	21.2	23.1	23.2	18.8
18 1991	24.1	22.7	23.2	19.7	16.9	14.6	14.1	16.6	19.2	20.3	21.9	23.5	19.7
19 1992	23.9	23.4	21.8	18.4	16.4	16.5	12.2	14.5	17.2	20.2	20.7	24.2	19.1
20 1993	23.4	21.6	22.1	20.5	15.8	13.7	13.8	15.5	16.4	20.8	21.7	23.5	19.1
Mean	23.5	23.0	22.2	19.1	15.8	13.9	14.1	15.8	17.2	20.0	21.4	23.0	19.1

Monthly Mean Temperature (No. 33)
 St. No. 02653012 Francisco
 1974 - 1993 (20 Years)



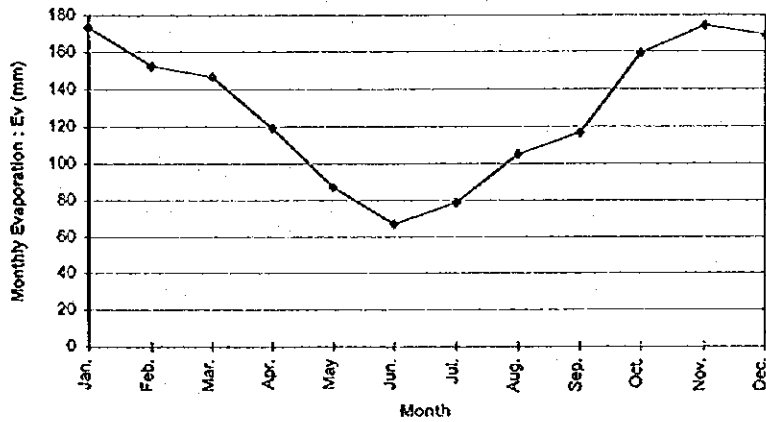
Annual Temperature (No. 33)
 St. No. 02653012 Francisco
 1974 - 1993 (20 Years)



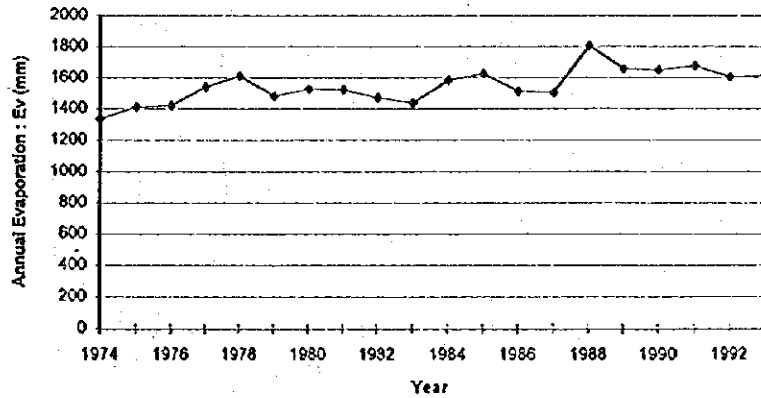
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02251027 (No.1)
 St. Name Bela Vista

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	133.3	153.8	74.1	111.9	85.7	52.9	85.7	94.4	121.6	138.2	173.9	111.6	111.4	1337.0
2 1975	156.8	128.7	136.4	116.8	83.0	66.5	70.4	118.0	107.2	135.3	139.6	153.2	117.7	1411.8
3 1976	156.3	139.0	149.9	105.8	74.1	60.7	70.1	94.1	90.7	144.2	167.6	168.5	118.4	1420.9
4 1977	142.9	173.9	157.4	112.7	93.6	65.1	90.8	104.4	120.6	166.6	151.1	162.4	128.5	1541.5
5 1978	185.4	181.3	153.5	135.5	98.2	68.4	76.3	93.4	114.1	166.9	160.8	179.8	134.3	1611.6
6 1979	179.8	165.1	153.9	110.1	78.5	71.6	64.8	110.0	103.5	145.8	163.2	136.3	123.6	1482.7
7 1980	178.0	145.1	160.9	115.6	85.1	66.8	72.4	97.5	93.2	160.3	166.6	178.2	127.1	1524.8
8 1981	165.5	159.3	158.2	118.1	104.2	63.0	70.5	104.3	122.8	125.5	179.0	151.3	126.8	1521.6
9 1982	184.4	149.3	135.9	122.6	86.0	61.9	78.1	92.0	121.2	145.9	149.3	145.6	122.7	1472.2
10 1983	168.0	146.9	146.2	105.6	72.5	51.2	75.0	109.1	84.7	137.9	176.5	164.1	119.8	1437.5
11 1984	193.0	183.0	140.2	105.6	94.4	79.1	85.0	90.9	119.8	171.7	166.1	155.3	132.0	1584.2
12 1985	190.2	147.8	141.3	115.9	91.4	65.8	72.8	111.0	125.0	168.0	191.6	205.1	135.5	1625.6
13 1986	183.8	134.7	146.7	133.3	78.9	77.3	71.6	85.3	112.5	166.3	169.3	152.6	126.0	1512.4
14 1987	171.5	134.2	163.1	113.4	70.0	63.1	86.1	98.8	105.6	142.5	173.9	181.9	125.3	1504.1
15 1988	204.9	141.7	170.5	118.9	77.7	78.4	95.7	147.5	168.6	195.0	213.4	202.4	150.5	1805.5
16 1989	138.3	139.5	160.7	131.4	105.3	74.8	94.0	111.8	130.6	198.2	167.6	185.5	138.1	1657.8
17 1990	160.6	180.4	162.1	138.9	94.0	53.5	72.7	109.9	132.2	178.6	172.7	195.6	137.6	1651.2
18 1991	189.7	167.9	132.2	126.4	103.8	75.2	93.6	120.3	133.9	167.0	194.4	171.8	139.7	1676.4
19 1992	205.4	159.7	128.2	110.8	78.3	76.7	75.7	102.1	109.3	154.2	185.0	209.5	133.7	1604.9
20 1993	180.6	119.7	164.1	136.7	93.9	68.9	76.1	106.0	114.2	174.3	205.0	175.7	134.6	1615.0
Mean	173.4	152.5	146.8	119.3	87.3	67.0	78.9	105.0	116.8	159.2	174.3	169.3	129.2	1549.9

Monthly Mean Evaporatio (No. 1)
 St. No. 02251027 Bela Vista
 1974 - 1993 (20 Years)



