

TABLES

Table 1 SUMMARY OF CLIMATE

Climatological features	Observation Station	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual	Data Source
<u>Air Temperature (°C)</u>															
Mean	Chon Buri	29.6	29.3	28.9	28.6	28.3	27.9	27.3	26.7	25.8	25.9	27.4	28.8	27.9	(1)
	Sattahip	29.7	29.2	28.9	28.4	28.4	27.9	27.1	26.5	26.1	26.7	27.9	28.9	27.9	(1)
	B. Nong Mapring	28.1	28.1	27.8	27.9	27.7	27.4	27.2	26.0	25.0	24.7	26.0	27.4	26.9	(2)
Mean Max.	Chon Buri	34.1	33.3	32.5	31.9	31.6	31.2	31.3	31.1	31.0	31.3	32.1	33.2	32.0	(1)
	Sattahip	34.6	33.3	32.7	32.4	32.5	32.2	31.9	32.2	32.4	33.2	33.6	34.1	32.9	(1)
	B. Nong Mapring	35.1	33.5	33.4	33.0	32.9	32.9	33.1	32.9	33.1	33.5	33.7	34.9	33.5	(2)
Mean Min.	Chon Buri	25.4	25.4	25.5	25.0	24.9	24.4	23.8	22.1	20.3	20.1	22.4	24.2	23.6	(1)
	Sattahip	26.5	26.2	26.4	25.7	25.6	25.0	24.0	22.6	21.6	22.1	24.2	25.6	24.6	(1)
	B. Nong Mapring	21.6	22.6	21.5	22.0	21.6	20.9	21.2	19.1	16.7	15.9	18.3	20.0	20.1	(2)
Extreme Max.	Chon Buri	38.0	37.8	37.1	35.5	34.7	34.4	34.8	35.2	36.1	36.2	36.6	37.0	33.0	(1)
	Sattahip	40.5	40.5	37.2	37.8	37.2	37.4	36.2	37.4	38.3	39.0	39.4	39.5	40.5	(1)
	B. Nong Mapring	40.0	40.0	39.0	43.5	39.0	40.0	38.9	40.0	38.5	38.5	39.4	39.3	43.5	(2)
Extreme Min.	Chon Buri	20.4	21.2	21.0	20.5	20.9	20.6	18.2	14.2	12.0	9.9	16.5	17.5	9.9	(1)
	Sattahip	21.0	21.5	20.9	19.0	21.5	19.0	19.5	15.0	12.8	12.3	16.8	18.7	12.3	(1)
	B. Nong Mapring	16.2	18.5	18.5	19.0	20.2	19.5	15.2	10.5	9.0	8.0	10.0	9.8	8.0	(2)
<u>Relative Humidity (%)</u>															
Mean	Chon Buri	71.0	75.0	75.0	75.0	76.0	80.0	80.0	73.0	66.0	67.0	71.0	71.0	73.0	(1)
	Sattahip	77.0	79.0	76.0	77.0	77.0	81.0	83.0	76.0	70.0	70.0	75.0	76.0	75.0	(1)
	B. Nong Mapring	92.2	94.5	94.9	94.8	94.9	95.6	94.6	90.1	88.0	92.5	92.8	93.5	93.2	(2)
Mean Max.	Chon Buri	87.6	88.8	87.6	88.5	90.0	92.3	93.0	89.5	85.1	85.0	88.2	87.8	83.6	(1)
	Sattahip	87.3	88.8	86.0	87.4	87.6	90.7	93.3	89.0	84.7	84.2	88.2	87.6	87.9	(1)
Mean Min.	Chon Buri	56.7	60.8	61.8	62.9	64.0	67.1	66.7	57.2	50.1	52.0	56.2	56.6	59.3	(1)
	Sattahip	61.1	66.6	65.5	64.2	65.9	68.3	69.1	60.7	53.0	51.2	57.0	59.9	61.9	(1)
Extreme Min.	Chon Buri	29.0	32.0	42.0	43.0	45.0	46.0	42.0	29.0	22.0	20.0	25.0	23.0	20.0	(1)
	Sattahip	33.0	43.0	43.0	47.0	48.0	45.0	38.0	28.0	21.0	25.0	17.0	29.0	17.0	(1)
<u>Evaporation (mm)</u>															
	B. Nong Mapring	111.3	102.4	93.3	95.0	90.0	77.7	91.2	96.7	101.7	99.4	93.5	112.0	1,164.2	(2)
	Bang Phra	115.9	109.7	101.0	97.3	91.8	78.3	85.1	87.5	84.7	76.2	76.9	103.1	1,110.1	(2)
	Ban Mai	121.3	111.6	107.7	106.6	103.8	90.9	98.8	96.6	107.7	109.1	107.5	125.9	1,287.5	(2)
<u>Wind Velocity (km/hr)</u>															
	Chon Buri	11.9	10.9	13.2	12.2	12.0	9.8	9.3	11.5	12.2	11.9	13.0	13.2	11.7	(1)
	Sattahip	13.3	13.3	18.2	17.4	16.9	13.7	10.7	12.6	13.2	11.1	12.6	13.7	13.9	(1)
<u>Cloud Cover (OKtas)</u>															
	Chon Buri	4.7	6.1	6.5	6.7	6.9	6.7	5.8	4.5	3.6	3.9	3.8	4.0	5.2	(1)
	Sattahip	4.9	6.4	6.5	6.8	6.9	6.9	6.0	4.8	3.7	3.9	4.1	4.3	5.4	(1)
<u>Rainfall (mm)</u>															
	Rayong	62.9	210.7	120.8	122.3	112.2	203.6	203.6	63.2	8.6	17.8	47.6	53.3	1,226.6	(2)
	Ban Khai	87.8	215.3	161.3	123.9	131.4	238.7	195.9	68.2	11.5	24.6	30.1	42.2	1,330.8	(2)
	Sattahip	76.3	193.6	74.4	98.4	97.0	211.5	275.0	86.5	15.5	21.6	41.5	53.6	1,244.9	(2)
	Bang Lamung	102.6	158.6	89.6	94.5	113.6	220.1	252.7	61.5	9.3	10.4	36.9	48.7	1,198.4	(2)
	Si Racha	88.3	150.6	110.8	113.6	131.7	257.7	218.1	51.3	13.7	11.1	31.4	38.7	1,216.5	(2)
	Bang Phra	113.2	161.9	120.3	124.7	154.6	295.4	222.6	48.9	10.2	10.5	41.2	45.6	1,349.1	(2)
	Chon Buri	77.6	158.8	119.4	152.2	162.4	295.2	210.9	53.9	6.0	13.9	23.3	34.1	1,307.6	(2)
	Ban Bung	94.5	151.9	117.8	129.4	136.7	217.5	182.2	41.2	9.4	8.1	26.3	45.3	1,150.3	(2)

Data Source: (1) Climatological Data of Thailand, 25 Year Period (1951-1975), MD.

(2) RID

Table 2 MONTHLY RAINFALL AT A.M. RAYONG (Station No. 48012)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	97.0	193.6	101.3	106.9	67.6	146.5	350.7	3.2	13.6	0.0	73.4	67.9	1,221.7
1953	6.3	200.7	188.4	300.2	149.4	271.9	202.3	180.6	0.0	0.0	54.3	64.2	1,618.4
1954	118.6	326.7	80.8	258.8	238.8	277.8	120.1	0.0	0.0	0.0	0.0	0.0	1,421.6
1955	54.4	209.9	206.6	202.1	292.0	145.1	341.8	15.8	0.0	0.0	0.0	42.6	1,510.3
1956	126.1	135.8	113.8	198.1	154.7	237.0	192.5	174.1	0.0	0.0	13.7	158.6	1,504.4
1957	56.3	-	213.2	245.3	167.3	436.0	279.8	48.6	0.0	43.6	115.2	12.8	-
1958	63.1	93.0	248.2	102.1	104.4	202.4	188.3	0.0	0.0	0.0	82.0	88.0	1,171.5
1959	64.8	325.6	49.3	283.9	69.6	273.2	355.0	33.8	14.6	21.2	18.0	0.0	1,509.0
1960	107.2	239.8	30.3	143.9	62.1	250.0	389.9	73.6	7.8	20.3	79.4	30.0	1,434.3
1961	79.3	298.9	191.9	14.0	99.4	71.7	210.5	44.8	14.5	0.0	36.0	151.6	1,212.6
1962	68.4	192.6	71.4	108.2	135.9	342.7	94.1	22.2	0.0	0.0	8.2	0.0	1,043.7
1963	50.8	100.8	30.5	50.0	92.9	318.8	296.1	72.9	0.0	0.0	41.0	8.3	1,062.1
1964	0.0	168.7	120.1	0.0	0.0	149.6	192.8	2.0	0.0	0.0	4.8	16.0	654.0
1965	3.8	246.1	54.3	10.6	90.1	199.7	138.3	35.6	7.4	50.0	39.5	12.2	887.6
1966	3.2	341.5	65.3	233.8	114.6	83.0	56.7	7.3	14.0	8.8	0.0	0.0	928.2
1967	40.9	245.7	18.5	26.1	28.6	57.8	455.2	0.0	0.0	117.8	100.3	0.0	1,090.9
1968	139.7	177.0	260.3	82.7	56.6	98.7	249.1	15.0	0.0	78.0	210.1	310.7	1,677.8
1969	14.7	89.2	111.4	250.4	117.1	197.8	74.8	310.2	0.0	15.1	148.0	147.1	1,475.8
1970	43.3	442.1	148.6	74.5	247.0	278.7	82.1	149.6	143.8	0.0	18.9	44.1	1,672.7
1971	77.9	298.7	57.0	10.6	225.0	280.9	238.6	9.3	0.0	0.0	11.5	5.4	1,214.9
1972	208.0	20.3	212.7	30.6	37.8	254.8	83.6	99.9	11.5	28.2	0.0	33.4	1,020.8
1973	24.8	293.1	76.9	99.7	26.6	222.7	146.8	90.6	25.5	12.7	50.6	40.4	1,110.4
1974	51.4	236.8	15.0	62.4	103.2	163.6	423.3	112.3	0.0	35.5	27.8	41.0	1,272.3
1975	14.6	361.3	102.1	88.5	91.0	160.7	184.8	53.5	4.7	0.0	8.7	60.9	1,130.8
1976	80.0	240.6	6.7	69.3	155.7	33.2	116.8	50.7	0.0	0.0	57.2	74.5	884.7
1977	0.5	99.9	68.1	264.1	79.2	101.6	155.9	60.9	0.0	95.1	157.1	6.2	1,088.6
1978	82.2	-	-	147.5	70.6	139.1	151.7	0.0	0.0	6.8	2.8	0.0	-
1979	96.0	48.4	141.5	112.0	67.6	312.4	10.8	0.0	0.0	0.0	16.8	63.1	868.6
1980	28.4	52.1	301.2	58.7	105.8	209.5	182.1	18.7	0.0	0.0	16.7	18.6	991.8
1981	85.0	219.4	218.3	34.4	114.5	190.8	142.9	210.0	0.0	0.0	34.6	101.8	1,351.7
Average	62.9	210.7	120.8	122.3	112.2	203.6	203.6	63.2	8.6	17.8	47.6	53.3	1,226.6

Note:

Data Source : RID

- : no data

Table 3 MONTHLY RAINFALL AT BAN KHAI (Station No. 48022)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	243.4	288.1	255.5	159.7	284.9	307.8	666.0	44.0	0.0	125.2	158.4	81.7	2,614.7
1953	250.5	556.6	454.0	778.4	270.1	259.6	328.5	250.3	0.0	8.4	11.6	80.0	3,248.0
1954	166.4	543.7	615.5	473.1	290.2	238.1	84.6	20.7	4.9	0.0	3.2	4.3	2,444.7
1955	52.9	288.1	472.0	855.3	218.9	639.2	424.2	66.7	3.6	20.5	7.1	10.3	3,058.8
1956	127.5	283.8	135.2	91.5	112.4	367.0	130.2	458.4	3.3	0.0	17.5	69.7	1,796.5
1957	127.0	101.4	199.6	246.3	154.3	350.6	284.6	159.6	0.0	4.5	47.8	18.6	1,694.3
1958	85.1	137.9	306.5	211.8	201.5	303.5	275.2	26.7	0.0	0.0	0.0	144.3	1,692.5
1959	50.7	224.9	72.1	357.8	41.4	161.9	156.8	37.6	0.0	100.6	5.4	11.1	1,238.3
1960	64.4	375.2	98.2	128.8	88.9	279.0	0.0	28.7	0.0	4.3	34.4	37.5	1,139.4
1961	67.2	293.0	203.7	57.4	150.2	59.2	229.7	20.8	0.0	31.9	28.9	44.3	1,186.3
1962	143.2	204.3	83.1	129.2	137.3	391.9	142.7	3.2	0.0	0.0	32.0	18.4	1,285.3
1963	126.6	27.7	116.5	27.7	219.1	306.0	292.2	75.7	0.0	11.7	18.3	0.0	1,221.5
1964	152.6	253.0	134.1	195.3	83.4	94.3	225.6	17.2	0.0	0.0	22.7	5.7	1,183.9
1965	2.6	230.1	35.2	4.2	97.9	248.6	75.5	7.3	0.0	0.0	5.2	0.0	706.6
1966	5.9	438.0	94.3	78.2	175.5	316.4	204.2	0.0	3.6	3.8	0.0	0.0	1,319.9
1967	36.6	134.2	22.4	71.0	18.3	154.1	176.6	20.8	0.0	33.5	57.9	0.0	725.4
1968	8.4	178.5	482.3	116.0	88.4	119.9	116.9	33.0	15.8	135.5	39.4	124.7	1,458.8
1969	54.6	284.8	79.4	148.1	175.9	239.6	244.5	79.6	0.0	72.0	182.4	82.8	1,643.7
1970	190.9	246.9	261.3	107.5	173.1	202.9	116.8	107.9	184.9	0.0	16.2	34.1	1,642.5
1971	73.3	232.5	56.7	65.8	183.2	272.3	208.8	4.4	41.6	0.0	0.0	10.3	1,148.9
1972	186.4	25.8	251.4	53.1	19.9	381.0	81.1	125.4	5.5	23.7	0.0	88.5	1,241.8
1973	38.6	351.2	231.9	98.3	134.9	299.1	200.1	99.3	22.3	8.7	33.4	34.7	1,552.5
1974	189.0	277.9	98.1	70.8	153.0	347.3	510.8	66.1	0.0	76.1	0.1	74.1	1,863.3
1975	63.8	280.2	128.0	108.8	139.7	194.2	368.9	45.2	7.1	0.0	48.0	48.6	1,432.5
1976	88.3	262.4	34.8	33.5	318.3	173.5	311.7	42.8	3.2	24.4	5.3	10.2	1,308.4
1977	67.7	167.8	100.3	321.1	64.6	172.5	193.9	11.2	0.0	78.3	111.0	0.0	1,288.4
1978	72.1	162.7	257.7	181.9	108.5	192.6	115.3	21.1	0.0	0.0	56.0	10.6	1,178.5
1979	87.1	40.7	279.2	94.7	15.5	229.7	88.5	0.0	11.3	0.0	1.2	78.9	926.8
1980	99.9	71.0	256.1	150.8	186.6	144.9	182.5	56.2	0.0	0.0	19.0	41.5	1,208.5
1981	72.0	310.9	176.2	72.1	173.8	202.9	160.6	225.3	0.0	29.5	0.0	109.8	1,533.1
Average ^{/1}	87.8	215.3	161.3	123.9	131.4	238.7	195.9	68.2	11.5	24.6	30.1	42.2	1,330.8

Note;

Data Source : RID

/1 : excluding 1952-1955

Table 4 MONTHLY RAINFALL AT SATTAHIP (Station No. 09073)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	32.8	151.7	57.4	31.0	81.5	51.2	837.2	97.6	7.1	55.4	133.8	81.8	1,615.8
1953	41.4	81.1	92.0	149.1	77.6	155.2	119.9	159.3	2.7	0.3	85.4	83.0	1,047.0
1954	96.9	328.4	47.2	156.9	87.0	173.7	221.3	10.7	0.5	0.9	2.2	57.6	1,183.3
1955	6.9	99.7	82.1	139.9	73.3	74.1	128.2	111.8	1.0	24.4	0.5	13.6	757.5
1956	121.5	70.5	112.9	54.0	72.7	284.0	151.0	93.8	6.2	30.5	7.3	7.8	1,012.2
1957	134.6	9.8	105.6	219.3	94.4	291.5	591.6	36.1	26.9	46.1	25.3	0.6	1,581.8
1958	99.1	69.8	87.1	70.2	151.5	258.5	208.9	6.3	0.0	0.0	39.2	167.4	1,158.4
1959	75.7	149.3	34.7	140.9	46.3	212.8	318.5	44.5	29.4	1.7	21.7	3.7	1,079.2
1960	50.7	173.2	6.4	133.0	51.6	206.1	530.7	79.2	0.7	0.0	49.0	41.2	1,321.8
1961	44.5	188.6	136.1	20.3	32.7	53.1	161.4	94.6	13.7	0.2	10.9	117.2	873.3
1962	6.2	174.9	14.2	65.1	197.9	336.8	218.2	1.8	0.0	0.0	3.4	12.5	1,031.0
1963	31.7	138.1	51.7	91.3	51.6	208.7	198.0	49.0	19.6	74.4	70.2	13.6	997.9
1964	76.4	170.2	154.8	223.6	90.3	141.2	174.1	2.6	0.0	60.8	66.0	0.0	1,160.0
1965	28.1	139.4	48.5	16.2	151.4	462.1	143.6	29.7	2.9	0.0	0.0	0.0	1,021.9
1966	26.1	347.3	78.8	72.1	52.0	180.9	273.6	11.3	0.0	0.0	9.9	0.0	1,052.0
1967	16.4	413.3	18.4	52.0	5.7	178.9	441.8	0.0	0.0	0.0	115.8	0.0	1,242.3
1968	182.7	222.1	118.5	36.2	93.1	142.9	166.1	53.2	0.4	78.6	81.9	181.8	1,357.5
1969	48.6	83.3	59.3	55.0	130.1	312.3	245.6	408.1	0.0	10.0	96.6	182.7	1,631.6
1970	109.0	510.7	89.0	62.5	117.1	214.4	207.3	350.8	235.5	0.0	8.7	184.4	2,089.4
1971	117.9	361.3	39.4	35.2	316.6	389.4	370.7	88.1	3.4	0.0	17.9	33.4	1,773.3
1972	377.9	42.4	117.8	80.8	81.1	360.6	186.3	226.9	19.1	55.9	7.1	37.9	1,593.8
1973	10.5	192.6	152.5	143.2	63.0	325.7	112.5	71.5	1.0	35.7	7.9	52.7	1,168.8
1974	150.8	248.9	18.9	24.0	63.0	135.4	482.5	76.2	0.8	36.3	21.9	35.0	1,293.7
1975	46.0	372.0	72.2	45.0	99.7	79.2	238.6	68.1	18.9	0.0	23.3	70.0	1,133.0
1976	98.2	256.8	19.4	197.1	214.1	153.3	290.2	32.6	0.0	2.7	0.4	16.0	1,280.8
1977	22.4	0.5	92.5	244.2	26.3	117.5	131.6	44.4	12.4	48.0	172.2	0.8	912.8
1978	6.0	231.1	102.1	-	-	-	-	-	-	-	-	-	-
verage	76.3	193.6	74.4	98.4	97.0	211.5	275.0	86.5	15.5	21.6	41.5	53.6	1,244.9

Note:

Data Source : RID

- : no data

Table 5 MONTHLY RAINFALL AT BANG LAMUNG (Station No. 09052)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	76.2	45.0	79.5	30.1	21.0	10.7	-	0.0	0.0	35.1	33.2	19.7	-
1953	24.0	147.6	144.7	-	-	-	91.3	166.9	0.0	12.8	59.0	0.0	-
1954	20.7	226.1	52.9	247.8	15.2	167.2	132.4	22.4	0.0	0.0	16.3	67.3	968.3
1955	157.8	132.4	132.4	47.9	248.2	365.8	194.8	110.8	0.0	40.7	67.2	0.0	1,498.0
1956	158.7	132.1	60.6	188.7	104.5	235.9	285.0	91.3	0.0	10.8	50.7	67.8	1,386.1
1957	215.0	72.9	153.4	142.7	182.0	203.3	629.8	50.7	0.0	0.0	25.7	6.1	1,681.6
1958	154.5	82.4	133.1	65.3	203.2	137.1	356.3	13.4	0.0	0.0	11.1	79.9	1,236.3
1959	138.9	174.2	28.2	224.8	52.2	270.0	362.3	10.0	0.0	0.0	39.7	113.8	1,416.1
1960	66.0	138.3	39.3	127.3	53.3	309.6	575.1	42.9	0.0	0.0	14.8	145.0	1,511.6
1961	151.1	147.6	57.2	60.0	95.3	98.3	273.5	14.0	0.0	0.0	0.0	49.1	946.1
1962	148.5	121.0	17.3	50.6	146.4	428.4	98.9	0.0	5.3	0.0	11.8	0.0	1,028.2
1963	6.0	106.2	89.2	135.2	150.5	371.6	273.0	105.8	0.0	0.0	0.0	37.5	1,275.1
1964	124.1	251.2	239.2	50.2	206.4	162.5	204.4	65.8	6.8	0.0	60.1	86.6	1,457.3
1965	92.0	225.6	20.1	48.5	60.7	344.8	238.9	35.3	12.5	16.0	19.1	22.8	1,136.3
1966	39.4	479.2	34.7	27.4	334.2	236.3	203.2	5.6	66.1	6.2	11.0	0.0	1,443.3
1967	107.1	163.1	33.3	79.3	32.0	150.3	292.2	39.0	2.8	14.7	162.0	22.7	1,098.5
1968	163.8	97.0	182.7	8.7	94.6	134.6	177.8	55.0	0.0	44.8	6.2	105.3	1,070.5
1969	0.0	152.7	47.4	122.7	142.0	264.4	150.2	66.6	0.0	28.8	100.4	83.0	1,158.2
1970	182.3	342.4	172.4	41.6	119.7	228.7	229.4	206.6	103.1	0.0	62.3	54.6	1,743.1
1971	83.9	175.1	8.2	48.9	138.1	183.6	178.6	0.0	0.0	0.0	13.1	13.9	843.4
1972	252.7	0.0	136.7	56.5	11.0	236.0	152.2	136.5	50.4	0.0	0.0	28.3	1,060.3
1973	8.9	132.4	188.6	157.3	94.3	132.0	111.0	84.8	1.9	0.0	8.7	47.4	967.3
1974	193.5	193.7	22.0	105.0	52.0	182.3	557.8	12.2	0.0	39.4	0.5	111.9	1,470.3
1975	44.4	-	5.0	79.5	198.0	214.1	168.0	79.7	1.7	0.0	65.2	34.5	-
1976	51.0	124.1	1.7	81.1	177.1	245.8	393.7	118.8	27.9	0.0	37.3	67.8	1,326.3
1977	79.7	187.0	44.6	54.3	80.5	211.6	345.8	35.2	0.0	61.9	151.4	0.0	1,252.0
1978	46.0	294.2	165.4	239.9	95.4	221.1	218.9	3.7	0.0	0.0	5.1	0.0	1,289.7
1979	108.9	75.5	95.6	67.0	53.1	242.0	0.0	0.0	0.0	0.0	8.3	91.9	742.3
1980	69.5	27.5	213.2	77.7	90.0	60.9	199.8	88.0	0.0	0.0	60.0	34.9	921.5
1981	112.2	148.7	90.3	73.5	44.6	333.6	233.0	185.0	0.0	0.0	7.5	68.0	1,296.4
Average	102.6	158.5	89.6	94.5	113.6	220.1	252.7	61.5	9.3	10.4	36.9	48.7	1,198.4

Note:

Data Source : RID

- : no data

Table 6 MONTHLY RAINFALL AT SI RACHA (Station No. 09042)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	86.1	112.0	82.1	136.5	288.9	150.3	556.6	153.8	0.0	74.2	155.2	14.5	1,810.2
1953	111.5	204.0	174.7	208.4	118.3	96.8	108.7	50.6	0.0	10.3	33.0	144.4	1,260.7
1954	24.9	282.8	118.8	262.6	197.7	332.2	114.2	35.4	0.0	0.0	28.1	119.2	1,515.9
1955	120.9	106.3	294.6	121.3	213.1	247.2	169.0	133.0	0.0	0.0	0.0	19.3	1,424.7
1956	167.6	139.2	90.5	55.7	102.0	298.9	188.7	116.6	0.0	0.0	31.8	56.2	1,247.2
1957	49.5	0.0	126.5	91.7	92.2	463.0	427.3	91.4	0.0	0.0	32.2	0.0	1,373.8
1958	122.4	60.7	133.3	59.8	209.8	186.9	171.6	0.0	0.0	0.0	0.0	35.7	984.2
1959	24.6	58.6	58.1	143.4	68.6	235.6	156.3	26.7	0.0	0.0	7.7	0.0	779.6
960	0.0	128.9	87.7	129.5	30.8	271.9	329.1	108.4	0.0	0.0	0.0	139.4	1,225.7
961	188.0	203.2	113.2	58.0	98.8	190.3	209.0	21.5	40.3	0.0	20.9	52.6	1,195.8
962	59.8	75.9	29.0	91.5	84.0	415.3	110.4	0.0	0.0	0.0	0.0	0.0	865.9
963	0.0	42.1	187.8	131.5	163.8	421.3	223.0	110.5	0.0	0.0	0.0	0.0	1,280.0
964	162.5	280.0	7.4	92.0	166.5	82.8	227.2	23.6	8.6	2.3	104.6	31.7	1,197.2
965	60.2	435.9	0.0	64.3	95.4	216.4	183.0	0.0	42.8	0.0	33.1	62.8	1,193.9
966	33.1	362.3	140.7	177.8	145.8	162.3	232.8	6.7	15.3	1.7	0.1	0.0	1,278.6
967	96.1	157.8	0.0	44.0	37.4	172.1	172.8	63.1	0.0	0.0	59.7	21.2	824.2
968	100.5	104.1	79.2	30.1	49.1	131.7	166.8	4.6	0.0	70.6	0.0	0.0	736.7
969	18.8	126.0	119.4	65.8	241.0	349.4	205.3	13.6	0.0	15.3	51.7	87.2	1,293.5
970	123.4	135.9	235.1	67.1	57.8	263.1	209.5	25.2	202.6	0.0	20.4	28.4	1,368.5
971	126.5	233.1	123.0	75.6	309.8	302.9	194.5	1.4	0.0	0.0	2.4	11.1	1,380.3
972	161.9	7.3	183.5	70.1	85.0	283.8	85.2	183.5	9.8	0.0	0.0	53.2	1,123.3
973	17.5	141.1	51.9	79.8	170.9	181.0	126.5	69.0	16.1	7.0	37.0	103.7	1,001.5
974	193.5	188.4	25.8	116.8	108.9	177.0	576.8	44.7	35.5	100.6	0.0	0.0	1,574.0
975	83.4	77.4	40.9	134.7	207.7	214.2	162.3	60.9	8.0	0.0	101.5	59.5	1,150.5
976	76.5	148.5	130.9	111.2	169.6	537.3	452.4	96.0	0.0	1.3	26.3	0.2	1,756.2
977	50.6	131.3	49.3	-	80.7	220.5	200.3	2.7	4.8	18.3	135.9	0.0	-
978	77.1	175.8	191.1	346.8	53.8	346.2	173.0	6.3	-	13.0	27.0	0.0	1,410.1
979	57.2	81.5	93.9	60.9	61.9	286.6	70.9	0.0	0.0	0.0	33.0	72.2	818.1
980	74.7	85.6	304.0	214.6	110.2	221.1	277.5	39.8	0.0	8.7	0.0	32.0	1,368.2
981	180.1	224.6	51.1	52.3	-	-	63.6	-	-	-	0.0	0.0	-
average	88.3	150.6	110.8	113.6	131.7	257.2	218.1	51.3	13.7	11.1	31.4	38.7	1,216.5

e;

a Source : RID

i no data

Table 7 MONTHLY RAINFALL AT BANG PHRA RESERVOIR (Station No. 09160)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1954	0.0	-	131.9	-	210.3	341.9	147.9	30.4	0.0	0.0	65.8	0.0	-
1955	61.4	253.0	199.8	142.9	191.6	204.7	196.0	95.1	0.0	14.6	4.4	80.8	1,444.3
1956	205.1	230.2	120.1	147.4	135.2	350.1	167.5	88.4	0.0	0.0	25.4	70.0	1,539.4
1957	159.3	31.6	153.7	171.3	192.7	433.4	486.8	80.5	0.0	34.2	38.7	10.2	1,792.4
1958	204.0	163.0	155.4	116.2	202.7	237.1	172.9	15.4	0.0	1.8	29.2	47.1	1,344.8
1959	56.6	85.8	88.1	188.3	76.3	344.4	309.4	31.7	0.0	0.0	50.4	29.5	1,260.5
1960	0.0	214.7	130.2	185.7	189.8	264.2	395.4	132.5	0.0	1.2	66.4	165.0	1,745.5
1961	190.5	-	103.3	93.2	261.1	175.6	34.7	19.2	64.5	0.0	0.0	0.0	-
1962	0.0	95.6	44.6	101.7	121.8	288.5	271.9	0.0	0.0	0.0	0.0	20.9	945.0
1963	0.0	84.1	220.0	192.4	217.8	492.2	264.1	108.5	0.0	0.0	16.1	28.0	1,623.2
1964	186.3	307.0	88.2	158.0	209.5	284.4	254.7	31.5	11.3	0.0	91.7	63.9	1,686.5
1965	121.2	346.0	31.5	75.5	85.8	385.3	203.9	0.0	0.0	6.7	68.6	22.0	1,346.5
1966	66.9	85.9	180.4	144.7	237.2	333.3	299.0	0.0	35.0	0.0	0.0	0.0	1,682.6
1967	106.2	165.1	28.5	110.1	32.3	254.8	251.4	62.3	0.0	0.0	117.6	18.4	1,067.6
1968	151.4	247.5	215.3	48.6	154.9	197.1	202.5	39.8	1.9	120.8	0.0	106.4	1,403.8
1969	40.4	159.9	23.1	69.7	178.3	347.7	111.8	11.8	0.0	0.0	50.8	0.0	1,081.1
1970	112.2	205.2	226.6	64.8	146.2	220.6	225.8	81.2	141.4	0.0	30.8	44.0	1,453.5
1971	197.2	205.2	106.2	95.6	288.6	276.9	139.1	14.4	4.8	0.0	24.0	55.1	1,407.1
1972	91.6	18.6	134.1	59.6	63.8	318.9	127.4	171.2	13.0	5.4	1.8	76.0	1,081.4
1973	4.6	152.1	97.3	94.0	179.5	230.0	155.8	47.6	11.9	12.3	0.0	81.4	1,066.5
1974	189.6	148.0	45.4	94.3	155.5	203.6	600.3	62.7	1.5	62.9	13.9	14.7	1,592.4
1975	75.0	130.6	39.7	97.1	246.7	250.7	109.6	45.1	0.0	0.0	80.9	59.5	1,134.9
1976	83.6	-	83.1	132.4	226.4	397.9	355.6	43.7	1.3	7.7	32.3	19.8	-
1977	105.0	190.9	110.8	80.3	57.6	203.5	200.3	26.4	0.0	15.8	171.7	0.0	1,162.3
1978	128.4	188.3	164.9	290.8	61.9	315.8	118.4	0.0	0.0	0.0	0.0	0.0	1,268.5
1979	162.8	44.4	104.7	90.1	47.3	312.9	35.0	0.0	0.0	0.0	101.8	39.1	938.1
1980	129.8	41.0	278.2	191.6	99.5	295.4	202.9	53.7	0.0	9.4	40.5	102.7	1,444.7
1981	341.4	253.0	64.4	131.7	57.9	311.4	193.9	75.0	0.0	0.0	31.8	121.7	1,582.2
Average	113.2	161.9	120.3	124.7	154.6	295.4	222.6	48.9	10.2	10.5	41.2	45.6	1,349.1

Note;

Data Source : RID

- : no data

Table 8 MONTHLY RAINFALL AT A.M. CHON BURI (Station No. 09013)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	88.4	111.0	93.9	120.7	161.7	168.2	424.9	10.8	0.0	57.4	31.1	55.5	1,323.6
1953	142.0	239.8	157.1	246.9	119.6	271.8	235.7	98.1	0.0	10.5	1.7	116.2	1,641.4
1954	18.1	373.7	102.4	232.5	156.2	238.1	78.5	0.0	11.0	0.0	8.0	40.8	1,259.3
1955	98.2	218.0	173.4	243.4	243.4	387.4	178.4	82.7	0.4	41.1	13.6	40.9	1,720.9
1956	81.5	192.9	136.8	117.0	116.1	304.3	294.1	101.5	0.0	0.0	4.0	67.9	1,416.1
1957	128.6	63.6	77.8	215.0	105.9	309.4	557.8	58.6	0.0	14.3	80.0	7.4	1,618.4
1958	59.9	165.4	99.3	122.3	179.1	295.8	155.2	4.7	0.0	14.3	72.9	24.6	1,193.5
1959	20.0	91.5	80.0	308.3	62.8	310.0	163.4	7.7	0.0	0.1	6.9	29.7	1,080.4
1960	36.2	62.6	115.3	219.1	130.2	225.0	319.1	64.6	1.5	0.0	31.0	72.8	1,277.4
1961	112.6	230.2	177.5	122.5	146.2	158.7	239.8	1.9	0.0	0.7	0.0	39.2	1,229.3
1962	63.4	203.0	41.3	124.7	128.6	293.8	148.8	3.1	0.0	0.0	0.0	13.4	1,020.1
1963	11.8	33.1	156.2	178.0	176.0	657.9	337.4	151.4	0.0	1.2	1.5	2.8	1,707.3
1964	118.2	283.0	142.9	196.8	143.6	232.4	251.8	39.0	0.0	0.0	80.1	44.6	1,537.4
1965	34.4	230.5	51.0	56.5	191.4	409.7	195.1	58.1	6.9	1.3	13.6	5.6	1,254.1
1966	18.7	318.5	118.2	165.7	243.9	445.9	176.3	8.5	38.1	3.2	20.5	32.4	1,589.9
1967	88.6	101.7	66.8	80.8	59.7	186.3	187.9	68.3	0.0	15.0	33.6	4.5	893.2
1968	109.5	85.0	194.4	125.6	117.2	168.9	180.3	37.9	0.0	45.4	1.6	48.9	1,114.7
1969	6.5	124.2	88.8	81.6	237.9	376.4	89.8	19.2	0.0	0.5	6.9	17.6	1,049.4
1970	99.5	147.9	224.5	163.5	161.5	199.0	95.8	48.2	60.1	7.8	24.4	29.0	1,261.2
1971	85.6	189.6	108.0	108.6	345.2	259.0	186.8	1.9	0.2	0.0	15.9	25.0	1,325.8
1972	85.1	15.4	212.0	77.5	67.7	383.9	119.6	135.2	46.1	0.0	0.0	52.2	1,194.7
1973	13.7	189.4	105.4	172.6	210.7	323.7	118.5	54.0	1.1	0.0	4.3	38.6	1,232.0
1974	301.7	112.6	51.3	125.4	188.2	231.3	555.5	90.9	0.0	90.2	0.0	12.6	1,759.7
1975	23.5	116.4	81.6	134.8	182.3	305.3	91.7	202.1	6.1	0.0	42.4	48.1	1,234.3
1976	92.4	150.0	78.2	136.0	269.2	306.7	232.9	117.0	0.0	4.0	53.5	31.8	1,473.7
1977	121.4	199.8	57.0	94.6	118.0	139.6	60.7	36.0	0.5	80.8	103.5	4.4	1,066.3
1978	70.6	204.3	162.9	220.4	50.8	463.6	109.0	19.5	0.0	2.6	0.0	0.1	1,303.8
1979	51.8	92.0	45.4	56.3	164.1	198.0	130.5	19.3	0.8	0.0	0.7	43.6	802.5
1980	69.6	60.6	262.9	166.7	227.0	259.7	200.7	22.7	0.0	0.2	54.5	5.0	1,329.6
1981	186.4	247.5	68.3	169.8	106.4	477.4	177.3	113.1	0.0	0.0	10.5	49.3	1,606.0
Average	81.3	161.8	117.7	152.8	160.5	301.2	209.8	55.9	5.8	13.0	23.9	33.6	1,317.2

ote;

ata Source : RID

Table 9 MONTHLY RAINFALL AT BAN BUNG (Station No. 09062)

(Unit: mm)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1952	155.8	159.9	55.0	158.6	166.5	24.8	421.9	43.5	0.0	31.0	102.4	112.9	1,432.3
1953	116.4	104.0	160.5	240.8	168.8	40.0	184.2	91.5	0.0	33.7	11.0	61.5	1,212.4
1954	120.0	241.0	69.0	227.8	158.1	270.2	125.2	0.0	0.0	0.0	69.5	127.2	1,408.0
1955	78.6	210.0	144.7	174.9	148.1	236.1	158.9	67.0	0.0	0.0	0.0	10.5	1,228.8
1956	29.0	20.8	240.5	77.1	92.5	166.2	204.1	127.1	0.0	0.0	0.0	49.5	1,006.8
1957	56.4	22.7	58.8	166.3	67.7	206.1	298.1	0.0	0.0	0.0	0.0	0.0	876.1
1958	73.3	289.6	67.4	113.9	195.1	215.2	83.8	6.3	0.0	0.0	57.7	70.8	1,173.1
1959	132.0	118.3	187.9	204.6	36.3	228.0	151.2	0.0	0.0	0.0	54.9	84.5	1,197.7
1960	26.7	87.6	98.7	137.6	129.8	170.6	367.0	43.1	0.0	0.0	50.2	0.0	1,111.3
1961	170.4	185.9	133.9	68.8	143.7	47.5	166.1	0.0	7.3	0.0	0.0	63.6	987.2
1962	44.7	66.3	87.0	113.7	146.3	235.1	119.8	0.0	0.0	0.0	21.2	68.6	902.7
1963	68.6	114.6	97.5	80.3	155.4	490.3	272.1	71.8	4.0	0.0	30.6	0.0	1,385.2
1964	77.3	45.0	82.9	188.5	162.5	240.3	166.8	0.0	9.7	0.3	103.9	44.0	1,121.2
1965	50.2	181.3	39.1	30.0	161.7	551.9	266.1	92.5	0.0	0.0	47.7	0.0	1,420.6
1966	0.0	436.7	87.1	90.4	177.1	182.5	160.9	0.0	18.6	0.0	0.0	0.0	1,153.3
1967	185.8	167.0	92.9	114.5	22.6	83.0	239.2	9.7	0.0	0.0	34.3	8.6	957.6
1968	118.2	175.8	394.7	121.2	175.9	169.8	152.4	2.4	5.3	67.7	0.0	65.7	1,449.1
1969	59.7	184.6	56.6	73.5	293.9	306.1	149.0	20.3	0.0	3.0	9.0	16.0	1,171.7
1970	211.9	192.0	244.8	111.2	136.3	189.5	96.1	6.1	109.5	0.0	0.0	87.7	1,385.1
1971	101.2	208.0	91.2	55.2	256.4	251.0	162.1	13.2	18.3	0.0	8.1	42.7	1,207.4
1972	153.9	7.3	158.9	79.1	64.5	307.5	165.3	142.0	40.6	16.2	8.3	94.7	1,238.3
1973	52.7	259.7	102.0	221.2	152.4	362.4	60.1	71.4	1.0	17.5	18.2	77.7	1,396.3
1974	160.2	125.2	41.7	214.1	177.6	248.6	486.7	110.3	0.0	61.0	3.1	21.0	1,649.5
1975	53.8	79.1	41.5	152.4	135.0	210.0	79.9	153.9	55.4	0.0	44.9	104.1	1,110.0
1976	111.5	113.6	22.0	123.2	123.4	227.8	167.6	0.0	0.0	0.0	0.0	0.0	889.1
1977	-	-	148.4	128.1	84.5	144.4	121.1	9.7	7.8	12.7	68.0	21.4	-
1978	61.6	217.2	114.5	124.4	40.8	186.3	106.8	12.2	0.0	1.1	0.8	4.3	870.0
1979	167.6	121.9	127.8	64.0	114.1	164.6	25.3	7.3	3.4	0.0	2.1	83.8	881.9
1980	47.1	109.2	222.2	116.7	73.4	140.9	136.8	4.7	0.0	0.0	18.1	37.8	906.9
1981	55.3	161.8	64.4	110.3	-	277.2	170.3	129.5	0.0	0.0	-	0.0	-
Average	94.5	151.9	117.8	129.4	136.7	217.5	182.2	41.2	9.4	8.1	26.3	45.3	1,160.3

Note;

Data Source : RID

- : no data

Table 10 10-DAY DISCHARGE AT STREAM GAUGE STATIONS
IN NATURAL CONDITION

(Unit: m³/s)

Year	Month	Ban Mai	Ban Pak Phraek	Ban Nong Mapring	Dok Krai Reservoir	Ban Khai Weir	
1979	May	1 - 10	4.67	0.64	5.12	0.71	6.59
		11 - 20	2.32	0.12	2.20	1.72	4.45
		21 - 31	0.50	0.02	0.80	0.56	1.82
	Jun.	1 - 10	0.66	0.38	1.26	1.12	3.02
		11 - 20	1.67	0.52	6.55	4.58	15.34
		21 - 30	0.98	0.30	1.36	0.51	3.00
	Jul.	1 - 10	0.33	0.33	1.12	0.20	2.25
		11 - 20	0.29	0.25	0.72	0.02	2.60
		21 - 31	0.61	1.90	0.71	0.85	7.22
	Aug.	1 - 10	1.35	0.34	0.89	0.43	2.24
		11 - 20	0.47	0.07	0.53	0.96	1.93
		21 - 31	0.35	0.06	0.45	0.31	1.08
	Sep.	1 - 10	0.50	1.17	1.93	1.44	5.50
		11 - 20	0.63	1.83	4.81	3.36	13.17
		21 - 30	3.42	2.60	4.02	6.47	21.79
	Oct.	1 - 10	10.68	7.44	6.30	5.30	40.34
		11 - 20	0.68	0.75	2.03	1.03	5.35
		21 - 31	0.29	1.32	2.18	0.70	7.04
	Nov.	1 - 10	0.19	0.23	1.02	1.13	3.61
		11 - 20	0.18	0.07	0.77	0.54	1.82
		21 - 30	0.15	0.08	0.54	0.38	1.32
	Dec.	1 - 10	0.14	0.09	0.68	0.47	1.63
		11 - 20	0.16	0.06	0.42	1.12	1.79
		21 - 31	0.16	0.05	0.45	0.31	1.07
1980	Jan.	1 - 10	0.14	0.02	0.33	0.25	0.73
		11 - 20	0.09	0.01	0.25	0.17	0.57
		21 - 31	0.09	0.03	0.20	0.14	0.49
	Feb.	1 - 10	0.08	0.02	0.29	0.00	0.59
		11 - 20	0.06	0.01	0.28	0.19	0.63
		21 - 29	0.02	0.04	1.80	3.43	5.66
	Mar.	1 - 10	0.00	0.02	0.36	0.25	0.83
		11 - 20	0.38	0.26	0.33	0.23	1.08
		21 - 31	1.00	0.87	1.60	0.68	4.33
	Apr.	1 - 10	0.28	0.05	0.38	0.26	0.91
		11 - 20	0.39	0.33	0.84	0.58	2.30
		21 - 30	0.38	0.32	0.77	0.54	2.15

Note ; Ban Mai : 484 km², Khlong Luang river
 Ban Pak Phraek : 161 km², Khlong Yai river
 Ban Nong Mapring : 416 km², Nong Pla Lai river
 Dok Krai Reservoir : 291 km², Khlong Dok Krai river
 Ban Khai Weir : 1,143 km², Rayong river

Table 11 MONTHLY MEAN DISCHARGE AT BAN MAI STREAM GAUGE STATION
(Catchment Area : 484 km²)

(Unit: m³/s)

Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.26	0.76	0.81	0.32	6.17	5.01	6.43	0.24	0.02	0.01	0.01	0.02	1.67
1969	0.02	0.07	0.07	0.06	2.17	18.66	5.75	0.53	0.01	0.01	0.01	0.05	2.28
1970	0.44	0.89	6.95	5.89	4.74	7.05	4.27	0.26	0.07	0.00	0.00	0.01	2.55
1971	0.02	0.17	1.70	0.49	7.01	17.81	13.70	2.50	0.10	0.01	0.03	0.00	3.63
1972	0.36	0.08	7.38	1.44	0.43	19.77	22.08	1.89	0.60	0.08	0.02	0.05	4.52
1973	0.04	0.49	1.20	5.49	6.08	20.70	8.77	0.85	0.14	0.14	0.25	0.38	3.71
1974	1.12	1.77	1.14	2.25	6.39	11.93	54.62	9.95	1.00	0.41	0.79	0.27	7.64
1975	0.29	1.71	0.96	6.26	2.91	19.13	22.53	3.48	0.42	0.24	0.54	0.43	4.91
1976	0.77	1.38	1.86	1.46	6.20	15.39	13.15	9.14	0.43	0.23	0.20	0.23	4.20
1977	0.19	0.84	1.01	2.78	3.81	3.75	5.80	0.73	0.22	0.16	1.44	0.50	1.77
1978	2.26	10.48	4.19	8.59	4.31	24.72	10.11	1.04	0.29	0.21	0.18	0.16	5.55
1979	0.67	2.43	1.10	0.42	0.71	1.52	3.77	0.17	0.15	0.11	0.05	0.47	0.96
1980	0.35	0.20	7.82	2.83	12.15	10.01	6.21	1.36	0.20	0.17	0.14	0.18	3.47
1981	8.98	3.52	0.97	1.61	2.31	21.40	8.49	3.85	0.45	0.11	0.08	0.05	4.32
Average	1.13	1.77	2.65	2.85	4.67	14.06	13.26	2.57	0.29	0.14	0.27	0.20	3.66

Table 1.2 MONTHLY MEAN DISCHARGE AT BAN MAE NAM KHU STREAM GAUGE STATION
(Catchment Area : 291 km²)

(Unit: m³/s)

Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	2.08	7.52	9.05	5.10	3.16	3.46	9.03	5.53	1.60	1.54	0.66	0.70	4.12
1969	0.28	1.41	2.43	1.59	1.97	6.41	8.27	7.17	2.05	1.03	2.15	0.66	2.95
1970	1.69	8.14	5.93	2.36	1.77	2.42	6.81	2.09	10.77	2.63	1.28	1.27	3.93
1971	1.89	2.33	1.54	0.51	1.06	4.41	8.95	4.32	1.51	0.75	1.00	0.63	2.41
1972	5.41	0.99	0.91	0.25	0.08	14.02	18.33	8.15	2.92	1.03	1.08	1.38	4.55
1973	0.57	3.33	4.07	3.83	3.98	6.61	9.37	4.74	1.83	0.90	0.70	0.88	3.40
1974	3.70	3.45	1.43	0.99	1.94	5.76	13.49	7.42	2.44	1.86	1.55	1.14	3.76
1975	1.17	3.09	3.66	1.27	1.55	2.80	15.48	8.30	3.50	0.93	1.00	0.88	3.64
1976	1.60	3.43	0.66	0.30	6.04	5.08	8.18	9.05	2.51	1.07	0.83	0.41	3.26
1977	1.40	2.69	1.03	2.31	1.82	1.22	11.50	2.91	0.73	0.61	0.97	0.50	2.31
1978	1.49	5.29	2.22	3.56	2.29	4.16	7.45	3.65	0.93	0.65	0.46	0.25	2.70
1979	0.34	0.98	2.07	0.37	0.56	3.76	2.29	0.68	0.62	0.19	1.13	0.40	1.12
1980	0.46	0.65	3.40	1.26	1.61	1.73	12.82	6.23	1.66	0.39	1.70	1.41	2.78
1981	2.60	7.45	3.17	2.26	2.55	5.00	8.15	11.86	4.00	1.19	0.65	0.98	4.16
Average	1.76	3.63	2.97	1.85	2.17	4.77	10.01	5.86	2.65	1.06	1.08	0.82	3.22

Note : The figures during the period from April 1975 to March 1982 are estimated from the Dok Krai reservoir operation data.

