REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF
WATER RESOURCES DEVELOPMENT

FEASIBILITY STUDY
ON
THE K.C.C. IRRIGATION DEVELOPMENT PROJECT
(STAGE I)

VOLUME 3
ANNEXES

JULY 1983

JAPAN INTERNATIONAL COOPERATION AGENCY

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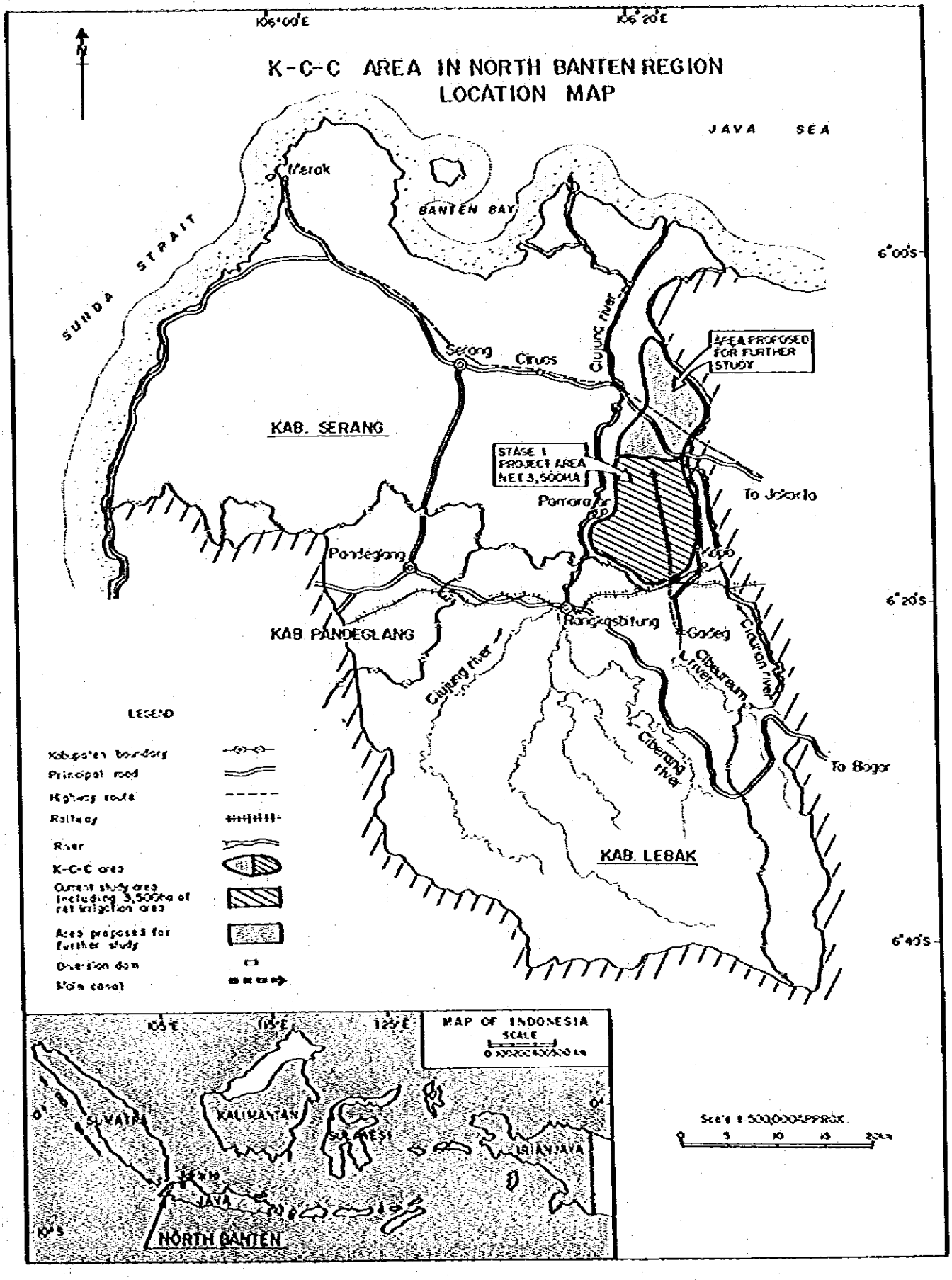
K-C-C AREA IN NORTH BANTEN REGION
LOCATION MAP
N
106°00'E
106°20'E
JAVA SEA
Merak
BANTEN BAY
SUNDA STRAIT
6°00'S
Cilegon
Serang
Ciruas
Ciujung river
AREA PROPOSED FOR FURTHER STUDY
KAB. SERANG
STAGE I PROJECT AREA NET 3,500HA
To Jakarta
Pontang
Pandeglang
6°20'S
Rangkasbitung
Gadog
Ciberang river
Ciberem river
KAB PANDEGLANG
Ciujung river
Ciberang river
To Bogor
KAB. LEBAK
6°40'S
LEGEND
Kabupaten boundary
Principal road
Highway route
Railway
River
K-C-C area
Current study area including 3,500ha of rat irrigation area
Area proposed for further study
Diversion dam
Main canal
MAP OF INDONESIA
SCALE
105°E
115°E
125°E
0°
10°S
SUMATRA
KALIMANTAN
SULAWESI
IRIAN JAYA
JAVA
NORTH BANTEN
Scale 1:500,000 APPROX.
0 5 10 15 20km