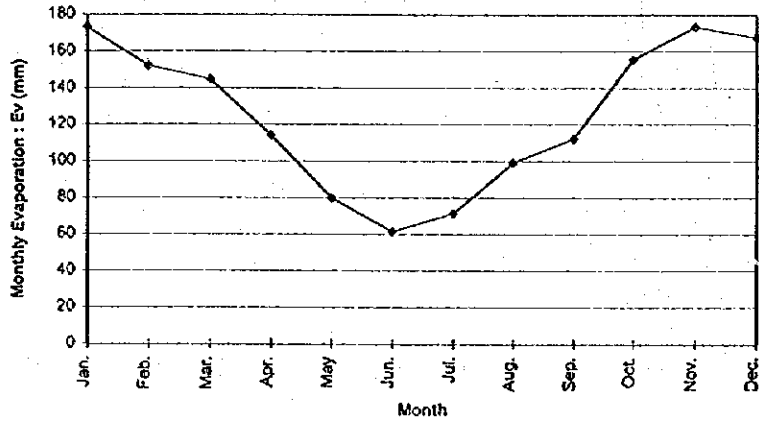
Annual Evaporation (No. 1)
 St. No. 02251027 Bela Vista
 1974 - 1993 (20 Years)



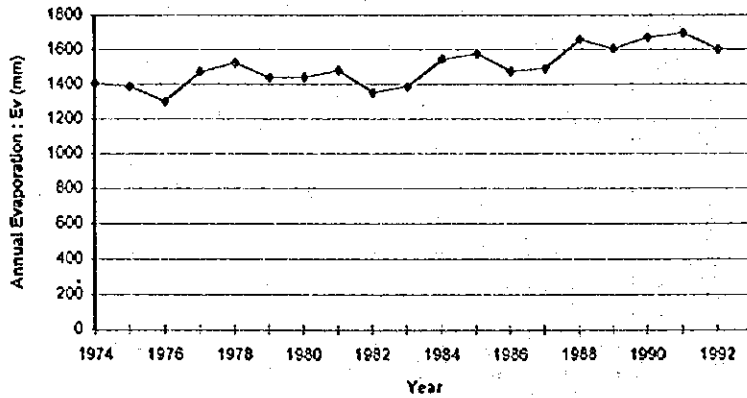
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02349030 (No.2)
 St. Name Joaquim

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	149.8	162.6	122.8	107.4	79.7	55.1	71.5	89.0	116.7	140.3	179.4	133.0	117.2	1406.3
2 1975	168.6	136.9	154.7	113.0	76.0	60.6	59.8	103.6	112.1	133.8	132.0	136.1	115.6	1337.3
3 1976	148.4	97.3	136.4	94.3	64.1	51.4	61.9	85.0	90.0	139.1	178.3	155.2	108.4	1301.3
4 1977	153.8	173.7	152.5	102.8	78.9	57.2	75.9	96.2	115.7	160.5	141.5	163.6	122.7	1472.1
5 1978	180.4	171.6	143.4	126.1	76.8	58.5	65.6	84.2	108.7	166.5	162.6	179.2	127.0	1523.4
6 1979	180.8	164.5	158.9	108.1	69.3	60.8	59.5	93.8	95.6	149.1	159.3	139.8	119.9	1439.3
7 1980	170.0	137.6	157.3	114.3	77.3	57.1	64.7	89.3	96.4	148.1	167.5	160.8	120.0	1440.4
8 1981	158.5	169.2	154.3	115.7	91.8	56.2	60.3	92.3	120.1	126.9	175.3	158.2	123.2	1478.8
9 1982	169.0	147.1	68.1	117.1	76.1	55.7	67.8	95.1	122.2	132.7	154.3	145.5	112.6	1351.6
10 1983	175.9	147.3	136.8	93.8	65.9	49.1	69.3	100.5	85.7	138.0	169.3	155.3	115.5	1386.2
11 1984	196.3	197.7	139.7	98.4	65.1	69.3	75.6	85.0	111.8	167.2	161.4	166.3	128.6	1543.7
12 1985	178.6	146.3	136.6	113.2	82.1	58.5	70.5	105.8	119.5	175.3	193.5	195.5	131.3	1575.4
13 1986	189.4	130.0	148.1	125.4	71.3	71.8	70.3	79.9	105.8	163.3	172.4	147.1	122.9	1474.6
14 1987	171.4	132.1	163.8	111.7	64.7	54.9	80.0	110.6	107.0	149.5	163.4	182.8	124.3	1491.9
15 1988	197.9	130.7	163.1	97.7	79.8	77.0	90.7	126.0	152.7	167.5	196.6	181.9	138.0	1655.6
16 1989	135.2	136.6	162.2	129.5	101.0	71.9	82.3	107.2	124.5	181.9	189.5	184.2	133.8	1605.9
17 1990	161.0	194.8	162.9	138.4	96.4	52.9	72.6	114.5	124.8	177.5	178.1	197.0	139.2	1670.9
18 1991	185.0	179.9	134.1	129.8	100.0	73.6	92.2	117.8	136.0	171.7	204.0	177.4	141.3	1695.5
19 1992	220.1	167.9	131.4	114.4	81.2	77.0	63.0	109.5	95.5	159.1	175.2	207.7	133.5	1601.9
20 1993	177.9	123.5	164.3	132.6	90.0	61.5	75.9	101.6	104.2	162.0	213.8	195.8	133.6	1603.1
Mean	173.4	152.1	144.6	114.2	80.0	61.5	71.5	99.3	112.3	155.5	173.4	167.7	125.4	1505.3

Monthly Mean Evaporatio (No. 2)
 St. No. 02349030 Joaquim
 1974 - 1993 (20 Years)



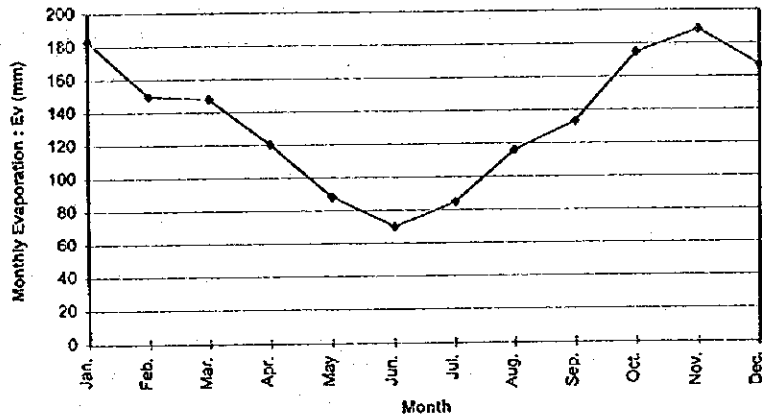
Annual Evaporation (No. 2)
 St. No. 02349030 Joaquim
 1974 - 1993 (20 Years)



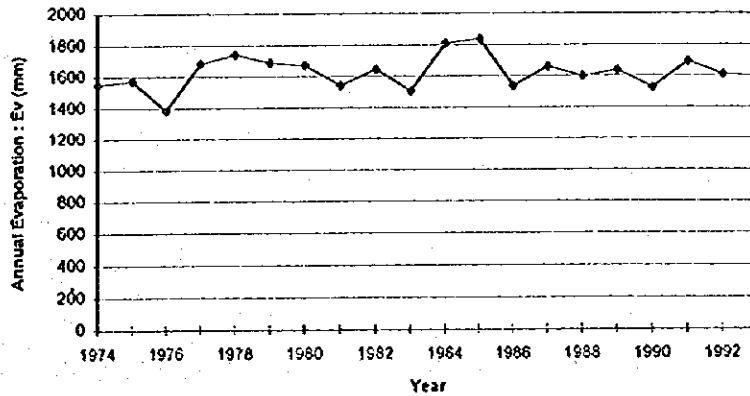
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02350017 (No.3)
 St. Name Cambara