Table 13 MONTHLY MEAN DISCHARGE AT BAN NONG MAPRING STREAM GAUGE STATION
(Catchment Area : 416 km²)

(Unit: m³/s)

Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	1.92	5.14	8.66	4.99	3.62	5.38	12.20	5.53	1.75	1.48	0.74	0.71	4.34
1969	0.50	2.47	2.47	1.61	2.90	11.60	15.60	10.70	3.01	1.52	1.62	0.95	4.58
1970	3.02	7.41	8.77	5.69	3.45	3.54	7.95	3.00	5.82	2.14	1.48	1.93	4.52
1971	2.00	4.07	2.89	1.21	3.74	7.89	10.80	4.00	1.75	1.01	2.37	1.75	3.62
1972	7.59	2.06	3.09	1.21	0.40	9.77	14.00	10.10	4.18	1.48	1.33	1.71	4.74
1973	0.81	4.76	5.81	5.47	5.69	9.45	13.40	6.78	2.62	1.28	1.00	1.25	4.86
1974	5.29	4.93	2.04	1.42	2.77	8.24	19.30	10.60	3.49	2.66	2.22	1.63	5.38
1975	1.55	3.64	2.14	2.06	2.28	11.10	14.50	8.48	3.36	1.56	1.59	1.61	4.49
1976	2.29	4.91	2.36	0.93	3.67	14.90	10.40	10.70	3.22	1.52	1.19	0.59	4.72
1977	1.03	2.69	2.09	2.42	1.70	1.25	5.24	2.22	0.89	0.88	2.25	0.71	1.95
1978	2.13	8.65	5.73	7.12	3.49	7.23	9.49	3.22	1.33	0.93	0.67	0.36	4.20
1979	0.85	2.65	3.06	0.84	0.62	3.59	3.46	0.78	0.51	0.26	0.75	0.79	1.51
1980	0.66	0.94	5.93	3.14	3.32	3.16	13.20	5.48	2.09	0.89	1.14	1.31	3.44
1981	3.38	8.55	4.19	3.24	3.30	8.14	9.76	8.50	4.45	1.57	1.21	1.40	4.81
Average	2.36	4.49	4.23	2.95	2.93	7.52	11.40	6.44	2.75	1.37	1.40	1.19	4.08

Table 14 MONTHLY MEAN DISCHARGE AT BAN PAK PHRAEK STREAM GAUGE STATION
(Catchment Area : 161 km²)

(Unit: m³/s)

Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.45	2.14	4.87	2.04	1.23	2.31	8.37	2.41	3.39	0.30	0.10	0.10	2.33
1969	0.05	0.67	0.68	0.34	0.87	7.73	12.33	6.80	0.92	0.31	0.35	0.15	2.61
1970	0.93	3.81	4.97	2.51	1.14	1.19	4.26	0.91	2.61	0.54	0.30	0.46	1.98
1971	0.48	1.48	0.86	0.22	1.30	4.21	6.90	1.44	0.39	0.16	0.63	0.39	1.54
1972	3.96	0.51	0.92	0.22	0.04	5.90	10.21	6.20	1.49	0.30	0.25	0.38	2.53
1973	0.12	1.89	2.60	2.36	2.51	5.59	9.70	3.31	0.74	0.24	0.16	0.23	2.47
1974	2.24	2.00	0.50	0.28	0.81	4.51	17.22	6.72	1.16	0.76	0.57	0.35	3.11
1975	0.32	1.24	0.54	0.51	0.59	7.26	11.00	4.72	1.09	0.33	0.34	0.34	2.36
1976	0.60	1.99	0.63	0.14	1.26	11.53	6.55	6.77	1.02	0.31	0.21	0.07	2.58
1977	0.17	0.77	1.20	2.35	0.80	0.74	5.37	0.66	0.15	0.08	0.69	0.13	1.10
1978	0.30	6.22	2.45	3.39	1.42	4.72	4.29	0.77	0.16	0.16	0.04	0.01	2.01
1979	0.26	0.25	0.40	0.87	0.16	1.87	3.11	0.13	0.06	0.02	0.02	0.40	0.63
1980	0.23	0.21	1.93	1.38	2.21	0.87	7.00	2.53	0.20	0.08	0.08	0.07	1.41
1981	1.42	3.36	1.86	2.37	1.93	5.64	3.31	3.14	0.65	0.18	0.12	0.05	2.01
Average	0.82	1.90	1.74	1.36	1.16	4.58	7.83	3.32	1.00	0.27	0.28	0.22	2.05

Note : The figures during the period from Apr. 1968 to May 1977 are estimated from Ban Nong Mapring stream gauge.

Table 15 MONTHLY MEAN DISCHARGE AT BAN KHAI WEIR SITE
(Catchment Area : 1,143 km²)

(Unit: m³/s)

Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	5.71	24.05	37.96	23.37	15.59	22.59	48.56	18.83	4.51	4.00	1.78	1.79	17.40
1969	1.30	4.20	11.44	8.77	10.58	36.99	60.55	35.43	7.53	3.69	5.00	2.28	15.65
1970	6.70	24.69	27.12	16.01	17.55	16.59	33.86	8.80	27.66	7.47	3.68	4.69	16.24
1971	6.35	12.94	9.97	4.81	11.08	25.84	42.97	17.56	5.61	2.80	3.20	2.76	12.16
1972	28.83	3.89	8.35	2.98	1.53	50.71	63.66	32.69	12.51	3.27	2.12	2.96	17.79
1973	1.66	16.59	23.27	20.45	17.68	54.82	62.50	26.39	10.07	3.50	2.17	2.37	20.12
1974	16.61	22.07	7.09	3.85	8.35	31.41	105.76	45.42	10.68	7.30	3.20	2.48	22.02
1975	3.88	15.46	11.73	8.77	8.60	37.61	71.42	34.80	11.50	3.47	3.91	4.16	17.94
1976	5.40	29.05	6.54	2.61	25.92	63.85	63.19	44.56	8.21	3.66	2.85	1.38	21.44
1977	3.28	6.98	5.79	12.49	5.11	4.33	31.42	7.21	2.17	2.07	6.01	1.77	7.39
1978	5.16	34.67	22.91	26.46	11.98	23.61	35.29	8.50	3.19	2.28	1.54	0.82	14.70
1979	1.97	4.21	7.12	4.13	1.73	13.49	17.24	2.25	1.48	0.59	2.18	2.15	4.88
1980	1.79	2.45	18.59	10.46	18.86	12.53	54.64	21.04	4.66	1.86	3.35	3.80	12.84
1981	11.88	41.13	16.24	11.62	11.48	37.08	36.04	40.71	13.73	3.75	2.51	3.21	19.12
Average	7.18	17.31	15.29	11.20	11.86	30.82	51.94	24.59	8.82	3.55	3.11	2.62	15.69

Table 16 YEARLY RUN-OFF COEFFICIENT

Water Year	Ban Mai (Khlong Luang R.)		Ban Pak Phraek (Khlong Yai R.)		Ban Nong Mapring (Nong Pla Lai R.)		Ban Mae Nam Khu (Khlong Dok Krai R.)		Ban Khai (Rayong River)						
	R	$\frac{f}{Q}$	R	$\frac{f}{Q}$	R	$\frac{f}{Q}$	R	$\frac{f}{Q}$	R	$\frac{f}{Q}$					
1968	1,487	52.7	0.073	2,245	73.5	0.203	2,245	136.9	0.147	2,245	129.9	0.199	2,245	548.7	0.214
1969	1,332	71.9	0.112	1,659	82.3	0.308	1,659	144.4	0.209	1,659	93.0	0.193	1,659	493.5	0.260
1970	1,450	80.4	0.115	1,514	62.4	0.256	1,514	142.5	0.226	1,514	123.9	0.281	1,514	512.1	0.296
1971	1,429	114.8	0.166	1,346	48.7	0.225	1,346	114.5	0.204	1,346	76.2	0.195	1,346	384.5	0.250
1972	1,245	142.5	0.236	1,463	79.8	0.339	1,463	149.5	0.246	1,463	143.5	0.337	1,463	561.0	0.336
1973	1,385	117.0	0.174	1,760	77.9	0.275	1,760	153.3	0.209	1,760	107.2	0.209	1,760	634.5	0.315
1974	1,540	240.9	0.323	1,406	98.1	0.433	1,406	169.7	0.290	1,406	118.6	0.290	1,406	694.4	0.432
1975	1,367	155.3	0.235	1,261	74.6	0.368	1,261	142.0	0.271	1,261	115.1	0.314	1,261	567.3	0.394
1976	1,205	132.5	0.227	1,463	81.4	0.345	1,463	148.8	0.245	1,463	102.8	0.241	1,463	676.1	0.404
1977	1,060	55.8	0.109	1,004	34.7	0.215	1,004	61.5	0.147	1,004	72.8	0.249	1,004	233.1	0.203
1978	1,153	175.0	0.314	1,215	63.4	0.324	1,215	132.5	0.262	1,215	85.1	0.241	1,215	463.6	0.334
1979	870	30.4	0.072	972	19.9	0.127	972	47.7	0.118	972	35.4	0.125	972	154.3	0.139
1980	1,051	109.4	0.215	1,355	44.5	0.204	1,355	108.5	0.193	1,355	87.7	0.222	1,355	404.9	0.262
1981	1,192	136.2	0.236	1,294	63.4	0.304	1,294	151.7	0.282	1,294	131.2	0.348	1,294	603.0	0.408
Average	1,269	115.4	0.186	1,425	64.6	0.280	1,425	128.7	0.218	1,425	101.5	0.246	1,425	494.8	0.303

*Note, R : annual rainfall (mm/year)

Q : annual run-off (MCM)

f : run-off coefficient

Annual rainfalls at Ban Mai and at Ban Nong Mapring are adopted for basin rainfall of the Khlong Luang and the Rayong river basins respectively.

Table 17 10-DAY DISCHARGE AT BALANCE POINT

(Unit: m³/s)

Year	Month	Zone 1 (526.0)	Zone 1-1 (51.2)	Zone 2 (30.1)	Zone 3 (123.0)	Zone 4 (301.0)	
1979	May	1 - 10	5.08	0.12	0.07	0.30	0.73
		11 - 20	2.52	0.30	0.18	0.72	1.78
		21 - 31	0.54	0.10	0.06	0.24	0.58
	Jun.	1 - 10	0.72	0.20	0.12	0.47	1.16
		11 - 20	1.81	0.81	0.47	1.94	4.74
		21 - 30	1.07	0.09	0.05	0.22	0.53
	Jul.	1 - 10	0.36	0.04	0.02	0.08	0.21
		11 - 20	0.32	0.00	0.00	0.01	0.02
		21 - 31	0.66	0.15	0.09	0.36	0.88
	Aug.	1 - 10	1.47	0.08	0.04	0.18	0.44
		11 - 20	0.51	0.17	0.10	0.41	0.99
		21 - 31	0.38	0.05	0.03	0.13	0.32
	Sep.	1 - 10	0.54	0.25	0.15	0.61	1.49
		11 - 20	0.68	0.59	0.35	1.42	3.48
		21 - 30	3.72	1.14	0.67	2.73	6.69
	Oct.	1 - 10	11.61	0.93	0.55	2.24	5.48
		11 - 20	0.74	0.18	0.11	0.44	1.07
		21 - 31	0.32	0.12	0.07	0.30	0.72
	Nov.	1 - 10	0.21	0.20	0.12	0.48	1.17
		11 - 20	0.20	0.10	0.06	0.23	0.56
		21 - 30	0.16	0.07	0.04	0.16	0.39
	Dec.	1 - 10	0.15	0.08	0.05	0.20	0.49
		11 - 20	0.17	0.20	0.12	0.47	1.16
		21 - 31	0.17	0.05	0.03	0.13	0.32
1980	Jan.	1 - 10	0.15	0.04	0.03	0.11	0.26
		11 - 20	0.10	0.03	0.02	0.07	0.18
		21 - 31	0.10	0.02	0.01	0.06	0.14
	Feb.	1 - 10	0.09	0.00	0.00	0.00	0.00
		11 - 20	0.07	0.03	0.02	0.08	0.20
		21 - 29	0.02	0.60	0.35	1.45	3.55
	Mar.	1 - 10	0.00	0.04	0.03	0.11	0.26
		11 - 20	0.41	0.04	0.02	0.10	0.24
		21 - 31	1.09	0.12	0.07	0.29	0.70
	Apr.	1 - 10	0.30	0.05	0.03	0.11	0.27
		11 - 20	0.42	0.10	0.06	0.25	0.60
		21 - 20	0.41	0.10	0.06	0.23	0.56

Note ; (1) Balance Point : Zone 1 : Khlong Luang potential damsite

Zone 1-1 : Ban Bung dam

Zone 2 : Estuary of the Khlong Yai Cheng river

Zone 3 : Bang Phra dam

Zone 4 : Estuary of the Khlong Bang Lamung river

(2) Figures in parentheses show the catchment area

Table 18 10-DAY DISCHARGE AT BALANCE POINT

(Unit: m³/s)

Year	Month	Zone 5 (37.9)	Zone 6 (119.0)	Zone 8 (31.8)	Zone 9 (120.0)	Zone 10 (1,143.0)	Zone 10-1 (158.0)	
1979	May	1 - 10	0.09	0.29	0.08	0.29	6.59	0.39
		11 - 20	0.22	0.70	0.19	0.71	4.45	0.93
		21 - 31	0.07	0.23	0.06	0.23	1.82	0.30
	Jun.	1 - 10	0.15	0.46	0.12	0.46	3.02	0.61
		11 - 20	0.60	1.87	0.50	1.89	15.34	2.49
		21 - 30	0.07	0.21	0.06	0.21	3.00	0.28
	Jul.	1 - 10	0.03	0.08	0.02	0.08	2.25	0.11
		11 - 20	0.00	0.01	0.00	0.01	2.60	0.01
		21 - 31	0.11	0.35	0.09	0.35	7.22	0.46
	Aug.	1 - 10	0.06	0.18	0.05	0.18	2.24	0.23
		11 - 20	0.13	0.39	0.10	0.40	1.93	0.52
		21 - 31	0.04	0.13	0.03	0.13	1.08	0.17
	Sep.	1 - 10	0.19	0.59	0.16	0.59	5.50	0.78
		11 - 20	0.44	1.37	0.37	1.39	13.17	1.82
		21 - 30	0.84	2.65	0.71	2.67	21.79	3.51
	Oct.	1 - 10	0.69	2.17	0.58	2.19	40.34	2.88
		11 - 20	0.13	0.42	0.11	0.42	5.35	0.56
		21 - 31	0.09	0.29	0.08	0.29	7.04	0.38
	Nov.	1 - 10	0.15	0.46	0.12	0.47	3.61	0.61
		11 - 20	0.07	0.22	0.06	0.22	1.82	0.29
		21 - 30	0.05	0.16	0.04	0.16	1.32	0.21
	Dec.	1 - 10	0.06	0.19	0.05	0.19	1.63	0.26
		11 - 20	0.15	0.46	0.12	0.46	1.79	0.61
		21 - 31	0.04	0.13	0.03	0.13	1.07	0.17
1980	Jan.	1 - 10	0.03	0.10	0.03	0.10	0.73	0.14
		11 - 20	0.02	0.07	0.02	0.07	0.57	0.09
		21 - 31	0.02	0.06	0.02	0.06	0.49	0.08
	Feb.	1 - 10	0.00	0.00	0.00	0.00	0.59	0.00
		11 - 20	0.02	0.08	0.02	0.08	0.63	0.10
		21 - 29	0.45	1.40	0.37	1.41	5.66	1.86
	Mar.	1 - 10	0.03	0.10	0.03	0.10	0.83	0.14
		11 - 20	0.03	0.09	0.03	0.09	1.08	0.12
		21 - 31	0.09	0.28	0.07	0.28	4.33	0.37
	Apr.	1 - 10	0.03	0.11	0.03	0.11	0.91	0.14
		11 - 20	0.08	0.24	0.06	0.24	2.30	0.31
		21 - 30	0.07	0.22	0.06	0.22	2.15	0.29

Note ; (1) Balance Point : Zone 5 : Map Prachan dam
Zone 6 : Estuary of the Huai Yai river
Zone 8 : Estuary of the Khlong Phayun river
Zone 9 : Estuary of the Khlong Huai Yai river
Zone 10 : Ban Khai Weir
Zone 10-1 : Khlong Thap Ma potential dam

(2) Figures in parentheses show the catchment area

Table 19 10-DAY AVERAGE DISCHARGE AT KILONG LUANG DAMSITE

Year	Period	(Unit: m ³ /s)											
		Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1968	1-10	0.00	0.88	1.32	0.11	13.63	1.93	7.48	0.47	0.04	0.01	0.02	0.01
	11-20	0.00	1.28	1.11	0.39	5.99	1.58	11.24	0.26	0.02	0.02	0.01	0.04
	21-31	0.84	0.35	0.21	0.54	1.17	12.83	2.69	0.07	0.01	0.01	0.01	0.01
1969	1-10	0.01	0.17	0.07	0.02	0.04	2.29	14.01	1.38	0.02	0.01	0.01	0.01
	11-20	0.03	0.03	0.11	0.07	1.56	20.83	3.49	0.27	0.01	0.01	0.01	0.01
	21-31	0.01	0.03	0.04	0.09	5.20	37.72	1.69	0.07	0.01	0.01	0.01	0.13
1970	1-10	0.19	0.73	2.33	10.48	3.18	3.72	6.51	0.57	0.15	0.01	0.00	0.01
	11-20	0.86	0.12	5.83	6.83	4.30	7.16	48.3	0.18	0.07	0.01	0.00	0.01
	21-31	0.39	0.57	14.51	2.30	7.71	12.12	2.75	0.09	0.01	0.00	0.05	0.01
1971	1-10	0.00	0.20	0.52	1.03	0.32	30.18	9.85	6.83	0.19	0.02	0.04	0.03
	11-20	0.00	0.09	2.22	0.45	5.79	12.40	26.64	0.94	0.06	0.02	0.03	0.01
	21-31	0.36	0.29	2.80	0.15	17.01	15.49	8.80	0.37	0.06	0.02	0.03	0.03
1972	1-10	0.66	0.25	9.76	3.55	0.27	18.16	37.23	2.30	0.83	0.09	0.03	0.02
	11-20	0.15	0.01	4.20	0.80	0.90	18.11	26.07	2.14	0.93	0.05	0.03	0.05
	21-31	0.37	0.01	10.09	0.47	0.25	33.64	10.11	1.73	0.24	0.12	0.01	0.09
1973	1-10	0.05	1.07	1.18	3.28	12.45	5.50	17.67	0.74	0.24	0.09	0.19	0.09
	11-20	0.02	0.38	0.57	11.32	5.20	35.99	9.61	1.47	0.13	0.09	0.19	0.09
	21-31	0.07	0.19	2.17	3.56	2.59	26.00	1.98	0.56	0.10	0.22	0.10	1.02
1974	1-10	0.51	1.20	2.53	1.94	10.30	6.31	33.14	14.91	1.70	0.43	0.59	0.28
	11-20	1.39	2.30	0.47	0.59	4.36	11.40	119.31	14.52	0.99	0.51	1.50	0.33
	21-31	1.75	2.23	0.72	4.60	6.25	21.20	28.73	3.01	0.62	0.38	0.37	0.27
1975	1-10	0.34	1.40	1.95	2.54	2.12	22.99	47.93	5.65	0.65	0.29	0.81	0.25
	11-20	0.18	1.36	0.53	12.21	2.74	16.33	21.99	4.51	0.42	0.26	0.60	0.66
	21-31	0.42	2.74	0.65	5.76	4.48	23.05	4.64	1.18	0.32	0.23	0.32	0.48
1976	1-10	1.28	2.01	1.64	0.36	3.58	19.08	16.84	22.68	0.69	0.27	0.24	0.36
	11-20	0.61	0.93	3.92	0.78	0.84	21.28	12.26	5.61	0.42	0.25	0.21	0.21
	21-31	0.61	1.54	0.52	3.45	14.97	9.81	14.11	1.52	0.32	0.23	0.20	0.18
1977	1-10	0.18	2.28	2.63	0.73	2.51	6.54	10.04	1.57	0.30	0.20	1.37	0.58
	11-20	0.17	0.65	0.44	3.81	4.36	1.78	4.35	0.49	0.22	0.18	2.22	0.23
	21-31	0.29	1.71	0.24	4.39	2.45	3.91	4.70	0.33	0.19	0.15	1.05	0.79
1978	1-10	1.03	0.72	3.28	3.66	8.44	4.49	23.89	1.88	0.37	0.23	0.20	0.26
	11-20	5.12	20.51	4.69	12.63	3.21	33.90	5.55	0.97	0.31	0.24	0.20	0.16
	21-31	1.23	12.80	5.71	11.32	2.61	42.20	4.21	0.57	0.26	0.22	0.18	0.12
1979	1-10	0.07	5.08	0.72	0.36	1.47	0.54	11.61	0.21	0.15	0.15	0.09	0.00
	11-20	0.04	2.52	1.82	0.32	0.51	0.68	0.74	0.20	0.17	0.10	0.07	0.41
	21-31	2.07	0.54	1.07	0.66	0.38	3.72	0.32	0.16	0.17	0.10	0.02	1.09
1980	1-10	0.30	0.25	4.09	2.57	5.80	4.11	10.20	2.62	0.29	0.17	0.23	0.32
	11-20	0.42	0.19	12.98	0.86	14.64	5.73	5.38	1.30	0.22	0.19	0.11	0.16
	21-31	0.41	0.23	8.44	5.55	18.47	22.80	4.85	0.51	0.16	0.18	0.10	0.13
1981	1-10	0.29	3.99	1.23	0.97	3.13	6.04	9.13	7.36	0.96	0.14	0.08	0.09
	11-20	0.33	2.04	0.31	2.39	3.70	24.11	11.10	2.29	0.34	0.13	0.11	0.07
	21-31	2.31	5.31	1.61	1.88	0.86	39.64	7.62	2.89	0.21	0.09	0.06	0.02

Table 20 10-DAY AVERAGE DISCHARGE AT KILONG XAI DAMSITE

Year	Period	(Unit: m ³ /s)											
		Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1968	1-10	0.35	2.33	8.29	3.17	1.98	1.50	11.71	4.41	5.94	0.41	0.19	0.08
	11-20	0.53	3.71	6.65	3.09	1.98	2.07	11.02	3.49	4.70	0.45	0.14	0.19
	21-31	0.95	2.68	4.83	2.10	1.11	5.81	11.27	1.88	3.26	0.37	0.08	0.14
1969	1-10	0.08	1.10	1.23	0.47	0.49	4.90	17.09	12.62	1.69	0.46	0.26	0.16
	11-20	0.07	0.91	0.53	0.56	0.96	12.43	15.81	9.27	1.18	0.47	0.81	0.11
	21-31	0.05	0.74	1.00	0.35	2.00	14.07	17.14	5.46	0.89	0.34	0.32	0.32
1970	1-10	1.84	3.22	6.57	4.92	1.83	0.95	5.13	1.54	3.67	0.93	0.35	0.42
	11-20	1.08	3.86	7.47	3.29	1.44	1.81	7.24	1.27	4.28	0.70	0.38	0.39
	21-31	0.85	8.11	6.15	2.13	1.39	2.07	5.00	0.89	2.75	0.57	0.50	1.03
1971	1-10	0.34	2.13	1.67	0.43	0.24	5.44	7.98	2.95	0.60	0.28	0.51	0.34
	11-20	0.70	1.16	0.99	0.26	1.11	3.63	10.83	1.71	0.43	0.20	0.76	0.30
	21-31	0.91	2.65	0.84	0.20	3.74	8.03	9.23	1.21	0.56	0.16	1.35	0.92
1972	1-10	6.40	1.06	1.33	0.46	0.08	3.87	14.26	7.84	2.52	0.46	0.23	0.26
	11-20	5.44	0.66	1.14	0.26	0.05	9.45	14.62	9.44	2.34	0.37	0.27	0.46
	21-31	4.24	0.38	1.27	0.19	0.03	10.64	12.71	7.91	1.27	0.39	0.57	0.80
1973	1-10	0.15	3.61	3.70	3.80	5.20	2.69	15.25	4.28	1.39	0.52	0.05	0.35
	11-20	0.09	1.85	3.66	3.28	3.37	8.19	13.21	5.49	0.96	0.47	0.16	0.29
	21-31	0.25	2.02	3.20	2.58	1.77	11.82	11.22	3.68	0.68	0.47	0.15	0.30
1974	1-10	1.31	1.94	1.03	0.50	1.77	1.60	20.27	13.14	2.30	0.69	1.01	0.46
	11-20	4.55	1.91	0.56	0.25	0.88	5.45	28.72	9.02	1.43	1.09	0.74	0.58
	21-31	3.24	4.54	0.44	0.40	0.68	11.08	21.12	5.17	1.04	1.28	0.51	0.38
1975	1-10	0.62	1.03	1.07	0.34	0.70	8.62	17.21	7.77	1.99	0.56	0.42	0.46
	11-20	0.26	0.92	0.66	0.65	0.74	10.20	16.13	7.54	1.46	0.43	0.45	0.28
	21-31	0.42	2.95	0.46	1.04	0.93	10.68	11.66	3.87	1.02	0.37	0.51	0.82
1976	1-10	1.25	4.86	1.37	0.19	0.77	19.70	4.90	11.59	1.83	0.51	0.43	0.12
	11-20	0.60	1.95	0.76	0.16	0.50	16.60	10.98	10.56	1.31	0.42	0.23	0.09
	21-31	0.60	1.39	0.43	0.22	3.64	10.53	10.56	5.35	1.04	0.43	0.16	0.07
1977	1-10	0.22	1.83	1.03	3.21	2.10	0.74	10.20	1.53	0.26	0.11	1.40	0.37
	11-20	0.15	0.23	3.51	1.99	0.70	0.74	7.70	0.80	0.24	0.14	0.43	0.12
	21-31	0.81	0.20	0.37	4.22	0.51	1.53	4.22	0.38	0.34	0.08	1.02	0.07
1978	1-10	0.04	2.00	3.66	3.94	3.18	1.08	7.39	1.64	0.31	0.11	0.05	0.03
	11-20	0.79	16.51	4.06	3.86	1.76	3.05	6.70	0.99	0.20	0.43	0.08	0.00
	21-31	0.40	6.92	2.23	5.85	0.93	15.04	3.53	0.51	0.15	0.11	0.03	0.00
1979	1-10	0.00	0.87	0.51	0.45	0.46	1.58	10.07	0.31	0.12	0.03	0.03	0.03
	11-20	0.24	0.16	0.70	0.34	0.09	2.48	1.02	0.09	0.08	0.01	0.01	0.35
	21-31	0.79	0.03	0.41	2.57	0.08	3.52	1.79	0.11	0.07	0.04	0.05	1.18
1980	1-10	0.07	0.12	1.98	1.73	1.75	1.38	4.17	6.61	0.37	0.12	0.15	0.11
	11-20	0.45	0.35	2.78	0.39	2.83	0.97	7.42	2.84	0.28	0.09	0.08	0.15
	21-31	0.43	0.37	3.07	3.33	4.29	1.14	16.19	0.84	0.15	0.09	0.05	0.05
1981	1-10	0.28	3.95	2.49	2.15	4.02	4.17	4.83	4.92	1.71	0.39	0.12	0.05
	11-20	0.15	2.65	1.12	5.08	3.32	5.19	4.50	2.69	0.51	0.23	0.27	0.01
	21-31	5.33	6.81	3.97	2.72	0.72	13.55	3.76	5.16	0.46	0.11	0.07	0.12

Table 21 10-DAY AVERAGE DISCHARGE AT KHLONG THAP NA DAMSITE

(Unit: m³/s)

Year	Period	Apr.	May	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1968	1-10	0.33	3.90	5.89	3.38	1.81	0.99	3.68	4.22	1.14	0.97	0.52	0.14
	11-20	0.57	4.93	4.35	3.01	2.16	3.76	3.76	3.14	0.86	0.85	0.32	0.66
	21-31	2.49	3.48	4.13	2.00	1.23	3.78	7.65	1.66	0.67	0.71	0.20	0.34
1969	1-10	0.18	0.42	1.81	0.81	0.52	1.47	5.01	5.48	1.55	0.60	0.35	0.28
	11-20	0.23	1.02	1.17	1.09	0.79	3.96	4.06	3.79	1.05	0.61	2.26	0.20
	21-31	0.05	0.84	0.96	0.70	1.81	5.02	4.41	2.41	0.77	0.47	0.82	0.59
1970	1-10	1.24	2.19	4.15	1.76	1.05	0.55	4.45	1.55	8.80	1.99	0.73	0.46
	11-20	0.66	3.09	3.24	1.29	1.09	1.50	3.87	1.14	5.45	1.37	0.67	0.40
	21-31	0.85	7.66	2.27	0.85	0.77	1.89	2.86	0.71	3.53	0.97	0.67	1.17
1971	1-10	0.37	1.39	1.30	0.33	0.12	2.04	2.89	3.65	0.92	0.58	0.30	0.24
	11-20	1.62	0.83	0.70	0.26	0.15	1.17	5.14	2.06	0.66	0.36	0.52	0.27
	21-31	1.09	1.55	0.50	0.23	1.37	3.97	6.40	1.33	0.87	0.29	0.83	0.49
1972	1-10	2.82	0.90	0.37	0.23	0.08	5.02	13.65	5.30	2.09	0.77	0.53	0.35
	11-20	2.61	1.03	0.52	0.12	0.03	7.28	10.00	4.45	1.66	0.24	0.53	0.57
	21-31	3.39	0.80	0.59	0.07	0.02	10.55	6.54	3.52	1.05	0.66	0.73	1.28
1973	1-10	0.28	2.55	2.32	2.47	3.31	1.28	5.91	2.46	1.38	0.52	0.56	0.53
	11-20	0.17	1.31	2.30	2.13	2.14	3.88	5.02	3.15	0.95	0.47	0.28	0.44
	21-31	0.48	1.43	2.00	1.67	1.13	5.60	4.35	2.11	0.68	0.47	0.26	0.45
1974	1-10	0.87	1.34	1.17	0.71	1.70	0.92	6.37	5.82	1.94	0.68	1.10	0.60
	11-20	3.02	1.32	0.65	0.35	0.84	2.79	9.03	3.99	1.21	1.08	0.81	0.77
	21-31	2.14	3.14	0.50	0.56	0.65	5.68	6.64	2.29	0.87	1.26	0.56	0.50
1975	1-10	0.68	1.79	4.57	0.44	0.75	3.71	15.90	4.46	2.58	0.52	0.55	0.44
	11-20	0.30	1.51	0.85	0.39	0.74	0.61	5.74	6.66	2.25	0.52	0.47	0.14
	21-31	0.92	1.72	0.54	1.19	1.02	0.23	4.01	2.39	0.96	0.48	0.62	0.83
1976	1-10	1.33	3.37	0.47	0.09	1.34	0.72	5.19	6.91	2.05	0.71	0.68	0.29
	11-20	0.64	1.35	0.11	0.30	0.64	2.53	3.33	4.98	1.17	0.58	0.37	0.22
	21-31	0.64	0.97	0.49	0.10	7.44	5.03	4.77	2.95	0.92	0.46	0.27	0.17
1977	1-10	1.32	3.37	0.36	0.73	2.23	0.44	4.29	2.88	0.53	0.28	0.41	0.36
	11-20	0.15	0.63	1.27	1.88	0.40	0.61	11.98	1.39	0.34	0.37	0.52	0.22
	21-31	0.81	0.49	0.05	1.67	0.40	0.93	2.81	0.47	0.33	0.35	0.67	0.23
1978	1-10	0.32	0.77	0.77	2.14	1.25	0.21	4.99	3.37	0.61	0.32	0.31	0.15
	11-20	1.34	5.80	2.76	1.61	1.88	1.38	4.28	1.74	0.51	0.45	0.24	0.12
	21-31	0.77	2.12	0.09	2.04	0.66	5.18	2.96	0.83	0.41	0.29	0.18	0.14
1979	1-10	0.13	0.39	0.61	0.11	0.23	0.78	2.88	0.61	0.26	0.14	0.00	0.14
	11-20	0.30	0.93	2.49	0.01	0.52	1.82	0.56	0.29	0.61	0.09	0.10	0.12
	21-31	0.12	0.30	0.28	0.46	0.17	3.51	0.38	0.21	0.17	0.08	1.86	0.37
1980	1-10	0.14	0.26	1.75	1.32	0.61	0.59	3.46	5.40	1.27	0.29	2.12	1.48
	11-20	0.31	0.27	1.12	0.41	1.03	0.71	8.49	3.07	0.92	0.12	0.30	0.64
	21-31	0.29	0.51	2.67	0.36	0.97	1.52	8.75	1.68	0.54	0.12	0.21	0.24
1981	1-10	0.59	4.71	2.92	1.16	1.92	0.64	3.27	8.51	2.65	0.93	0.12	0.29
	11-20	0.66	3.00	1.27	1.89	1.55	3.20	4.35	5.07	1.71	0.58	0.34	0.21
	21-31	2.99	4.39	0.98	0.68	0.74	4.31	5.54	5.73	2.17	0.46	0.43	1.05

Table 22 MONTHLY RUN-OFF AT KHLONG LUANG DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.28	0.83	0.88	0.35	6.71	5.45	6.99	0.26	0.02	0.01	0.01	0.02	1.82
1969	0.02	0.08	0.08	0.07	2.36	20.28	6.25	0.58	0.01	0.01	0.01	0.05	2.48
1970	0.48	0.97	7.55	6.40	5.15	7.66	4.64	0.28	0.08	0.00	0.00	0.01	2.77
1971	0.02	0.19	1.85	0.53	7.62	19.36	14.89	2.72	0.11	0.01	0.03	0.00	3.95
1972	0.39	0.09	8.02	1.57	0.47	21.49	24.00	2.05	0.65	0.09	0.02	0.05	4.91
1973	0.04	0.53	1.30	5.97	6.61	22.50	9.53	0.92	0.15	0.15	0.27	0.41	4.03
1974	1.22	1.92	1.24	2.45	6.95	12.97	59.36	10.81	1.09	0.45	0.86	0.29	8.30
1975	0.32	1.86	1.04	6.80	3.16	20.79	24.49	3.78	0.46	0.26	0.59	0.47	5.34
1976	0.84	1.50	2.02	1.59	6.74	16.73	14.29	9.93	0.47	0.25	0.22	0.25	4.57
1977	0.21	0.91	1.10	3.02	4.14	4.08	6.30	0.79	0.24	0.17	1.57	0.54	1.92
1978	2.46	11.39	4.55	9.34	4.68	26.87	10.99	1.13	0.32	0.23	0.20	0.17	6.03
1979	0.73	2.64	1.20	0.46	0.77	1.65	4.10	0.19	0.16	0.12	0.05	0.51	1.04
1980	0.38	0.22	8.50	3.08	13.20	10.88	6.75	1.48	0.22	0.19	0.15	0.20	3.77
1981	9.76	3.83	1.05	1.75	2.51	23.26	9.23	4.18	0.49	0.12	0.09	0.05	4.70
Average	1.23	1.92	2.88	3.10	5.08	15.28	14.41	2.79	0.32	0.15	0.29	0.22	3.98

River System : Khlong Luang

Catchment Area : 526 km²

No. of Zone : 1

Note : Estimated from Ban Mai Stream Gauge.

Table 23 MONTHLY RUN-OFF AT PA DAENG DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.03	0.08	0.09	0.04	0.69	0.56	0.71	0.03	0.00	0.00	0.00	0.00	0.19
1969	0.00	0.01	0.01	0.01	0.24	2.07	0.64	0.06	0.00	0.00	0.00	0.01	0.25
1970	0.05	0.10	0.77	0.65	0.53	0.78	0.47	0.03	0.01	0.00	0.00	0.00	0.28
1971	0.00	0.02	0.19	0.05	0.78	1.98	1.52	0.28	0.01	0.00	0.00	0.00	0.40
1972	0.04	0.01	0.82	0.16	0.05	2.20	2.45	0.21	0.07	0.01	0.00	0.01	0.50
1973	0.00	0.05	0.13	0.61	0.68	2.30	0.97	0.09	0.02	0.02	0.03	0.04	0.41
1974	0.12	0.20	0.13	0.25	0.71	1.33	6.07	1.11	0.11	0.05	0.09	0.03	0.85
1975	0.03	0.19	0.11	0.70	0.32	2.13	2.50	0.39	0.05	0.03	0.06	0.05	0.55
1976	0.09	0.15	0.21	0.16	0.69	1.71	1.46	1.02	0.05	0.03	0.02	0.03	0.47
1977	0.02	0.09	0.11	0.31	0.42	0.42	0.64	0.08	0.02	0.02	0.16	0.06	0.20
1978	0.25	1.16	0.47	0.95	0.48	2.75	1.12	0.12	0.03	0.02	0.02	0.02	0.62
1979	0.07	0.27	0.12	0.05	0.08	0.17	0.42	0.02	0.02	0.01	0.01	0.05	0.11
1980	0.04	0.02	0.87	0.31	1.35	1.11	0.69	0.15	0.02	0.02	0.02	0.02	0.39
1981	1.00	0.39	0.11	0.18	0.26	2.38	0.94	0.43	0.05	0.01	0.01	0.01	0.48
Average	0.13	0.20	0.29	0.32	0.52	1.56	1.47	0.29	0.03	0.02	0.03	0.02	0.407

River System : Khlong Luang

Catchment Area : 53.8 km²

No. of Zone : 1

Note : Estimated from Ban Mai Stream Gauge.

Table 24 MONTHLY RUN-OFF AT BAN BUNG DAM

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.37	1.32	1.59	0.90	0.56	0.61	1.59	0.97	0.28	0.27	0.11	0.12	0.73
1969	0.05	0.25	0.43	0.28	0.35	1.13	1.46	1.26	0.36	0.18	0.38	0.12	0.52
1970	0.30	1.43	1.04	0.42	0.31	0.43	1.20	0.37	1.90	0.45	0.23	0.22	0.69
1971	0.33	0.41	0.27	0.09	0.19	0.78	1.58	0.76	0.27	0.13	0.18	0.11	0.42
1972	0.95	0.17	0.16	0.04	0.01	2.47	3.23	1.43	0.51	0.18	0.19	0.24	0.80
1973	0.10	0.59	0.72	0.67	0.70	1.16	1.65	0.83	0.32	0.16	0.12	0.16	0.60
1974	0.65	0.61	0.25	0.17	0.34	1.01	2.37	1.31	0.43	0.33	0.27	0.20	0.66
1975	0.21	0.54	0.64	0.22	0.27	0.49	2.72	1.46	0.62	0.16	0.18	0.16	0.64
1976	0.28	0.60	0.12	0.05	1.06	0.89	1.44	1.59	0.44	0.19	0.15	0.07	0.57
1977	0.25	0.47	0.18	0.41	0.32	0.22	2.02	0.51	0.13	0.11	0.17	0.09	0.41
1978	0.26	0.93	0.39	0.63	0.40	0.73	1.31	0.64	0.16	0.11	0.08	0.04	0.48
1979	0.06	0.17	0.36	0.07	0.10	0.66	0.40	0.12	0.11	0.03	0.20	0.07	0.20
1980	0.08	0.11	0.60	0.22	0.28	0.30	2.26	1.10	0.29	0.07	0.30	0.25	0.49
1981	0.46	1.31	0.56	0.40	0.40	0.88	1.43	2.09	0.70	0.21	0.11	0.17	0.73
Average	0.31	0.64	0.52	0.33	0.33	0.84	1.76	1.03	0.47	0.19	0.19	0.14	0.57

River System : Khlong Luang

Catchment Area : 51.2 km²

No. of Zone : 1

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 25 MONTHLY RUN-OFF AT BANG PHRA DAM

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.88	3.18	3.83	2.16	1.34	1.46	3.82	2.34	0.68	0.65	0.28	0.30	1.74
1969	0.12	0.60	1.03	0.67	0.83	2.71	3.50	3.03	0.87	0.44	0.91	0.28	1.25
1970	0.71	3.44	2.51	1.00	0.75	1.02	2.88	0.88	4.55	1.11	0.54	0.54	1.66
1971	0.80	0.99	0.65	0.22	0.45	1.86	3.78	1.83	0.64	0.32	0.42	0.42	1.02
1972	2.29	0.42	0.39	0.11	0.03	5.93	7.75	3.45	1.23	0.44	0.46	0.58	1.92
1973	0.24	1.41	1.72	1.62	1.68	2.79	3.96	2.00	0.77	0.38	0.30	0.37	1.44
1974	1.56	1.46	0.60	0.42	0.82	2.44	5.70	3.14	1.03	0.79	0.66	0.48	1.59
1975	0.50	1.31	1.55	0.54	0.66	1.18	6.54	3.51	1.48	0.39	0.42	0.37	1.54
1976	0.68	1.45	0.28	0.13	2.55	2.15	3.46	3.83	1.06	0.45	0.35	0.17	1.38
1977	0.59	1.14	0.44	0.98	0.77	0.52	4.86	1.23	0.31	0.26	0.41	0.21	0.98
1978	0.63	2.24	0.94	1.51	0.97	1.76	3.15	1.54	0.39	0.28	0.19	0.11	1.14
1979	0.14	0.41	0.88	0.16	0.24	1.59	0.97	0.29	0.26	0.08	0.48	0.17	0.47
1980	0.19	0.28	1.44	0.53	0.68	0.73	5.42	2.63	0.70	0.17	0.72	0.60	1.18
1981	1.10	3.15	1.34	0.96	1.08	2.11	3.45	5.01	1.69	0.50	0.28	0.41	1.76
Average	0.74	1.53	1.26	1.26	0.92	2.02	4.23	2.48	1.12	0.45	0.46	0.35	1.36

River System : Huai Sukhrup

Catchment Area : 123 km²

No. of Zone : 3

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 26 MONTHLY RUN-OFF AT NONG KHO DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.35	1.25	1.50	0.85	0.53	0.57	1.50	0.92	0.27	0.26	0.11	0.12	0.68
1969	0.05	0.23	0.40	0.26	0.33	1.06	1.37	1.19	0.34	0.17	0.36	0.11	0.49
1970	0.28	1.35	0.98	0.39	0.29	0.40	1.13	0.35	1.79	0.44	0.21	0.21	0.65
1971	0.31	0.39	0.26	0.09	0.18	0.73	1.49	0.72	0.25	0.12	0.17	0.11	0.40
1972	0.90	0.16	0.15	0.04	0.01	2.33	3.04	1.35	0.49	0.17	0.18	0.23	0.76
1973	0.10	0.55	0.68	0.64	0.66	1.10	1.56	0.79	0.30	0.15	0.12	0.15	0.56
1974	0.61	0.57	0.24	0.16	0.32	0.96	2.24	1.23	0.41	0.31	0.26	0.19	0.62
1975	0.19	0.51	0.61	0.21	0.26	0.47	2.57	1.38	0.58	0.15	0.17	0.15	0.60
1976	0.27	0.57	0.11	0.11	0.05	1.00	0.84	1.50	0.42	0.18	0.14	0.07	0.54
1977	0.23	0.45	0.17	0.38	0.30	0.20	1.91	0.48	0.12	0.10	0.16	0.08	0.38
1978	0.25	0.88	0.37	0.59	0.38	0.69	1.24	0.61	0.15	0.11	0.08	0.04	0.45
1979	0.06	0.16	0.34	0.06	0.09	0.62	0.38	0.11	0.10	0.03	0.19	0.07	0.19
1980	0.08	0.11	0.56	0.21	0.27	0.29	2.13	1.03	0.28	0.07	0.28	0.23	0.46
1981	0.43	1.24	0.53	0.38	0.42	0.83	1.35	1.97	0.66	0.20	0.11	0.16	0.69
Average	0.29	0.60	0.49	0.31	0.36	0.79	1.66	0.97	0.44	0.18	0.14	0.14	0.54

River System : Khlong Bang Lamung

Catchment Area : 48.3 km²

No. of Zone : 4

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 27 MONTHLY RUN-OFF AT HUAI BUNG DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.49	1.77	2.13	1.20	0.74	0.82	2.13	1.30	0.38	0.36	0.16	0.17	0.97
1969	0.07	0.33	0.57	0.37	0.46	1.51	1.95	1.69	0.48	0.24	0.51	0.16	0.69
1970	0.40	1.92	1.40	0.56	0.42	0.57	1.60	0.49	2.54	0.62	0.30	0.30	0.93
1971	0.45	0.55	0.36	0.12	0.25	1.04	2.11	1.02	0.36	0.18	0.24	0.15	0.57
1972	1.27	0.23	0.21	0.06	0.02	3.30	4.32	1.92	0.69	0.24	0.25	0.33	1.07
1973	0.13	0.78	0.96	0.90	0.94	1.56	2.21	1.12	0.43	0.21	0.17	0.21	0.80
1974	0.87	0.81	0.34	0.23	0.46	1.36	3.18	1.75	0.57	0.44	0.37	0.27	0.89
1975	0.28	0.73	0.86	0.30	0.37	0.66	3.64	1.95	0.82	0.22	0.24	0.21	0.86
1976	0.38	0.81	0.16	0.07	1.42	1.20	1.93	2.13	0.59	0.25	0.20	0.10	0.77
1977	0.33	0.63	0.24	0.54	0.43	0.29	2.71	0.69	0.17	0.14	0.23	0.12	0.54
1978	0.35	1.25	0.52	0.84	0.54	0.98	1.75	0.86	0.22	0.15	0.11	0.06	0.64
1979	0.08	0.23	0.49	0.09	0.13	0.89	0.54	0.16	0.15	0.05	0.27	0.09	0.26
1980	0.11	0.15	0.80	0.30	0.38	0.41	3.02	1.47	0.39	0.09	0.40	0.33	0.65
1981	0.61	1.75	0.75	0.53	0.60	1.18	1.92	2.79	0.94	0.28	0.15	0.23	0.98
Average	0.41	0.86	0.70	0.44	0.51	1.12	2.36	1.38	0.62	0.25	0.25	0.19	0.76

River System : Khlong Bang Lamung

Catchment Area : 68.5 km²

No. of Zone : 4

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 28 MONTHLY RUN-OFF AT HUAI TAKHIAN TIA DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.24	0.85	1.03	0.58	0.41	0.39	1.02	0.63	0.18	0.17	0.07	0.08	0.47
1969	0.03	0.16	0.28	0.18	0.22	0.73	0.94	0.81	0.23	0.12	0.24	0.07	0.33
1970	0.19	0.92	0.67	0.27	0.20	0.27	0.77	0.24	1.22	0.30	0.15	0.14	0.45
1971	0.21	0.26	0.18	0.06	0.12	0.50	1.01	0.49	0.17	0.09	0.11	0.07	0.27
1972	0.61	0.11	0.10	0.03	0.01	1.59	2.08	0.92	0.33	0.12	0.12	0.16	0.52
1973	0.07	0.38	0.46	0.43	0.45	0.75	1.06	0.54	0.21	0.10	0.08	0.10	0.39
1974	0.42	0.39	0.16	0.11	0.22	0.65	1.53	0.84	0.28	0.21	0.18	0.13	0.43
1975	0.13	0.35	0.42	0.14	0.18	0.32	1.76	0.94	0.40	0.11	0.11	0.10	0.41
1976	0.18	0.39	0.08	0.03	0.68	0.58	0.93	1.03	0.28	0.12	0.09	0.05	0.37
1977	0.16	0.31	0.12	0.26	0.21	0.14	1.30	0.33	0.08	0.07	0.11	0.06	0.26
1978	0.17	0.60	0.25	0.40	0.26	0.47	0.84	0.41	0.11	0.07	0.05	0.03	0.31
1979	0.04	0.11	0.24	0.04	0.06	0.43	0.26	0.08	0.07	0.02	0.13	0.05	0.13
1980	0.05	0.07	0.39	0.14	0.18	0.20	1.45	0.71	0.19	0.04	0.19	0.16	0.32
1981	0.30	0.85	0.36	0.26	0.26	0.57	0.92	1.34	0.45	0.13	0.07	0.11	0.47
Average	0.20	0.41	0.34	0.21	0.25	0.54	1.14	0.66	0.30	0.12	0.12	0.09	0.37

River System : Khlong Bang Lamung

Catchment Area : 33.0 km²

No. of Zone : 4

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 29 MONTHLY RUN-OFF AT KHLONG NA KLUA DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.16	0.58	0.69	0.39	0.24	0.27	0.69	0.42	0.12	0.12	0.05	0.05	0.32
1969	0.02	0.11	0.19	0.12	0.15	0.49	0.63	0.55	0.16	0.08	0.16	0.05	0.23
1970	0.13	0.62	0.45	0.18	0.14	0.19	0.52	0.16	0.83	0.20	0.10	0.10	0.30
1971	0.14	0.18	0.12	0.04	0.08	0.34	0.69	0.33	0.12	0.06	0.08	0.05	0.18
1972	0.41	0.08	0.07	0.02	0.01	1.07	1.40	0.62	0.22	0.08	0.08	0.11	0.35
1973	0.04	0.26	0.31	0.29	0.30	0.51	0.72	0.36	0.14	0.07	0.05	0.07	0.26
1974	0.28	0.26	0.11	0.08	0.15	0.44	1.03	0.57	0.19	0.14	0.12	0.09	0.29
1975	0.09	0.24	0.28	0.10	0.12	0.21	1.19	0.64	0.27	0.07	0.08	0.07	0.28
1976	0.12	0.26	0.05	0.02	0.46	0.39	0.63	0.69	0.19	0.08	0.06	0.03	0.25
1977	0.11	0.21	0.08	0.18	0.14	0.09	0.88	0.22	0.06	0.05	0.07	0.04	0.18
1978	0.11	0.41	0.17	0.27	0.16	0.32	0.57	0.28	0.07	0.05	0.04	0.02	0.21
1979	0.03	0.08	0.16	0.03	0.04	0.29	0.18	0.05	0.05	0.01	0.09	0.03	0.08
1980	0.04	0.05	0.26	0.10	0.12	0.13	0.98	0.48	0.13	0.03	0.13	0.11	0.21
1981	0.20	0.57	0.24	0.17	0.16	0.38	0.62	0.91	0.31	0.09	0.05	0.08	0.32
Average	0.13	0.28	0.23	0.14	0.17	0.37	0.77	0.45	0.20	0.08	0.08	0.06	0.25

River System : Hual Nong Pru

Catchment Area : 22.3 km²

No. of Zone : 5

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 30 MONTHLY RUN-OFF AT MAP PRACHAN DAM

(Unit: m³/s)

Water Year	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.27	0.98	1.18	0.66	0.41	0.45	1.18	0.72	0.21	0.20	0.09	0.09	0.54
1969	0.04	0.18	0.32	0.21	0.26	0.83	1.08	0.93	0.27	0.13	0.28	0.09	0.38
1970	0.22	1.06	0.77	0.31	0.23	0.32	0.89	0.27	1.40	0.34	0.17	0.17	0.52
1971	0.25	0.30	0.20	0.07	0.14	0.57	1.17	0.56	0.20	0.10	0.13	0.08	0.31
1972	0.70	0.13	0.12	0.03	0.01	1.83	2.39	1.06	0.38	0.13	0.14	0.18	0.59
1973	0.07	0.43	0.53	0.50	0.52	0.86	1.22	0.62	0.24	0.12	0.09	0.11	0.44
1974	0.48	0.45	0.19	0.13	0.25	0.75	1.76	0.97	0.32	0.24	0.20	0.15	0.49
1975	0.15	0.40	0.48	0.17	0.20	0.36	2.02	1.08	0.46	0.12	0.13	0.11	0.47
1976	0.21	0.45	0.09	0.04	0.79	0.66	1.07	1.18	0.33	0.14	0.11	0.05	0.43
1977	0.18	0.35	0.13	0.30	0.24	0.16	1.50	0.38	0.10	0.08	0.13	0.07	0.30
1978	0.19	0.69	0.29	0.46	0.30	0.54	0.97	0.48	0.12	0.08	0.06	0.03	0.35
1979	0.04	0.13	0.27	0.05	0.07	0.49	0.30	0.09	0.08	0.02	0.15	0.05	0.14
1980	0.06	0.08	0.44	0.16	0.21	0.23	1.67	0.81	0.22	0.05	0.22	0.18	0.36
1981	0.34	0.97	0.41	0.29	0.33	0.65	1.06	1.54	0.52	0.15	0.08	0.13	0.54
Average	0.23	0.47	0.39	0.24	0.28	0.62	1.30	0.76	0.35	0.14	0.14	0.11	0.42

River System : Huai Nong Pru

Catchment Area : 37.9 km²

No. of Zone : 5

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 31 MONTHLY RUN-OFF AT HUAI CHAK NOK DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.13	0.47	0.56	0.32	0.20	0.22	0.56	0.34	0.10	0.10	0.04	0.04	0.26
1969	0.02	0.09	0.15	0.10	0.12	0.40	0.51	0.45	0.13	0.06	0.13	0.04	0.18
1970	0.11	0.51	0.37	0.15	0.11	0.15	0.42	0.13	0.67	0.16	0.08	0.08	0.25
1971	0.12	0.14	0.10	0.03	0.07	0.27	0.56	0.27	0.09	0.05	0.06	0.04	0.15
1972	0.34	0.06	0.06	0.02	0.00	0.87	1.14	0.51	0.18	0.06	0.07	0.09	0.28
1973	0.04	0.21	0.25	0.24	0.25	0.41	0.58	0.29	0.11	0.06	0.04	0.05	0.21
1974	0.23	0.21	0.09	0.06	0.12	0.36	0.84	0.46	0.15	0.12	0.10	0.07	0.23
1975	0.07	0.19	0.23	0.08	0.10	0.17	0.96	0.52	0.22	0.06	0.06	0.05	0.23
1976	0.10	0.21	0.04	0.02	0.38	0.32	0.51	0.56	0.16	0.07	0.05	0.03	0.20
1977	0.09	0.17	0.06	0.14	0.11	0.08	0.72	0.18	0.05	0.04	0.06	0.03	0.14
1978	0.09	0.33	0.14	0.22	0.14	0.26	0.46	0.23	0.06	0.04	0.03	0.02	0.17
1979	0.02	0.06	0.13	0.02	0.03	0.23	0.14	0.04	0.04	0.01	0.07	0.02	0.07
1980	0.03	0.04	0.21	0.08	0.10	0.11	0.80	0.39	0.10	0.02	0.11	0.09	0.17
1981	0.16	0.46	0.20	0.14	0.16	0.31	0.51	0.74	0.25	0.07	0.04	0.06	0.26
Average	0.11	0.23	0.18	0.12	0.13	0.30	0.62	0.36	0.16	0.07	0.07	0.05	0.20

River System : Huai Yai

Catchment Area : 18.1 km²

No. of Zone : 6

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 32 MONTHLY RUN-OFF AT HUAI YAI DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.47	1.70	2.05	1.15	0.72	0.78	2.04	1.25	0.36	0.35	0.15	0.16	0.93
1969	0.06	0.32	0.55	0.36	0.45	1.45	1.87	1.62	0.46	0.23	0.49	0.15	0.67
1970	0.38	1.84	1.34	0.53	0.40	0.55	1.54	0.47	2.44	0.60	0.29	0.29	0.89
1971	0.43	0.53	0.35	0.12	0.24	1.00	2.03	0.98	0.34	0.17	0.23	0.14	0.55
1972	1.23	0.22	0.21	0.06	0.02	3.17	4.15	1.85	0.66	0.23	0.25	0.31	1.03
1973	0.13	0.75	0.92	0.87	0.90	1.50	2.12	1.07	0.41	0.20	0.16	0.20	0.77
1974	0.84	0.78	0.32	0.22	0.44	1.30	3.05	1.68	0.55	0.42	0.35	0.26	0.85
1975	0.26	0.70	0.83	0.29	0.35	0.63	3.51	1.88	0.79	0.21	0.23	0.20	0.82
1976	0.36	0.78	0.15	0.07	1.37	1.15	1.85	2.05	0.57	0.24	0.19	0.09	0.74
1977	0.32	0.61	0.23	0.52	0.41	0.28	2.60	0.66	0.17	0.14	0.22	0.11	0.52
1978	0.34	1.20	0.50	0.81	0.52	0.94	1.69	0.83	0.21	0.15	0.10	0.06	0.61
1979	0.08	0.22	0.47	0.08	0.13	0.85	0.52	0.15	0.14	0.04	0.26	0.09	0.25
1980	0.10	0.15	0.77	0.29	0.36	0.39	2.90	1.41	0.38	0.09	0.39	0.32	0.63
1981	0.59	1.69	0.72	0.51	0.58	1.13	1.85	2.69	0.91	0.27	0.15	0.22	0.94
Average	0.40	0.82	0.67	0.42	0.49	1.08	2.27	1.33	0.60	0.24	0.25	0.19	0.73

River System : Huai Yai

Catchment Area : 65.9 km²

No. of Zone : 6

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 33 MONTHLY RUN-OFF AT KHLONG YAI DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.61	2.90	6.59	2.76	1.67	3.13	11.33	3.26	4.59	0.41	0.14	0.14	3.13
1969	0.07	0.91	0.92	0.46	1.18	10.47	16.70	9.21	1.25	0.42	0.47	0.20	3.52
1970	1.26	5.16	6.73	3.40	1.54	1.61	5.77	1.23	3.53	0.73	8.53	0.62	2.67
1971	0.65	2.00	1.16	0.30	1.76	5.70	9.34	1.95	0.53	0.22	0.85	0.53	2.09
1972	5.36	0.69	1.25	0.30	0.05	7.99	13.82	8.40	2.02	0.41	0.34	0.51	3.43
1973	0.16	2.56	3.52	3.20	3.40	7.57	13.13	4.48	1.00	0.32	0.22	0.31	3.32
1974	3.03	2.71	0.68	0.38	1.10	6.11	23.32	9.10	1.57	1.03	0.77	0.47	4.18
1975	0.43	1.68	0.73	0.69	0.80	9.83	14.89	6.39	1.48	0.45	0.46	0.46	3.20
1976	0.81	2.69	0.85	0.19	1.71	15.61	8.87	9.17	1.38	0.42	0.28	0.09	3.51
1977	0.23	1.04	1.62	3.18	1.08	1.00	7.27	0.89	0.20	0.11	0.93	0.18	1.48
1978	0.41	8.42	3.32	4.59	1.92	6.39	5.81	1.04	0.22	0.22	0.05	0.01	2.69
1979	0.35	0.34	0.54	1.18	0.22	2.53	4.21	0.18	0.08	0.03	0.03	0.54	0.85
1980	0.31	0.28	2.61	1.87	2.99	1.18	9.48	3.43	0.27	0.11	0.11	0.09	1.90
1981	1.92	4.55	2.52	3.21	2.61	7.64	4.48	4.25	0.88	0.24	0.16	0.07	2.71
Average	1.11	2.57	2.36	1.84	1.57	6.20	10.60	4.50	1.35	0.37	0.38	0.30	2.76

River System : Rayong
 Catchment Area : 218 km²
 No. of Zone : 10

Note : Estimated from Ban Pak Phraek Gauge.

Table 34 MONTHLY RUN-OFF AT NONG PLA LAI DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	1.92	5.14	8.66	4.99	3.62	5.38	12.20	5.53	1.75	1.48	0.74	0.71	4.34
1969	0.50	2.47	2.47	1.61	2.90	11.60	15.60	10.70	3.01	1.52	1.62	0.95	4.58
1970	3.02	7.41	8.77	5.69	3.45	3.54	7.95	3.00	5.82	2.14	1.48	1.93	4.52
1971	2.00	4.07	2.89	1.21	3.74	7.89	10.80	4.00	1.75	1.01	2.37	1.75	3.62
1972	7.59	2.06	3.09	1.21	0.40	9.77	14.00	10.10	4.18	1.48	1.33	1.71	4.74
1973	0.81	4.76	5.81	5.47	5.69	9.45	13.40	6.78	2.62	1.28	1.00	1.25	4.86
1974	5.29	4.93	2.04	1.42	2.77	8.24	19.30	10.60	3.49	2.66	2.22	1.63	5.38
1975	1.55	3.64	2.14	2.06	2.28	11.10	14.50	8.48	3.36	1.56	1.59	1.61	4.49
1976	2.29	4.91	2.36	0.93	3.67	14.90	10.40	10.70	3.22	1.52	1.19	0.59	4.72
1977	1.03	2.69	2.09	2.42	1.70	1.25	5.24	2.22	0.89	0.88	2.25	0.71	1.95
1978	2.13	8.65	5.73	7.12	3.49	7.23	9.49	3.22	1.33	0.93	0.67	0.36	4.20
1979	0.85	2.65	3.06	0.84	0.62	3.59	3.46	0.78	0.51	0.26	0.75	0.79	1.51
1980	0.66	0.94	5.93	3.14	3.32	3.16	13.20	5.48	2.09	0.89	1.14	1.31	3.44
1981	3.38	8.55	4.19	3.24	3.30	8.14	9.76	8.50	4.45	1.57	1.21	1.40	4.81
Average	2.36	4.49	4.23	2.95	2.93	7.52	11.40	6.44	2.75	1.37	1.40	1.19	4.083

River System : Rayong

Catchment Area : 408 km²

No. of Zone : 10

Note : Estimated from Ban Nong Mapring Gauge.

Table 35 MONTHLY RUN-OFF AT KHLONG THAP MA DAMSITE

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	1.13	4.08	4.91	2.77	1.72	1.88	4.90	3.00	0.87	0.84	0.36	0.38	2.25
1969	0.15	0.77	1.32	0.86	1.07	3.48	4.49	3.89	1.11	0.56	1.17	0.36	1.60
1970	0.92	4.42	3.22	1.28	0.96	1.31	3.70	1.13	5.85	1.43	0.69	0.69	2.15
1971	1.03	1.27	0.84	0.28	0.58	2.39	4.86	2.35	0.82	0.41	0.54	0.34	1.31
1972	2.94	0.54	0.49	0.14	0.04	7.61	9.95	4.43	1.59	0.56	0.59	0.75	2.47
1973	0.31	1.81	2.21	2.08	2.16	3.59	5.09	2.57	0.99	0.49	0.38	0.48	1.85
1974	2.01	1.87	0.78	0.54	1.05	3.13	7.32	4.03	1.32	1.01	0.84	0.62	2.05
1975	0.64	1.68	1.99	0.69	0.84	1.52	8.40	4.51	1.90	0.50	0.54	0.48	1.98
1976	0.87	1.86	0.36	0.16	3.28	2.76	4.44	4.91	1.36	0.58	0.45	0.22	1.78
1977	0.76	1.46	0.56	1.25	0.99	0.66	6.24	1.58	0.40	0.33	0.53	0.27	1.26
1978	0.81	2.87	1.21	1.93	1.24	2.26	4.05	1.98	0.50	0.35	0.25	0.14	1.47
1979	0.18	0.53	1.12	0.20	0.30	2.04	1.24	0.37	0.34	0.10	0.61	0.22	0.60
1980	0.25	0.35	1.85	0.68	0.87	0.94	6.96	3.38	0.90	0.21	0.92	0.77	1.51
1981	1.41	4.05	1.72	1.23	1.38	2.71	4.43	6.44	2.17	0.65	0.35	0.53	2.26
Average	0.96	1.97	1.61	1.00	1.18	2.59	5.43	3.18	1.44	0.58	0.59	0.45	1.75

River System : Rayong

Catchment Area : 158 km²

No. of Zone : 10

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 36 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 1

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.28	0.83	0.88	0.35	6.71	5.45	6.99	0.26	0.02	0.01	0.01	0.02	1.82
1969	0.02	0.08	0.08	0.07	2.36	20.28	6.25	0.58	0.01	0.01	0.01	0.05	2.48
1970	0.48	0.97	7.55	6.40	5.15	7.66	4.64	0.28	0.08	0.00	0.00	0.01	2.77
1971	0.02	0.19	1.85	0.53	7.62	19.36	14.89	2.72	0.11	0.01	0.03	0.00	3.95
1972	0.39	0.09	8.02	1.57	0.47	21.49	24.00	2.05	0.65	0.09	0.02	0.05	4.91
1973	0.04	0.53	1.30	5.97	6.61	22.50	9.53	0.92	0.15	0.15	0.27	0.41	4.03
1974	1.22	1.92	1.24	2.45	6.95	12.97	59.36	10.81	1.09	0.45	0.86	0.29	8.30
1975	0.32	1.86	1.04	6.80	3.16	20.79	24.49	3.78	0.46	0.26	0.59	0.47	5.34
1976	0.84	1.50	2.02	1.59	6.74	16.73	14.29	9.93	0.47	0.25	0.22	0.25	4.57
1977	0.21	0.91	1.10	3.02	4.14	4.08	6.30	0.79	0.24	0.17	1.57	0.54	1.92
1978	2.46	11.39	4.55	9.34	4.68	26.87	10.99	1.13	0.32	0.23	0.20	0.17	6.03
1979	0.73	2.64	1.20	0.46	0.77	1.65	4.10	0.19	0.16	0.12	0.05	0.51	1.04
1980	0.38	0.22	8.50	3.08	13.20	10.88	6.75	1.48	0.22	0.19	0.15	0.20	3.77
1981	9.76	3.83	1.05	1.75	2.51	23.26	9.23	4.18	0.49	0.12	0.09	0.05	4.70
Average	1.23	1.92	2.88	3.10	5.08	15.28	14.41	2.79	0.32	0.15	0.29	0.22	3.98

Balance Point : Khlong Luang Potential damsite

Catchment Area : 526 km²

Note : Estimated from Ban Mai Stream Gauge.

Table 37 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE I-1

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.37	1.32	1.59	0.90	0.56	0.61	1.59	0.97	0.28	0.27	0.11	0.12	0.73
1969	0.05	0.25	0.43	0.28	0.35	1.13	1.46	1.26	0.36	0.18	0.38	0.12	0.52
1970	0.30	1.43	1.04	0.42	0.31	0.43	1.20	0.37	1.90	0.46	0.23	0.22	0.69
1971	0.33	0.41	0.27	0.09	0.19	0.78	1.58	0.76	0.27	0.13	0.18	0.11	0.42
1972	0.95	0.17	0.16	0.04	0.01	2.47	3.23	1.43	0.51	0.18	0.19	0.24	0.80
1973	0.10	0.59	0.72	0.67	0.70	1.16	1.65	0.83	0.32	0.16	0.12	0.16	0.60
1974	0.65	0.61	0.25	0.17	0.34	1.01	2.37	1.31	0.43	0.33	0.27	0.20	0.66
1975	0.21	0.54	0.64	0.22	0.27	0.49	2.72	1.46	0.62	0.16	0.18	0.16	0.64
1976	0.28	0.60	0.12	0.05	1.06	0.89	1.44	1.59	0.44	0.19	0.15	0.07	0.57
1977	0.25	0.47	0.18	0.41	0.32	0.22	2.02	0.51	0.13	0.11	0.17	0.09	0.41
1978	0.26	0.93	0.39	0.63	0.40	0.73	1.31	0.64	0.16	0.11	0.08	0.04	0.48
1979	0.06	0.17	0.36	0.07	0.10	0.66	0.40	0.12	0.11	0.03	0.20	0.07	0.20
1980	0.08	0.11	0.60	0.22	0.28	0.30	2.26	1.10	0.29	0.07	0.30	0.25	0.49
1981	0.46	1.31	0.56	0.40	0.40	0.88	1.43	2.09	0.70	0.21	0.11	0.17	0.73
Average	0.31	0.64	0.52	0.33	0.33	0.84	1.76	1.03	0.47	0.19	0.19	0.14	0.57

Balance Point : Ban Bung dam

Catchment Area : 51.2 km²

Note : Estimated from Ban Mae Nam Khu Gauge.

Table 38 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 2

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.22	0.78	0.94	0.53	0.33	0.36	0.93	0.57	0.17	0.16	0.07	0.07	0.43
1969	0.03	0.15	0.25	0.16	0.20	0.66	0.86	0.74	0.21	0.11	0.22	0.07	0.31
1970	0.18	0.84	0.61	0.24	0.18	0.25	0.70	0.22	1.11	0.27	0.13	0.13	0.41
1971	0.20	0.23	0.16	0.05	0.11	0.46	0.93	0.45	0.16	0.08	0.10	0.07	0.25
1972	0.56	0.10	0.09	0.03	0.01	1.45	1.90	0.84	0.30	0.11	0.11	0.14	0.47
1973	0.06	0.34	0.42	0.40	0.41	0.64	0.97	0.49	0.19	0.09	0.07	0.09	0.35
1974	0.38	0.36	0.15	0.10	0.20	0.60	1.40	0.77	0.25	0.19	0.16	0.12	0.39
1975	0.12	0.32	0.38	0.13	0.16	0.27	1.60	0.86	0.36	0.10	0.10	0.09	0.38
1976	0.17	0.36	0.07	0.03	0.63	0.53	0.85	0.94	0.26	0.11	0.09	0.04	0.34
1977	0.15	0.28	0.11	0.24	0.19	0.13	1.19	0.30	0.08	0.06	0.10	0.05	0.24
1978	0.15	0.55	0.23	0.37	0.24	0.43	0.77	0.38	0.10	0.07	0.05	0.03	0.28
1979	0.04	0.10	0.21	0.04	0.06	0.39	0.24	0.07	0.06	0.02	0.12	0.04	0.12
1980	0.05	0.07	0.35	0.13	0.17	0.18	1.33	0.64	0.17	0.04	0.18	0.15	0.29
1981	0.27	0.77	0.33	0.23	0.26	0.52	0.84	1.23	0.41	0.12	0.07	0.10	0.43
Average	0.18	0.38	0.31	0.19	0.22	0.49	1.04	0.61	0.27	0.11	0.11	0.09	0.33

Balance Point : Estuary of the Khlong Yai Cheng river

Catchment Area : 30.1 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge

Table 39 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 3

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.88	3.18	3.83	2.16	1.34	1.46	3.82	2.34	0.68	0.65	0.28	0.30	1.74
1969	0.12	0.60	1.03	0.67	0.83	2.71	3.50	3.03	0.87	0.44	0.91	0.28	1.25
1970	0.71	3.44	2.51	1.00	0.75	1.02	2.88	0.88	4.55	1.11	0.54	0.54	1.66
1971	0.80	0.99	0.65	0.22	0.45	1.86	3.78	1.83	0.64	0.32	0.42	0.42	1.02
1972	2.29	0.42	0.39	0.11	0.03	5.93	7.75	3.45	1.23	0.44	0.46	0.58	1.92
1973	0.24	1.41	1.72	1.62	1.68	2.79	3.96	2.00	0.77	0.38	0.30	0.37	1.44
1974	1.56	1.46	0.60	0.42	0.82	2.44	5.70	3.14	1.03	0.79	0.66	0.48	1.59
1975	0.50	1.31	1.55	0.54	0.66	1.18	6.54	3.51	1.48	0.39	0.42	0.37	1.54
1976	0.68	1.45	0.28	0.13	2.55	2.15	3.46	3.83	1.06	0.45	0.35	0.17	1.38
1977	0.59	1.14	0.44	0.98	0.77	0.52	4.86	1.23	0.31	0.26	0.41	0.21	0.98
1978	0.63	2.24	0.94	1.51	0.97	1.76	3.15	1.54	0.39	0.28	0.19	0.11	1.14
1979	0.14	0.41	0.88	0.16	0.24	1.59	0.97	0.29	0.26	0.08	0.48	0.17	0.47
1980	0.19	0.28	1.44	0.53	0.68	0.73	5.42	2.63	0.70	0.17	0.72	0.60	1.18
1981	1.10	3.15	1.34	0.96	1.08	2.11	3.45	5.01	1.69	0.50	0.28	0.41	1.76
Average	0.74	1.53	1.26	1.26	0.92	2.02	4.23	2.48	1.12	0.45	0.46	0.35	1.36

Balance Point : Bang Phra dam

Catchment Area : 123 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge.

Table 40 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 4

Water Year	(Unit; m ³ /s)												
	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	2.15	7.78	9.36	5.28	3.27	3.58	9.34	5.72	1.65	1.59	0.68	0.72	4.26
1969	0.29	1.46	2.51	1.64	2.04	6.63	8.55	7.42	2.12	1.07	2.22	0.68	3.05
1970	1.75	8.42	6.13	2.44	1.83	2.50	7.04	2.16	11.14	2.72	1.32	1.81	4.07
1971	1.95	2.31	1.59	0.53	1.10	4.56	9.26	4.47	1.56	0.76	1.03	0.65	2.49
1972	5.60	1.02	0.94	0.26	0.08	14.50	18.96	8.43	3.02	1.07	1.12	1.43	4.71
1973	0.59	3.44	4.21	3.96	4.12	6.37	9.69	4.90	1.89	0.93	0.72	0.91	3.52
1974	3.83	3.57	1.48	1.02	2.01	5.96	13.95	7.67	2.52	1.92	1.60	1.18	3.89
1975	1.21	3.20	3.79	1.31	1.60	2.70	16.01	8.59	3.62	0.96	1.03	0.83	3.77
1976	1.65	3.55	0.68	0.31	6.25	5.25	8.46	9.36	2.60	1.11	0.86	0.42	3.37
1977	1.45	2.78	1.07	2.39	1.88	1.26	11.90	3.01	0.76	0.63	1.00	0.52	2.39
1978	1.54	5.47	2.30	3.68	2.37	4.30	7.71	3.78	0.96	0.67	0.48	0.26	2.79
1979	0.35	1.01	2.14	0.38	0.58	3.89	2.37	0.70	0.64	0.20	1.17	0.41	1.16
1980	0.48	0.67	3.52	1.30	1.67	1.79	13.26	6.44	1.72	0.40	1.76	1.46	2.88
1981	2.69	7.71	3.28	2.34	2.64	5.17	8.43	12.27	4.14	1.23	0.67	1.01	4.30
Average	1.82	3.75	3.07	1.91	2.24	4.93	10.35	6.06	2.74	1.10	1.12	0.85	3.33

Balance Point : Estuary of the Khlong Bang Lamung river

Catchment Area : 301 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge

Table 41 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 5

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.27	0.98	1.18	0.66	0.41	0.45	1.18	0.72	0.21	0.20	0.09	0.09	0.54
1969	0.04	0.18	0.32	0.21	0.26	0.83	1.08	0.93	0.27	0.13	0.28	0.09	0.38
1970	0.22	1.06	0.77	0.31	0.23	0.32	0.89	0.27	1.40	0.34	0.17	0.17	0.52
1971	0.25	0.30	0.20	0.07	0.14	0.57	1.17	0.56	0.20	0.10	0.13	0.08	0.31
1972	0.70	0.13	0.12	0.03	0.01	1.83	2.39	1.06	0.38	0.13	0.14	0.18	0.59
1973	0.07	0.43	0.53	0.50	0.52	0.86	1.22	0.62	0.24	0.12	0.09	0.11	0.44
1974	0.48	0.45	0.19	0.13	0.25	0.75	1.76	0.97	0.32	0.24	0.20	0.15	0.49
1975	0.15	0.40	0.48	0.17	0.20	0.36	2.02	1.08	0.46	0.12	0.13	0.11	0.47
1976	0.21	0.45	0.09	0.04	0.79	0.66	1.07	1.18	0.33	0.14	0.11	0.05	0.43
1977	0.18	0.35	0.13	0.30	0.24	0.16	1.50	0.38	0.10	0.08	0.13	0.07	0.30
1978	0.19	0.69	0.29	0.46	0.30	0.54	0.97	0.48	0.12	0.08	0.06	0.03	0.35
1979	0.04	0.13	0.27	0.05	0.07	0.49	0.30	0.09	0.08	0.02	0.15	0.05	0.14
1980	0.06	0.08	0.44	0.16	0.21	0.23	1.67	0.81	0.22	0.05	0.22	0.18	0.36
1981	0.34	0.97	0.41	0.29	0.33	0.65	1.06	1.54	0.52	0.15	0.08	0.13	0.54
Average	0.23	0.47	0.39	0.24	0.28	0.62	1.30	0.76	0.35	0.14	0.14	0.11	0.42

Balance Point : Map Prachan dam

Catchment Area : 37.9 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge.

Table 42 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 6

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.85	0.08	3.70	2.09	1.29	1.21	3.69	2.26	0.65	0.63	0.27	0.29	1.68
1969	0.11	0.58	0.99	0.65	0.81	2.62	3.38	2.93	0.84	0.42	0.88	0.27	1.21
1970	0.69	3.33	2.42	0.97	0.72	0.99	2.78	0.85	4.40	1.08	0.52	0.52	1.61
1971	0.77	0.95	0.63	0.21	0.43	1.80	3.66	1.77	0.62	0.31	0.41	0.26	0.99
1972	2.21	0.40	0.37	0.10	0.03	5.73	7.50	3.33	1.19	0.42	0.44	0.56	1.86
1973	2.23	1.36	1.66	1.57	1.63	8.70	3.83	1.94	0.75	0.37	0.29	0.36	1.39
1974	1.51	1.41	0.58	0.40	0.79	2.36	5.52	3.03	1.00	0.76	0.63	0.47	1.54
1975	0.48	1.26	1.50	0.52	0.63	1.15	6.33	3.39	1.43	0.38	0.41	0.36	1.49
1976	0.65	1.40	0.27	0.12	2.47	2.08	3.35	3.70	1.03	0.44	0.34	0.17	1.33
1977	0.57	1.10	0.42	0.93	0.74	0.50	4.70	1.19	0.30	0.25	0.40	0.20	0.94
1978	0.61	2.16	0.91	1.45	0.94	1.70	3.03	1.49	0.38	0.27	0.19	0.10	1.10
1979	0.14	0.40	0.85	0.15	0.23	1.54	0.94	0.28	0.25	0.08	0.46	0.16	0.46
1980	0.19	0.27	1.39	0.52	0.66	0.71	5.24	2.55	0.68	0.16	0.70	0.58	1.14
1981	1.06	3.05	1.30	0.92	1.04	2.04	3.33	4.85	1.64	0.49	0.27	0.40	1.70
Average	0.72	1.48	1.21	0.76	0.89	1.95	4.09	2.40	1.08	0.43	0.44	0.34	1.32

Balance Point : Estuary of the Huai Yai river

Catchment Area : 119 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge

Table 43 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 8

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.23	0.82	0.99	0.56	0.35	0.38	0.99	0.60	0.17	0.17	0.07	0.08	0.45
1969	0.03	0.15	0.27	0.17	0.22	0.70	0.90	0.78	0.22	0.11	0.23	0.07	0.32
1970	0.18	0.89	0.65	0.26	0.19	0.26	0.74	0.23	1.18	0.29	0.14	0.14	0.43
1971	0.21	0.25	0.17	0.06	0.12	0.48	0.98	0.47	0.17	0.08	0.11	0.07	0.26
1972	0.59	0.11	0.10	0.03	0.01	1.53	2.00	0.89	0.32	0.11	0.12	0.15	0.50
1973	0.06	0.36	0.44	0.42	0.43	0.72	1.02	0.52	0.20	0.10	0.08	0.10	0.37
1974	0.40	0.38	0.16	0.11	0.21	0.63	1.47	0.81	0.27	0.20	0.17	0.12	0.41
1975	0.13	0.34	0.40	0.14	0.17	0.31	1.69	0.91	0.38	0.10	0.11	0.10	0.40
1976	0.17	0.37	0.07	0.03	0.66	0.56	0.89	0.99	0.27	0.12	0.09	0.04	0.36
1977	0.15	0.29	0.11	0.25	0.20	0.13	1.26	0.32	0.08	0.07	0.11	0.05	0.25
1978	0.16	0.58	0.24	0.39	0.25	0.45	0.81	0.40	0.10	0.07	0.05	0.03	0.30
1979	0.04	0.11	0.23	0.04	0.06	0.41	0.25	0.07	0.07	0.02	0.12	0.04	0.12
1980	0.05	0.07	0.37	0.14	0.18	0.19	1.40	0.68	0.18	0.04	0.19	0.15	0.30
1981	0.05	0.81	0.35	0.25	0.28	0.55	0.89	1.30	0.44	0.13	0.07	0.11	0.45
Average	0.19	0.40	0.32	0.20	0.24	0.52	1.09	0.64	0.29	0.12	0.12	0.09	0.35

Balance Point : Estuary of the Khlong Phayun river

Catchment Area : 31.8 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge

Table 44 MONTHLY RUN-OFF AT BALANCE POINT OF ZONE 9

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	0.86	3.10	3.73	2.10	1.30	1.43	3.72	2.28	0.66	0.64	0.27	0.29	1.70
1969	0.12	0.58	1.00	0.66	0.81	2.64	3.41	2.96	0.85	0.42	0.89	0.27	1.22
1970	0.70	3.36	2.45	0.97	0.73	1.00	2.81	0.86	4.44	1.08	0.53	0.52	1.62
1971	0.78	0.96	0.64	0.21	0.44	1.82	3.69	1.78	0.62	0.31	0.41	0.26	0.99
1972	2.23	0.41	0.38	0.10	0.03	5.78	7.56	3.36	1.20	0.42	0.45	0.57	1.88
1973	0.24	1.37	1.68	1.58	1.64	2.73	3.86	1.95	0.75	0.37	0.29	0.36	1.40
1974	1.53	1.42	0.59	0.41	0.80	2.38	5.56	3.06	1.01	0.77	0.64	0.47	1.55
1975	0.48	1.27	1.51	0.52	0.64	1.15	6.38	3.42	1.44	0.38	0.41	0.36	1.50
1976	0.66	1.41	0.27	0.12	2.49	2.09	3.37	3.73	1.04	0.44	0.34	0.17	1.34
1977	0.58	1.11	0.42	0.95	0.75	0.50	4.74	1.20	0.30	0.25	0.40	0.21	0.95
1978	0.61	2.18	0.92	1.47	0.94	1.72	3.07	1.51	0.38	0.27	0.19	0.10	1.11
1979	0.14	0.40	0.85	0.15	0.23	1.55	0.94	0.28	0.26	0.08	0.47	0.16	0.46
1980	0.19	0.27	1.40	0.52	0.66	0.71	5.29	2.57	0.68	0.16	0.70	0.58	1.15
1981	1.07	3.07	1.31	0.93	1.05	2.06	3.36	4.89	1.65	0.49	0.27	0.40	1.72
Average	0.73	1.50	1.22	0.76	0.89	1.97	4.13	2.42	1.09	0.44	0.45	0.34	1.33

Balance Point : Estuary of the Khlong Huai Yai river

Catchment Area : 120 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge

Table 45 MONTHLY RUN-OFF AT BALANCE POINT OF SUB-ZONE 10

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	4.01	21.99	37.24	22.03	13.53	19.16	43.22	15.92	3.02	2.57	0.85	0.83	15.45
1969	0.26	2.06	9.51	7.21	7.72	48.52	56.94	32.50	5.92	2.40	3.73	1.09	14.83
1970	5.55	23.32	25.76	14.27	15.21	13.49	30.14	5.56	26.70	6.56	2.35	4.11	14.54
1971	5.04	11.54	8.72	2.68	7.96	23.21	41.53	15.97	4.39	1.77	1.75	1.72	10.54
1972	26.53	2.50	5.41	0.79	0.00	49.56	61.49	30.29	11.77	2.41	0.90	1.56	16.10
1973	0.28	15.51	21.91	17.90	14.53	53.04	60.49	24.85	9.51	2.33	1.35	1.28	18.65
1974	15.73	21.39	6.11	1.75	5.16	28.17	105.12	44.83	10.46	7.09	2.46	0.84	20.88
1975	1.96	13.91	10.76	6.42	5.60	34.66	69.08	34.16	11.36	1.76	1.77	0.12	15.99
1976	3.04	28.42	6.51	1.41	24.49	66.54	61.05	43.68	6.76	0.48	0.61	0.00	20.30
1977	0.28	5.08	3.50	9.02	2.89	0.68	28.13	4.94	1.38	0.34	3.78	0.43	5.08
1978	0.83	33.99	22.51	24.09	9.40	30.56	32.98	5.37	1.22	0.38	0.00	0.00	13.54
1979	0.22	2.43	2.53	1.94	0.00	10.03	14.28	0.42	0.49	0.00	0.83	0.57	2.82
1980	0.08	0.32	16.38	8.11	16.81	10.29	52.63	16.92	3.26	0.30	1.17	0.55	10.64
1981	8.08	40.23	14.58	9.43	8.81	33.95	33.43	39.47	13.45	1.95	0.12	0.26	17.04
Average	5.14	15.91	13.67	9.08	9.44	30.13	49.32	22.49	7.84	2.17	1.55	0.95	14.02

Balance Point : Ban Khai weir
 Catchment Area : 1,143 km²

Table 46 MONTHLY RUN-OFF AT BALANCE POINT OF SUB-ZONE 10-1

(Unit: m³/s)

Water Year	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Annual
1968	1.13	4.08	4.91	2.77	1.72	1.88	4.90	3.00	0.87	0.84	0.36	0.38	2.25
1969	0.15	0.77	1.32	0.86	1.07	3.48	4.49	3.89	1.11	0.56	1.17	0.36	1.60
1970	0.92	4.42	3.22	1.28	0.96	1.31	3.70	1.13	5.85	1.43	0.69	0.69	2.15
1971	1.03	1.27	0.84	0.28	0.58	2.39	4.86	2.35	0.82	0.41	0.54	0.34	1.31
1972	2.94	0.54	0.49	0.14	0.04	7.61	9.95	4.43	1.59	0.56	0.59	0.75	2.47
1973	0.31	1.81	2.21	2.08	2.16	3.59	5.09	2.57	0.99	0.49	0.38	0.48	1.85
1974	2.01	1.87	0.78	0.54	1.05	3.13	7.32	4.03	1.32	1.01	0.84	0.62	2.05
1975	0.64	1.68	1.99	0.69	0.84	1.52	8.40	4.51	1.90	0.50	0.54	0.48	1.98
1976	0.87	1.86	0.36	0.16	3.28	2.76	4.44	4.91	1.36	0.58	0.45	0.22	1.78
1977	0.76	1.46	0.56	1.25	0.99	0.66	6.24	1.58	0.40	0.33	0.53	0.27	1.26
1978	0.81	2.87	1.21	1.93	1.24	2.26	4.05	1.98	0.50	0.35	0.25	0.14	1.47
1979	0.18	0.53	1.12	0.20	0.30	2.04	1.24	0.37	0.34	0.10	0.61	0.22	0.60
1980	0.25	0.35	1.85	0.68	0.87	0.94	6.96	3.38	0.90	0.21	0.92	0.77	1.51
1981	1.41	4.05	1.72	1.23	1.38	2.71	4.43	6.44	2.17	0.65	0.35	0.53	2.26
Average	0.96	1.97	1.61	1.00	1.18	2.59	5.43	3.18	1.44	0.58	0.59	0.45	1.75

Balance Point : Khlong Thap Ma dam

Catchment Area : 158 km²

Note : Estimated from Ban Mae Nam Khu Stream Gauge.