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	155.3	156.8	136.0	124.2	95.2	64.4	76.0	111.8	140.4	141.9	207.1	140.8	129.1	1549.7
2 1975	185.7	144.6	166.4	128.8	98.6	72.3	70.4	120.7	135.9	149.7	150.6	147.1	130.9	1570.6
3 1976	161.9	138.3	148.0	106.2	73.6	5.3	72.7	97.0	101.2	156.1	177.7	146.8	115.4	1384.9
4 1977	151.6	175.2	161.6	125.1	99.8	71.7	97.1	130.3	144.4	193.7	158.2	174.2	140.2	1582.7
5 1978	197.6	192.5	160.6	142.4	92.7	71.1	84.7	108.6	138.0	191.7	188.1	173.5	145.1	1741.5
6 1979	197.2	179.3	175.2	130.4	85.2	85.1	80.0	120.8	120.4	179.5	185.3	149.0	140.6	1687.4
7 1980	184.7	134.7	162.6	128.3	94.1	77.8	85.4	117.2	126.0	183.8	193.5	182.2	139.2	1670.2
8 1981	169.2	177.0	173.2	134.4	113.3	70.6	85.7	124.2	153.6	139.2	196.6	5.3	128.5	1542.2
9 1982	190.8	157.7	148.5	139.2	97.8	71.8	84.1	110.1	158.1	171.8	165.3	150.3	137.0	1643.5
10 1983	189.6	153.0	155.5	112.5	5.3	59.3	86.6	131.9	106.6	158.1	180.7	166.5	125.5	1506.4
11 1984	214.0	195.0	158.2	120.2	101.7	88.7	106.4	116.9	139.0	207.4	195.6	167.7	150.6	1811.1
12 1985	191.5	155.6	147.9	125.8	97.7	71.6	91.5	131.7	158.4	214.7	223.8	227.6	153.1	1837.7
13 1986	201.0	142.9	5.3	143.8	87.9	86.8	91.1	99.2	143.4	193.6	185.9	155.9	128.1	1536.8
14 1987	181.2	130.8	170.5	123.7	72.4	69.1	98.2	124.6	132.7	161.8	196.7	197.8	138.3	1659.5
15 1988	202.5	5.3	168.3	112.6	76.0	72.1	89.9	129.9	163.8	173.5	206.3	197.4	133.1	1597.5
16 1989	147.5	135.6	160.0	131.3	102.3	70.2	80.4	112.9	129.5	191.4	185.1	183.8	136.3	1635.8
17 1990	161.7	181.8	154.0	5.3	91.0	70.7	71.8	107.6	119.9	182.8	178.2	201.8	127.2	1526.5
18 1991	193.9	158.9	127.0	128.4	103.2	75.1	87.5	119.4	137.4	173.3	210.6	177.5	141.0	1692.1
19 1992	205.2	159.6	125.9	112.5	81.8	79.7	80.1	105.7	110.4	159.6	175.9	212.7	134.1	1609.1
20 1993	182.1	118.9	153.5	131.6	95.1	68.5	78.2	102.2	109.8	168.1	207.7	160.8	133.0	1596.4
Mean	183.2	149.7	148.0	120.3	88.2	70.1	84.9	116.1	133.3	174.9	188.5	166.9	135.3	1624.1

Monthly Mean Evaporatio (No. 3)
 St. No. 02350017 Cambara
 1974 - 1993 (20 Years)



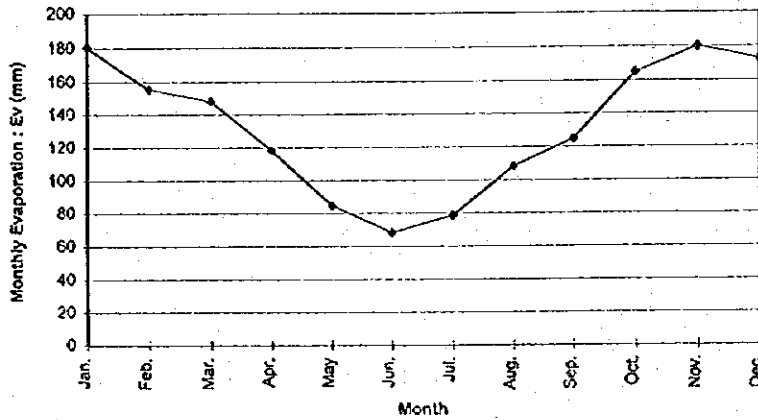
Annual Evaporation (No. 3)
 St. No. 02350017 Cambara
 1974 - 1993 (20 Years)



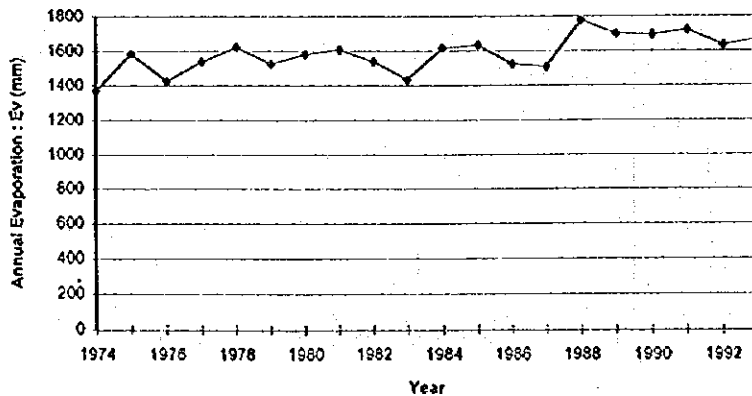
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02350018 (No.4)
 St. Name Bandeirantes