Table 47 ANNUAL MAXIMUM RAINFALL (1/3)

(Unit : mm)

Ban Bung (Code No.09062)Ban Mai (Code No.09171)

Year	1-day	2-day	3-day	4-day	1-day	2-day	3-day	4-day
1952	97.6	135.8	164.1	164.1				
1953	64.0	98.0	116.5	130.5				
1954	76.5	111.0	113.4	134.6				
1955	60.0	84.5	84.5	87.0				
1956	99.8	110.9	110.9	110.9				
1957	116.5	181.5	181.5	197.8				
1958	84.5	84.5	136.8	136.8				
1959	73.5	114.2	132.0	132.0				
1960	86.2	138.5	172.0	182.4				
1961	72.5	87.1	87.1	105.9				
1962	63.5	84.7	84.7	98.4				
1963	103.8	120.8	175.2	175.2				
1964	95.2	123.6	123.6	123.6				
1965	69.7	92.2	136.7	155.1	41.7	63.0	73.0	86.5
1966	75.9	101.7	125.8	125.8	57.5	61.7	67.9	67.9
1967	90.7	125.5	127.8	127.8	130.3	148.7	161.8	168.3
1968	67.4	129.5	165.3	211.6	65.6	92.2	131.0	144.0
1969	71.8	118.2	130.6	141.8	57.5	78.9	92.3	108.5
1970	72.2	87.6	94.7	97.2	66.7	72.4	81.4	81.7
1971	54.1	71.9	91.1	100.7	88.8	140.0	148.8	156.8
1972	78.0	122.0	153.5	158.8	58.9	89.5	128.6	146.4
1973	82.3	83.8	99.4	123.4	74.7	81.2	102.0	103.5
1974	87.0	122.4	149.2	167.4	97.0	165.3	202.8	202.8
1975	51.7	53.4	56.7	81.3	66.8	85.6	107.7	110.1
1976	48.6	80.4	90.4	90.4	76.7	79.6	82.7	93.4
1977	69.0	69.0	74.1	91.5	52.4	61.1	63.7	63.7
1978	62.0	72.5	83.0	93.5	58.7	78.4	107.7	148.9
1979	40.0	62.1	72.2	84.6	75.0	117.1	123.9	130.7
1980	68.4	71.6	80.3	105.6	77.9	83.2	83.2	99.2
1981	67.5	69.6	76.9	104.3	54.8	73.7	91.5	118.5

Table 47 ANNUAL MAXIMUM RAINFALL (2/3)

(Unit : mm)

Year	Phan Thong (Code No.09032)				Phanot Nikhom (Code No.09022)			
	1-day	2-day	3-day	4-day	1-day	2-day	3-day	4-day
1952	72.5	94.1	97.7	117.2				
1953	100.0	140.0	210.1	228.2				
1954	120.0	137.1	148.9	153.9	142.6	150.6	154.3	163.6
1955	60.0	70.0	70.0	100.0	79.1	96.2	122.3	131.0
1956					74.5	74.5	90.6	90.6
1957					75.5	92.4	102.5	102.5
1958	80.2	115.8	134.1	134.1	99.1	170.6	177.8	177.8
1959	106.2	136.5	136.5	136.5	52.5	87.5	87.5	118.8
1960	76.4	84.2	106.9	125.3	79.2	154.5	157.8	234.1
1961	90.8	107.1	171.4	171.4	76.6	90.7	131.1	131.1
1962	78.3	108.3	132.0	132.0	85.9	95.0	116.1	120.1
1963	90.1	107.7	153.7	184.2	89.2	155.2	191.5	217.4
1964	201.4	201.4	249.1	249.1	82.7	146.4	146.4	147.9
1965	89.5	89.5	89.5	89.5	45.0	45.0	51.7	52.7
1966	89.2	93.7	93.7	93.7	95.3	95.3	95.3	95.3
1967	90.2	110.7	110.7	110.7	98.0	98.0	124.0	124.0
1968	53.2	87.3	119.0	130.7	98.6	124.4	124.4	155.9
1969	82.5	90.3	100.6	101.4	28.5	55.2	55.2	55.2
1970	59.3	78.7	94.8	94.8				
1971	101.3	101.3	101.3	162.4				
1972	71.2	85.3	93.5	120.9	70.0	117.6	148.6	155.8
1973	102.9	108.3	108.3	110.6	64.7	86.5	96.5	98.8
1974	84.8	111.0	130.2	130.2	139.1	149.9	187.1	222.9
1975	55.4	69.0	94.7	108.1	75.6	102.5	103.8	103.8
1976	136.1	136.1	136.1	136.1	100.1	100.1	107.9	107.9
1977	20.4	20.4	34.4	34.4	101.8	126.9	131.5	134.6
1978	46.4	59.4	74.1	74.1	65.8	74.0	78.4	95.9
1979	45.6	45.6	68.9	69.7	51.2	72.6	89.0	99.0
1980	70.9	114.4	114.4	114.4	56.4	91.7	93.1	104.4
1981	48.4	53.6	53.6	53.6	131.2	155.4	157.3	174.7

Table 47 ANNUAL MAXIMUM RAINFALL (3/3)

(Unit : mm)

Year	<u>Ban Khai (Code No.48022)</u>				<u>A.M., Rayong (Code No.48012)</u>			
	1-day	2-day	3-day	4-day	1-day	2-day	3-day	4-day
1952					210.5	226.6	226.6	226.6
1953					98.1	120.8	120.8	149.2
1954					70.6	117.1	142.5	164.4
1955					91.8	115.6	118.8	126.4
1956					115.7	142.3	145.7	145.7
1957	108.2	144.4	144.4	191.7	103.6	136.0	168.6	220.8
1958	103.4	103.4	186.8	186.8	93.2	131.0	162.2	230.3
1959	127.2	161.5	161.5	165.7	84.4	117.8	142.4	148.2
1960	172.2	172.2	240.8	240.8	81.8	135.7	172.5	220.7
1961	72.4	72.4	94.4	111.2	66.6	112.6	116.1	118.8
1962	77.7	129.2	160.0	167.2	72.4	132.6	155.7	165.8
1963	115.2	151.5	231.9	269.3	113.2	164.0	208.1	213.9
1964	96.4	96.4	96.4	106.8	57.0	101.2	101.2	144.2
1965	56.2	88.8	114.0	121.1	78.8	125.3	125.3	129.1
1966	123.3	125.6	159.7	159.7	153.2	194.5	194.5	194.7
1967	84.2	137.8	137.8	143.6	116.3	132.3	170.5	170.5
1968	115.8	202.8	208.1	208.1	126.8	167.9	170.7	240.7
1969	93.4	125.7	174.0	193.6	156.0	258.0	310.2	310.2
1970	87.2	136.8	145.0	148.6	130.0	192.3	200.5	232.7
1971	65.9	82.7	145.9	160.0	66.1	94.3	117.8	132.5
1972	120.3	153.5	182.1	195.3	119.2	119.2	127.7	127.7
1973	82.3	112.4	186.6	190.2	52.7	83.0	94.1	94.1
1974	98.0	154.3	172.8	191.9	100.4	140.6	159.1	174.8
1975	60.2	71.6	117.6	125.8	126.3	196.8	233.0	250.6
1976	77.3	124.4	155.7	165.9	72.3	96.5	113.0	114.8
1977	96.3	101.2	118.8	126.1	107.6	143.6	143.6	143.6
1978	130.2	154.5	154.5	156.9	80.0	80.0	80.0	86.1
1979	112.5	112.5	129.0	129.0	112.0	112.0	120.7	123.8
1980	82.2	118.3	118.3	126.8	121.8	144.3	148.6	166.6
1981	68.4	68.4	83.9	107.1	177.8	177.8	182.8	185.8

Table 48 PROBABLE RAINFALL (1/2)

(Unit : mm)

Return Period (year)	Phan Thong	Phanat Nikhom	Ban Bung	Ban Mai	Ban Khai	A.M Rayong
<u>1-day</u>						
2	77.9	79.0	72.4	67.7	93.1	99.8
5	112.1	106.7	89.6	89.6	120.1	135.9
10	134.7	125.1	101.0	104.0	138.0	159.9
20	156.4	142.7	111.9	117.9	155.1	182.8
30	168.9	152.8	118.2	125.8	165.0	196.0
50	184.5	165.5	126.1	135.8	177.3	212.5
100	205.6	182.6	136.7	149.2	193.9	234.8
200	226.6	199.6	147.2	162.6	210.5	257.0
500	254.2	222.1	161.2	180.3	232.3	286.3
<u>2-day</u>						
2	93.2	103.0	96.0	88.0	119.1	134.2
5	128.5	137.5	124.4	121.2	153.6	175.7
10	151.9	160.3	143.2	143.1	176.5	203.2
20	174.3	182.3	161.2	164.1	198.4	229.6
30	187.1	194.9	171.6	176.2	211.1	244.8
50	203.3	210.6	184.5	191.4	226.8	263.8
100	225.0	231.9	202.0	211.8	248.1	289.4
200	246.6	253.1	219.4	232.1	269.3	314.9
500	275.2	281.0	242.4	258.9	297.3	348.5

Table 48 PROBABLE RAINFALL (2/2)

Return Period (year)	(Unit : mm)					
	Phan Thong	Phanat Nikhom	Ban Bung	Ban Mai	Ban Khai	AM Rayong
<u>3-day</u>						
2	108.6	114.5	111.1	103.6	146.9	148.6
5	153.7	152.4	146.2	142.9	187.7	196.5
10	183.5	177.5	169.5	168.8	214.7	228.2
20	212.1	204.5	191.8	193.8	240.7	258.6
30	228.6	215.3	204.7	208.1	255.6	276.1
50	249.1	232.6	220.7	226.1	274.2	298.0
100	276.9	256.0	242.4	250.2	299.4	327.5
200	304.5	278.2	264.0	274.3	324.5	356.9
500	341.0	309.8	292.4	306.1	357.5	395.7
<u>4-day</u>						
2	116.9	124.5	122.7	114.1	157.5	163.9
5	163.8	171.8	158.0	154.1	199.5	216.5
10	194.9	203.1	181.4	180.6	227.3	251.4
20	224.6	233.1	203.9	206.0	254.0	284.8
30	241.8	250.4	216.8	220.6	269.4	304.1
50	263.2	272.0	232.9	238.9	288.5	328.1
100	292.1	301.2	254.7	263.5	314.4	360.5
200	320.9	330.2	276.3	288.1	340.2	392.8
500	358.9	368.5	305.0	320.4	374.2	435.5

Table 49 RELATION BETWEEN POINT AND BASIN RAINFALLS

(Unit : mm/day)

Year	Date	Basin Rainfall			Point Rainfall			Ratio		
		Khlong Luang	Nong Pla Lai	Rayong	Khlong Luang	Nong Pla Lai	Rayong	Khlong Luang	Nong Pla Lai	Rayong
1966	Sep. 19	47.01	36.00	28.18	110.5	71.6	71.6	0.425	0.503	0.394
1969	Sep. 22	38.21	3.37	14.22	98.6	4.8	32.9	0.388	0.806	0.432
1974	Oct. 7	67.67	50.63	53.72	127.3	61.2	61.2	0.532	0.827	0.877
1974	Oct. 19	65.23	44.83	34.66	139.1	73.4	73.4	0.469	0.611	0.472
1976	Sep. 5	71.06	67.93	50.82	99.4	87.3	87.3	0.715	0.778	0.582
1978	Sep. 20	25.74	28.62	35.37	64.2	52.3	53.6	0.401	0.547	0.660
1981	Sep. 21	41.88	29.08	38.68	74.1	55.6	69.9	0.565	0.523	0.553
							Average	0.499	0.574	0.549

Table 50. RELATIONSHIP BETWEEN RAINFALL AND
DURATION AT A.M. CHON BURI

Storm	Duration (hr)								(Unit : mm)
	0.5	1	2	3	6	12	24		
May 1964	-	-	34.5 (39.6)	50.0 (57.3)	77.8 (89.2)	83.3 (95.5)	87.2 (100.0)		
May 1966	26.5 (25.7)	30.2 (29.2)	47.0 (45.5)	49.5 (47.9)	51.3 (49.7)	96.0 (92.9)	103.3 (100.0)		
Sep. 1966	-	68.5 (62.0)	98.5 (89.1)	101.3 (91.7)	110.5 (100.0)	110.5 (100.0)	110.5 (100.0)		
Sep. 1966	29.0 (27.0)	50.0 (46.5)	86.2 (80.1)	89.2 (82.9)	92.5 (86.0)	102.9 (95.6)	107.6 (100.0)		
Aug. 1971	50.0 (38.2)	80.5 (61.5)	131.0 (100.0)	131.0 (100.0)	131.0 (100.0)	131.0 (100.0)	131.0 (100.0)		
Aug. 1973	28.5 (28.6)	45.0 (45.2)	56.0 (56.2)	62.7 (63.0)	90.2 (90.6)	99.0 (99.4)	99.6 (100.0)		
Average of %	26.7	49.0	68.4	73.8	85.9	97.2	100.0		

Note : figures in parenthesis indicate percent of 24-hour rainfall

Table 51 PROBABLE MAXIMUM PRECIPITATION

1. Observed Maximum Storm

Rain Gauge Station :	Sattahip	Date	Daily Rainfall (mm)
Recorded Period :	1952 to 1980	1970 Nov. 28	2.8
Maximum Storm :	1970 Nov. 30	29	3.0
		30	319.6
		Dec. 1	87.0
		2	50.9
		3	1.4

2. Moisture Adjustment and Transposition

Station/Damsite	Sattahip	Chon Buri	Dam Basin		
			Khlong Luang	Khlong Yai	Khlong Thap Ma
Elevation (m)	18	2	300	100	70
Max. Dew Point (°C)	23.5	22.2	22.0 ¹	23.0 ¹	23.5 ¹
Dew Point (°C)	21.3	-	-	-	-
Precipitable Water (mm)					
from sea level ²	58.4	-	62.2	68.6	71.1
below ground height	0.0	-	5.1	1.3	0.3
above ground height	58.4	-	57.1	67.3	70.8
Adjustment Factor	-	-	0.978	1.152	1.213

¹ : Estimated

² : 1,000 mb to 200 mb

3. Areal Rainfall of Khlong Luang Dam Basin (Adjustment factor, 0.978)

Date	Observed at Sattahip (mm)	Transposed Rainfall (mm)	Areal Rainfall (×0.64, mm)
Nov. 28	2.8	2.7	1.7
29	3.0	2.9	1.9
30	319.6	312.6	200.1
Dec. 1	87.0	85.1	54.5
2	50.9	49.8	31.9
3	1.4	1.4	0.9

4. Areal Rainfall of Khlong Yai Dam Basin (Adjustment factor, 1.152)

Date	Observed at Sattahip (mm)	Transposed Rainfall (mm)	Areal Rainfall (×0.70, mm)
Nov. 28	2.8	3.2	2.2
29	3.0	3.5	2.5
30	319.6	368.2	257.7
Dec. 1	87.0	100.2	70.1
2	50.9	58.6	41.0
3	1.4	1.6	1.1

5. Areal Rainfall of Khlong Thap Ma Dam Basin (Adjustment factor, 1.213)

Date	Observed at Sattahip (mm)	Transposed Rainfall (mm)	Areal Rainfall (×0.73, mm)
Nov. 28	2.8	3.4	2.5
29	3.0	3.6	2.6
30	319.6	387.7	283.0
Dec. 1	87.0	105.5	77.0
2	50.9	61.7	45.0
3	1.4	1.7	1.2

Table 52 EFFECTIVE RAINFALL RATIO

Gauge Station	Drainage Area (km ²)	Flood	Runoff (MCM)	Runoff (mm)	Rainfall Point	Rainfall (mm) Basin	Runoff Ratio	Average Ratio
Ban Mai	484	Sep 1969	15.47	32.0	108.5	69.4	0.46	0.55
		Oct 1971	12.40	25.6	94.5	60.5	0.42	
		Oct 1974	57.62	119.0	202.8	129.8	0.92	
		Sep 1978	10.60	21.9	86.2	55.2	0.40	
Ban Mae Nam Khu	291	Oct 1967	4.63	15.9	34.6	23.5	0.68	0.61
		Dec 1970	11.94	41.0	84.1	57.2	0.72	
		Oct 1972	6.50	22.3	76.2	51.8	0.43	
Ban Nong Mapring	416	Oct 1974	3.28	7.9	68.0	44.2	0.18	0.22
		May 1976	6.67	16.0	108.3	70.4	0.23	
		Sep 1976	5.04	12.1	72.0	46.8	0.26	
Ban Phak Preak	161	Oct 1979	1.20	7.5	12.0	8.8	0.85	0.62
		Oct 1980	3.04	18.9	98.1	71.6	0.26	
		Nov 1980	3.49	21.7	39.9	29.6	0.75	

Table 53 BASIN FACTOR OF THE KHLONG LUANG RIVER BASIN

Basin No.	Drainage Area (km ²)	Length of River Course (km)	Length of Lca (km)	Elevation (m)		Slope ($\times 10^{-3}$)	Lag Time (hr)	Remarks
				Hmax	Hmin			
L - 1	526	35.0	12.5	362	25.5	9.614	4.5	Khlong Luang damsite
L - 2	69	9.0	4.5	65	20	5.000	1.5	Ban Mai area
L - 3	64	19.5	10.0	525	15	26.154	2.5	Khlong Labo river
L - 4	51.2	10.0	4.5	281	70	21.100	1.0	Ban Bung dam
L - 5	467.8	31.0	17.0	204	19	5.968	4.0	Huai Yang river
L - 6	217	22.5	9.0	72	4	3.022	3.5	Panat Nikhom area
L - 7	279	26.0	11.0	443	5	16.846	3.0	Ban Bung area
L - 8	296	18.0	10.5	5	0	0.278	4.0	Phan Thong area

Table 54 BASIN FACTOR OF THE RAYONG RIVER BASIN

Basin No.	Drainage Area (km ²)	Length of River Course (km)	Length of Lca (km)	Elevation (m)		Slope ($\times 10^{-3}$)	Lag Time (hr)	Remarks
				Hmax	Hmin			
R - 1	408	42.0	25.0	542	26	12.286	5.5	Nong Pla Lai damsite
R - 2	291	42.0	16.0	306	35	6.452	6.0	Dok Krai dam
R - 3	51	15.0	6.0	95	15	5.333	2.0	Khlong Noi river
R - 4	218	22.0	7.5	179	34.5	6.021	3.0	Khlong Yai damsite
R - 5	106	16.5	7.0	189	15	10.545	2.5	Khlong Luai river
R - 6	171	13.0	7.5	695	7	52.923	1.5	Khlong Nam Ngu river
R - 7	158	23.0	11.0	140	10	5.652	3.5	Khlong Thap Ma damsite
R - 8	45	15.0	7.5	60	0	4.000	2.5	Map Kabok river
R - 9	264	20.5	10.0	286	0	13.951	2.5	Khlong Kha river

Table 55 LAG TIME OF CHANNEL

River	Channel	Lag time (hr)	Stretch	
			Upstream	Downstream
Khlong Luang	A	1.2	Khlong Luang damsite	confluence of K. Kabo river
	B	0.9	Khlong Kabo river	confluence of Huai Yang river
	C	1.1	Huai Yang river	road No. 315
	D	0.8	area extends to southernward of road No. 315	
	E	2.5	road No. 315	river mouth
Rayong	A	1.1	Nong Pla Lai damsite	confluence of K. Yai river
	B	1.1	Dok Krai damsite	confluence of Nong Pla Lai river
	C	1.8	Khlong Yai damsite	confluence of Nong Pla Lai river
	D	1.1	K. Yai river	Ban Khai weir
	E	0.4	Ban Khai weir	Khlong Yai Lam river
	F	1.4	K. Thap Ma damsite	confluence of Rayong river
	G	2.3	K. Yai Lam river	Rayong bridge

Table 56 PROBABLE FLOOD RUNOFF OF KHLONG LUANG RIVER
UNDER PRESENT CONDITION/1

Point No./ <u>2</u>	Location	Return period								PMF
		2-yr	5-yr	10-yr	30-yr	50-yr	100-yr	200-yr	500-yr	
1	Khlong Luang dams site	567	729	858	1,015	1,101	1,224	1,346	1,462	2,522
4	Upstream of confluence of Khlong Kabo river	176	210	238	273	292	319	347	381	-
7	Upstream of confluence of Huai Yang river	141	166	188	213	227	247	266	290	-
8	Ban Bung dams site	159	202	228	265	283	306	332	365	-
10	Huai Yang river	499	659	729	850	908	986	1,058	1,160	-
13	Panat Nikhom	202	250	289	344	361	389	426	452	-
18	River mouth	285	361	411	493	520	565	607	658	-

/1: With existing Ban Bung dam

/2: Refer to Fig. 23

Table 57 PROBABLE FLOOD RUNOFF OF RAYONG RIVER
WITH DOK KRAI DAM

(Unit: m³/s)

Point No./1	Location	Return Period									PMF
		2-yr	5-yr	10-yr	30-yr	50-yr	100-yr	200-yr	500-yr		
4	Khlong Dok Krai river	92	106	115	133	139	152	162	180	-	
2	Nong Pla Lai river	278	343	385	467	496	552	589	649	-	
6	Outflow of Khlong Yai damsite	507	637	718	885	932	1,039	1,120	1,226	1,947	
7	Upstream of confluence of Khlong Luai river	181	221	247	299	314	348	373	408	-	
11	Ban Khai weir	493	590	644	753	791	862	915	980	-	
14	Upstream of confluence of Khlong Thap Ma river	452	534	583	677	709	774	819	895	-	
16	Outflow of Khlong Thap Ma damsite	373	480	542	658	699	771	840	918	1,535	
19	Khlong Thap Ma river	159	197	222	263	278	301	322	354	-	
21	Rayong bridge	371	425	459	523	541	579	608	640	-	

/1: Refer to Fig.

Table 58 ESTIMATE OF SEDIMENT YIELD
FROM RESERVOIR SEDIMENTATION RECORD

1. Reservoir : existing Bang Bung dam
2. Reservoir sedimentation record
 - a. Reservoir capacity :
 - 920,000 m³ in 1958
 - 750,000 m³ in 1981
 - b. Drainage area : 51.2 km²
 - c. Annual sedimentation :
 - $(920 - 750) \times 10^3 \text{ m}^3 / 23 \text{ yrs} / 51.2 \text{ km}^2 = 144 \text{ m}^3 / \text{yr} / \text{km}^2$
3. Trap efficiency : by Brune's diagram
 - a. Reservoir capacity :
 - $(920 + 750) \times 10^3 \text{ m}^3 / 2 = 835,000 \text{ m}^3$
 - b. Annual inflow : Average run-off at Bang Bung dam during the period from 1968 to 1981 :
 - $0.57 \text{ m}^3 / \text{sec} = 18.0 \times 10^6 \text{ m}^3 / \text{yr}$
 - c. Capacity - inflow ratio :
 - $0.835 \times 10^6 \text{ m}^3 / 18.0 \times 10^6 \text{ m}^3 = 0.046$
 - d. Percent of sediment trapped : 85 %
4. Annual sediment yield
 - a. Sediment trapped by dam : $144 \text{ m}^3 / \text{yr} / \text{km}^2$
 - b. Trap ratio : 85 %
 - c. Annual sediment yield rate
 - $144 / 0.85 = 169 \text{ m}^3 / \text{yr} / \text{km}^2$

Table 59 ESTIMATED SEDIMENT DEPOSIT FOR POTENTIAL DAMSITES

Potential Damsites	Zone No.	Rivers	Drainage Area (km ²)	Sediment Yield Rate (m ³ /yr/km ²)	Reservoir Sedimentation for 100-yr (10 ⁹ m ³)
Khlong Luang	1	Khlong Luang	526	300	15.78
Pa Daeng	1	Huai Pa Daeng	53.8	300	1.61
Huai Bung	4	Huai Bung	68.5	300	2.06
Huai Takhian Tia	4	Huai Takhian Tia	33.0	300	0.99
Khlong Na Klua	5	Khlong Na Klua	22.3	300	0.67
Huai Chak Nok	6	Huai Chak Nok	18.1	300	0.54
Huai Yai	6	Huai Yai	65.9	300	1.98
Khlong Yai	10	Khlong Yai	218	300	6.54
Khlong Thap Ma	10	Khlong Thap Ma	158	300	4.74

FIGURES

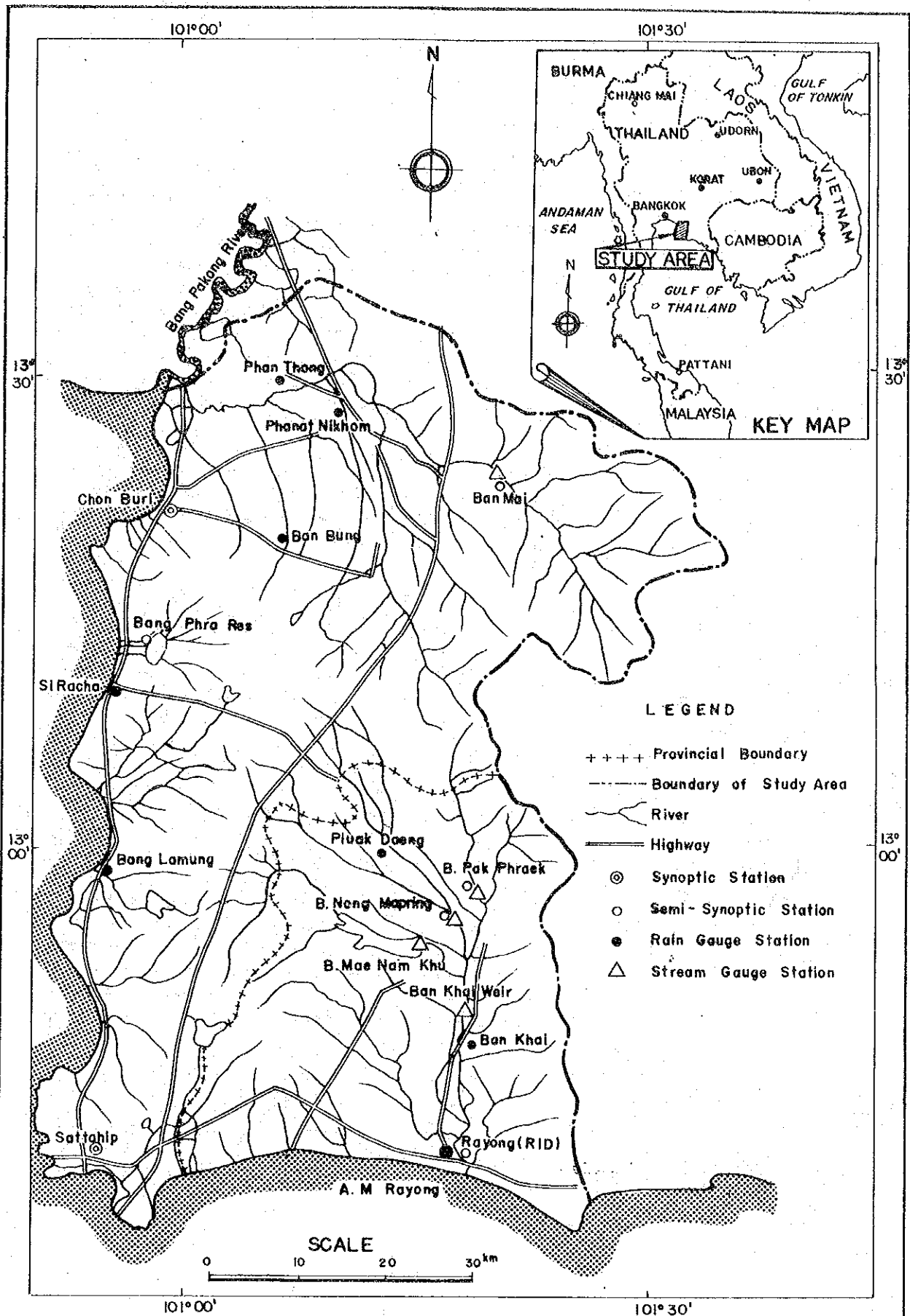


Fig. 1 Location Map of Metro-Hydrological Station

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Climatological Data	Stations			Available Period																																				
	Name	RID	Code No.	1950s									1960s									1970s									80s									
				0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1					
Air Temperature	Ban Mai	RID	09171																																					
	A.M.Chon Buri	MD	09013																																					
	Bang Phra Res.	RID	09160																																					
	Sattahip	MD	09073																																					
	Ban Pak Phraek	RID	48141																																					
	B.Nong Mapring	RID	48121																																					
	Rayong	RID	48101																																					
Relative Humidity	Ban Mai	RID	09171																																					
	A.M.Chon Buri	MD	09013																																					
	Sattahip	MD	09073																																					
	Ban Pak Phraek	RID	48141																																					
	B.Nong Mapring	RID	48121																																					
Evaporation	Ban Mai	RID	09171																																					
	A.M.Chon Buri	MD	09013																																					
	Bang Phra Res.	RID	09160																																					
	Sattahip	MD	09073																																					
	Ban Pak Phraek	RID	48141																																					
	B.Nong Mapring	RID	48121																																					
	Dak Krai Res.	RID	48151																																					
	Rayong	RID	48101																																					
Wind	Ban Mai	RID	09171																																					
	A.M.Chon Buri	MD	09013																																					
	Bang Phra Res.	RID	09160																																					
	Sattahip	MD	09073																																					
Cloud Cover	A.M.Chon Buri	MD	09013																																					
	Sattahip	MD	09073																																					
Dew Point	A.M.Chon Buri	MD	09013																																					
	Sattahip	MD	09073																																					
Rainfall	Ban Mai	RID	09171																																					
	Panal Nikhom	MD	09022																																					
	Phan Thong	MD	09032																																					
	Ban Bung	MD	09062																																					
	A.M.Chon Buri	MD	09013																																					
	Bang Phra Res.	RID	09160																																					
	Si Racha	MD	09042																																					
	Bang Lamung	MD	09052																																					
	Sattahip	MD	09073																																					
	Ban Pak Phraek	RID	48141																																					
	Pluak Daeng	MD	48092																																					
	B.Nong Mapring	RID	48121																																					
	Dak Krai	RID	48111																																					
	Ban Khai	MD	48022																																					
	A.M.Rayong	MD	48012																																					
	Rayong	RID	48101																																					

Fig.2 Availability of Climatological Data

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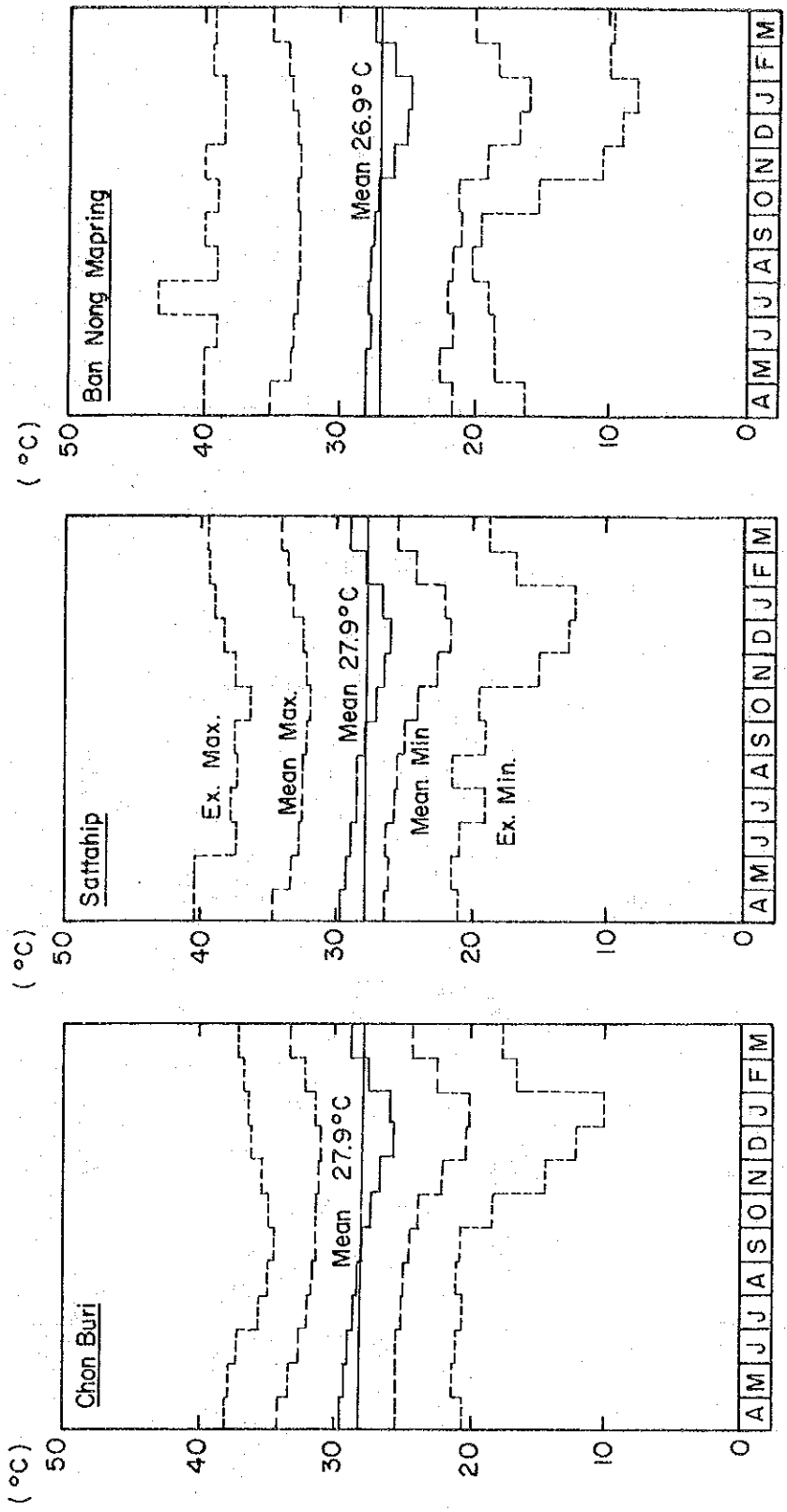


Fig. 3 Monthly Air Temperature

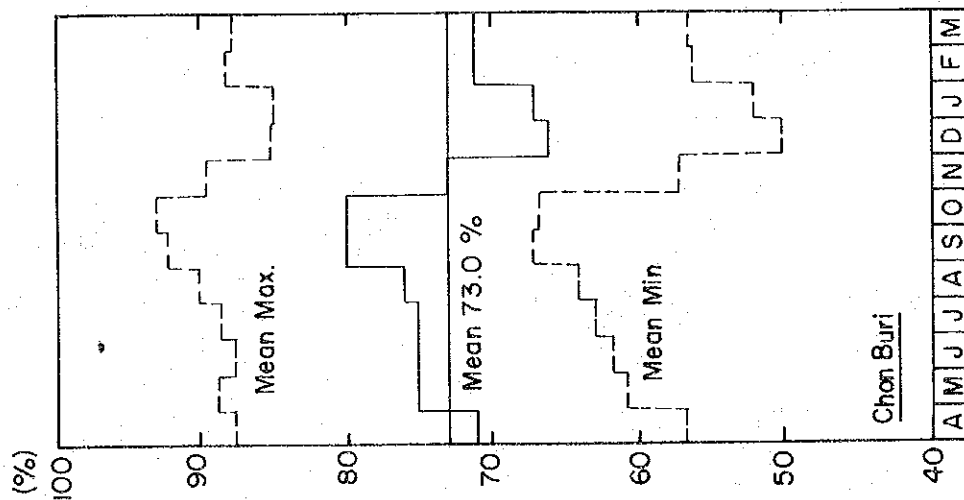
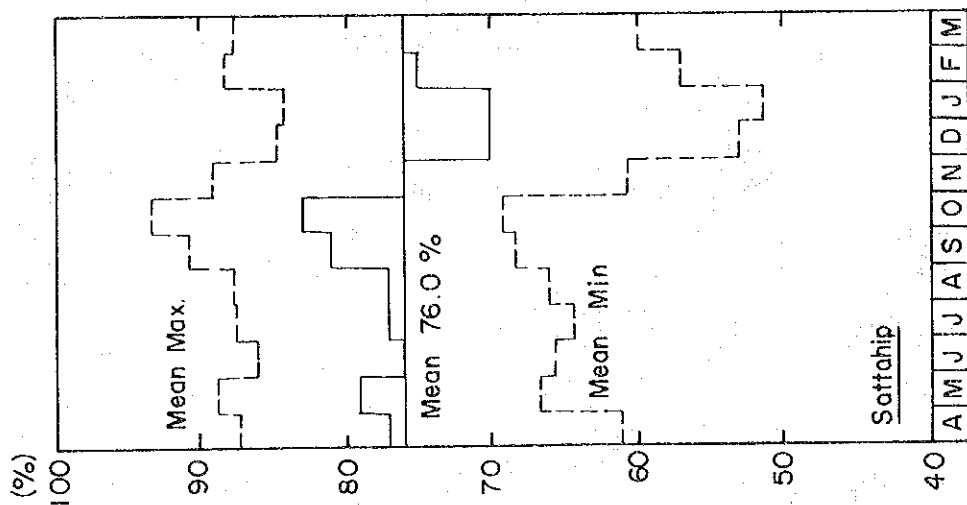
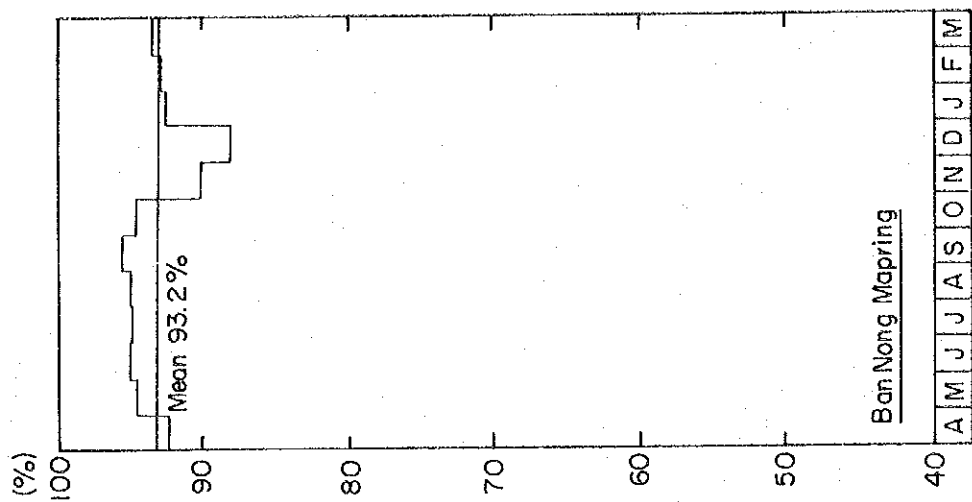


Fig. 4 Monthly Relative Humidity

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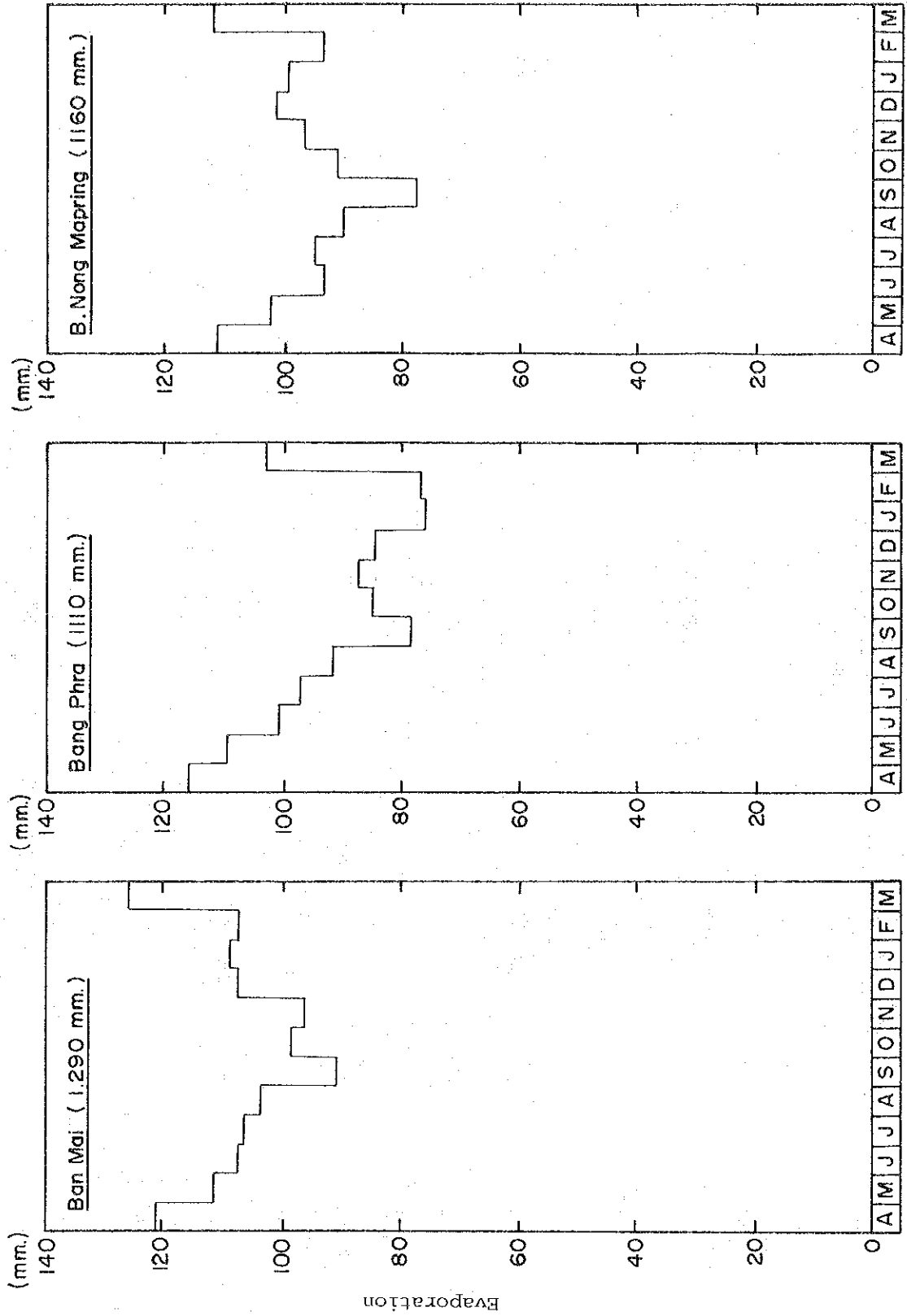


Fig. 5 Monthly Evaporation

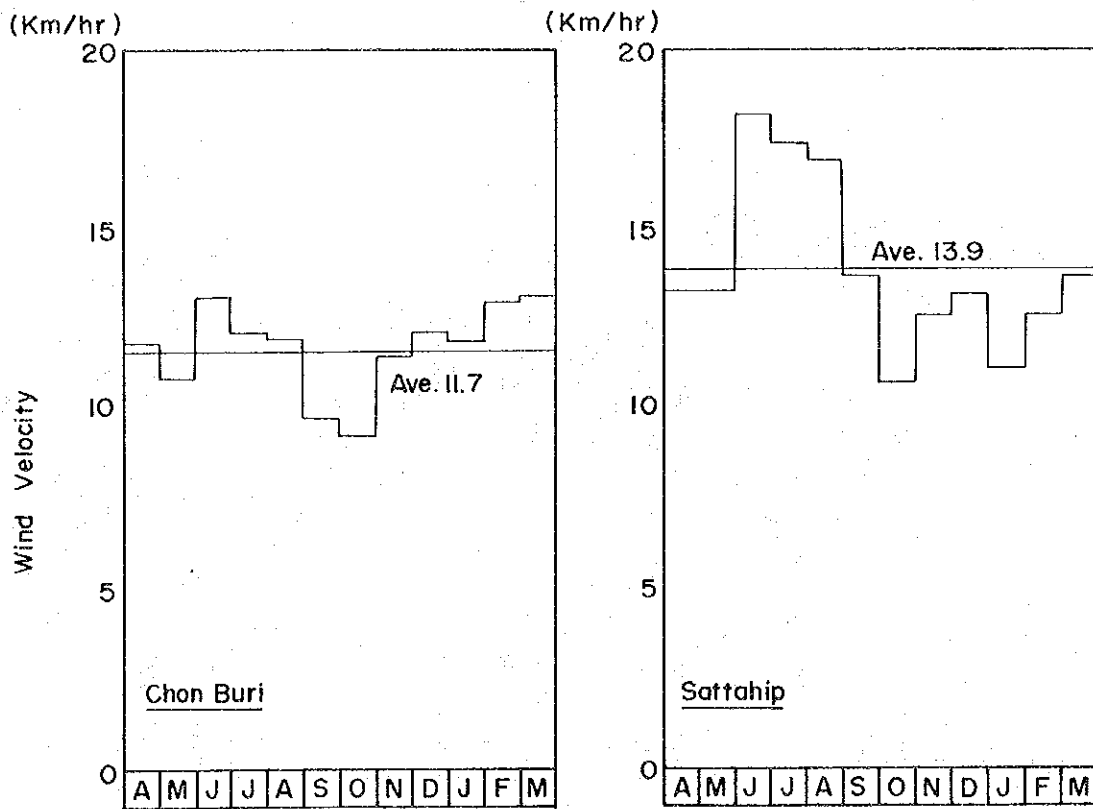


Fig. 6 Monthly Wind Velocity

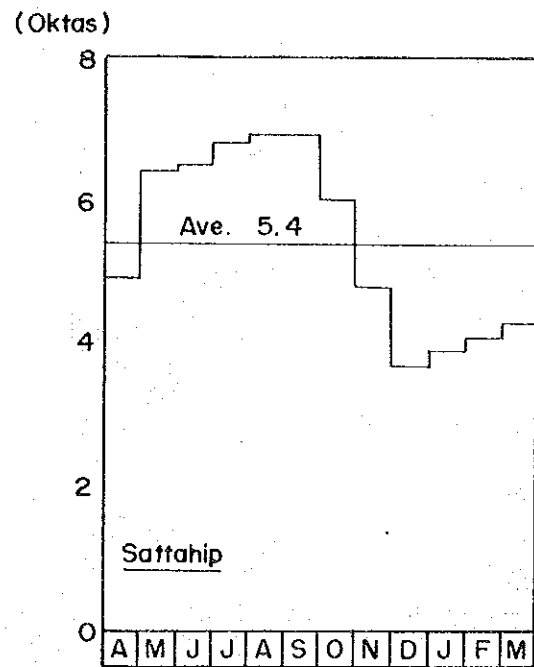
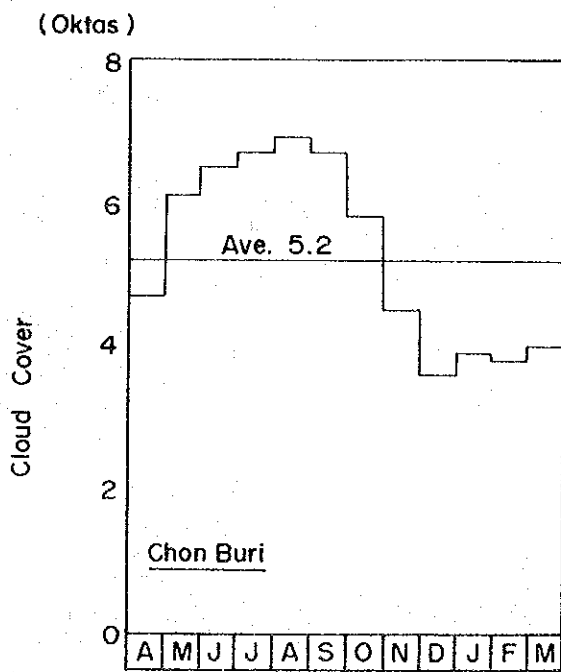


Fig. 7 Monthly Cloud Cover

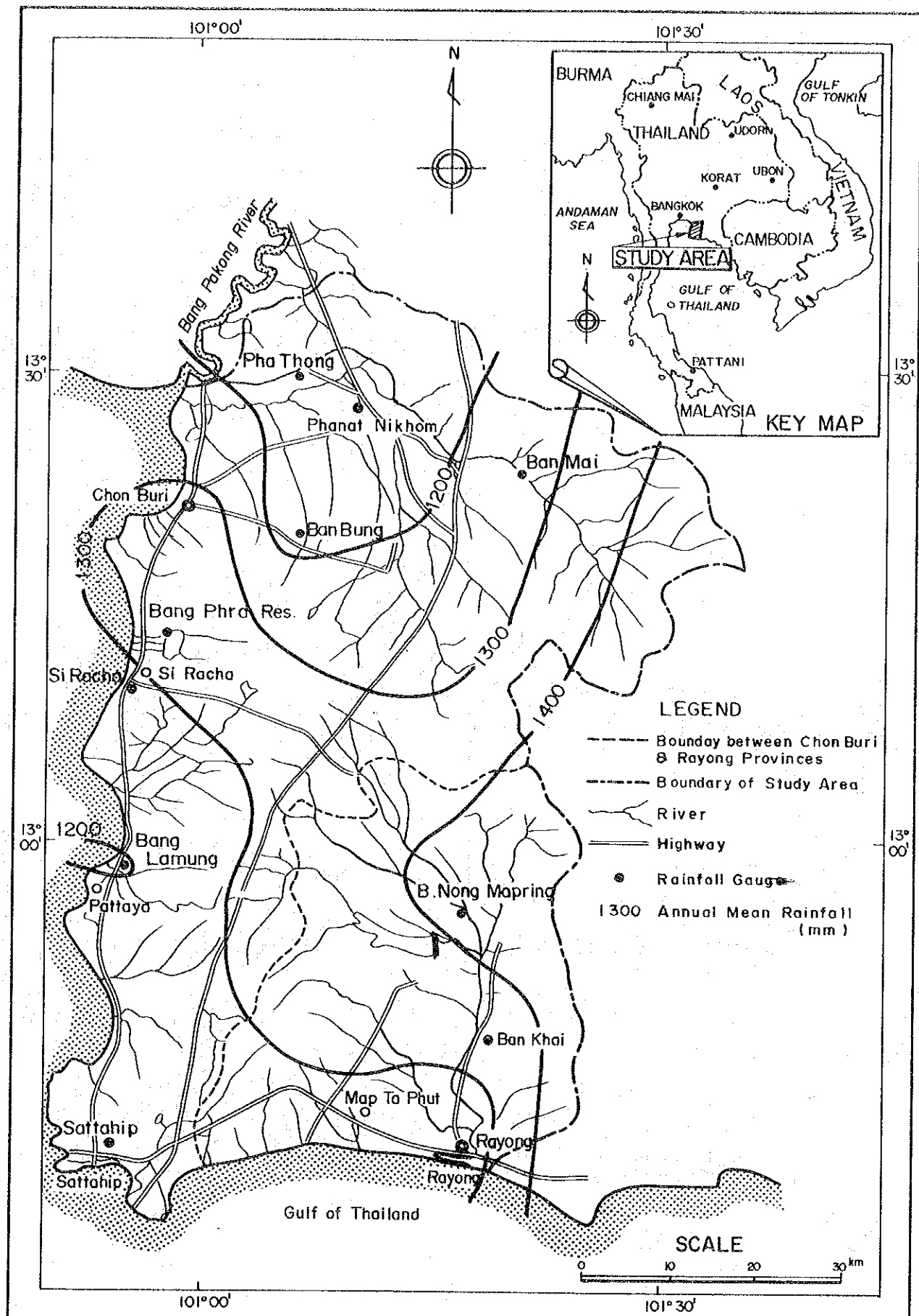


Fig. 8 Annual Mean Isohyetal Map

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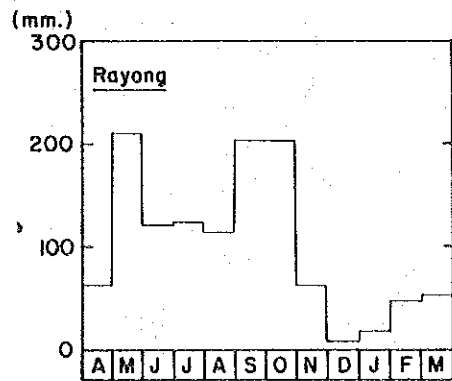
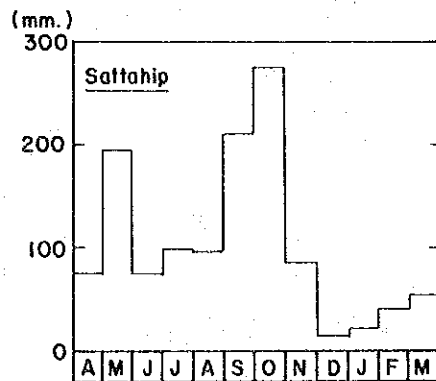
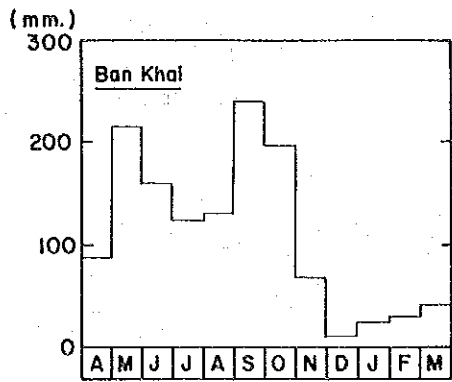
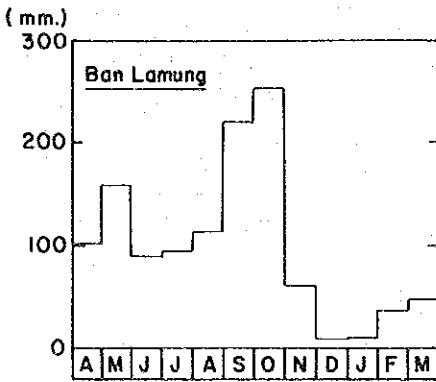
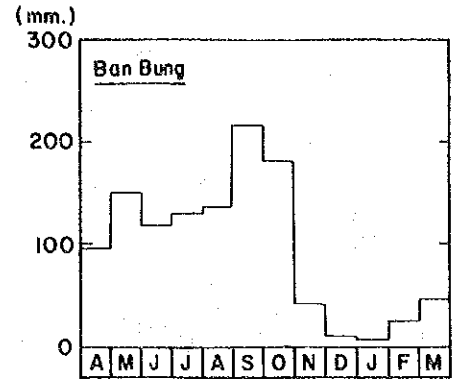
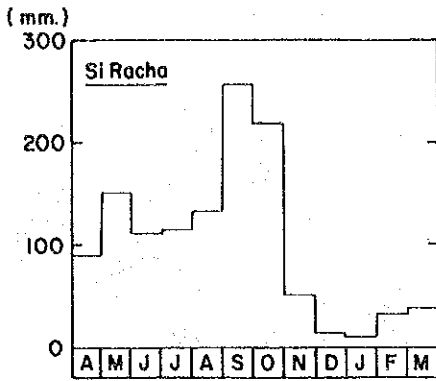
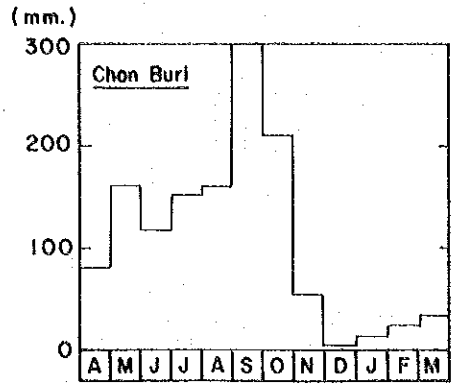
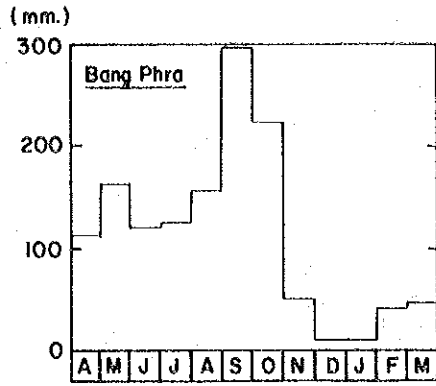


Fig. 9 Monthly Rainfall Distribution

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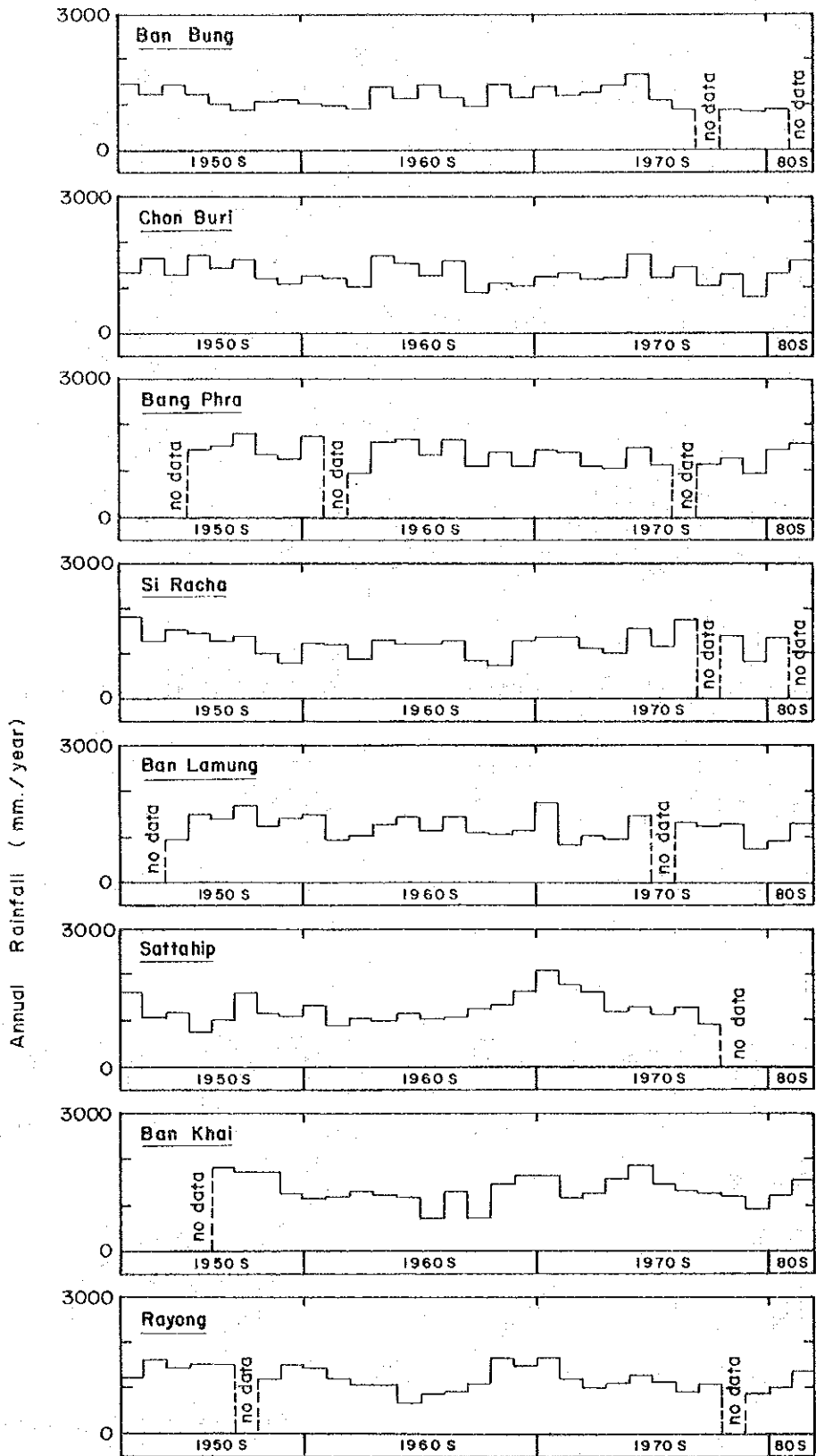


Fig. 10 Historical Variation of Annual Rainfall

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Code No.	Station	1960s					1970s									1980s				
		5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	
Kgt. 19	Ban Mai	[Gauge Height Data: 1960-1979] [Stream Flow Measurement Period: 1960-1979]																		
Z 15	Ban Pak Phraek	[Gauge Height Data: 1978-1979] [Stream Flow Measurement Period: 1978-1979]																		
Z 4	Ban Nong Mapring	[Gauge Height Data: 1960-1979] [Stream Flow Measurement Period: 1960-1979]																		
Z 3	Ban Mae Nam Khu	[Gauge Height Data: 1960-1969] [Stream Flow Measurement Period: 1960-1969]																		
-	Dok Krai Reservoir	[Gauge Height Data: 1978-1979] [Stream Flow Measurement Period: 1978-1979]																		
-	Ban Khai Weir	[Gauge Height Data: 1960-1979] [Stream Flow Measurement Period: 1960-1979]																		
-	Diversion Channel - 1	[Gauge Height Data: 1960-1979] [Stream Flow Measurement Period: 1960-1979]																		
-	Diversion Channel - 2	[Gauge Height Data: 1960-1979] [Stream Flow Measurement Period: 1960-1979]																		
-	Diversion Channel - 3	[Gauge Height Data: 1960-1979] [Stream Flow Measurement Period: 1960-1979]																		

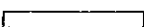

Legend  : Available Gauge Height Data
 : Stream Flow Measurement Period

Fig.11 Availability of Stream Gauging Records

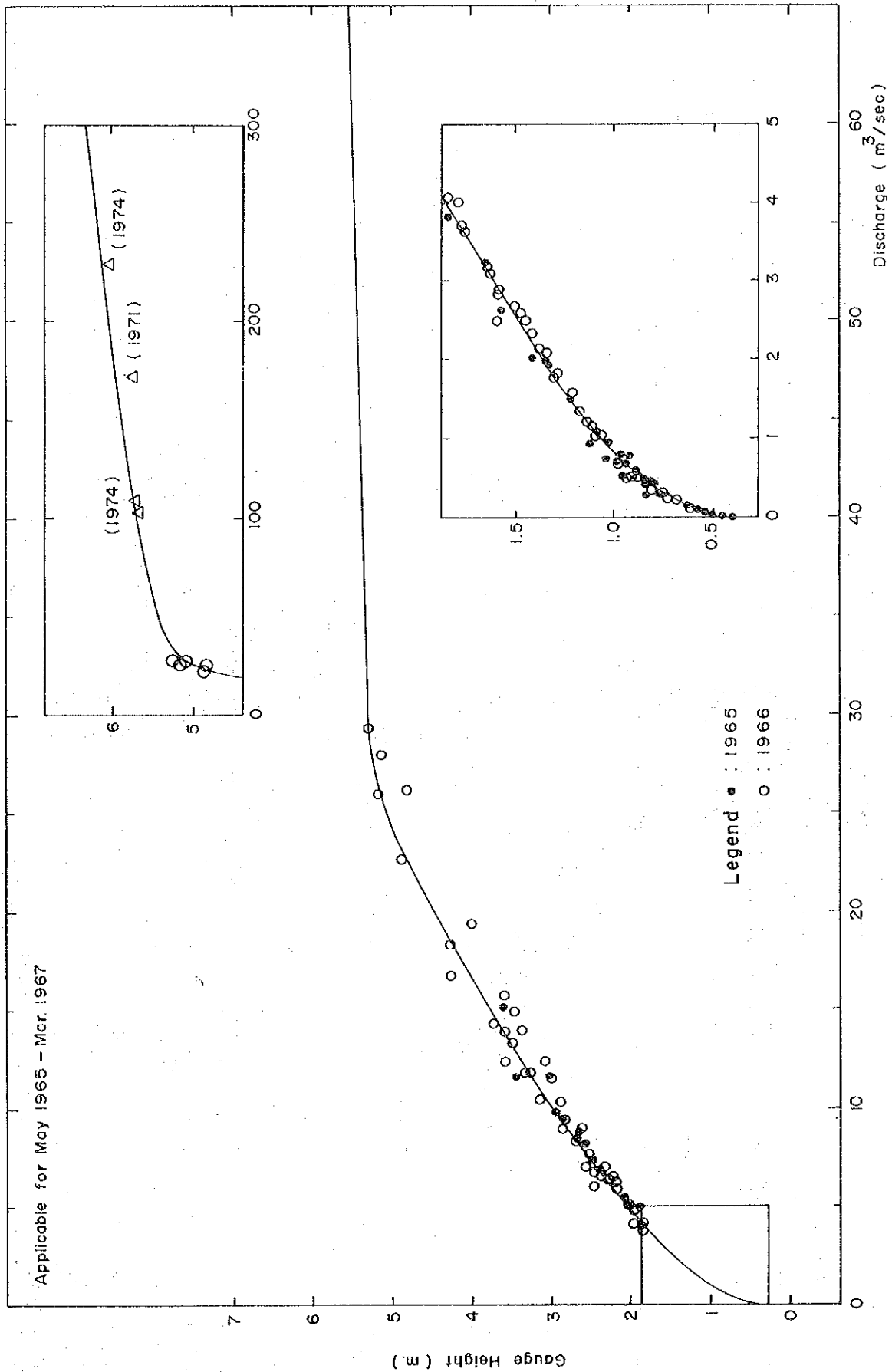


Fig. 12 Stage-Discharge Curve at Ban Mai (1 / 7)

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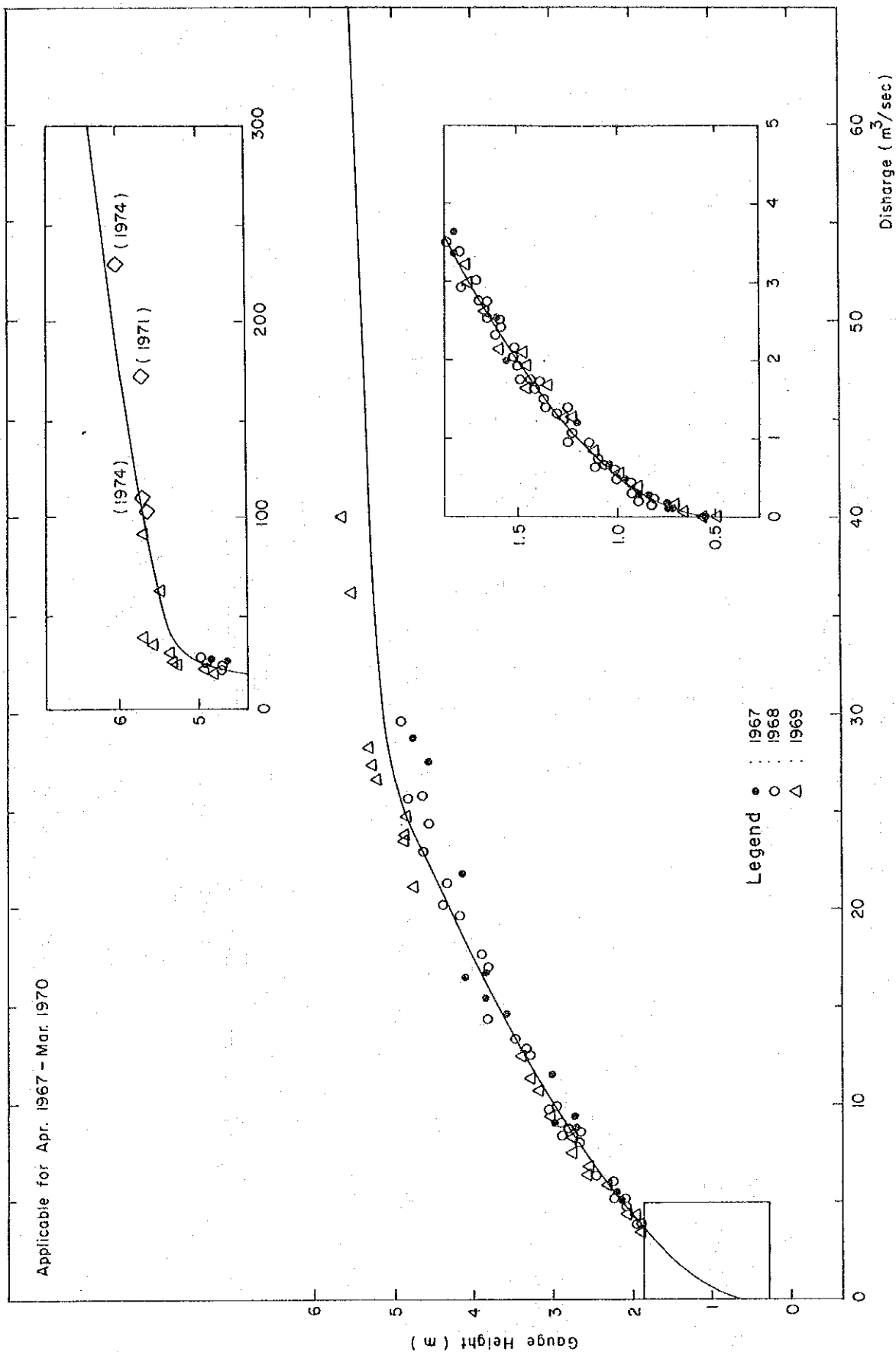


Fig. 12 Stage-Discharge Curve at Ban Mai (2/7)

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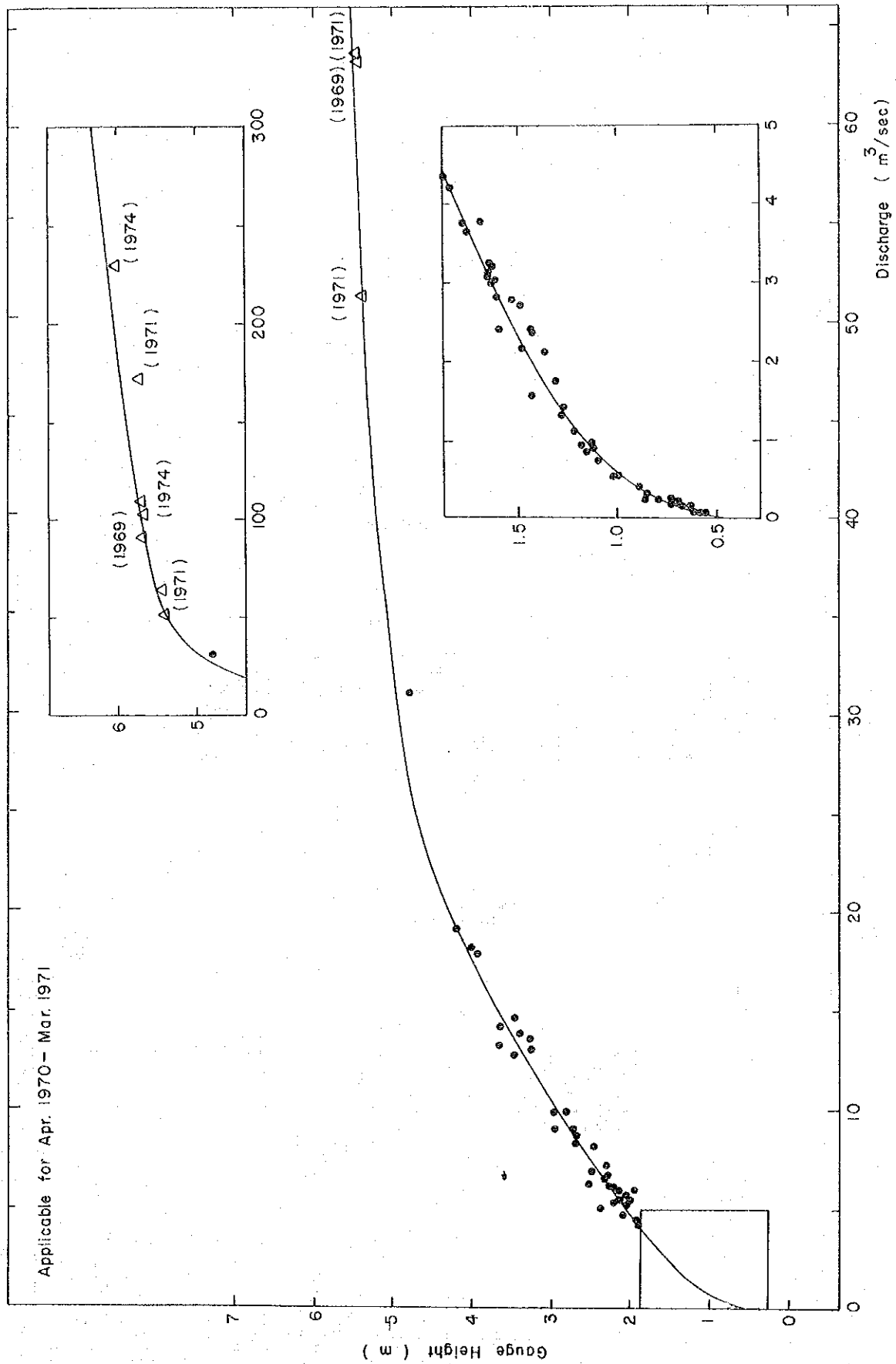


Fig. 12 Stage-Discharge Curve at Ban Mai (3/7)

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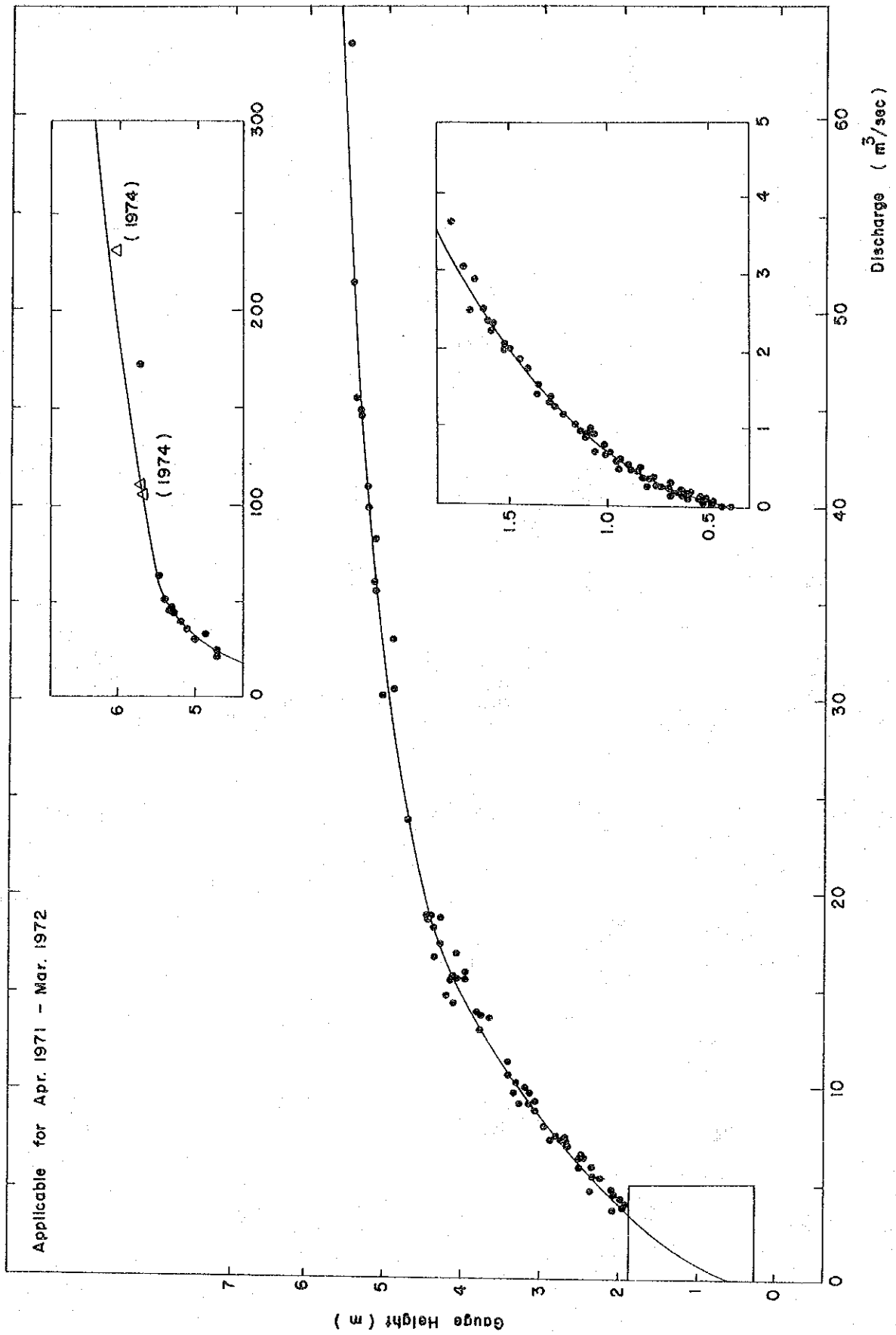


Fig. 12 Stage-Discharge Curve at Ban Mai (4/7)

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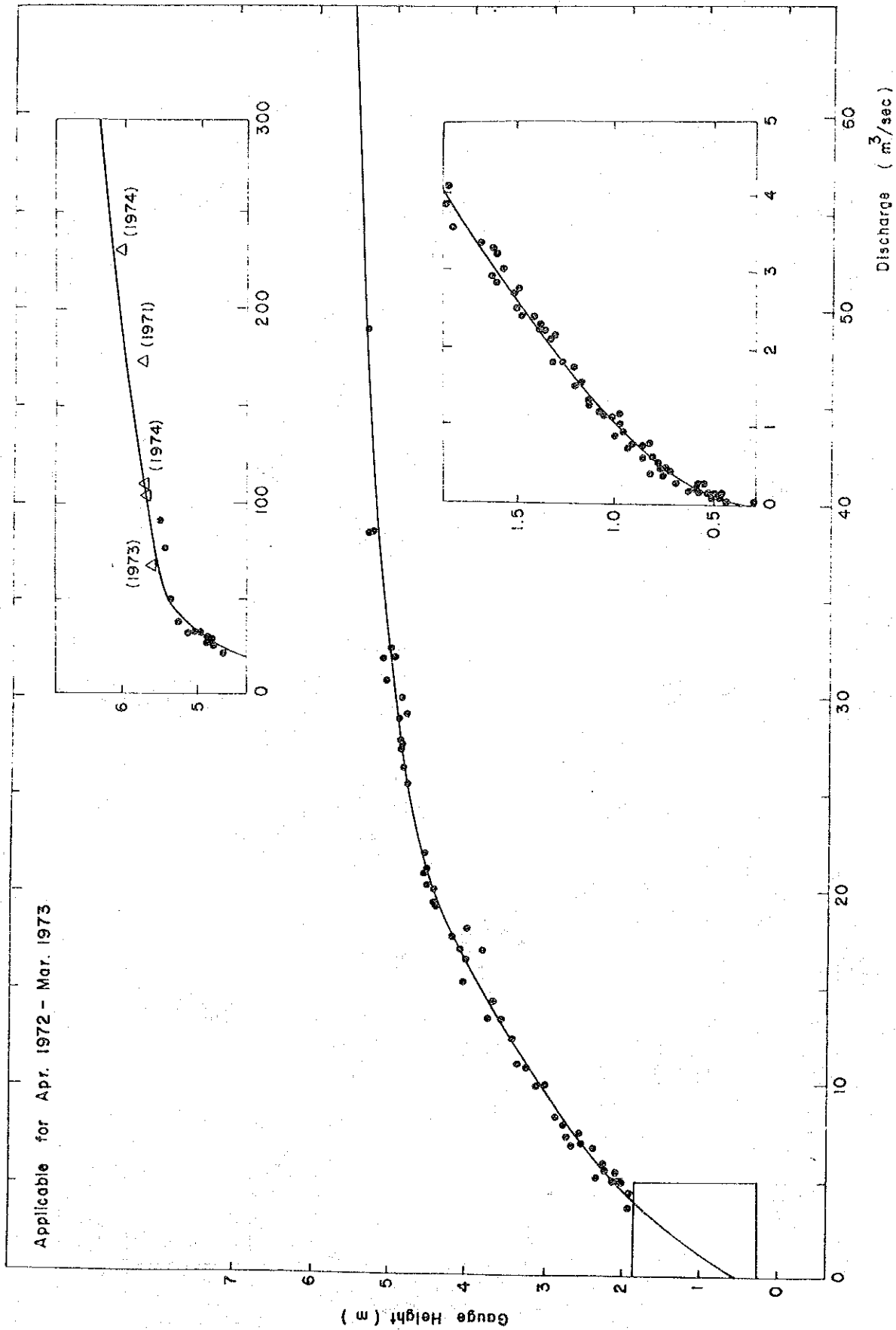


Fig. 12 Stage-Discharge Curve at Ban Mai (5/7)

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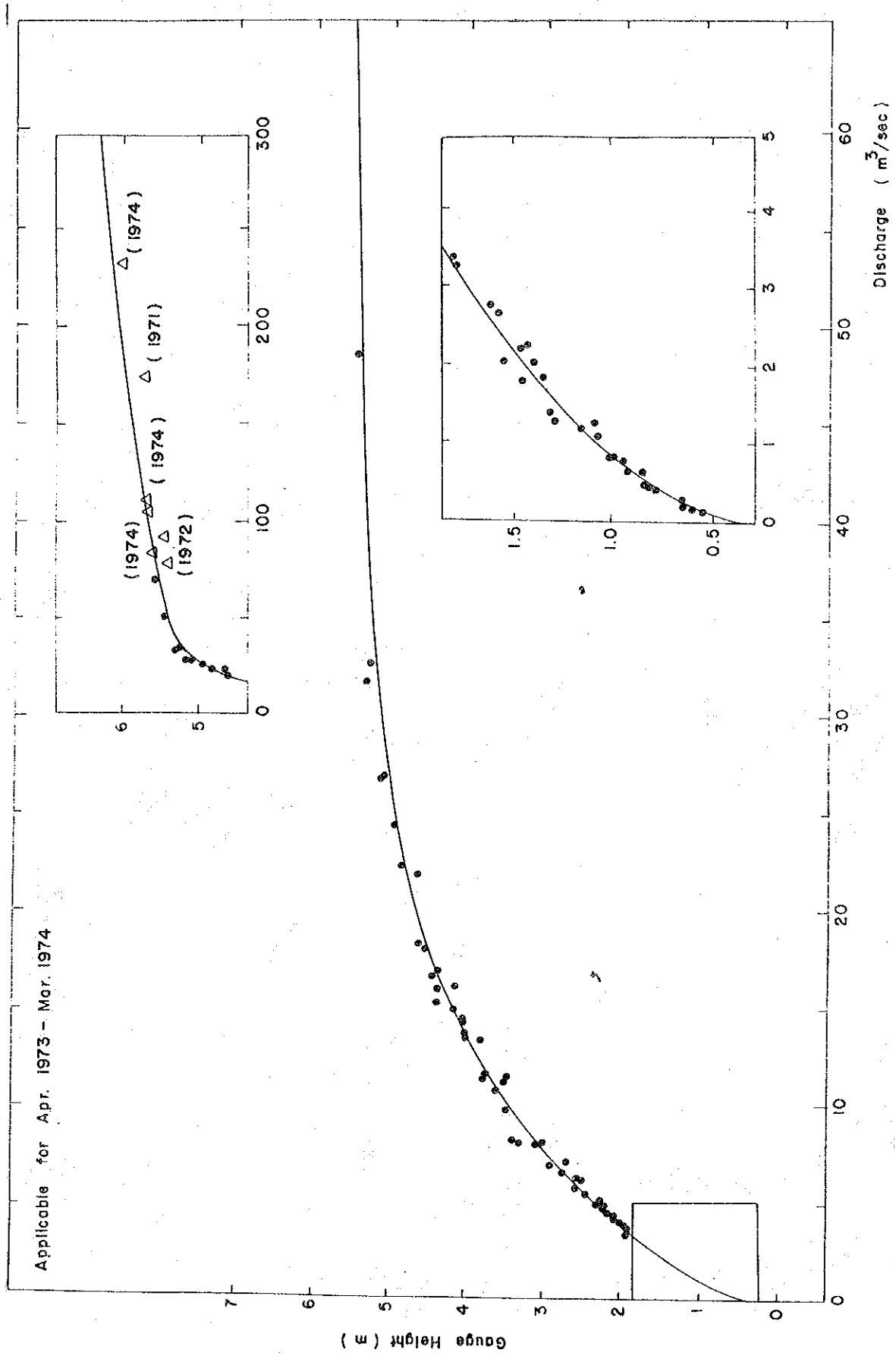


Fig. 12 Stage-Discharge Curve at Ban Mai (6/7)

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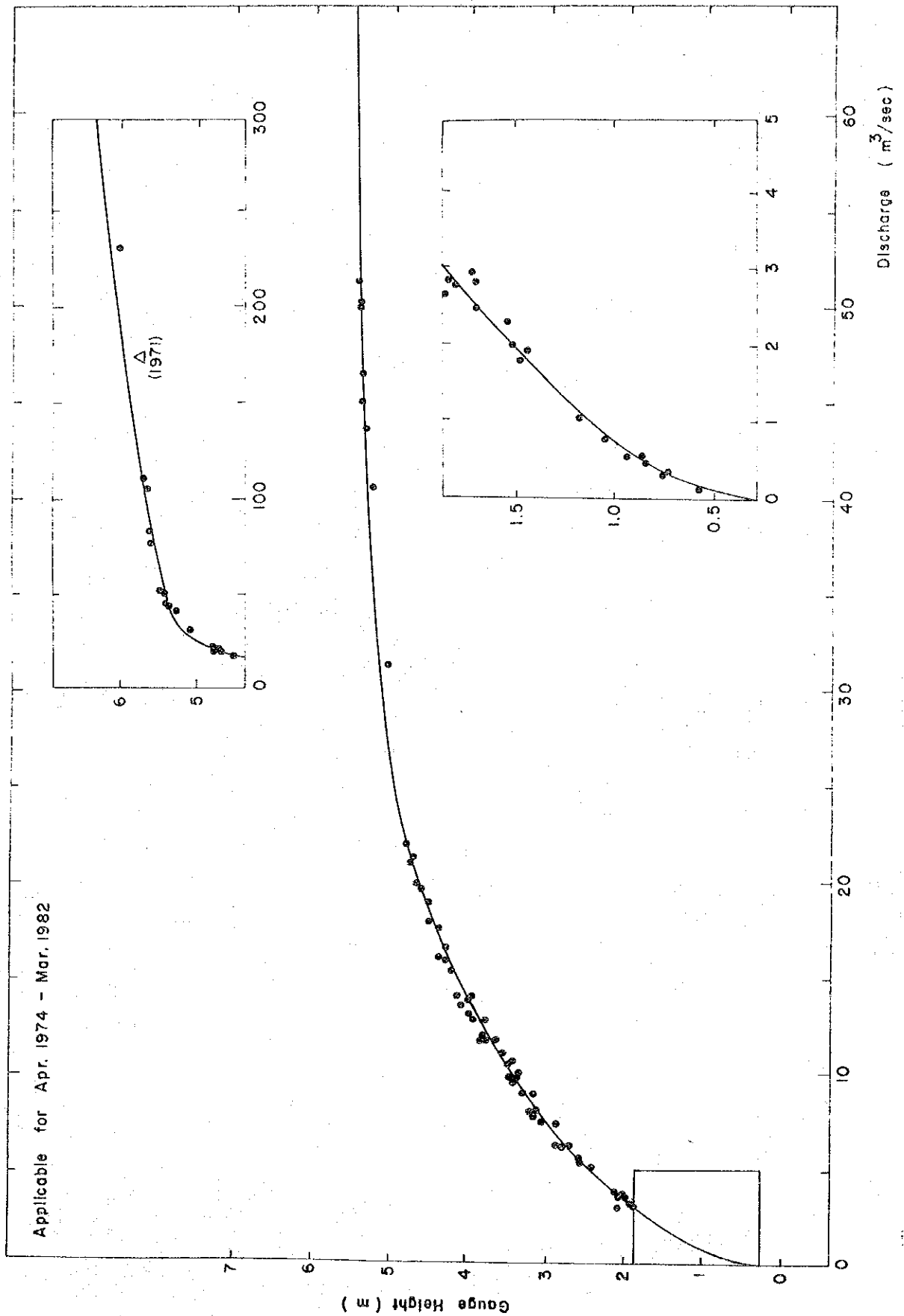


Fig.12 Stage-Discharge Curve at Ban Mai (7/7)

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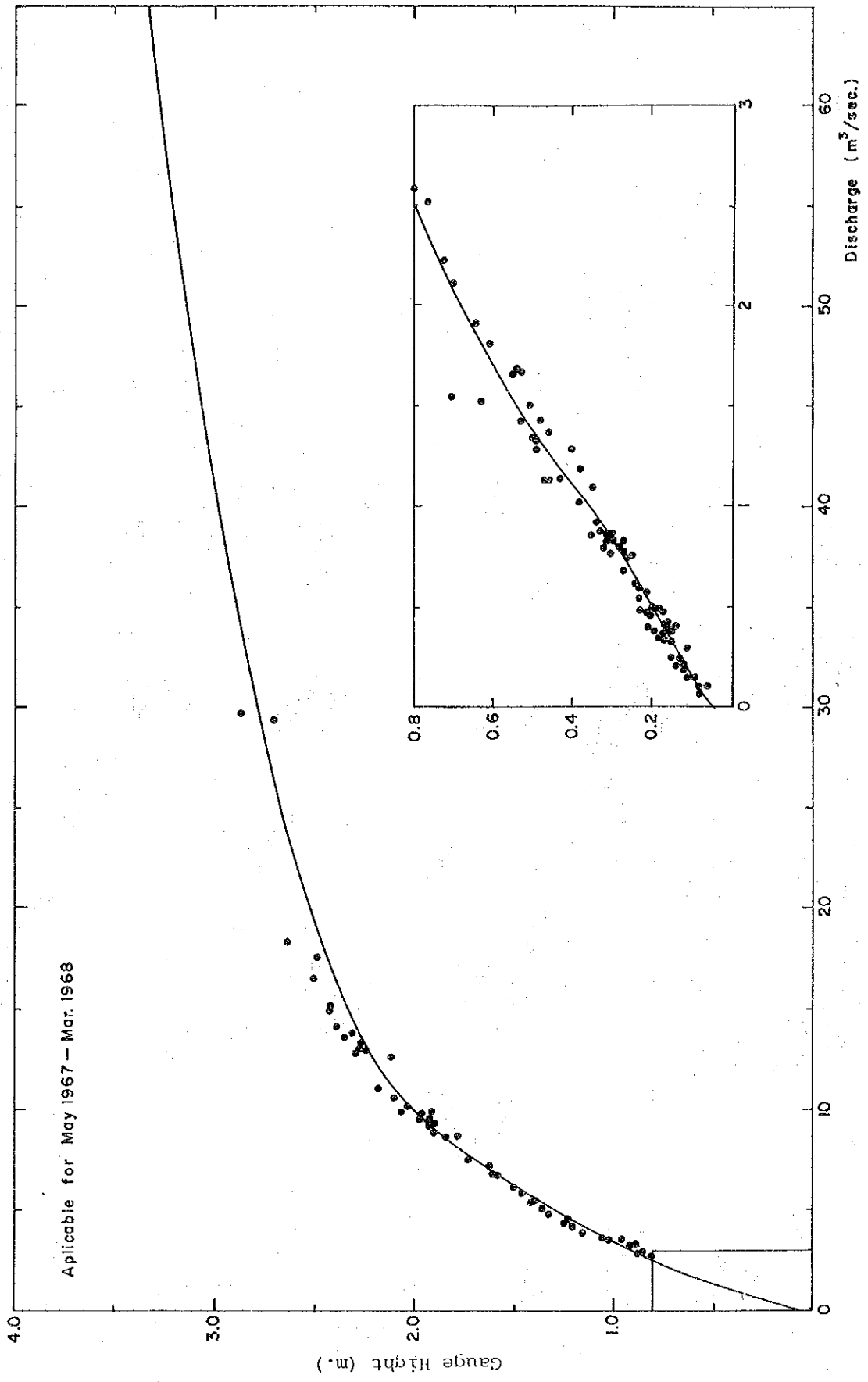


Fig.13 Stage-Discharge Curve at Ban Mae Nam Khu (1/6)

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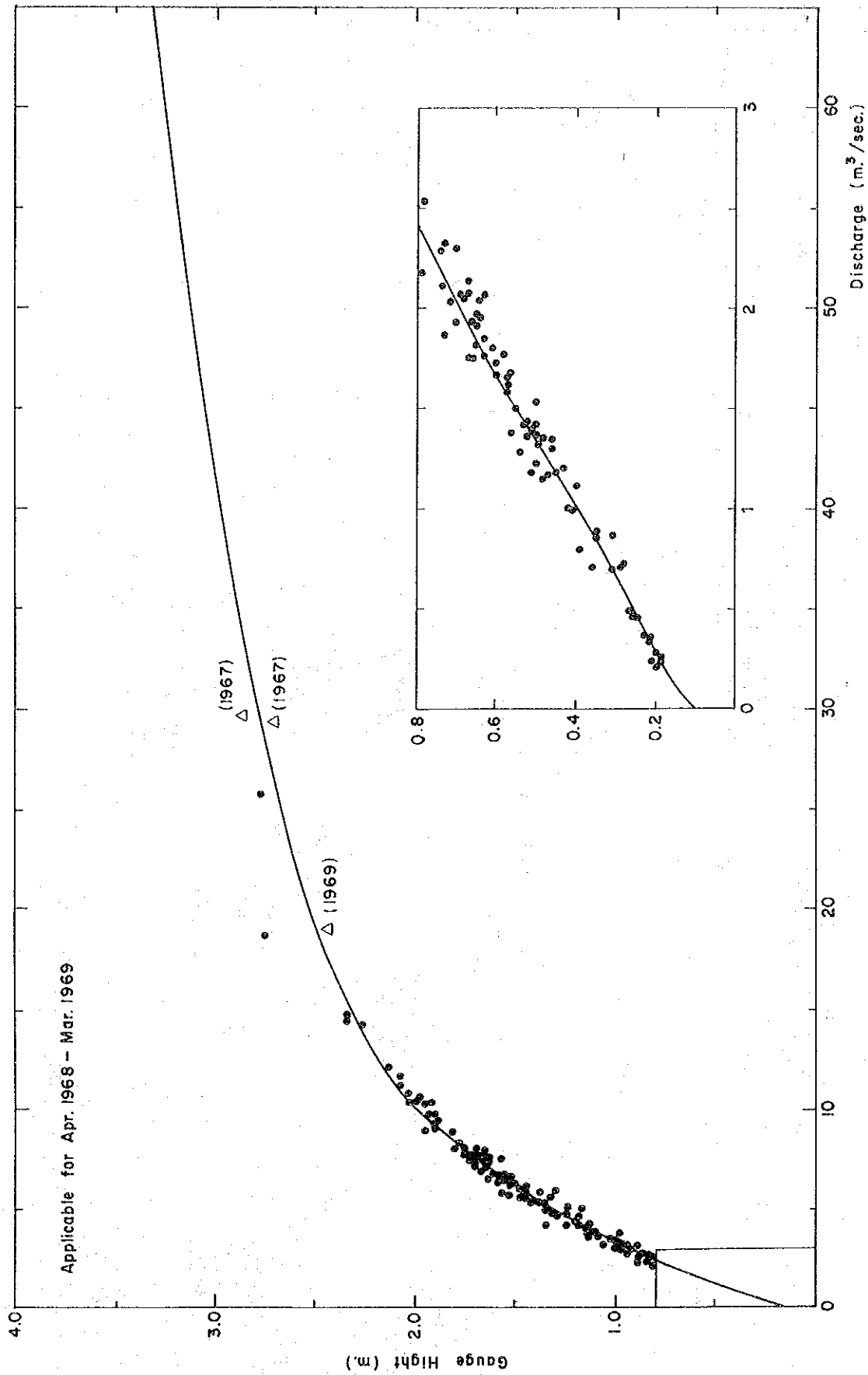


Fig.13 Stage-Discharge Curve at
Ban Mae Nam Khu (2/6)

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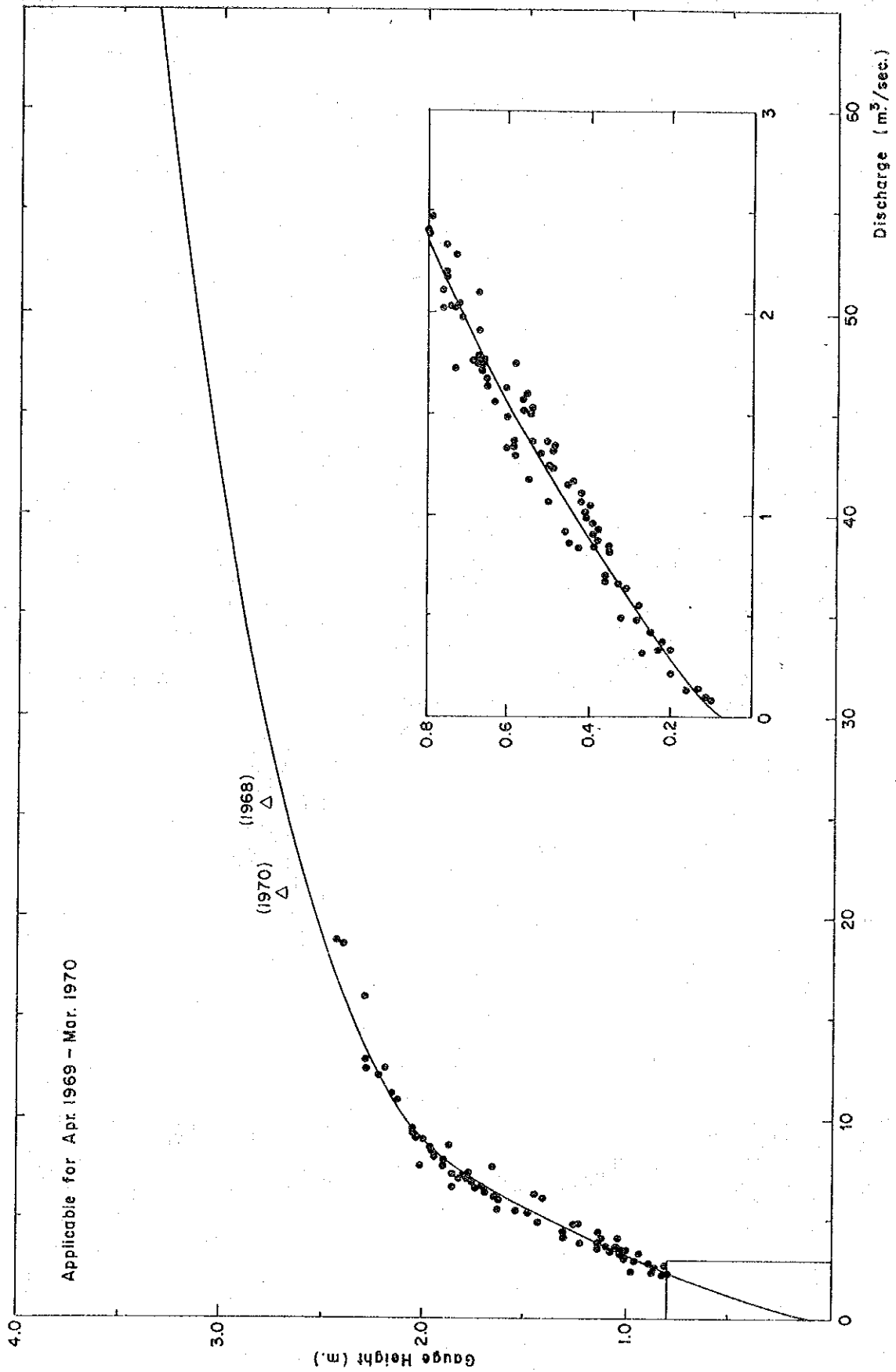