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	147.2	159.2	68.8	52.5	41.0	68.4	78.1	114.9	143.0	144.5	208.5	143.4	114.1	1369.5
2 1975	187.5	147.2	168.6	131.7	102.1	76.2	74.3	123.8	116.1	152.1	153.0	152.0	132.1	1584.7
3 1976	160.9	131.3	145.1	101.3	67.5	56.4	66.7	100.4	104.6	151.4	172.5	151.3	118.8	1425.4
4 1977	144.9	176.0	160.8	107.8	89.3	64.3	87.6	104.9	124.2	166.4	145.4	167.6	128.3	1539.0
5 1978	192.2	180.0	150.2	130.5	84.4	64.9	88.4	91.0	114.9	176.7	163.9	185.5	135.2	1522.6
6 1979	184.5	165.0	164.4	133.3	76.0	69.7	62.7	105.1	104.7	154.5	160.8	144.7	127.1	1525.3
7 1980	176.3	138.1	155.0	112.3	82.7	64.7	70.9	98.1	128.9	165.7	195.1	174.2	131.6	1582.0
8 1981	167.3	179.0	158.7	122.0	102.0	59.4	67.8	127.1	156.0	128.9	182.2	157.0	133.9	1607.3
9 1982	184.5	153.3	138.5	126.1	81.8	61.1	73.9	93.7	158.4	173.9	151.1	143.1	128.3	1539.5
10 1983	177.4	148.1	144.6	104.7	70.7	51.2	70.7	108.4	85.9	138.4	171.6	161.7	119.5	1434.4
11 1984	215.3	196.7	142.3	108.3	90.0	73.3	82.0	91.5	114.2	174.9	170.9	158.3	134.8	1517.6
12 1985	185.1	155.8	136.9	115.9	86.1	64.2	73.8	109.6	124.3	180.7	194.5	207.1	136.2	1633.9
13 1986	202.5	135.0	144.7	130.8	79.0	76.4	74.0	86.0	111.6	167.6	172.1	145.0	127.1	1524.8
14 1987	175.8	123.5	163.9	114.6	70.2	62.4	84.9	100.9	107.4	143.5	174.5	187.5	125.8	1509.1
15 1988	207.2	139.1	122.7	117.7	76.7	72.0	98.1	142.5	169.7	174.6	205.1	199.0	147.9	1774.8
16 1989	152.3	141.4	162.3	134.1	108.3	75.1	88.8	116.8	137.4	199.0	191.5	191.7	141.6	1638.8
17 1990	166.1	190.2	157.3	141.8	96.3	70.8	72.6	110.0	124.7	184.6	177.0	202.9	141.2	1694.3
18 1991	198.0	169.3	131.8	131.1	108.5	78.0	89.9	119.7	138.4	172.4	204.2	176.5	143.3	1719.8
19 1992	208.3	159.5	125.0	111.7	82.0	80.9	83.3	111.5	115.2	162.7	184.7	210.4	136.3	1635.1
20 1993	176.7	122.7	170.0	139.3	101.1	74.3	64.3	112.2	115.7	166.7	217.5	184.6	138.9	1668.9
Mean	160.6	155.5	148.1	118.4	84.8	68.2	78.6	108.4	124.8	165.0	180.1	172.8	132.1	1565.2

Monthly Mean Evaporatio (No. 4)
 St. No. 02350018 Bandeirantes
 1974 - 1993 (20 Years)



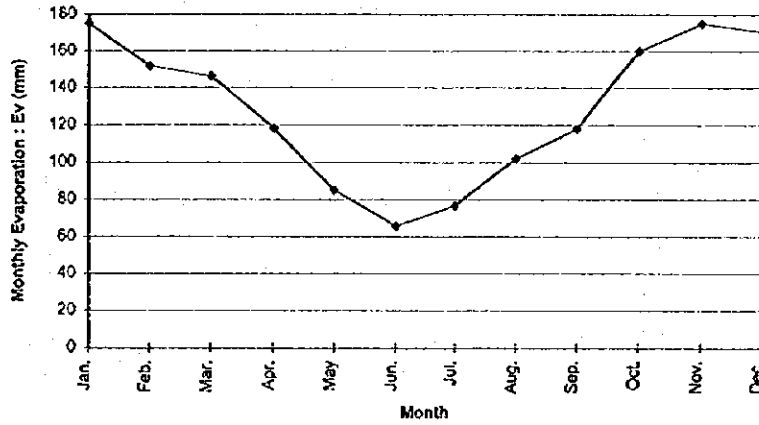
Annual Evaporation (No. 4)
 St. No. 02350018 Bandeirantes
 1974 - 1993 (20 Years)



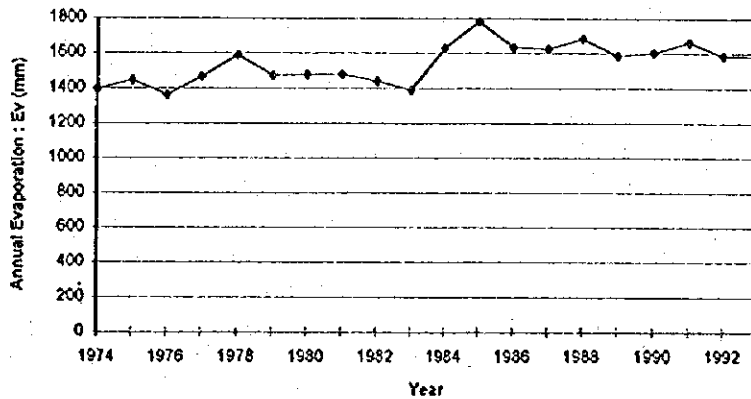
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02351003 (No 5)
 St. Name Londrina

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	145.5	163.8	82.5	115.5	89.8	56.7	81.6	89.0	120.4	140.5	183.3	128.4	116.4	1397.1
2 1975	178.0	133.5	155.5	119.6	82.6	63.0	65.4	110.8	109.9	138.1	134.1	153.9	120.5	1445.5
3 1976	152.2	135.2	141.2	103.1	70.4	57.4	68.8	89.0	66.4	144.5	161.1	156.3	113.6	1363.6
4 1977	140.9	166.3	148.5	104.8	87.5	61.8	84.5	97.5	110.3	155.3	138.8	161.1	122.3	1457.0
5 1978	183.6	181.3	145.9	130.1	85.3	63.2	72.9	87.0	111.3	169.9	172.7	181.2	132.3	1587.4
6 1979	180.6	164.0	157.8	109.2	76.3	69.2	62.7	102.8	101.3	150.3	150.4	139.9	122.9	1474.3
7 1980	168.0	140.4	159.3	116.5	82.4	63.9	72.2	91.0	95.5	156.9	163.6	170.3	123.3	1479.9
8 1981	155.0	156.9	159.1	117.7	98.5	59.0	68.2	100.2	121.7	124.4	172.3	147.5	123.4	1480.5
9 1982	186.5	145.4	134.0	121.1	82.4	59.2	72.9	88.5	121.6	142.1	139.2	148.9	120.1	1441.7
10 1983	165.8	140.4	137.9	100.8	71.3	49.0	69.2	103.8	85.3	137.9	168.9	160.6	115.9	1391.0
11 1984	200.2	182.9	142.4	103.1	90.5	72.8	79.3	87.6	140.1	188.6	178.9	164.2	135.9	1630.6
12 1985	205.8	148.4	146.0	121.5	95.2	72.4	88.3	128.8	145.8	191.1	211.4	225.9	148.4	1780.7
13 1986	193.3	138.6	148.1	138.7	83.9	81.8	83.4	97.8	133.7	184.7	192.3	156.0	136.0	1632.2
14 1987	178.1	139.3	175.4	123.2	77.3	65.4	92.5	115.8	123.9	158.3	184.7	192.7	135.4	1624.6
15 1988	192.2	127.2	167.7	109.1	70.4	75.8	89.3	134.5	154.2	170.9	208.0	182.7	140.1	1631.8
16 1989	138.4	131.9	156.6	125.7	99.5	63.7	81.6	104.8	128.6	182.7	188.2	181.2	132.7	1585.8
17 1990	158.9	183.4	150.8	137.0	89.7	64.6	67.4	99.6	120.4	172.6	163.7	188.9	133.5	1602.0
18 1991	186.9	169.9	132.0	126.0	99.1	72.4	87.5	113.3	132.8	167.1	194.2	180.7	138.5	1662.0
19 1992	213.3	162.5	121.8	110.6	75.4	75.2	73.6	97.2	111.3	155.4	180.0	208.9	132.1	1585.4
20 1993	176.5	120.5	155.7	132.4	93.3	65.3	75.6	102.5	110.1	161.5	204.8	183.3	131.8	1581.4
Mean	175.0	151.8	146.1	118.3	85.0	65.8	76.7	102.1	118.1	160.0	175.0	170.6	128.7	1544.7