Fig.13 Stage-Discharge Curve at
Ban Mae Nam Khu (3/6)

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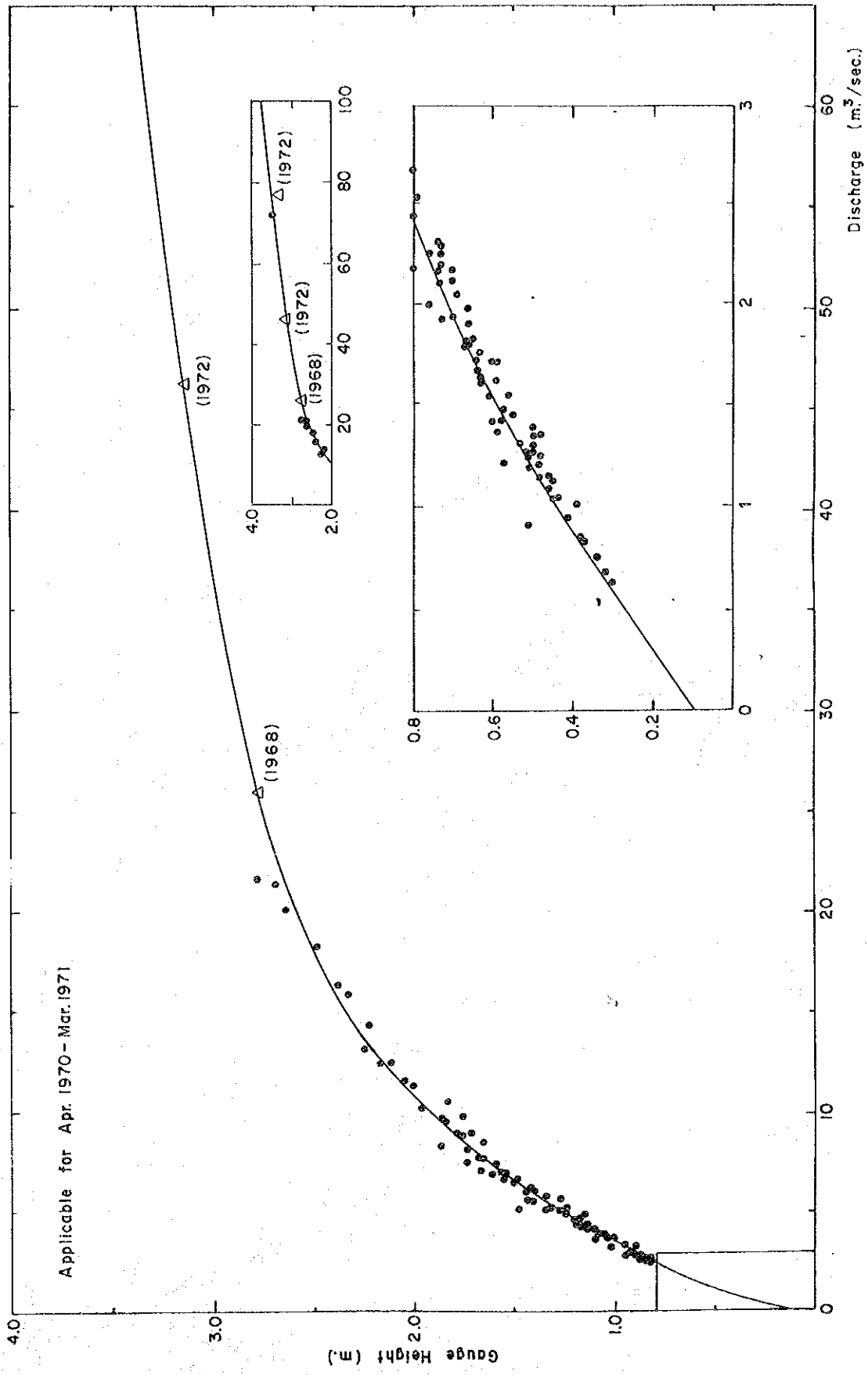


Fig.13 Stage-Discharge Curve at
Ban Mae Nam Khu (4/6)

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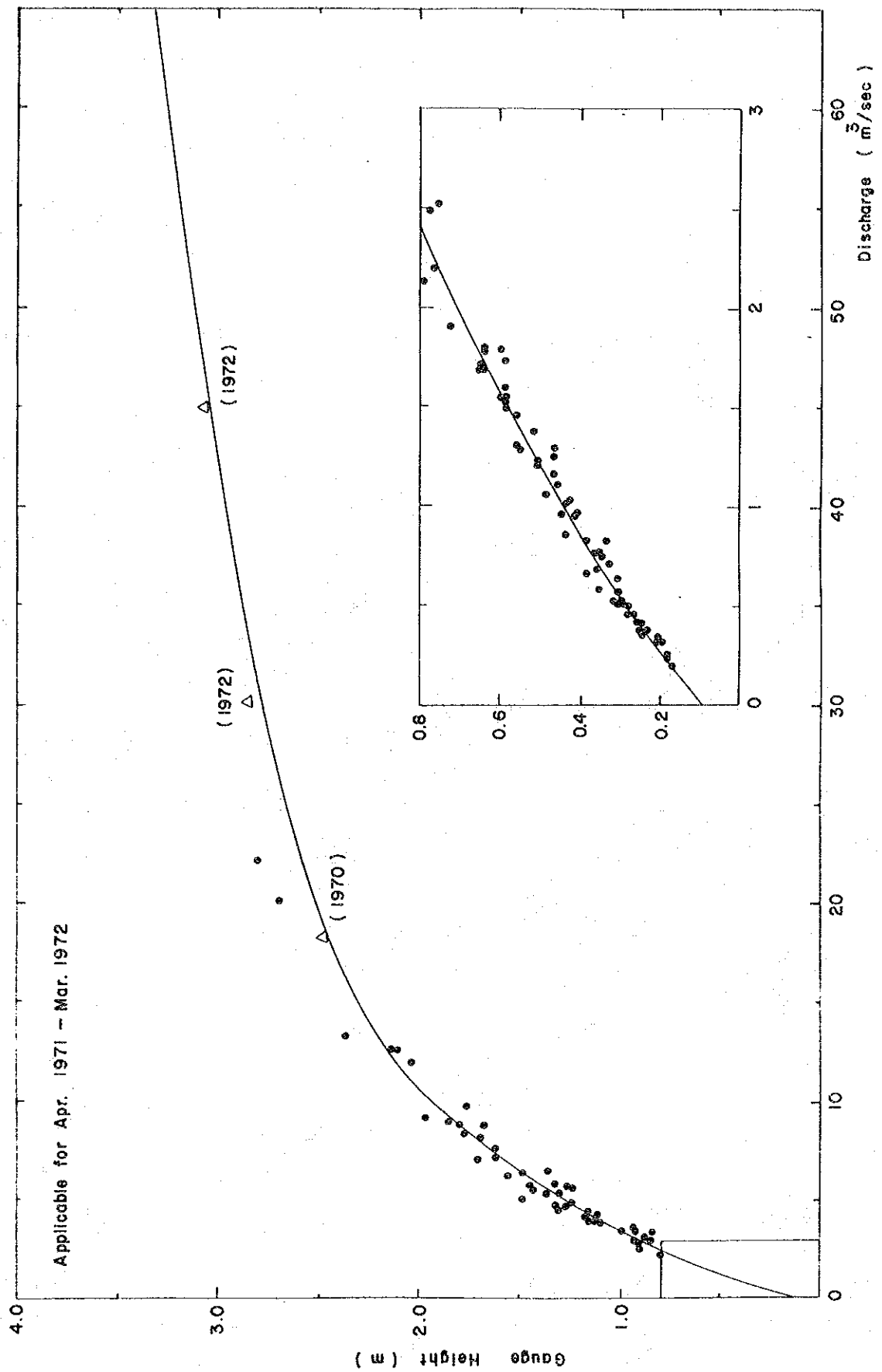


Fig.13 Stage-Discharge Curve at Ban Mae Nam Khu (5/6)

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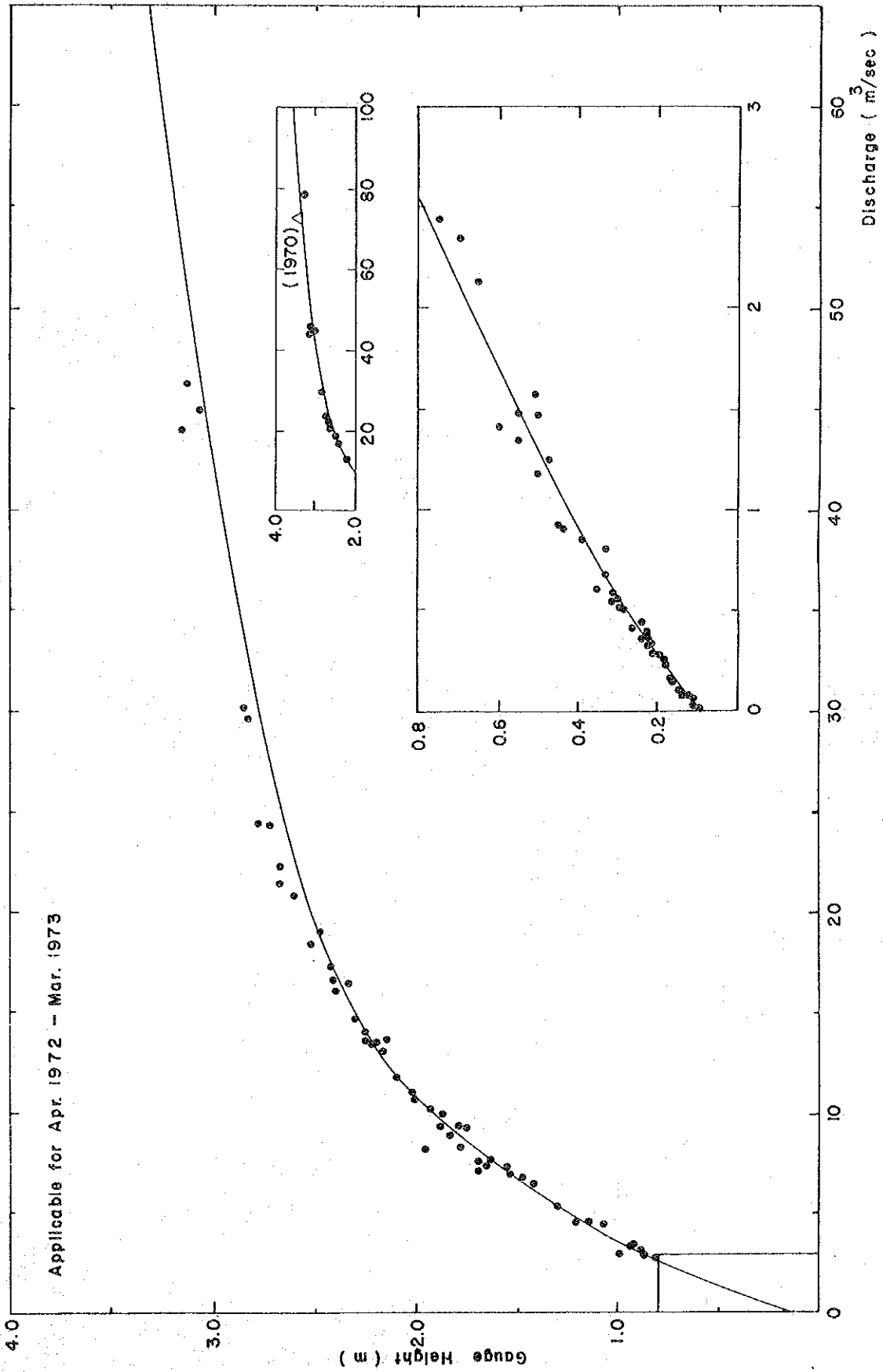


Fig.13 Stage-Discharge Curve at
Ban Mae Nam Khu (6/6)

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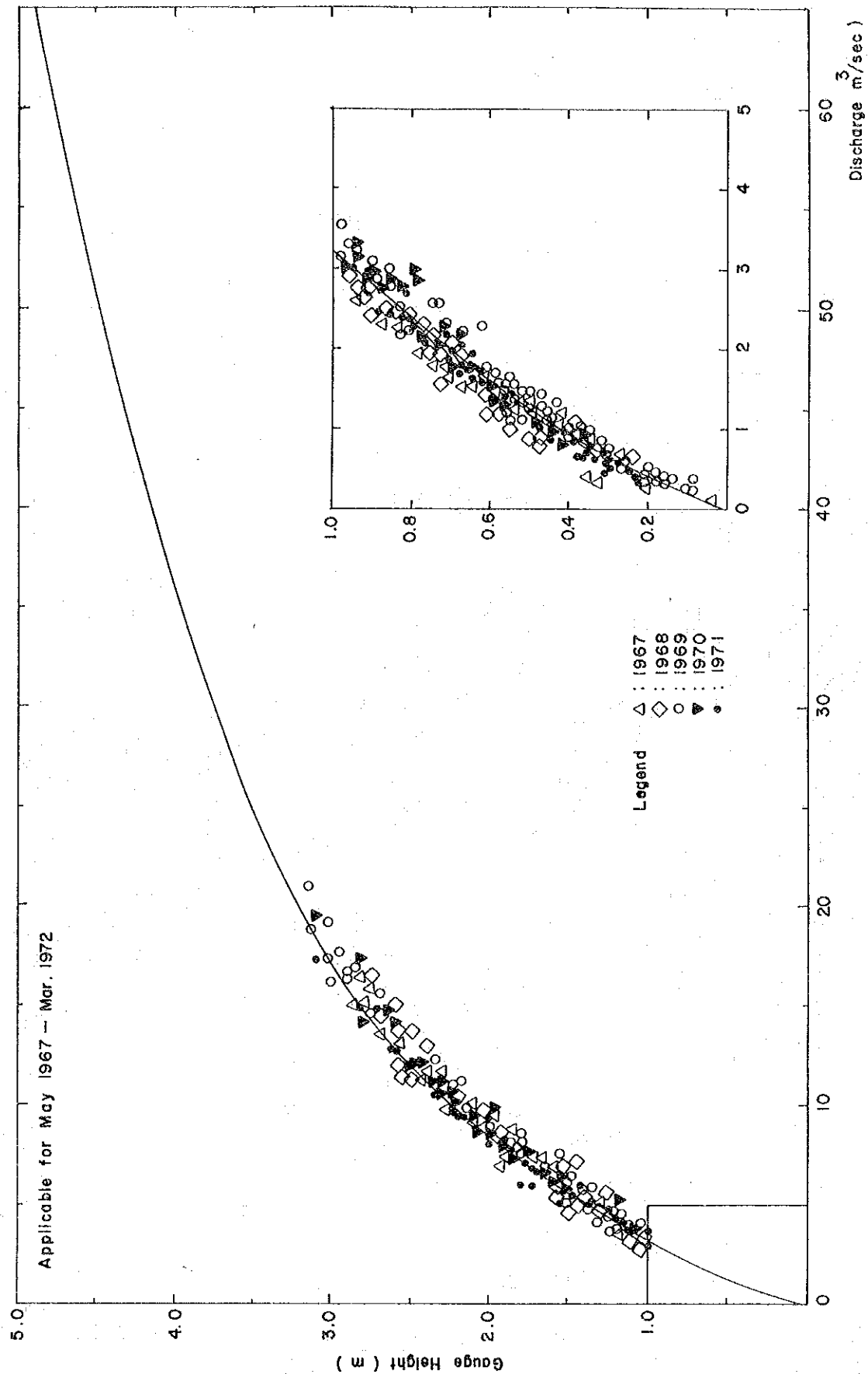


Fig.14 Stage-Discharge Curve at Ban Nong Mapring (1/3)

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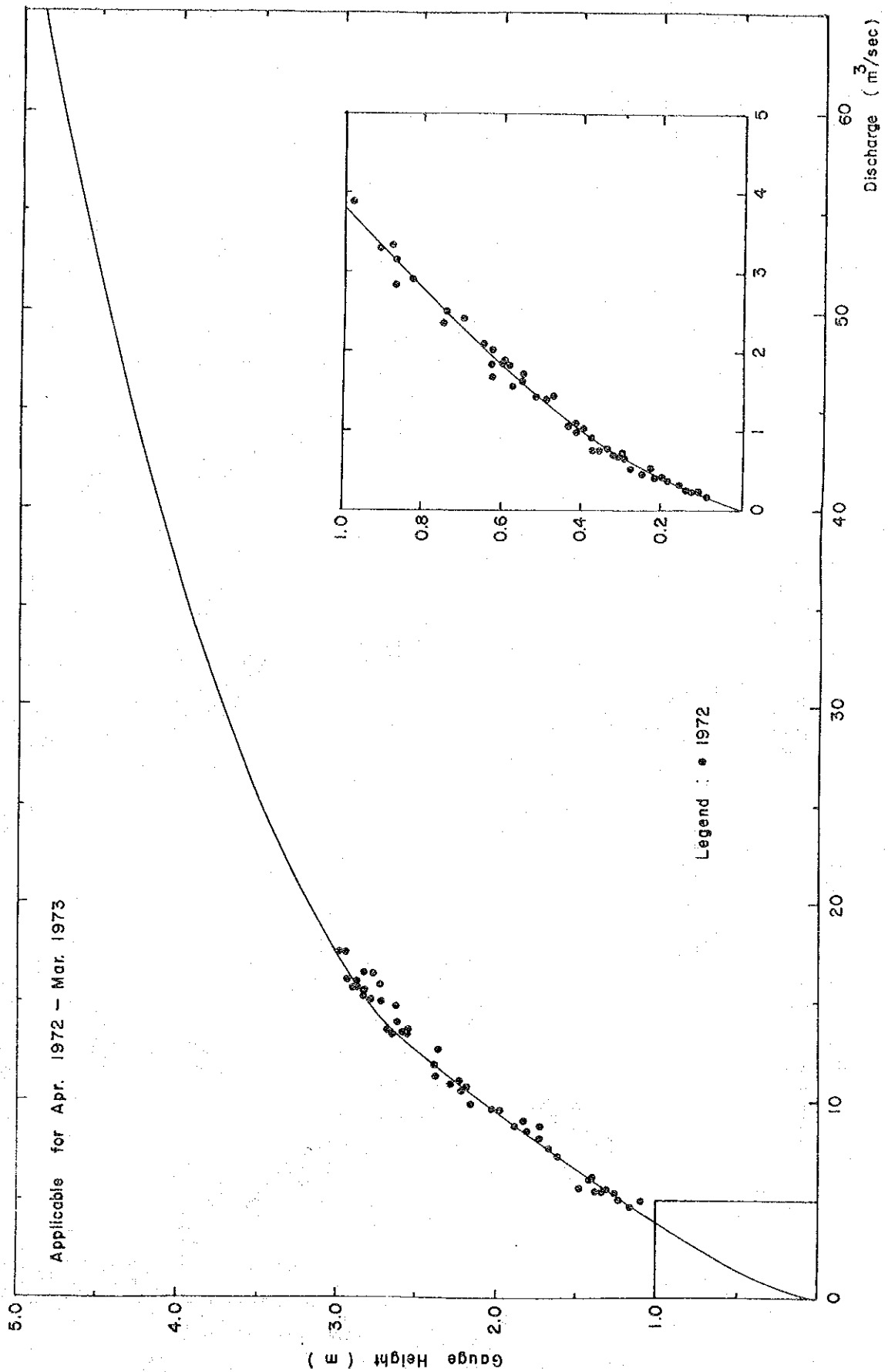


Fig.14 Stage-Discharge Curve at Ban Nong Mapring (2/3)

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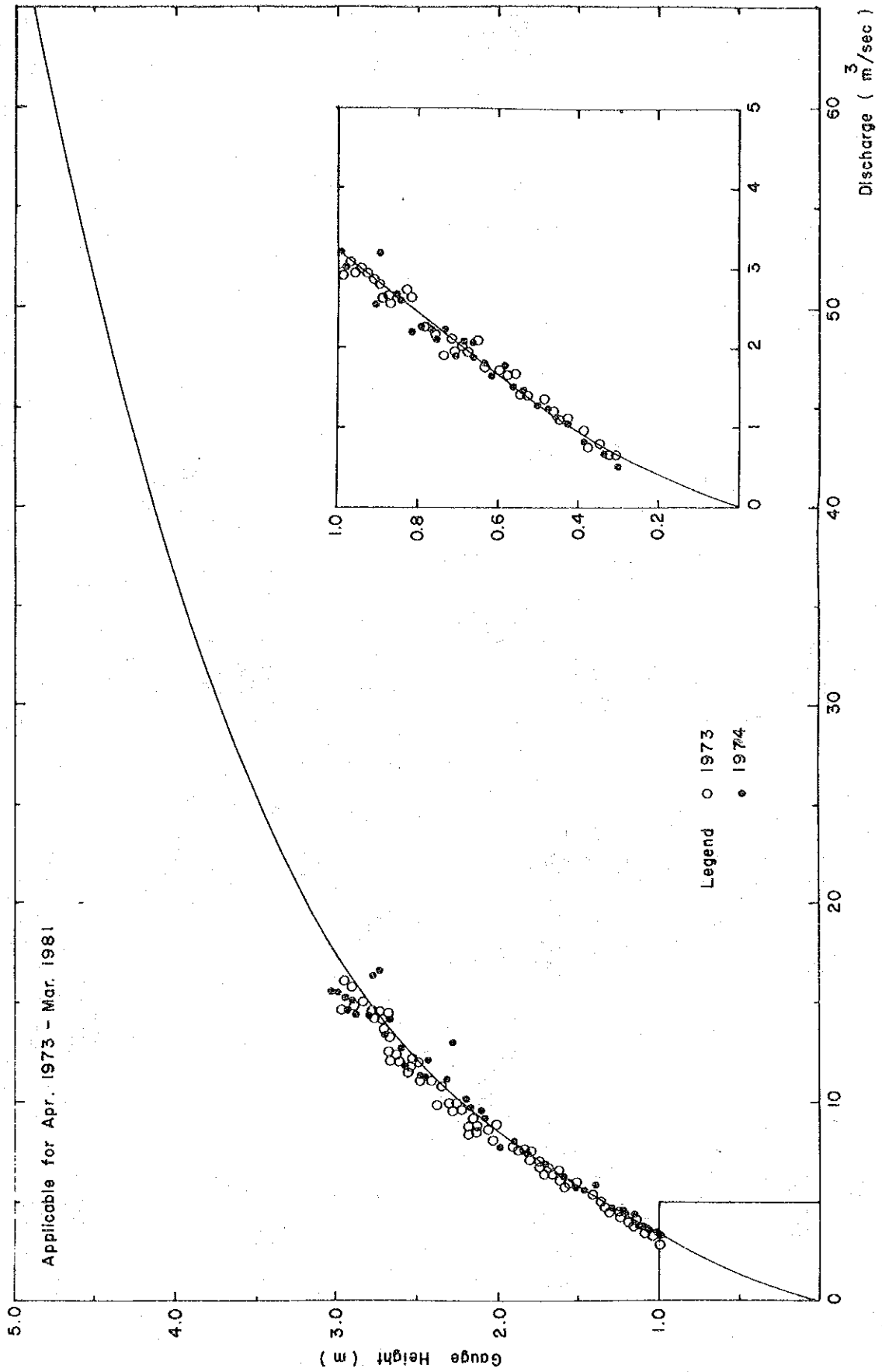


Fig.14 Stage-Discharge Curve at
Ban Nong Mapring (3/3)

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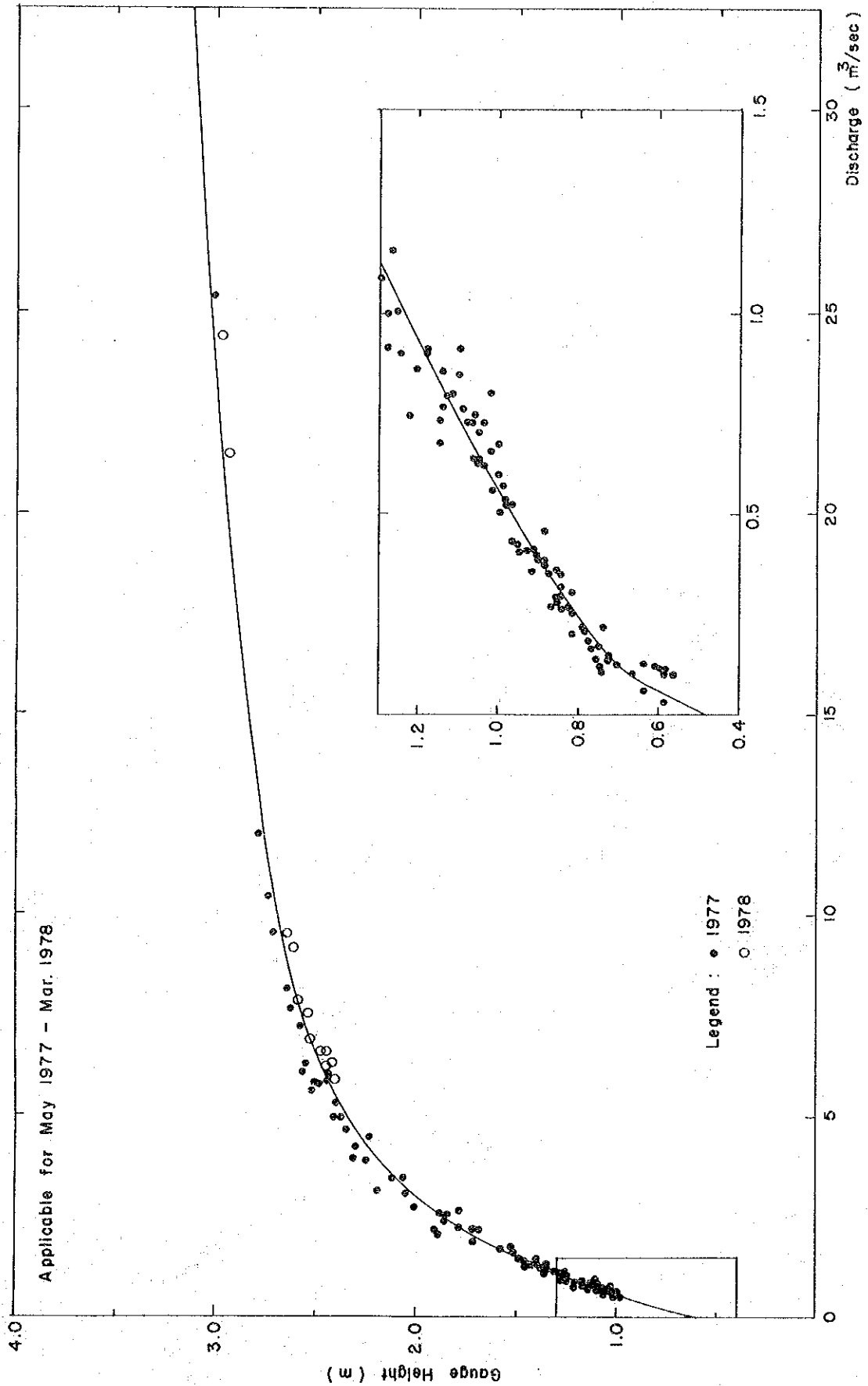


Fig. 15 Stage-Discharge Curve at
Ban Pak Phraek (1/5)

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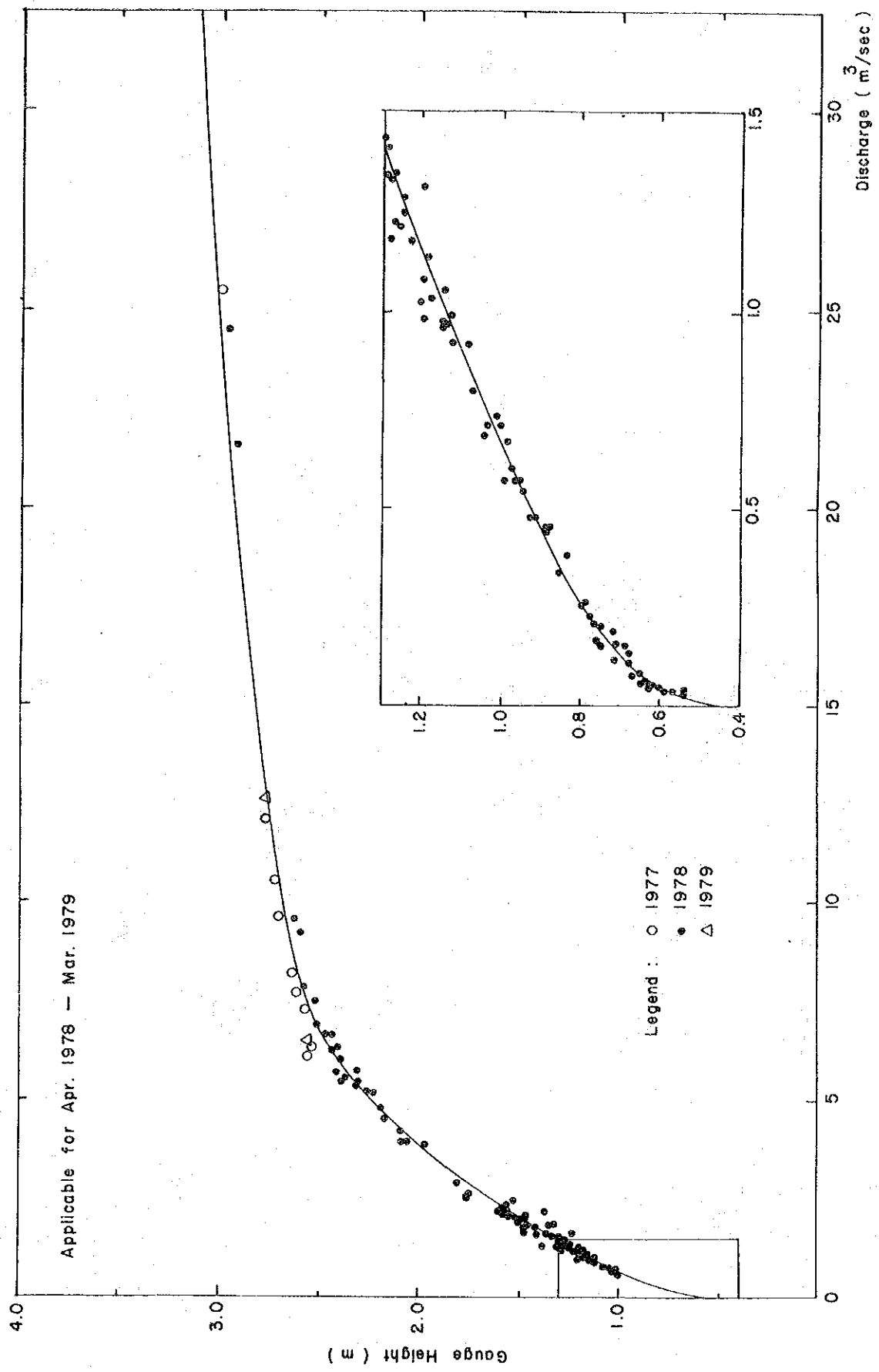


Fig. 15 Stage - Discharge Curve at Ban Pak Phraek (2/5)

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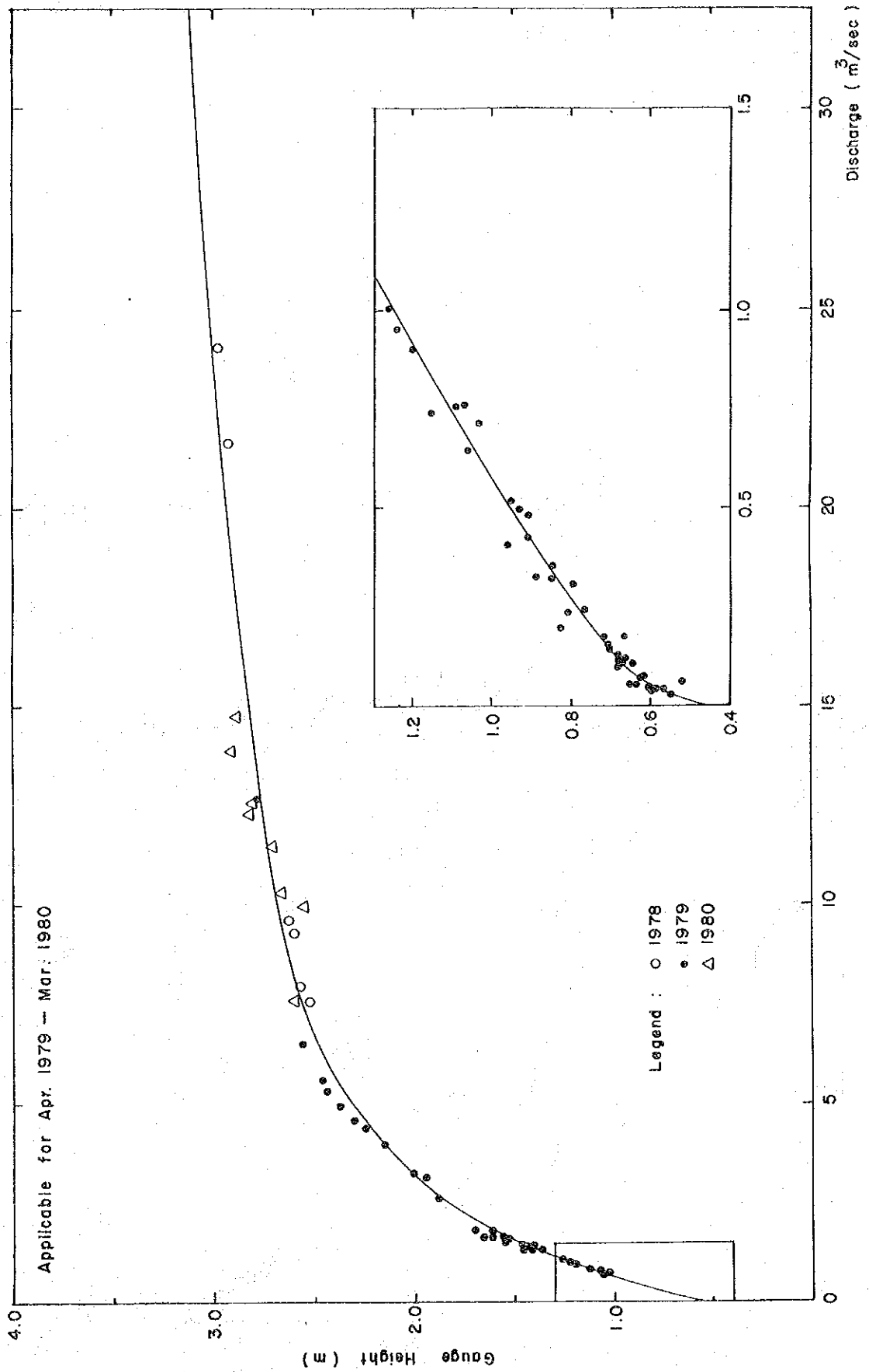


Fig. 15 Stage-Discharge Curve at Ban Pak Phraek (3/5)

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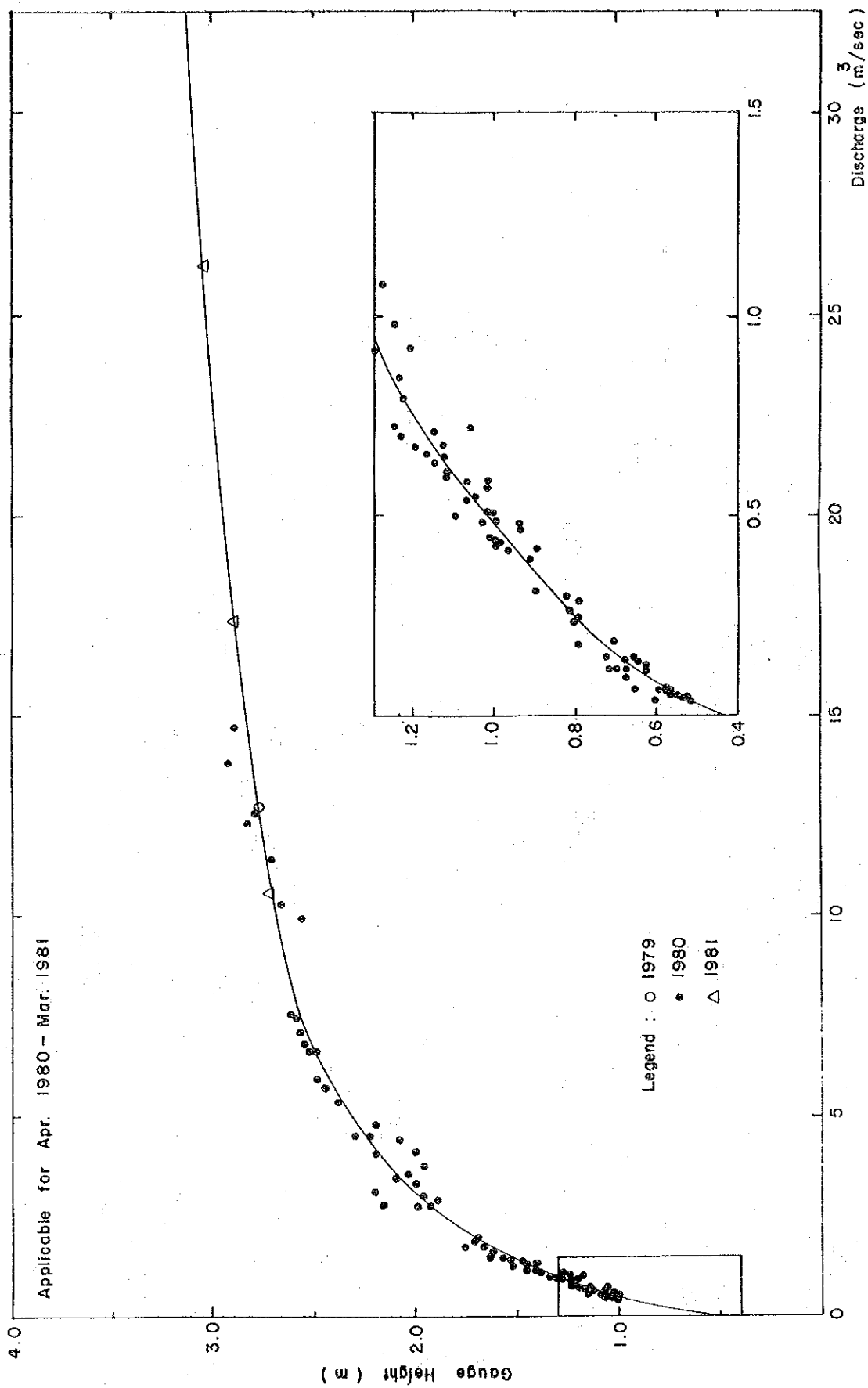


Fig.15 Stage - Discharge Curve at
Ban Pak Phraek (4/5)

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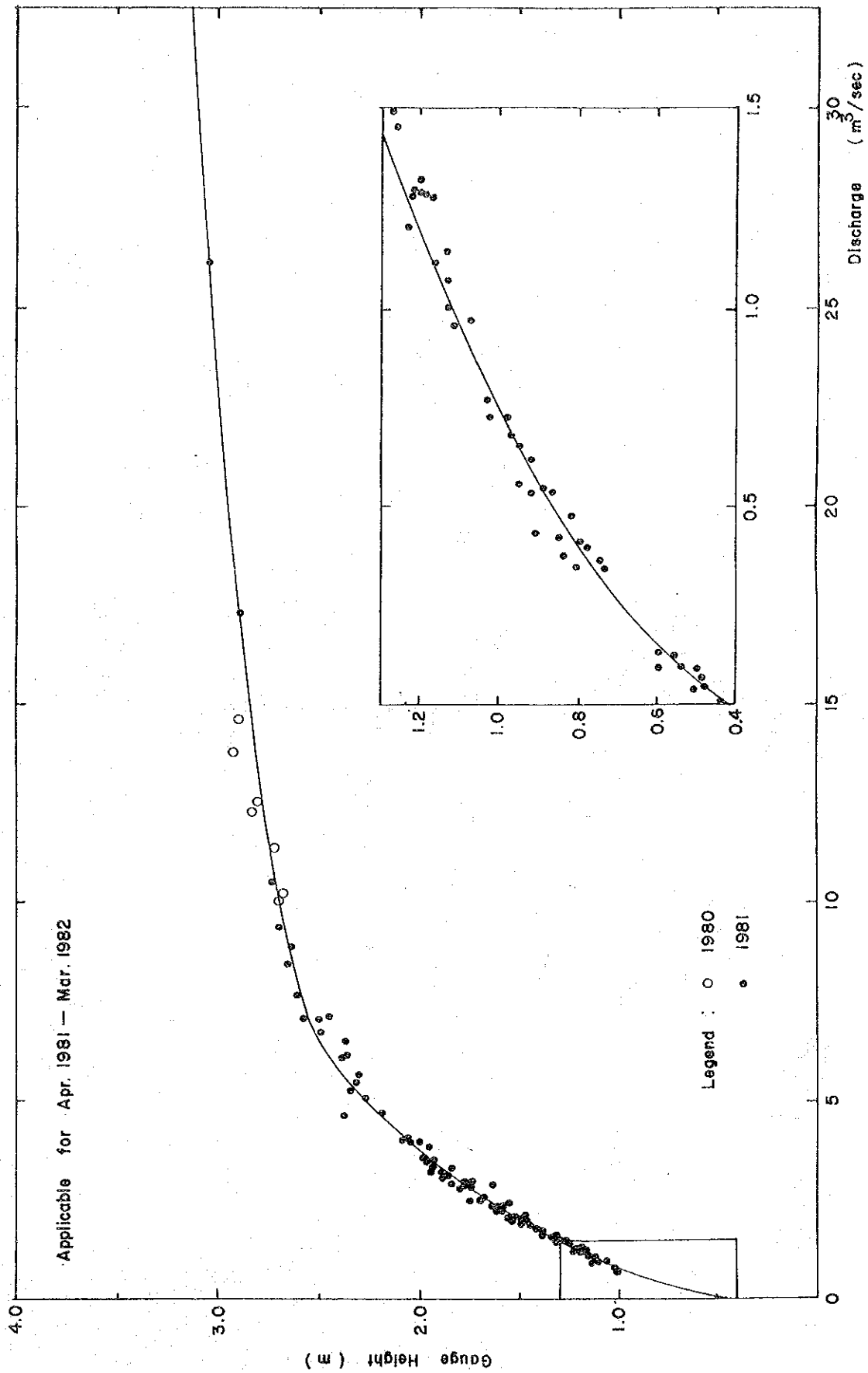


Fig. 15 Stage - Discharge Curve at
Ban Pak Phraek (5/5)

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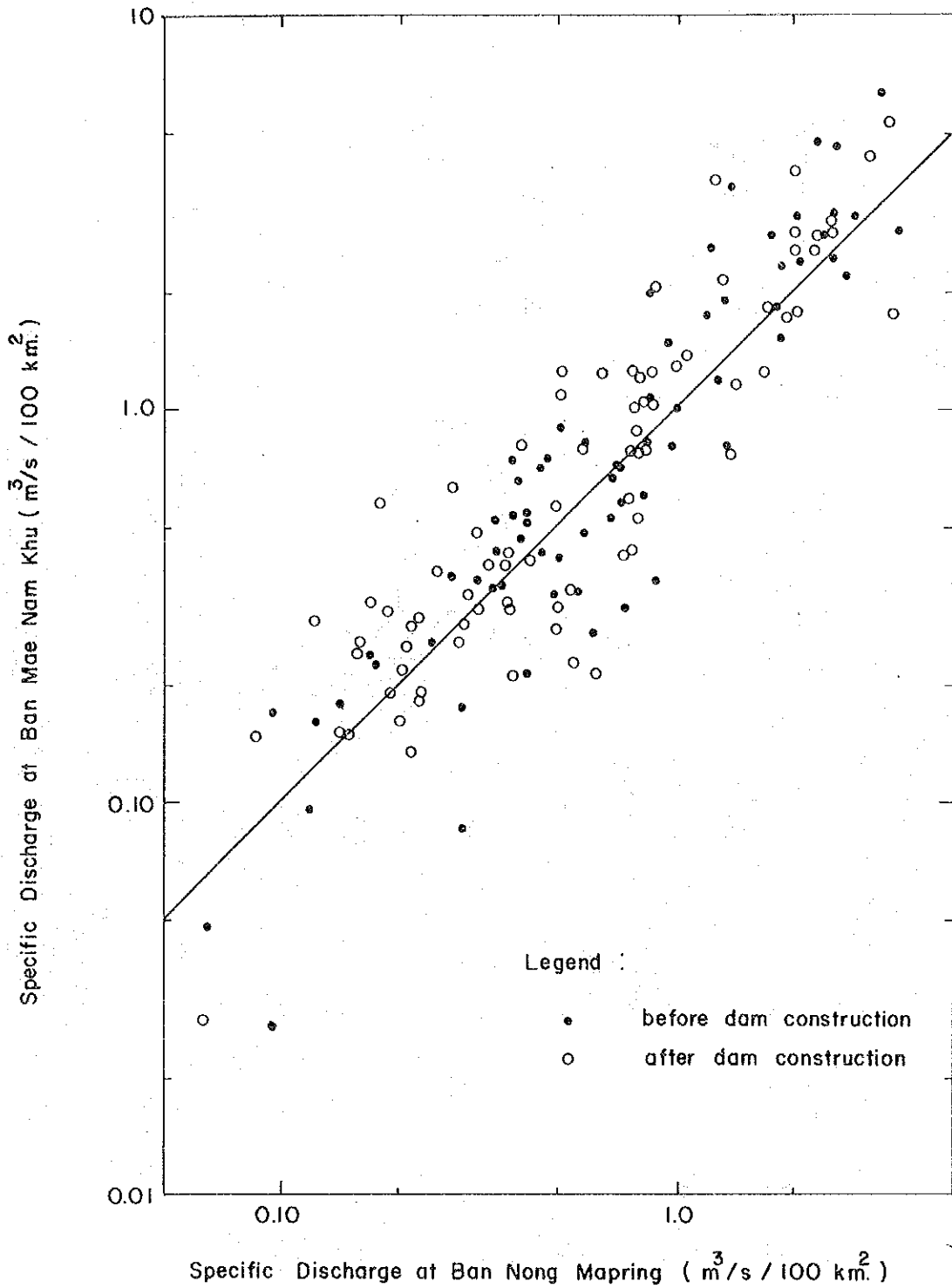


Fig. 16 Monthly Run-off Correlation between Ban Mae Nam Khu and Ban Nong Mapring

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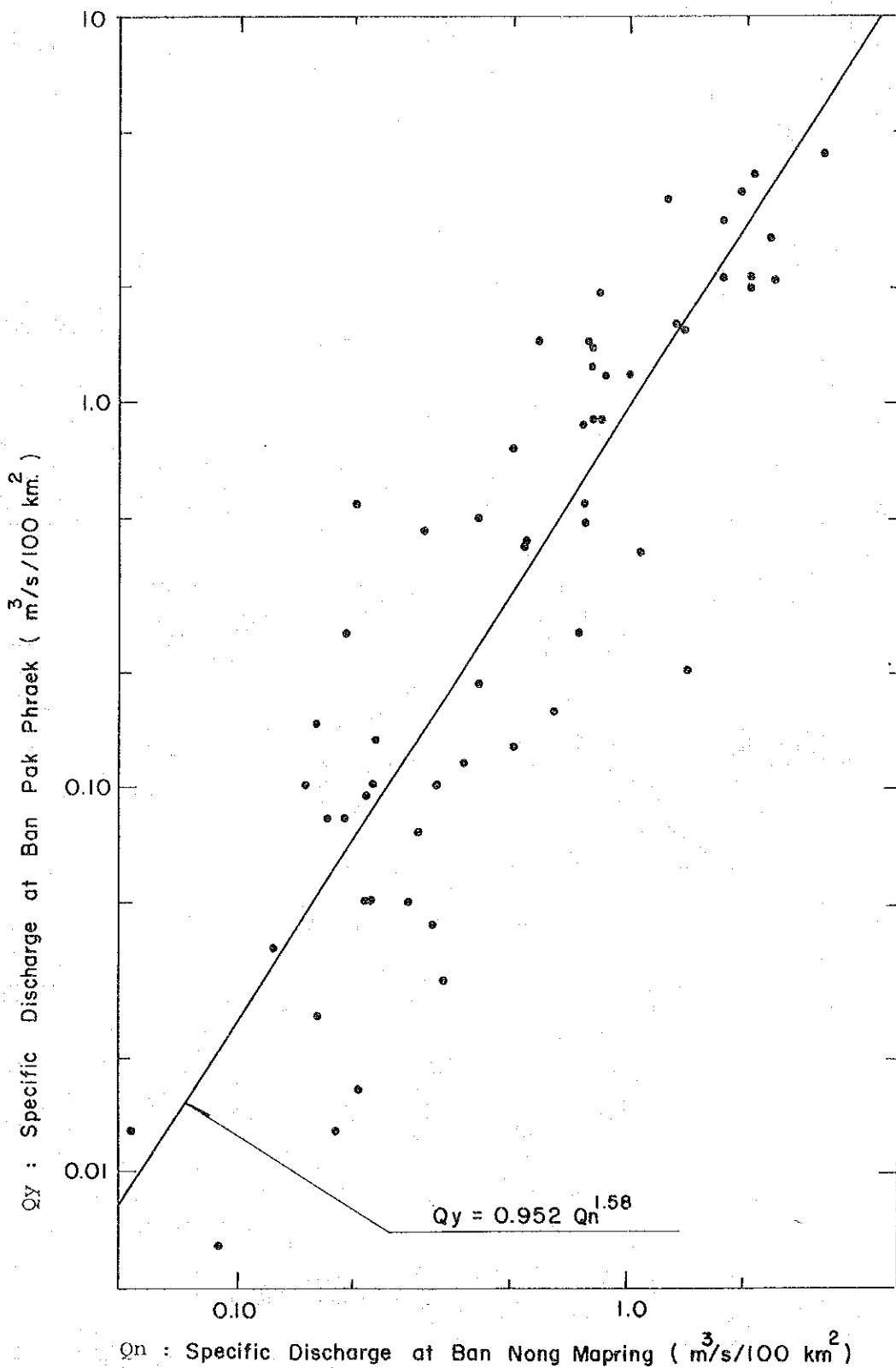


Fig. 17 Monthly Run-off Correlation between Ban Pak Phraek and Ban Nong Mapring

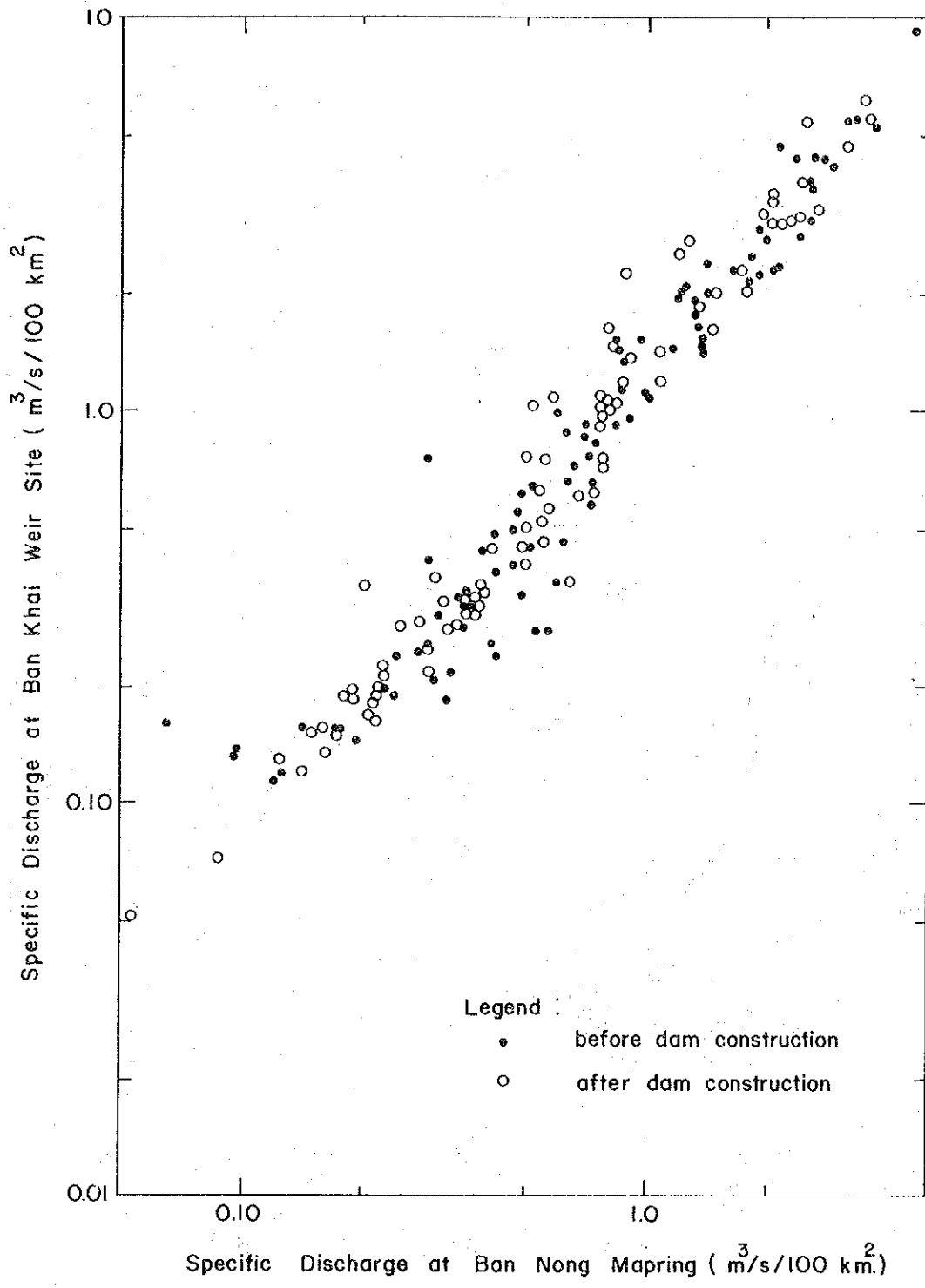


Fig. 18 Monthly Run-off Correlation between Ban Khai and Ban Nong Mapring

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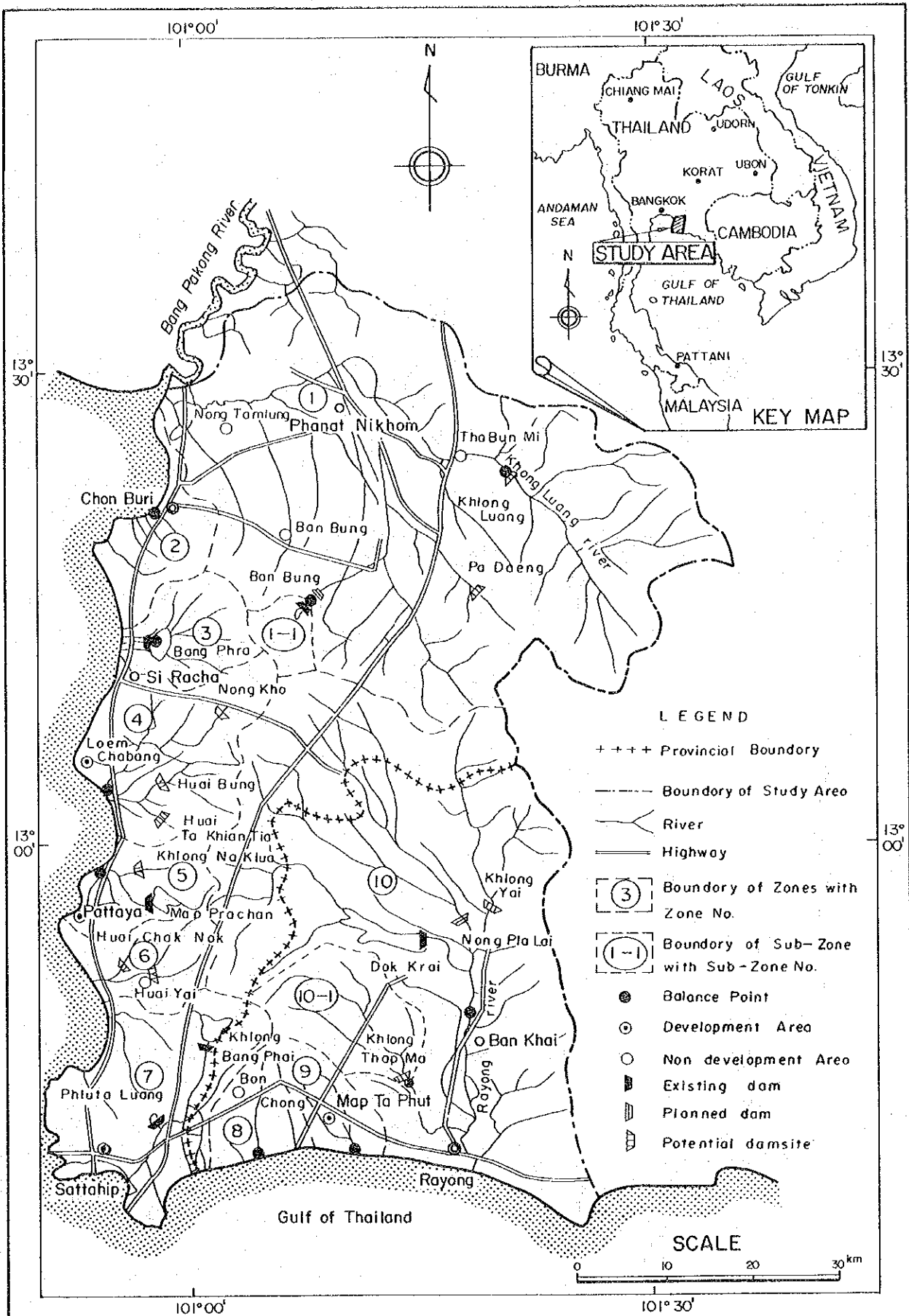


Fig. 19 Zoning of Study Area

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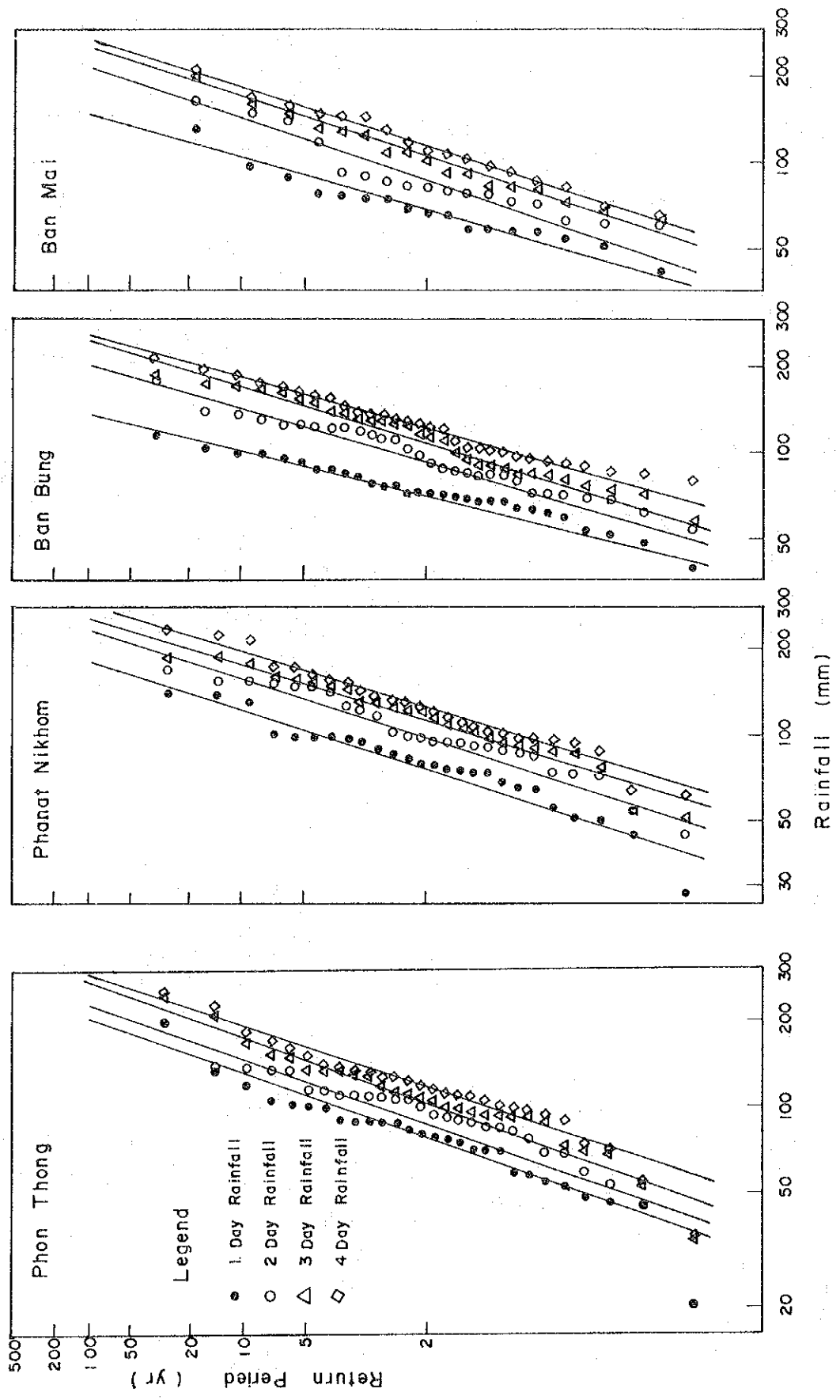


Fig. 20 Probable Rainfall (1/2)

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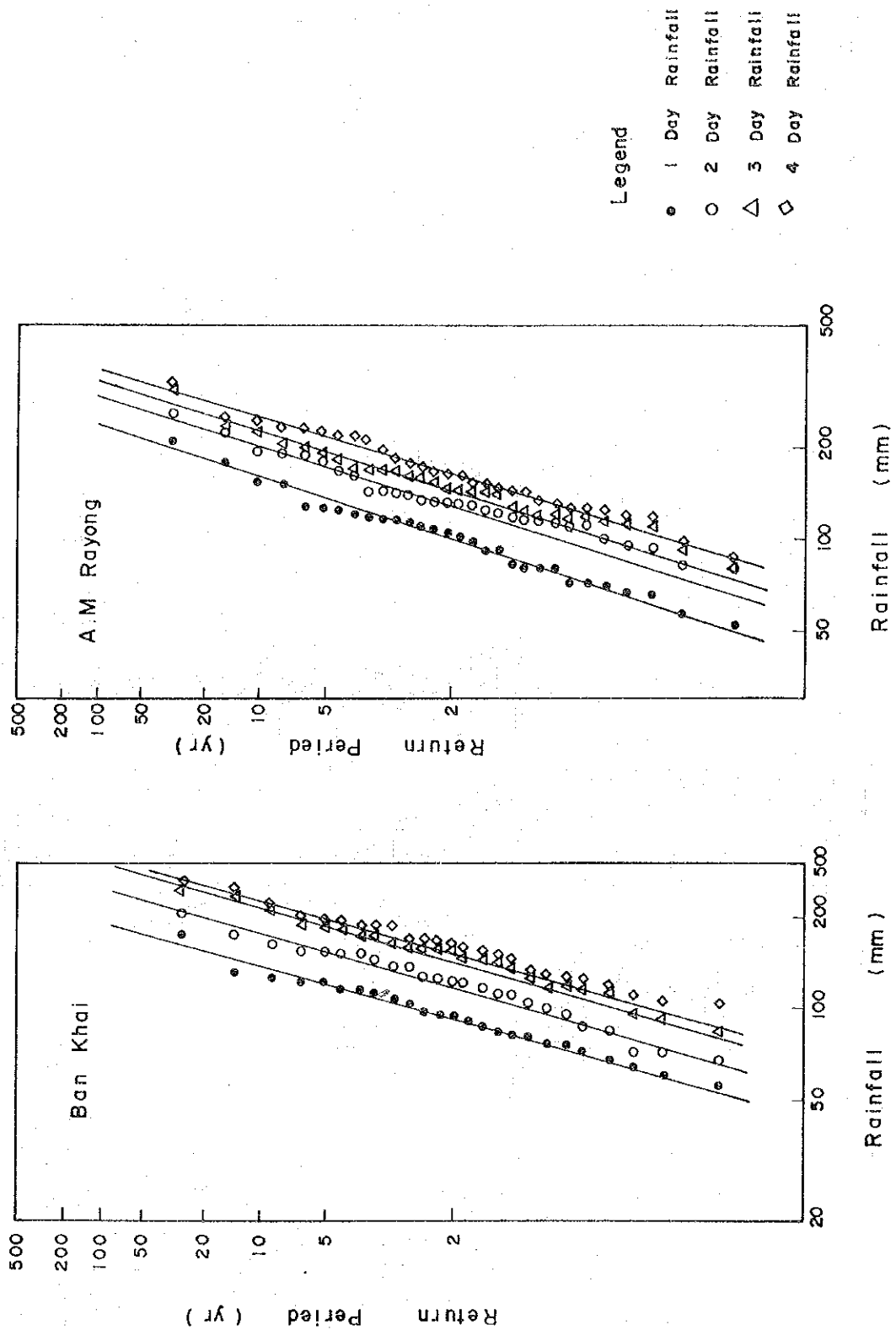


Fig. 20 Probable Rainfall (2/2)

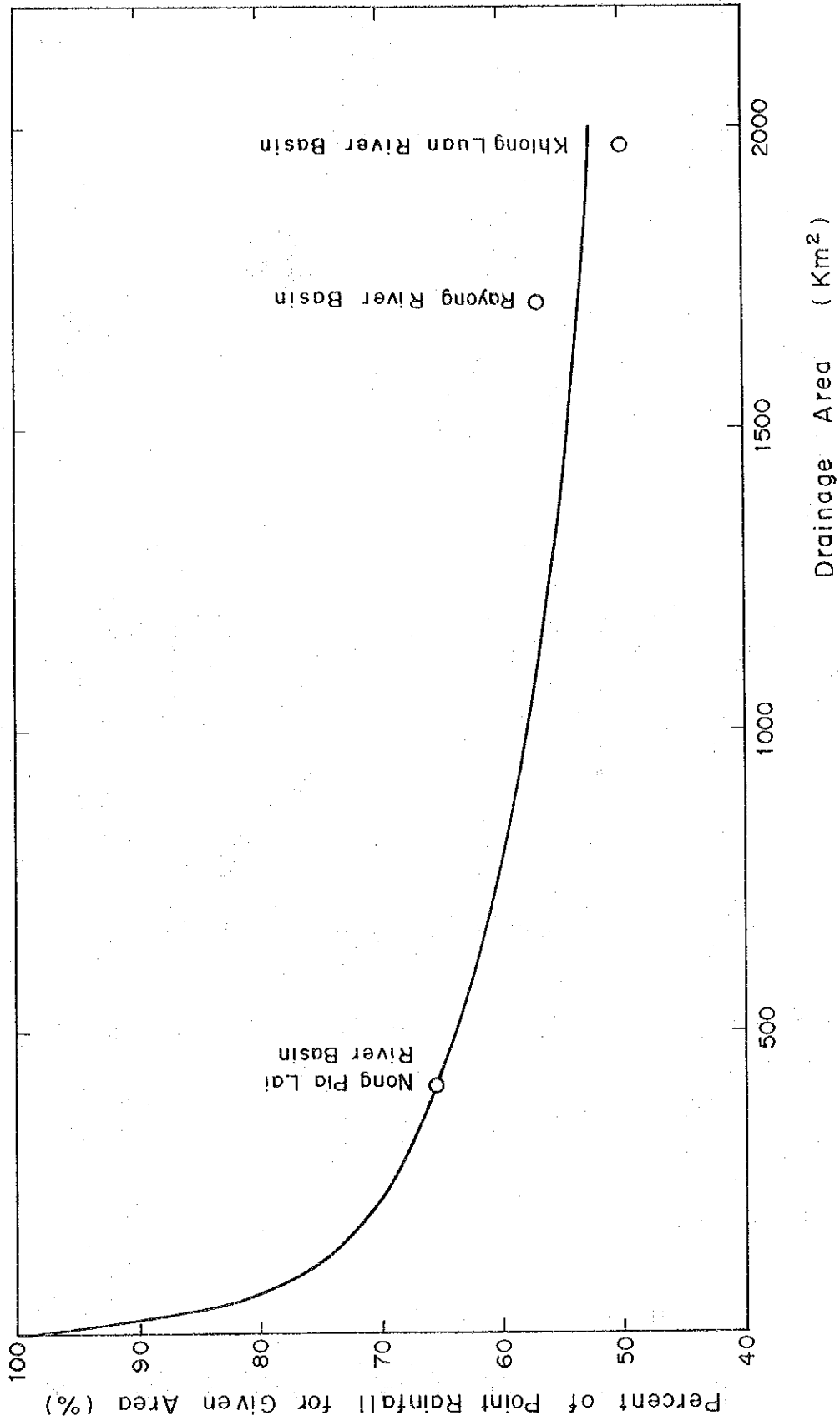


Fig. 21

Area-Depth Curve

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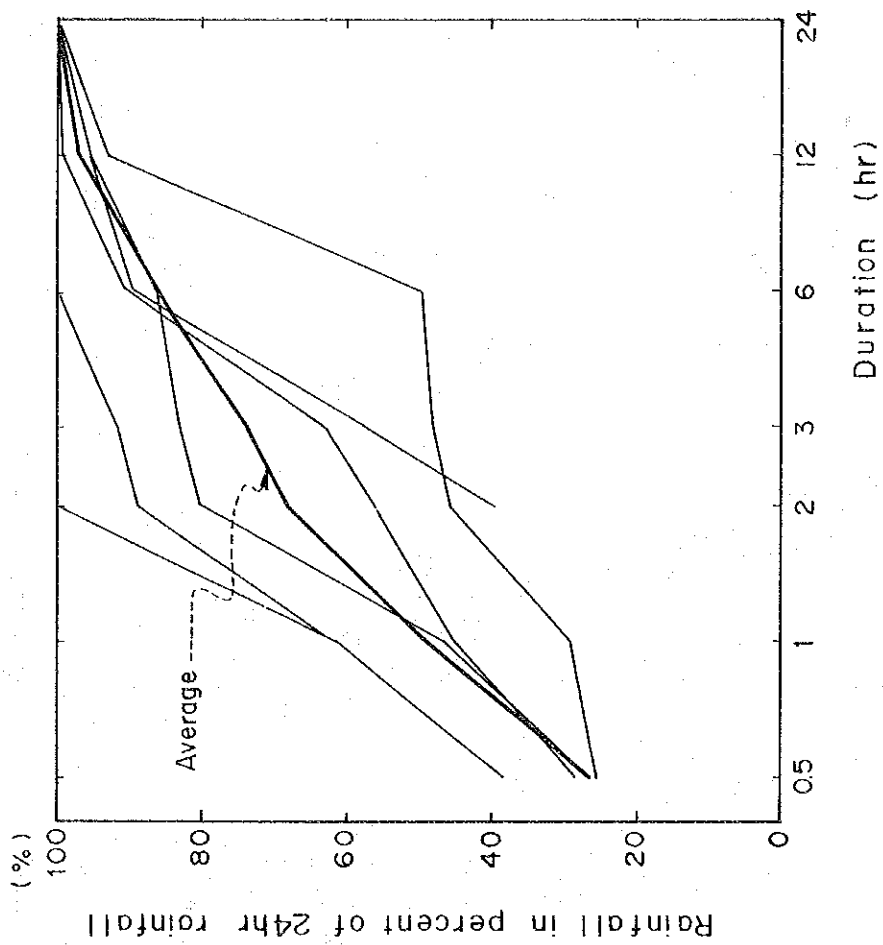


Fig.22 Relationship between Rainfall and Duration at A.M Chon Buri

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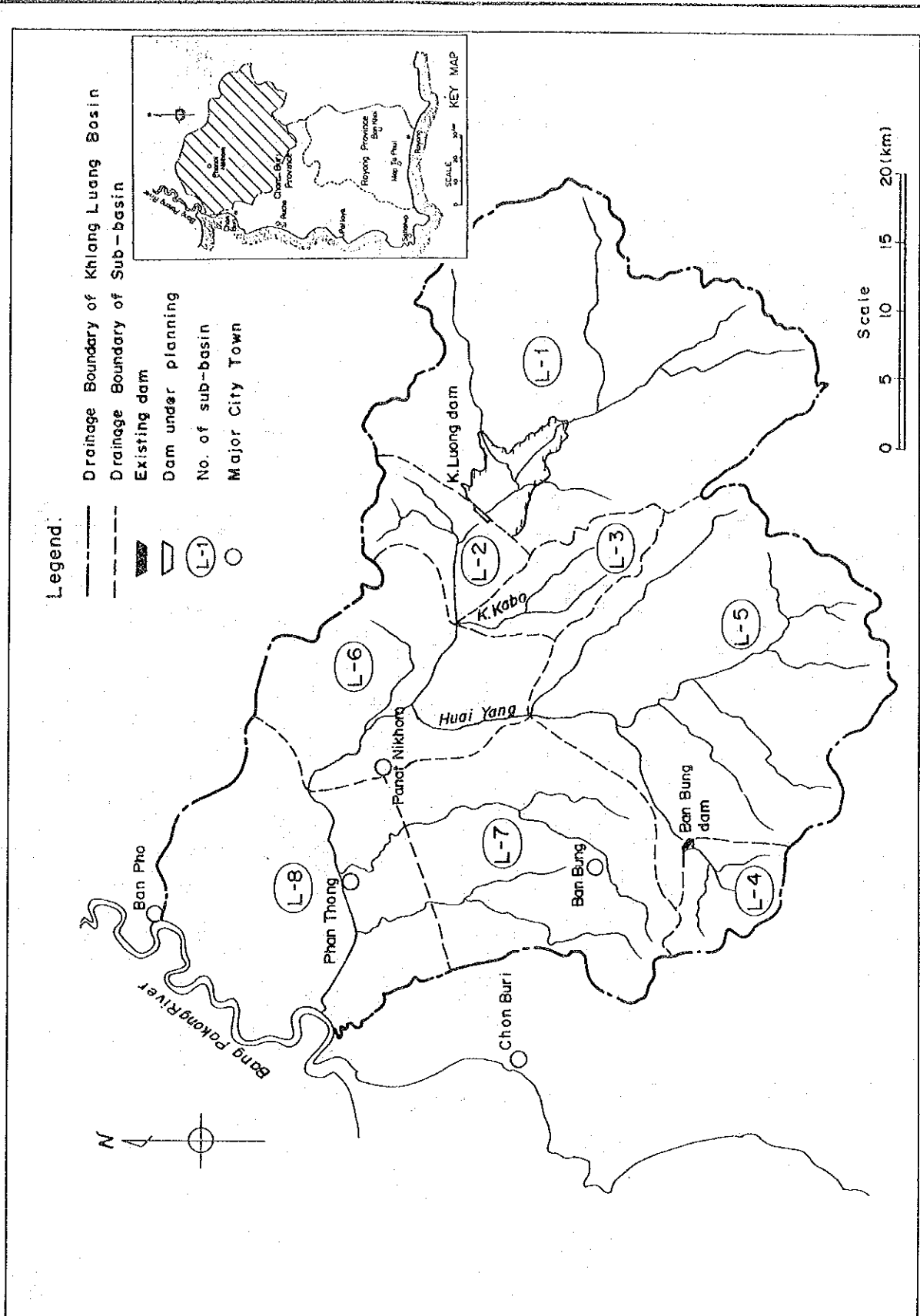


Fig.23 Sub-basins of Khlong Luang River Basin for Runoff Analysis

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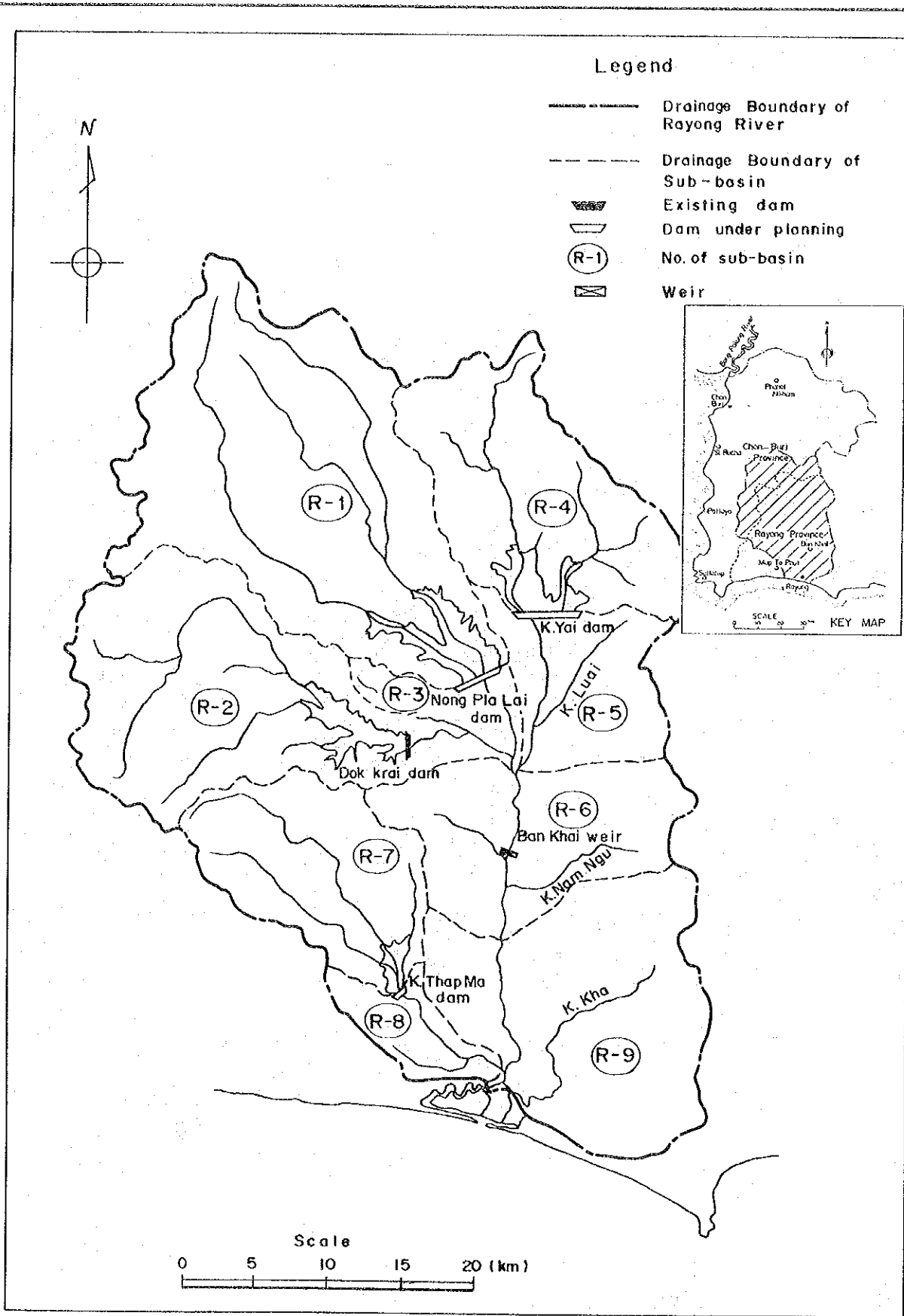


Fig. 24 Sub-basins of Rayong River Basin for Runoff Analysis

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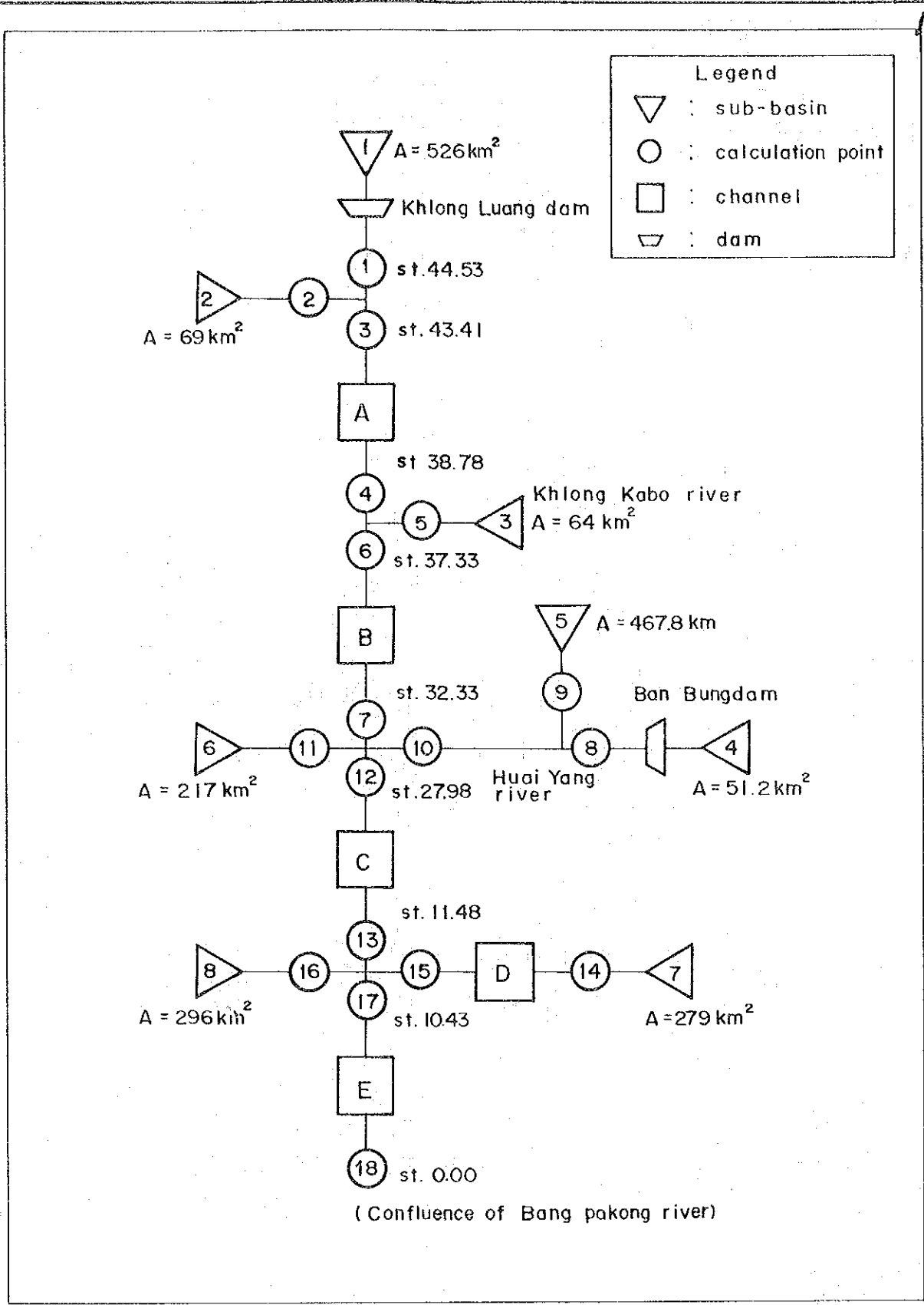


Fig.25 Runoff Calculation Model Diagram Khlong Luang River Basin

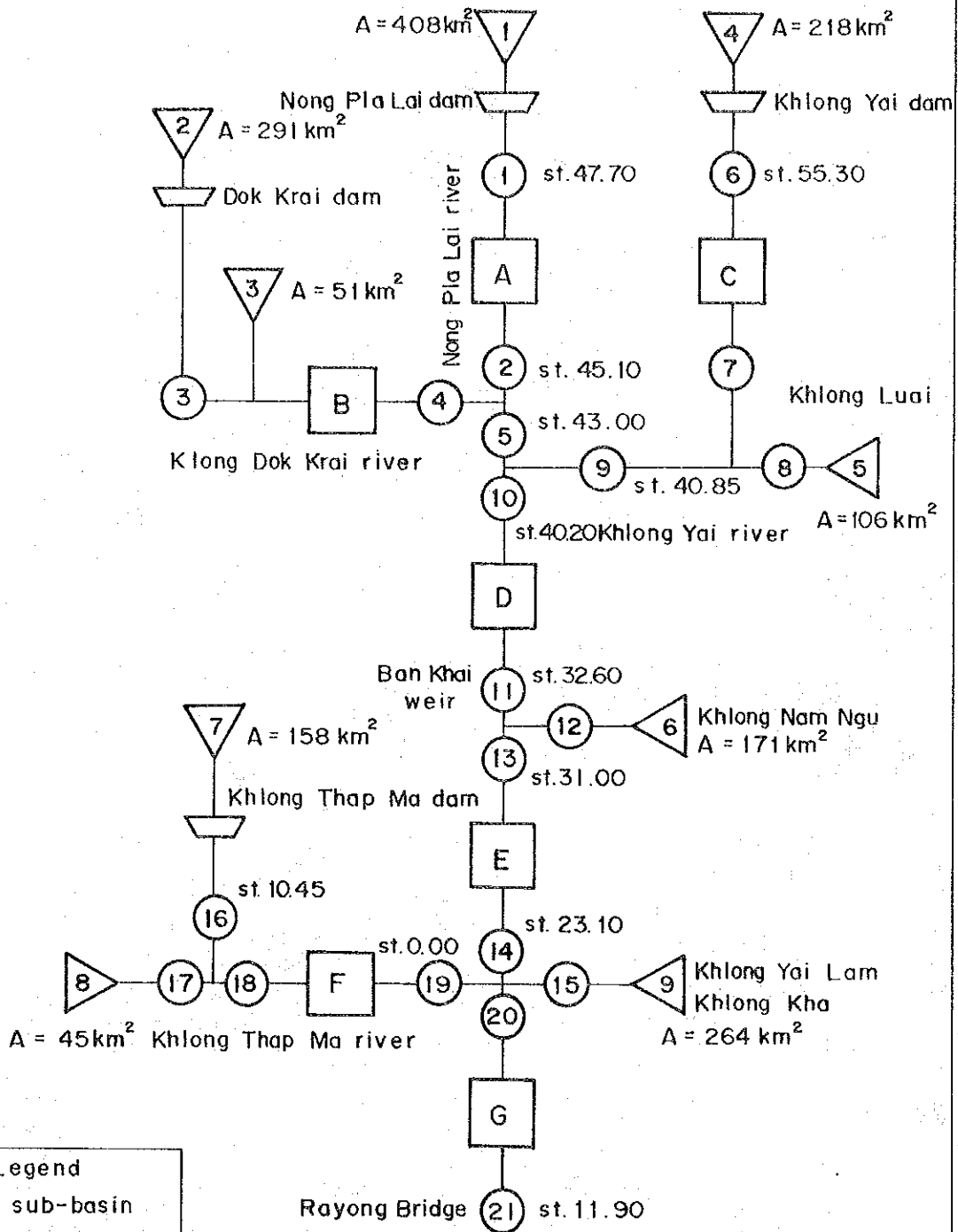


Fig.26 Runoff Calculation Model Diagram, Rayong River Basin

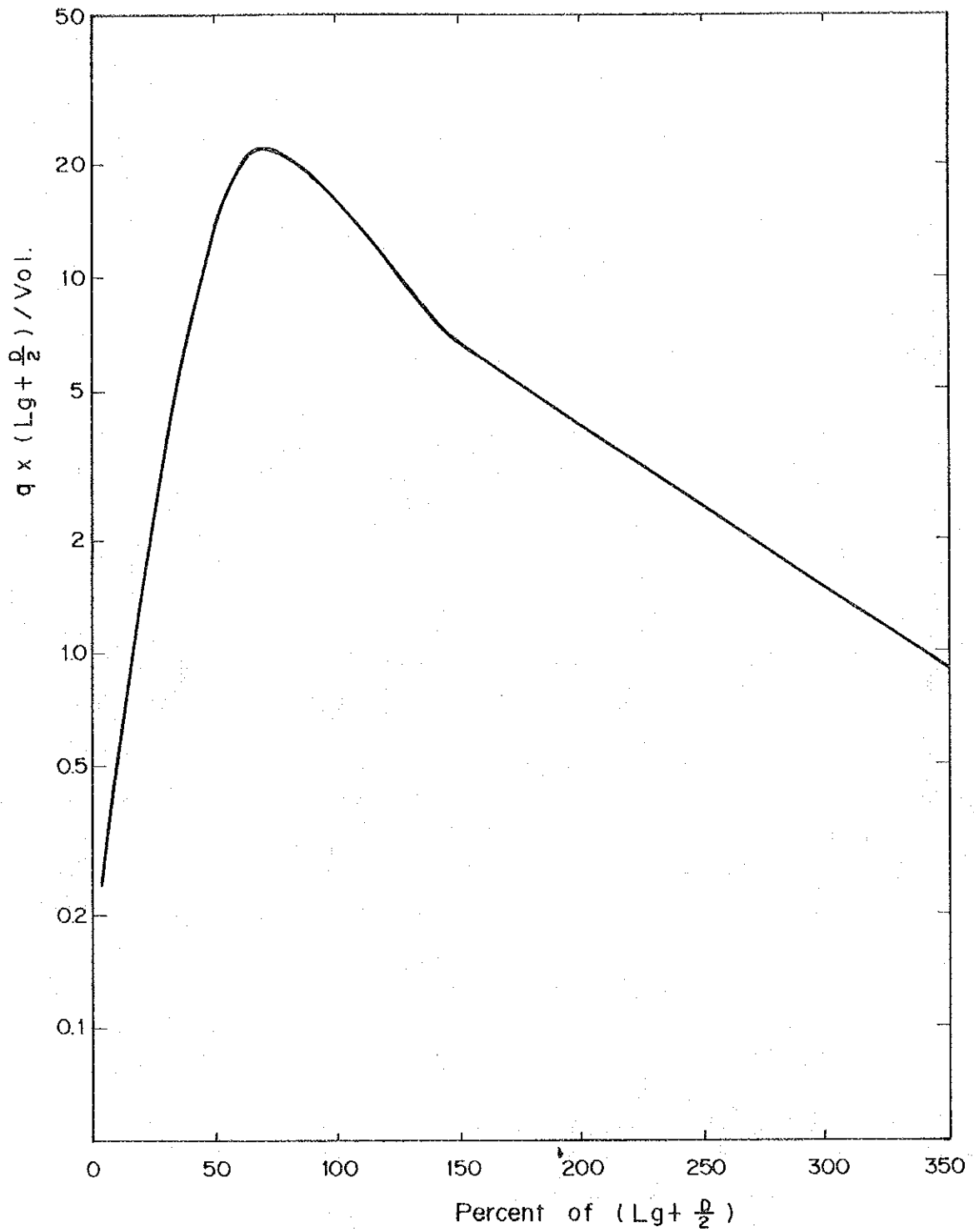


Fig.27 Dimensionless Graph

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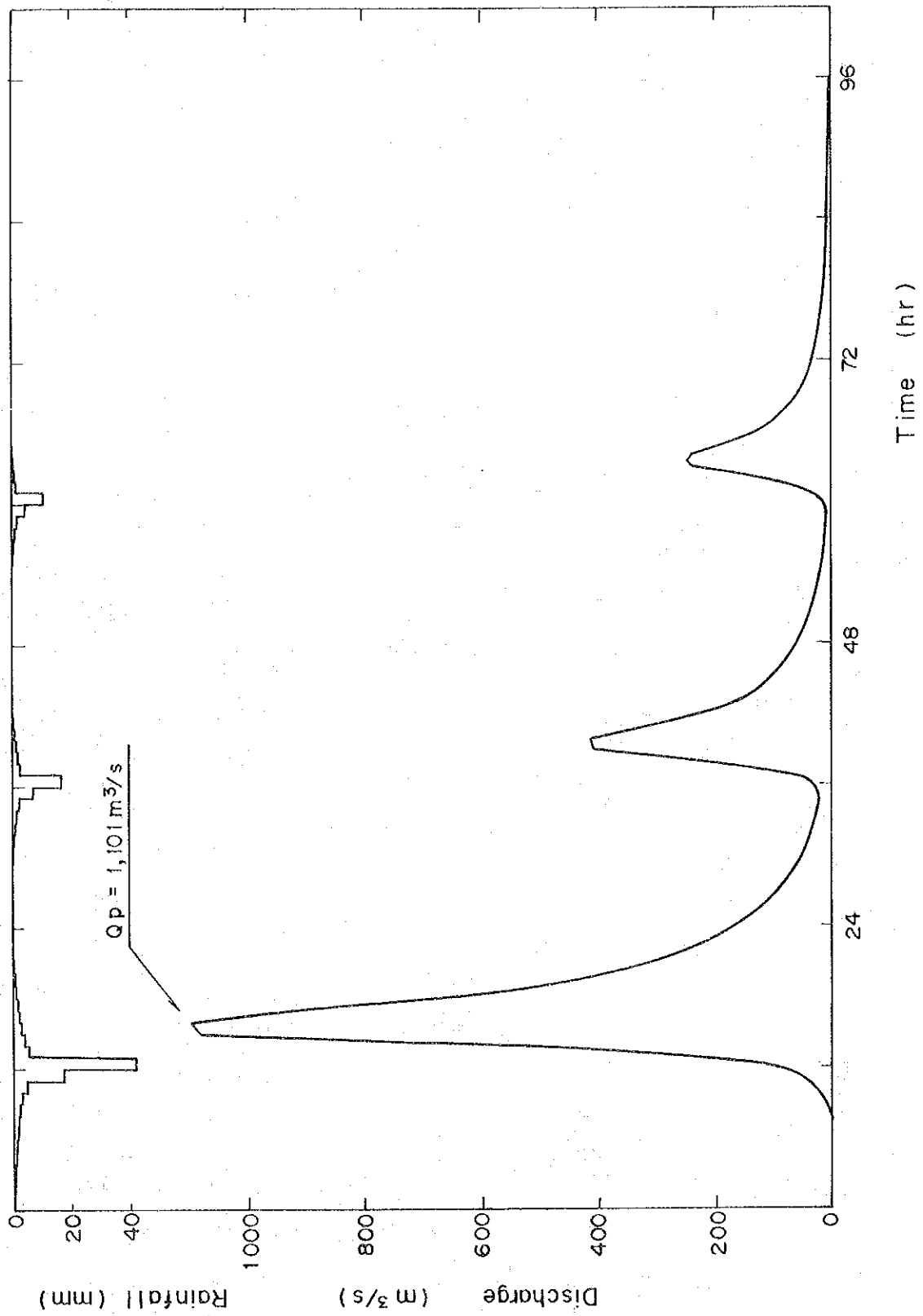