Monthly Mean Evaporation (No. 5)
 St. No. 02351003 Londrina
 1974 - 1993 (20 Years)



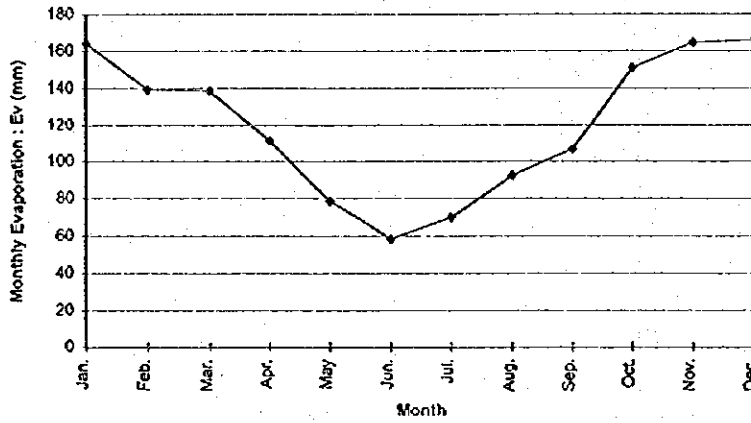
Annual Evaporation (No. 5)
 St. No. 02351003 Londrina
 1974 - 1993 (20 Years)



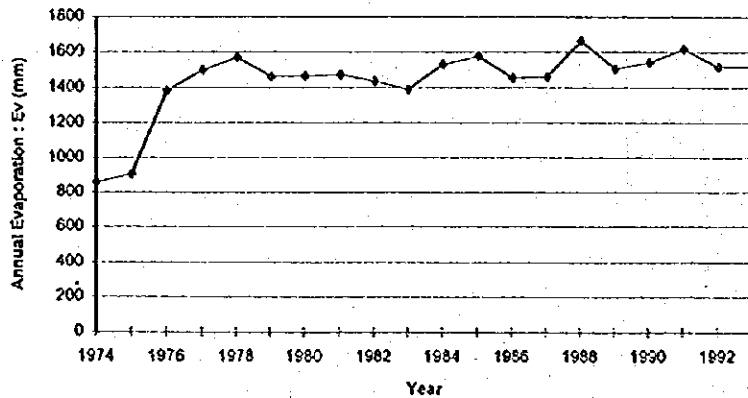
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02351008 (No.6)
 St. Name Apucarana

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	80.8	70.4	67.2	117.0	90.2	37.8	66.1	45.1	58.1	68.3	75.6	80.1	71.5	857.7
2 1975	81.1	69.9	68.1	52.2	40.7	34.1	35.1	49.4	57.4	130.8	138.8	147.6	75.4	904.9
3 1976	149.0	135.4	146.7	107.0	72.7	58.4	69.4	91.5	86.9	145.9	159.4	162.2	115.4	1384.3
4 1977	138.4	163.2	151.2	110.9	88.0	64.9	89.5	100.1	119.0	169.3	141.1	162.8	124.9	1498.3
5 1978	184.6	129.3	144.7	134.9	88.5	65.6	76.0	89.8	114.7	162.0	162.8	165.7	130.7	1568.4
6 1979	178.8	155.8	153.8	106.9	78.2	74.1	63.1	103.4	103.1	147.2	154.6	142.5	121.8	1461.4
7 1980	168.1	137.6	160.6	115.4	83.3	63.2	72.0	93.2	94.3	150.2	157.7	168.9	122.0	1464.5
8 1981	156.3	148.9	157.7	114.8	99.2	59.6	71.8	101.8	128.0	123.9	164.8	147.9	122.7	1472.6
9 1982	186.1	140.4	134.8	123.0	83.3	57.9	75.6	90.4	120.9	139.2	138.1	146.4	119.7	1436.1
10 1983	163.0	139.7	138.5	100.7	72.5	47.9	70.9	104.4	85.2	138.9	168.6	162.4	115.9	1390.5
11 1984	193.8	172.8	139.6	104.1	91.8	75.2	82.3	87.2	118.3	165.5	151.3	149.6	127.6	1531.4
12 1985	192.5	134.5	136.7	108.2	89.2	66.4	71.2	107.4	121.8	163.7	165.7	196.4	131.2	1574.6
13 1986	171.3	127.4	141.2	123.8	76.8	76.2	70.6	84.6	109.5	159.7	161.3	151.2	121.1	1453.6
14 1987	161.0	130.7	159.1	113.7	67.1	62.7	84.0	94.6	104.6	134.9	168.0	180.4	121.7	1460.5
15 1988	200.6	119.5	171.3	102.6	53.3	62.4	89.3	128.7	156.5	174.9	217.2	186.7	138.6	1863.0
16 1989	133.2	124.9	152.0	117.7	89.5	53.1	66.8	94.7	117.7	186.7	189.8	179.2	125.5	1506.4
17 1990	150.4	193.3	150.2	130.2	76.9	47.4	51.2	90.6	112.9	175.6	164.9	197.9	128.5	1541.5
18 1991	196.8	172.2	123.1	115.6	89.7	57.5	76.8	106.2	125.5	168.4	204.9	181.0	134.6	1615.7
19 1992	220.6	159.1	115.1	103.2	59.3	58.0	57.8	89.1	102.0	153.9	182.0	217.5	126.5	1517.6
20 1993	175.3	113.3	159.2	127.7	79.7	47.3	60.0	93.6	89.3	163.6	206.0	192.7	126.4	1518.9
Mean	164.1	139.3	138.5	111.5	78.5	58.5	70.0	92.3	106.7	151.0	164.6	165.9	120.1	1441.0

Monthly Mean Evaporatio (No.6)
 St. No. 02351008 Apucarana
 1974 - 1993 (20 Years)



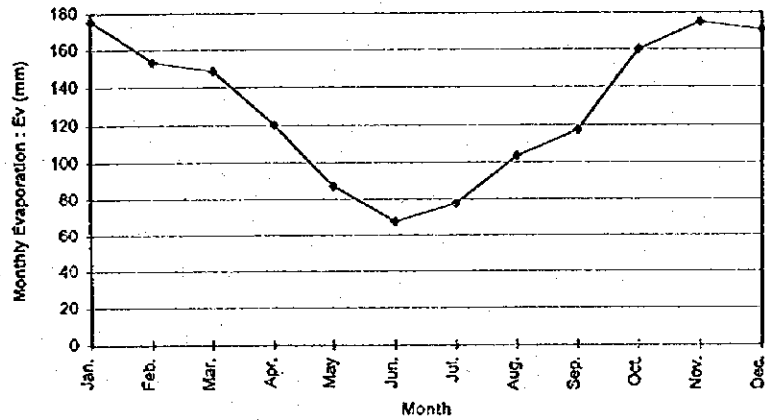
Annual Evaporation (No. 6)
 St. No. 02350017 Apucarana
 1974 - 1993 (20 Years)



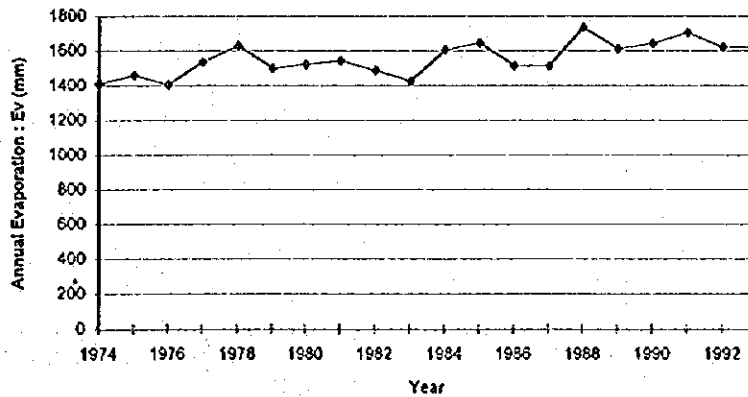
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02352011 (No.7)
 St. Name Ibipora

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	145.9	163.8	84.6	116.7	91.7	59.8	83.7	90.9	121.5	141.1	182.7	129.2	117.6	1411.3
2 1975	177.5	134.2	156.6	120.7	84.7	65.6	67.9	112.2	111.3	138.7	134.9	154.1	121.5	1458.4
3 1976	152.5	136.5	149.1	108.9	74.0	59.4	69.0	93.6	91.0	148.1	168.6	155.2	117.2	1405.8
4 1977	144.2	174.6	158.8	111.5	93.3	64.9	90.3	103.9	120.3	168.9	141.1	163.7	128.0	1535.5
5 1978	189.5	185.9	151.2	136.6	89.0	67.1	76.9	90.7	111.0	171.3	174.6	184.6	135.7	1528.6
6 1979	180.1	164.7	158.5	113.0	80.4	71.3	64.8	106.9	105.1	154.4	162.3	138.5	125.0	1459.9
7 1980	172.4	144.4	163.5	121.1	86.3	65.6	72.1	96.8	95.6	160.3	169.2	174.8	126.8	1522.1
8 1981	158.8	163.3	162.8	122.2	104.6	62.6	70.4	103.9	136.4	133.0	175.6	148.7	128.5	1542.3
9 1982	187.9	147.0	142.3	126.5	88.7	61.0	76.5	94.7	125.5	146.5	145.0	148.0	124.0	1487.7
10 1983	170.0	143.1	142.4	103.3	73.1	50.9	72.5	107.3	86.7	140.0	174.1	162.4	118.8	1425.9
11 1984	199.8	186.4	144.1	105.5	95.6	77.6	85.2	89.9	121.9	173.5	168.2	158.5	133.8	1606.0
12 1985	192.9	149.0	140.9	113.9	91.1	66.2	74.3	113.1	125.8	177.1	190.8	210.2	137.1	1645.1
13 1986	188.4	131.0	144.0	130.8	78.7	78.2	71.3	86.8	113.8	167.9	168.3	154.8	126.2	1514.1
14 1987	168.7	130.2	166.2	115.8	70.3	61.8	84.0	98.7	108.3	144.7	176.5	188.0	126.1	1512.9
15 1988	198.4	129.2	173.5	114.8	72.8	80.5	93.0	137.1	160.8	176.5	212.6	166.6	144.6	1735.7
16 1989	141.0	133.9	157.0	127.7	103.6	72.6	84.3	108.1	127.7	186.6	189.2	180.2	134.3	1611.8
17 1990	155.6	192.2	158.5	138.4	92.9	67.7	71.0	104.6	123.6	177.1	168.0	196.1	138.9	1642.5
18 1991	195.2	174.2	132.3	125.9	103.8	76.4	92.8	117.9	134.4	169.2	202.1	181.7	142.2	1705.9
19 1992	215.5	163.0	125.5	115.4	77.8	76.8	76.6	103.3	114.3	158.6	182.5	212.6	135.2	1622.2
20 1993	176.9	123.9	163.1	136.3	95.3	67.7	78.5	107.1	111.2	166.9	210.1	184.9	135.2	1621.8
Mean	175.6	153.5	148.6	120.2	87.3	67.7	77.8	103.4	117.3	160.0	174.8	170.6	129.7	1556.8

Monthly Mean Evaporatio (No. 7)
 St. No. 02351011 Ibipora
 1974 - 1993 (20 Years)



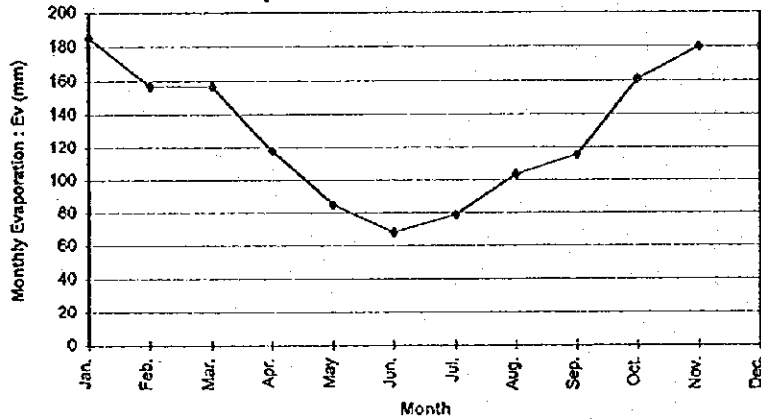
Annual Evaporation (No. 7)
 St. No. 02351011 Ibipora
 1974 - 1993 (20 Years)



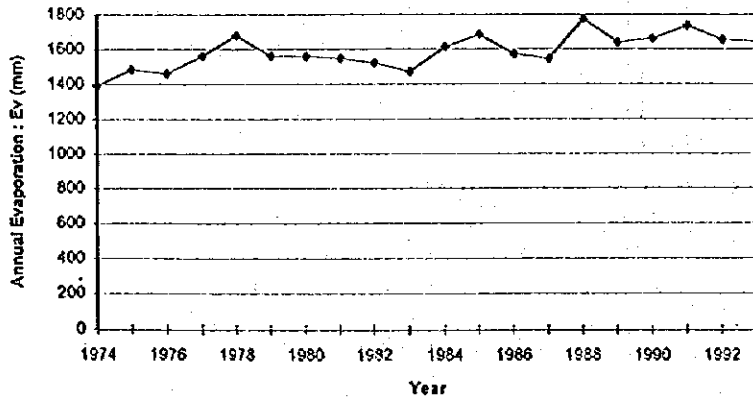
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02352017 (No. 8)
 St. Name Paranaval