Fig.28 50-year Flood Hydrograph of
Khlong Luang Dam

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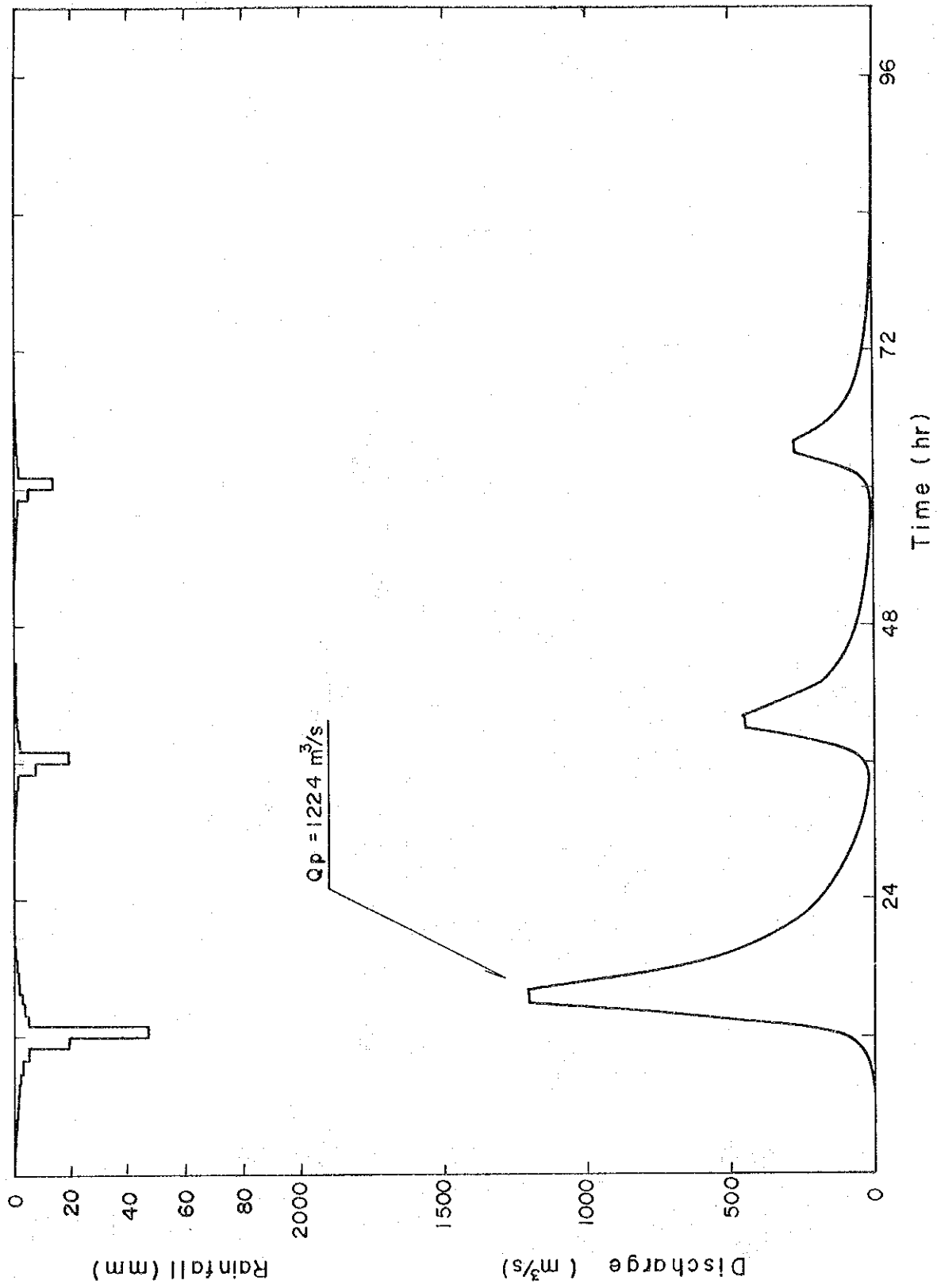


Fig.29 100-year Flood Hydrograph of Khlong Luang Dam

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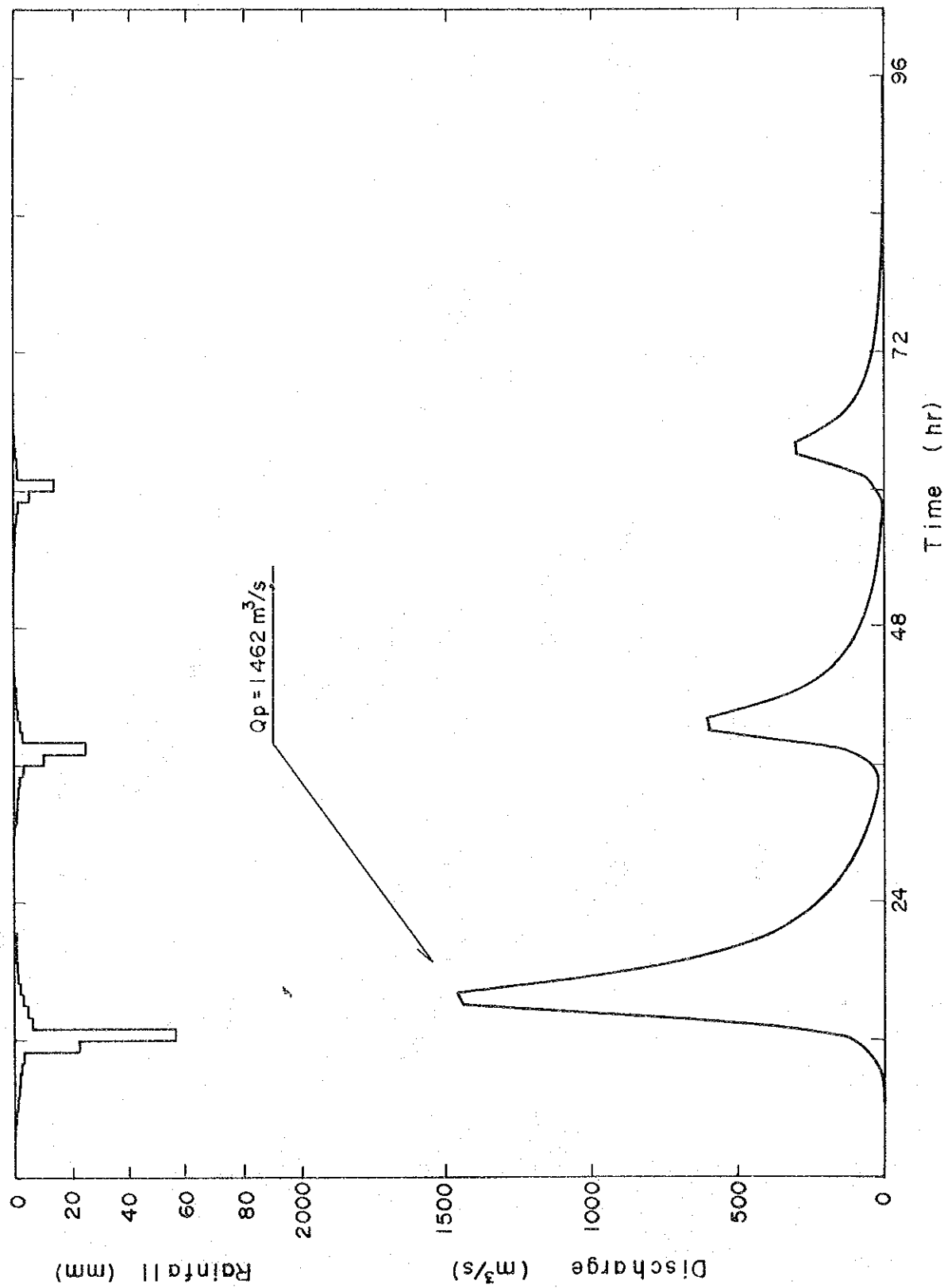


Fig. 30 500-year Flood Hydrograph of Khlong Luang Dam

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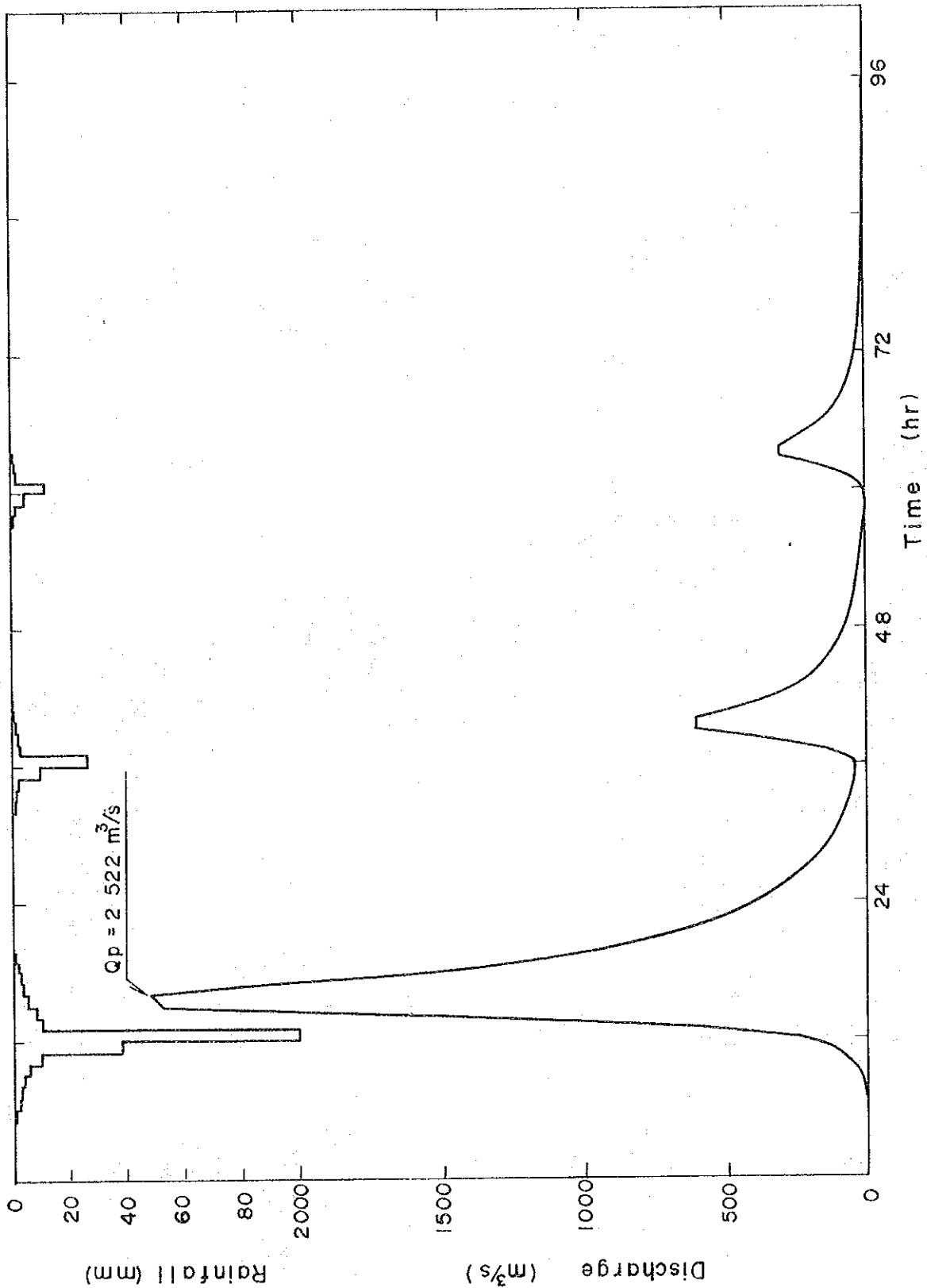


Fig. 31 PMF Hydrograph of Khlong Luang Dam

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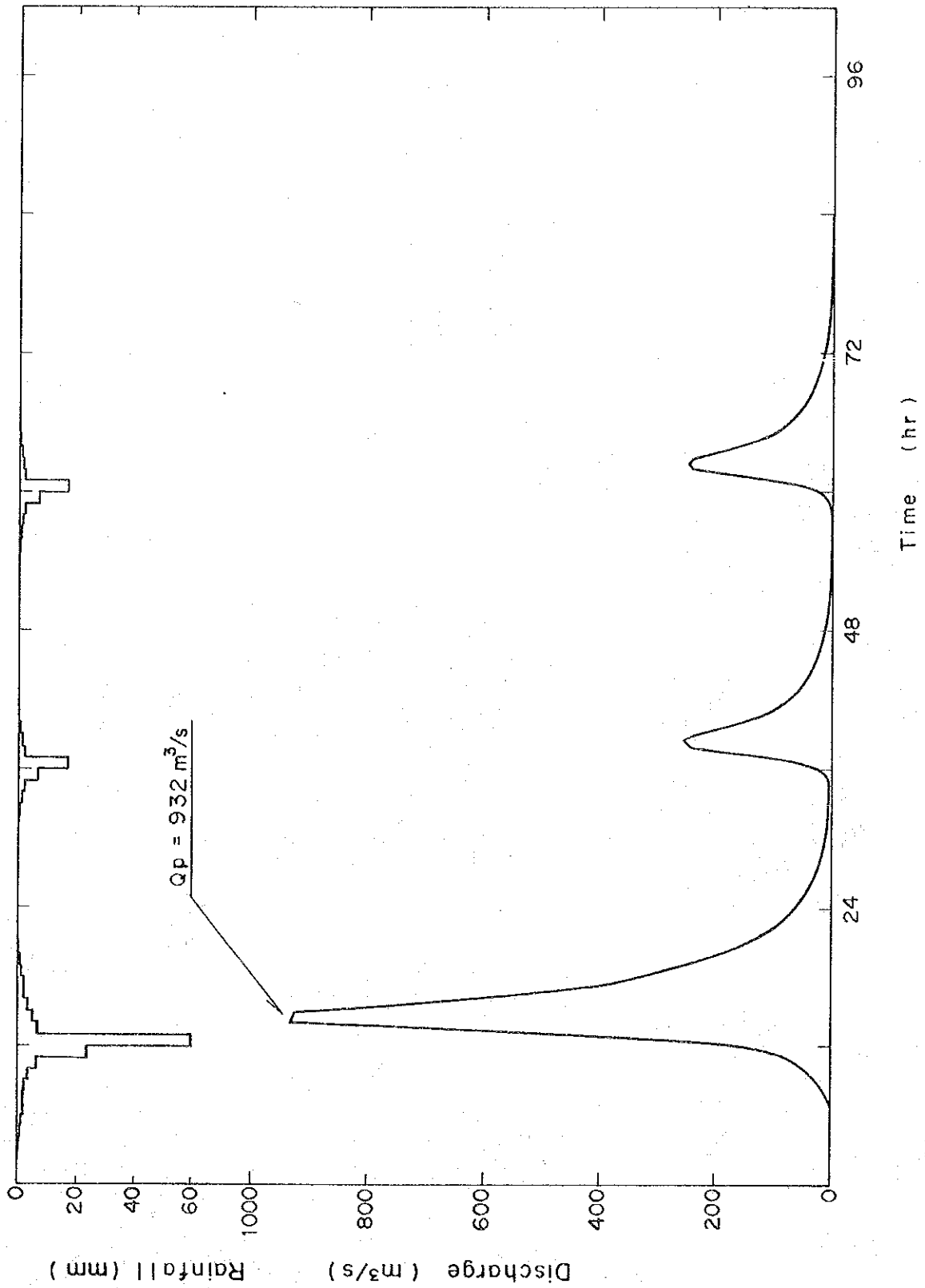


Fig.32 50-year Flood Hydrograph of Khlong Yai Dam

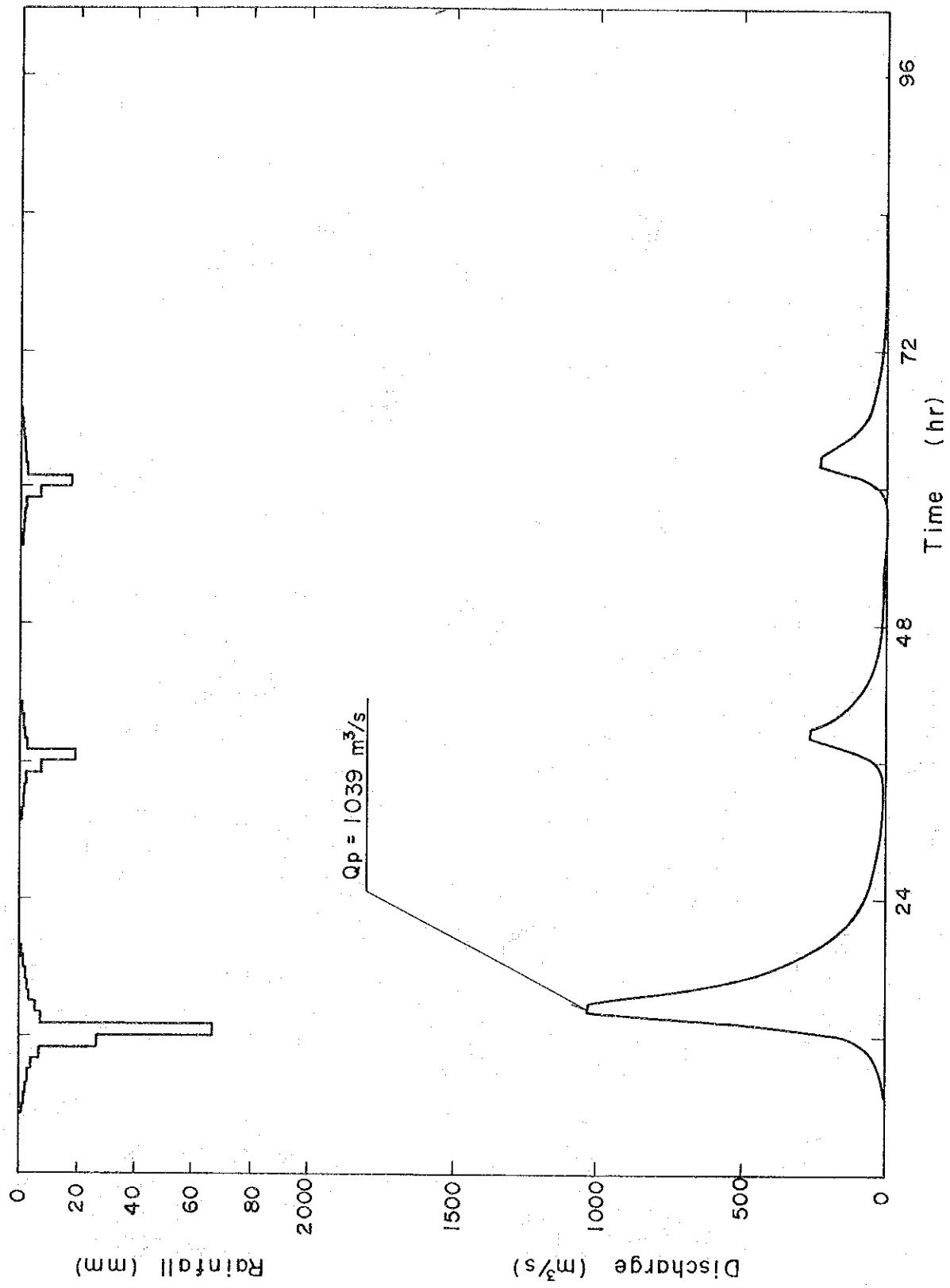


Fig. 33 100-year Flood Hydrograph of Khlong Yai Dam

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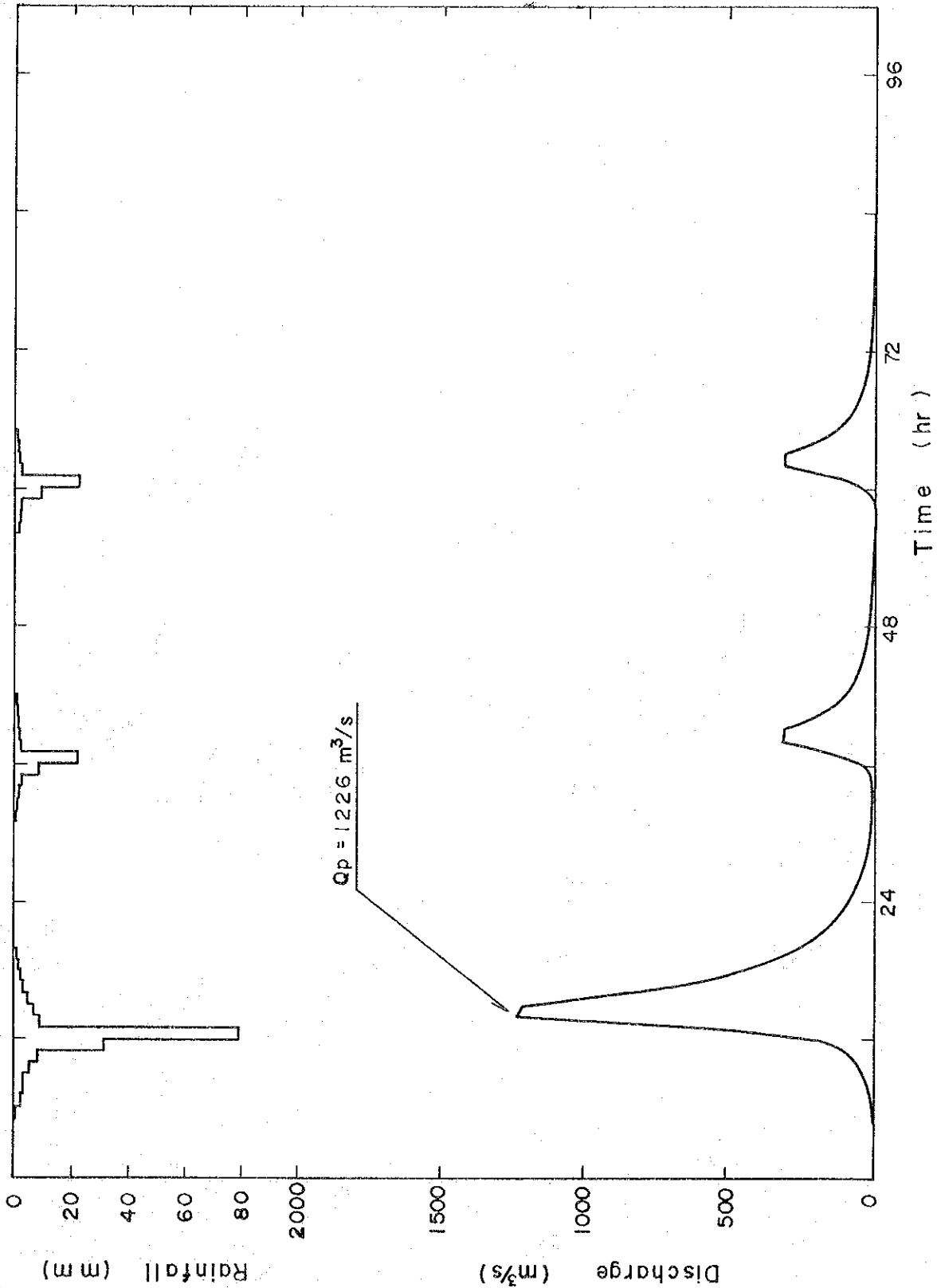


Fig. 34 500 - year Flood Hydrograph of
Khlong Yai Dam

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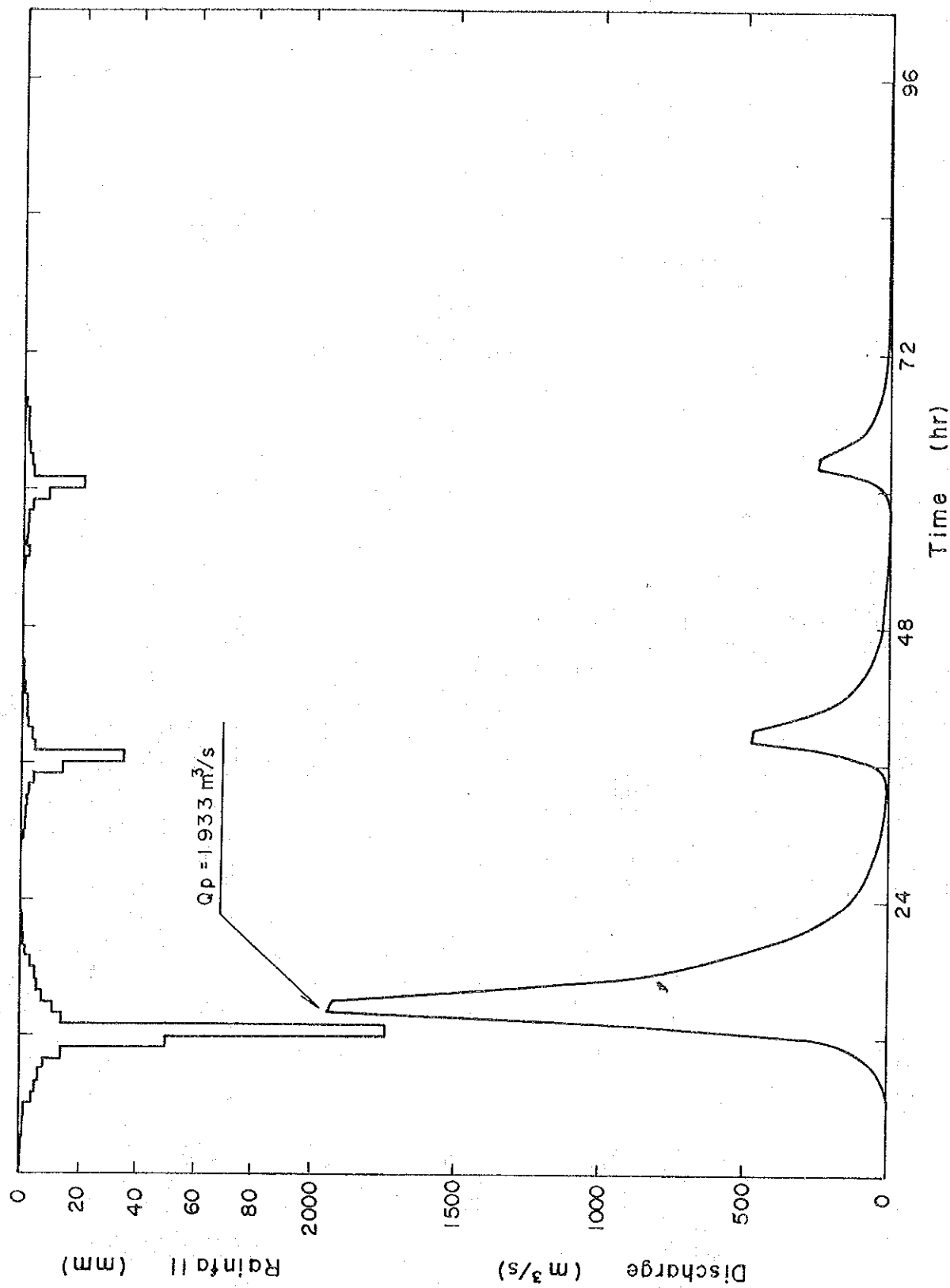


Fig. 35 PMF Hydrograph of Khlong Yai Dam

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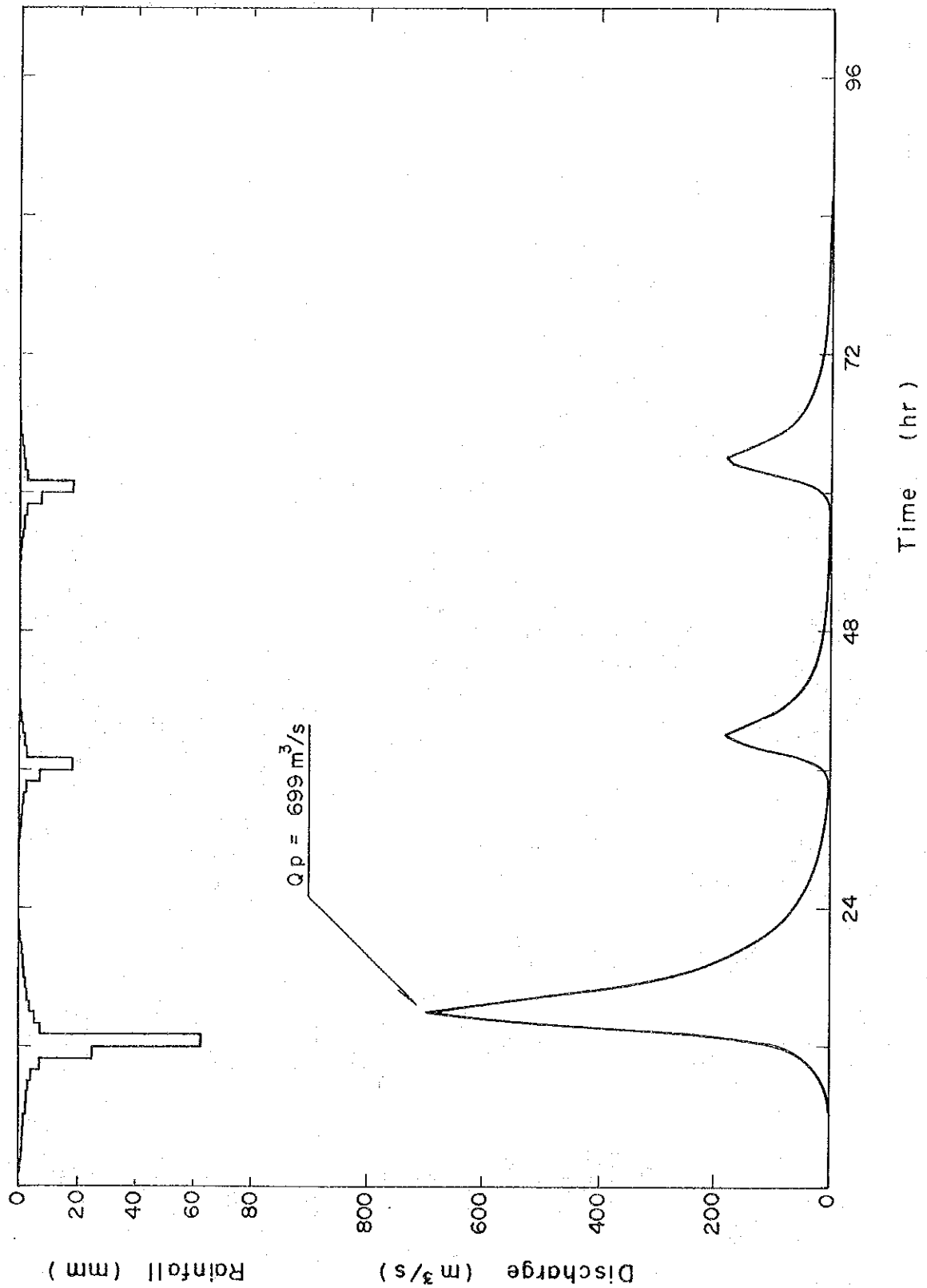


Fig.36 50-year Flood Hydrograph of
Khlong Thap Ma Dam

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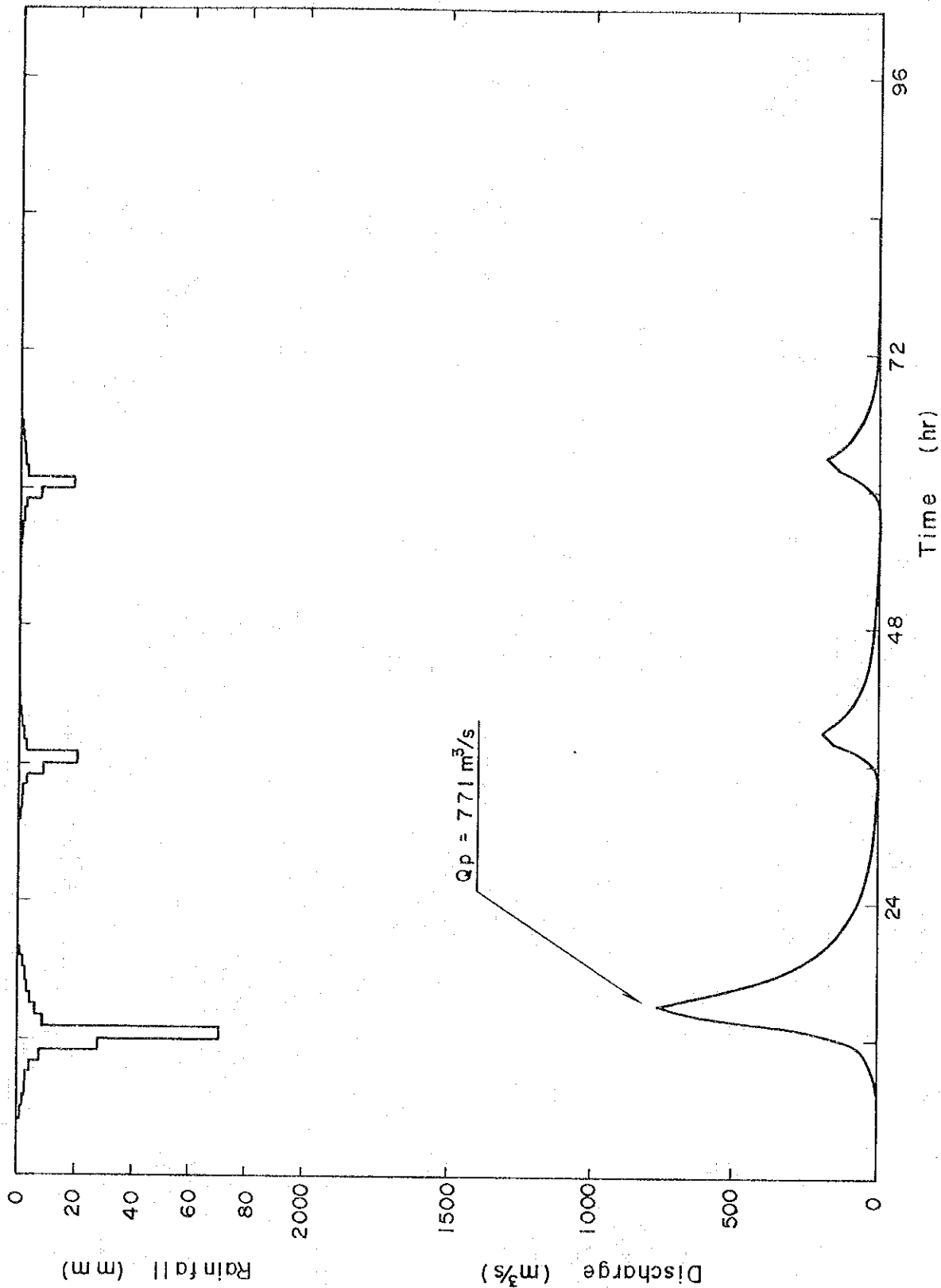


Fig. 37 100 - year Flood Hydrograph of
Khlong Thap Ma Dam

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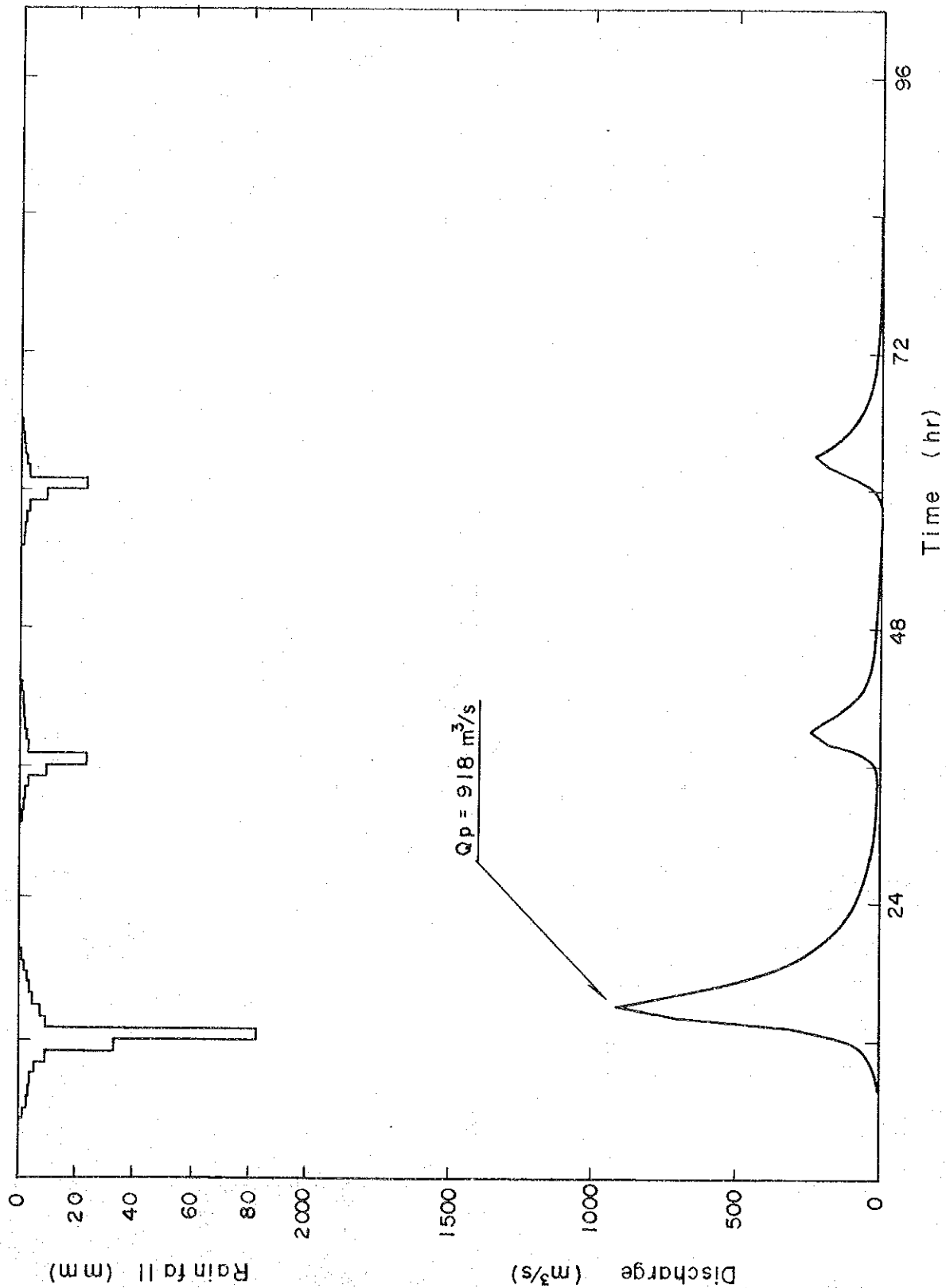


Fig. 38 500-year Flood Hydrograph of Khlong Thap Ma Dam

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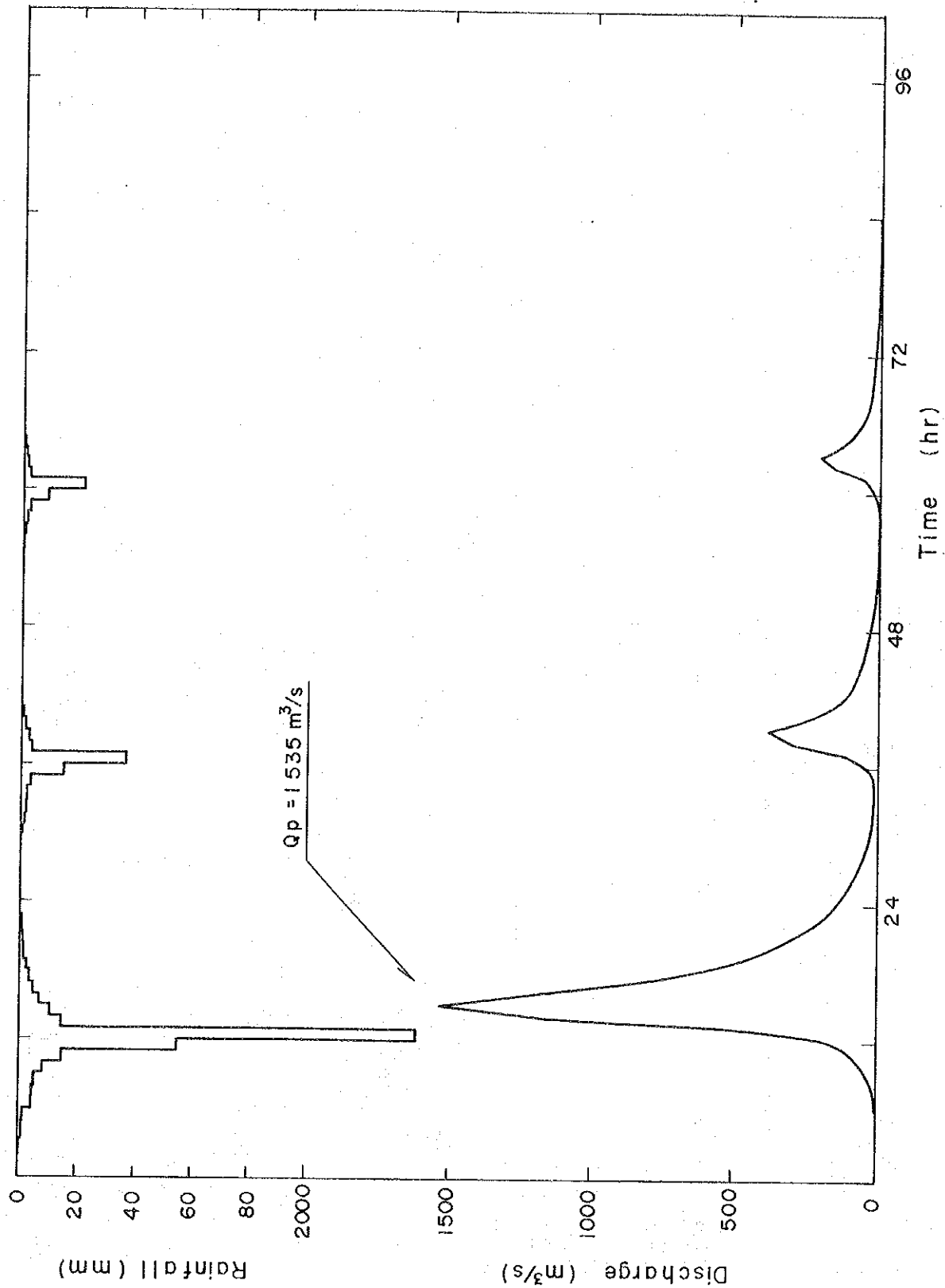


Fig.39 PMF Hydrograph of
Khlong Thap Ma Dam

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SECTORAL REPORT VIII
GEOLOGY

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1. INTRODUCTION

Test drilling, permeability test and standard penetration test (STP) were executed directly by Soil and Geology Division of RID, in compliance with the request made by the Study Team.

The permeability test and STP were, in general, conducted at 3 m intervals and 1 m intervals, respectively. The work quantity is tabulated hereunder.

Locations	Nos. of Borehole (nos.)	Total Drilling Depth (m)	Nos. of Permea. Test (nos.)	Nos. of STP (nos.)
Khlong Luang damsite	3	90.0	30	46
Khlong Yai damsite	3	90.4	30	28
Khlong Thap Ma damsite	3	90.0	31	38
Proposed weir site	2	14.6	-	14
Alternative weir site	2	14.4	-	14
Total	13	299.4	91	140

In addition to the above, geological reconnaissance was made over the proposed reservoir area, damsite and appurtenant structure site and diversion weir site.

The investigation on construction materials such as concrete aggregates, earthfill materials and rock materials was also conducted in parallel with the geological investigation. Major effort was laid on the investigation of the earthfill materials. The outlines of the investigation are as follows.

Proposed Dam	Investigated Borrow Area (location)	Nos. of Test Pitting (nos.)	Nos. of Soil Sample (nos.)
Khlong Luang	5	6	13
Khlong Yai	3	4	14
Khlong Thap Ma	4	5	16
Total	13	15	43

The laboratory test of the soil samples has been carried out in Soil Laboratory of RID and is completed by the end May, 1983.

2. GEOLOGY

2.1 General Geology

2.1.1 Khlong Luang River Basin

Basement rock of the Khlong Luang river basin is pre-Cambrian metamorphic rocks, comprising gneiss, gneissose granites, quartz-mica-schists, phyllites, shales and quartzites. The basement rock is intruded with granite of Carboniferous to Triassic periods.

The metamorphic rocks are developed in the eastern part of the basin and exposed around the uppermost reaches of the river and the eastern watershed. The intrusive granites are located in the western part and crop out in the southern watershed.

Quaternary deposits of terrace and fan, as well as lateritic residual soil, cover the bedrock extensively in the upper half of the basin, while alluvial flood deposits and coastal sand are wide-spread in the lower half of the basin. Geological map over the Study Area is shown in Fig. 1.

Topographic feature is that of peneplain, characterized by mildly undulating hills of low relief and sporadically scattered monadnocks which are relatively outstanding isolated hills as remnants of erosion. The ground height is for the most part lower than El. 100 m.

2.1.2 Rayong River Basin

The Khlong Yai river basin, including the Khlong Thap Ma, a tributary, is situated in the geologic province of the pre-Cambrian metamorphic rocks. Gneiss and gneissose granites are cropped out around the eastern divide of the basin, whereas the Triassic intrusive granites are widely developed on the western side of the basin. Small patches of crystalline schists and phyllites are located in the Khlong Thap Ma valley.

The terrace and colluvial deposits of Quaternary period are wide-spread in the basin, covering the metamorphic bedrocks. The river alluvial deposits and flood deposits cover the central parts of the basin, along the river valley.