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	151.4	160.3	133.0	57.4	49.3	59.6	82.3	93.7	122.7	145.6	182.3	150.7	115.9	1390.2
2 1975	186.9	140.8	151.4	114.1	82.8	64.2	71.5	108.3	106.9	142.4	154.3	158.7	123.5	1432.3
3 1976	169.3	145.7	153.1	111.6	74.7	59.3	70.7	92.0	90.8	152.6	167.9	173.1	121.7	1450.8
4 1977	148.7	172.3	160.8	115.2	93.8	69.2	90.3	99.2	116.5	174.6	148.6	171.3	130.0	1560.5
5 1978	198.3	193.9	162.7	135.7	89.8	67.2	80.9	91.0	115.1	167.2	178.9	198.2	139.9	1678.7
6 1979	189.4	172.9	161.7	108.7	82.2	75.0	67.3	113.1	108.2	156.7	177.7	147.2	130.0	1560.0
7 1980	192.4	146.7	177.2	118.7	86.3	64.5	71.8	93.1	94.5	162.2	165.4	185.4	129.8	1558.1
8 1981	175.5	150.2	169.6	122.3	106.6	61.1	73.0	104.0	122.8	130.9	176.7	154.8	129.0	1547.6
9 1982	208.0	144.3	139.0	129.0	88.9	58.5	80.7	96.9	123.3	144.4	150.6	156.7	126.7	1520.1
10 1983	176.7	145.0	151.6	107.7	77.0	47.6	70.3	105.8	85.6	141.0	179.9	162.3	122.5	1470.4
11 1984	202.3	181.2	147.3	113.0	91.6	74.2	85.8	88.2	120.8	179.4	166.9	163.2	134.5	1613.8
12 1985	209.7	145.7	145.3	117.7	91.7	67.7	73.7	104.0	124.8	175.7	200.8	226.9	140.3	1683.8
13 1986	195.7	139.8	154.9	132.7	79.9	76.8	71.9	89.5	116.2	166.6	174.9	173.2	131.0	1572.0
14 1987	178.5	139.4	171.6	116.6	68.0	63.9	86.0	96.0	104.1	144.9	187.3	168.7	128.6	1545.1
15 1988	213.7	139.4	176.5	119.0	77.3	80.4	96.0	144.5	151.3	179.3	209.8	185.9	147.7	1772.9
16 1989	139.8	147.2	161.0	130.2	101.8	72.9	91.1	109.4	123.9	165.9	192.9	184.8	136.7	1640.8
17 1990	161.7	164.6	166.3	136.7	86.6	69.5	88.5	107.3	122.1	176.2	181.7	200.2	138.5	1661.5
18 1991	195.8	183.1	145.3	131.6	100.4	76.5	94.7	122.3	133.8	163.3	201.3	187.1	144.6	1735.2
19 1992	220.9	176.1	140.8	110.8	80.9	82.7	75.0	99.9	109.7	157.9	185.2	215.1	137.9	1654.9
20 1993	137.3	132.2	159.7	131.1	94.4	68.9	75.3	108.1	115.7	170.9	209.6	192.3	137.1	1645.4
Mean	185.1	157.0	156.7	118.0	85.0	68.0	76.8	103.3	115.4	160.9	179.6	179.8	132.3	1587.7

Monthly Mean Evaporatio (No. 8)
 St. No. 02352017 Paranaval
 1974 - 1993 (20 Years)



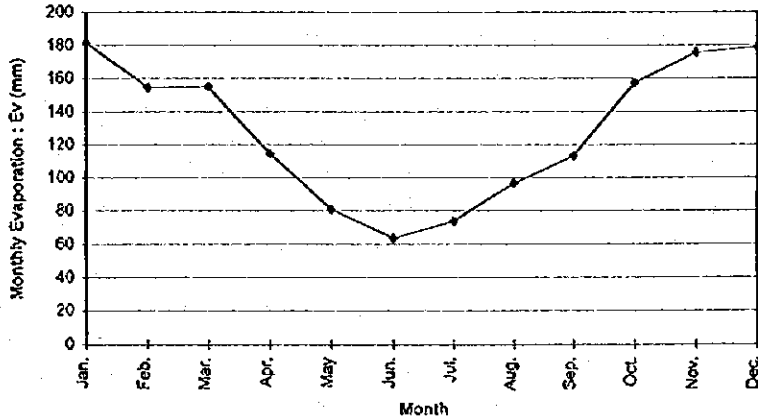
Annual Evaporation (No. 8)
 St. No. 02352017 Paranaval
 1974 - 1993 (20 Years)



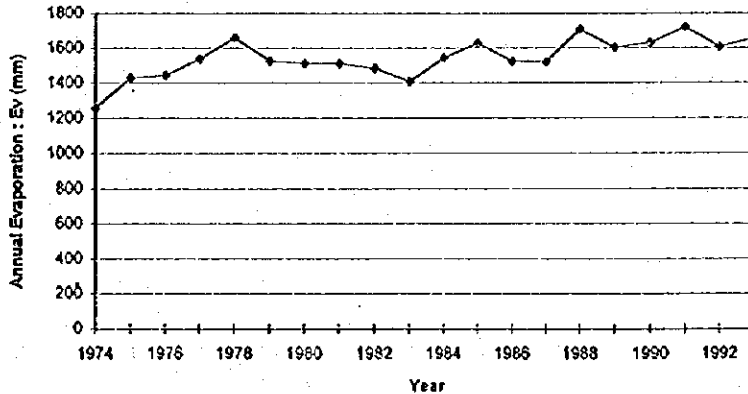
Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02352019 (No.9)
 St. Name Cianorte

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	143.2	157.3	134.6	52.6	41.3	32.9	37.9	45.1	123.1	144.5	150.2	158.6	104.7	1256.1
2 1975	185.8	139.6	149.6	110.3	74.5	62.5	67.5	100.7	98.5	132.4	148.6	158.9	119.1	1428.7
3 1976	160.7	150.5	150.3	108.9	69.5	57.1	69.5	91.0	85.1	154.2	173.8	172.6	120.3	1443.2
4 1977	144.4	169.7	153.4	117.5	91.4	65.4	87.7	94.8	118.1	173.7	147.2	174.4	128.1	1537.7
5 1978	205.4	165.5	162.5	133.7	69.0	64.0	77.0	91.6	114.8	165.7	176.1	192.1	138.2	1658.3
6 1979	198.1	168.9	160.1	104.9	74.0	72.1	64.3	105.4	103.4	154.2	171.5	148.5	127.1	1525.4
7 1980	186.0	139.0	172.5	117.2	80.4	60.4	67.2	88.9	91.8	159.2	162.5	186.8	126.0	1511.8
8 1981	172.3	147.0	168.0	118.6	100.6	57.9	71.5	100.3	121.6	131.0	169.5	152.3	125.9	1510.6
9 1982	210.1	134.4	145.7	125.2	86.5	55.4	76.3	92.8	119.6	141.1	134.7	161.9	123.7	1484.6
10 1983	175.8	146.5	145.0	97.5	70.2	45.2	65.6	103.2	82.2	132.1	172.9	172.7	117.4	1408.8
11 1984	192.9	178.5	141.3	107.6	83.7	69.2	84.2	83.9	121.5	166.9	152.1	157.3	128.7	1544.1
12 1985	210.8	137.6	143.2	112.4	87.1	64.7	70.6	99.5	120.3	172.2	193.3	216.8	135.7	1628.4
13 1986	189.0	136.4	146.3	122.2	76.4	78.1	71.4	86.7	116.1	162.6	173.1	167.4	127.0	1523.6
14 1987	175.8	141.8	171.0	117.1	63.6	59.7	81.8	89.9	107.6	143.1	181.2	188.1	126.7	1520.6
15 1988	197.1	143.0	173.2	109.0	70.6	75.9	91.1	132.4	147.2	173.9	208.7	166.2	142.4	1708.3
16 1989	130.4	136.7	163.4	125.6	100.2	69.1	65.1	104.2	120.3	186.2	197.5	183.9	133.6	1603.6
17 1990	155.2	186.4	162.8	133.9	84.0	67.5	65.9	103.3	120.4	171.4	181.1	198.8	135.9	1630.6
18 1991	200.6	184.1	155.6	131.6	97.4	74.5	90.2	113.4	129.2	158.2	197.9	187.4	143.3	1720.2
19 1992	215.0	167.5	131.9	110.1	75.9	74.2	68.9	95.8	115.1	156.8	181.0	214.9	133.9	1607.0
20 1993	179.6	141.1	166.9	135.0	95.5	68.1	78.0	107.8	109.8	168.1	209.2	195.4	137.9	1655.4
Mean	181.7	154.6	154.9	114.5	80.8	63.6	73.6	96.5	113.3	157.4	175.6	178.8	128.8	1545.3

Monthly Mean Evaporation (No. 9)
 St. No. 02352019 Cianorte
 1974 - 1993 (20 Years)



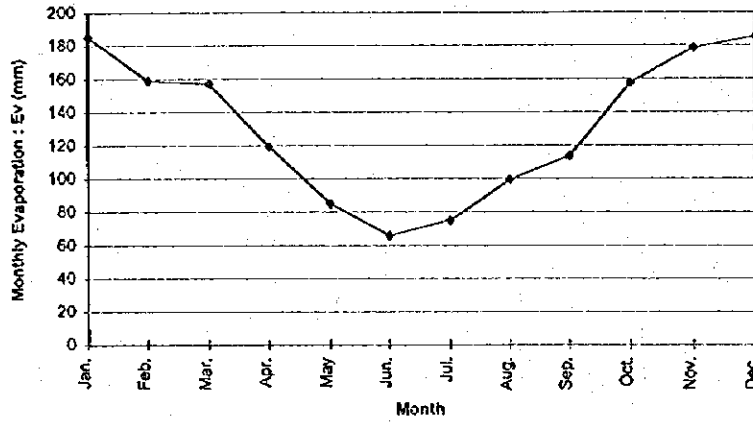
Annual Evaporation (No. 9)
 St. No. 02352019 Cianorte
 1974 - 1993 (20 Years)



Monthly Evaporation Table Period 1974 - 1993 (20 years)
 St. No. 02353008 (No.10)
 St. Name Umurama

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Mean	Total
1 1974	149.9	154.3	137.4	120.6	88.0	56.8	41.7	85.9	119.7	144.3	182.4	164.4	120.4	1445.2
2 1975	180.1	140.2	145.8	110.5	78.5	63.5	71.1	99.2	98.6	129.9	162.1	165.4	120.4	1444.7
3 1976	164.5	161.1	156.6	112.3	74.3	57.5	67.6	89.2	90.9	153.2	171.0	176.2	122.8	1473.8
4 1977	143.8	177.6	159.6	120.7	90.5	68.8	87.9	87.7	118.2	171.3	143.2	177.5	128.7	1544.7
5 1978	206.7	183.3	164.6	133.2	92.3	65.1	78.2	88.8	112.1	166.7	173.0	202.6	139.7	1576.6
6 1979	202.3	169.2	163.2	102.2	73.5	71.9	64.1	106.3	104.9	150.3	174.4	158.2	128.4	1540.4
7 1980	193.3	143.6	174.3	121.1	84.9	62.1	64.2	88.5	96.9	151.6	160.9	185.3	127.2	1525.7
8 1981	180.3	154.0	173.0	118.6	103.1	57.9	73.7	100.2	115.4	130.9	170.9	152.5	127.5	1530.6
9 1982	212.4	141.8	135.9	129.2	87.3	53.9	78.2	93.5	113.3	146.7	137.1	169.5	124.9	1458.7
10 1983	175.1	144.4	147.6	99.3	70.3	43.5	60.1	97.6	84.0	139.8	176.8	192.6	119.3	1431.1
11 1984	195.1	179.6	143.3	108.7	87.4	68.5	88.1	81.8	123.6	168.5	157.9	170.2	130.9	1570.5
12 1985	214.5	147.4	146.1	111.9	90.2	66.9	71.8	96.8	115.3	170.9	198.0	228.0	138.4	1660.6
13 1986	188.9	139.2	156.8	122.4	76.0	78.1	74.9	88.9	114.2	160.3	175.1	178.4	130.3	1563.1
14 1987	178.2	147.9	170.4	120.1	65.0	62.4	80.4	90.7	106.7	141.8	181.1	189.7	127.9	1534.5
15 1988	201.5	148.9	174.2	112.0	69.4	70.3	91.7	135.3	149.9	176.3	212.7	186.7	144.1	1723.9
16 1989	134.7	139.5	160.4	123.5	99.0	68.5	87.6	118.6	122.9	188.7	195.4	194.0	135.9	1530.7
17 1990	152.3	175.5	165.4	136.7	87.3	71.3	69.6	112.8	123.4	173.8	195.8	207.5	139.3	1671.4
18 1991	211.4	186.5	162.1	137.3	103.9	79.5	97.9	117.8	132.5	161.5	204.1	194.1	149.0	1783.6
19 1992	218.5	184.8	142.1	114.9	79.9	79.9	71.4	97.2	116.8	161.0	185.9	224.3	139.7	1678.7
20 1993	186.6	154.0	158.8	132.5	97.8	74.4	79.1	107.9	109.4	165.9	211.3	190.5	139.0	1662.1
Mean	185.0	158.9	157.1	119.4	84.9	65.9	74.9	99.2	113.6	157.6	178.6	185.4	131.7	1580.3

Monthly Mean Evaporatio (No. 10)
 St. No. 02353008 Umurama
 1974 - 1993 (20 Years)



Annual Evaporation (No. 10)
 St. No. 02353008 Umurama
 1974 - 1993 (20 Years)