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8. Laporan Tahunan Anggaran, P3SA, 1978 - 1980
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ANNEX - I

METEOROLOGY AND HYDROLOGY

1. METEOROLOGY

1.1 General

There exist two (2) meteorological stations and about thirty (30) rainfall gauging stations in and around the study area. The stations listed in Table I-1, Table I-2 and Fig. I-1 are considered to be the ones where the data for the proposed study are available. Serang meteorological station belongs to PMG (Meteorological and Geophysical Center) with data from 1971 and Cikadu meteorological station belongs to P3SA with data from 1978. Rainfall data in these stations are recorded both daily and monthly but some data are missing during 1945 - 50, the latter half of the 1960s and the latter half of the 1970s.

Based on the rainfall data obtainable at the Serang station, the record of rainfall changes during the past 100 years are shown in Table I-4 and Fig. I-2 which indicate a decreasing tendency in mean annual rainfall. For instance, the mean annual rainfall during 1971 - 1980 is about 250mm less than that of 1881 - 1890. It is estimated that the water holding capacity in the river basin is decreasing due mainly to the deterioration of the forest and as a result the maximum flood runoff is growing larger while minimum flood runoff is growing smaller year by year. Under these circumstances, it seems to be safer and more reasonable to undertake study and analysis of the rainfall and runoff data of recent years which include all the complete records.

1.2 Rainfall

1.2.1 Rainfall in North Banten

The rainfall in North Banten region is characterized by its abundance in the mountainous area in the southern part of the region and the comparatively less amount of rain in the coastal area in the northern part of the region. This is similar to the characteristics of rainfall in other part of Java island. The mean annual rainfall

in this region is presented in Fig.I-3. The annual rainfall in the region ranges from 1,500mm - 2,000mm in the coastal area to 2,500mm - 4,000mm in the hilly and mountainous area. Annual rainfall of more than 5,000mm is recorded at Mt. Gede.

1.2.2 Rainfall in Lowland Area

There are both a rainy season and a dry season in the lowland area where rice fields are included as shown in Fig.I-4. The rainy season is from October to April and the dry season from May to September. The rainfall in the study area fluctuates considerably. Seventy (70) percent of the annual rainfall occurs in the wet season and remaining thirty (30) percent in dry season. The rainfall from April to May and from September to October fluctuates year by year.

There are three (3) rainfall gauging stations in the vicinity of the K-C-C area; Parigi (33), Pamarayan (35) and Maja (36a). Among the three stations, Parigi station has been selected as a representative point for calculation of effective rainfall of the Project area for the reason that its location is adjoining the Project area and its annual rainfall is the smallest among these stations.

1.2.3 Rainfall in the Mountainous Area

In the mountainous area with abundant annual rainfall, the period of dry season lasts only for three (3) months during which the rainfall is larger than that of lowland area.

1.3 Effective Rainfall

Effective rainfall at the Project area is shown in Table I-7, which is calculated using the following formula based on the daily rainfall data at Parigi:

$$Re = 0.7 \times R$$

where, Re = effective rainfall

R = rainfall

$5mm \leq R \leq 50mm$

However, Re = 0.8 x R has been adopted for calculation of puddling water requirement.

Supplement of the Missing Rainfall Data

Effective rainfall is calculated on the basis of daily rainfall at Parigi (33) and the missing data is supplemented by the data at Kramatwetan (23c), Pamarayan (35) and Baralaja (25b) which are all situated at almost the same distance from Parigi. Method of calculation is as follows:

1) When the data at each station are almost the same as that of Parigi, the following formula is adopted;

$$RE_P = \Sigma(RE_{Pa} + RE_B + RE_K)/3 \times \tilde{R}/R_P$$

2) When the data at each station are different from one another, RE at the nearest point from Parigi was calculated and multiplied by the monthly rainfall ratio;

$$RE_P = RE' \times R'/R_P$$

3) When the data of two stations are almost the same and also are approximately the same with that of Parigi, formula 1) above is applied for the said data of the two stations.

In which,

RE_P: Effective rainfall of Parigi (mm/10 days)
RE_{Pa}: " " at Pamarayan (")
RE_B: " " at Baralaja (")
PE_K: " " at Krawatwetan (")
$\tilde{R}$: Average rainfall (mm/month)
R_P: Rainfall at Parigi (")
RE': Effective Rainfall at approximate value point (mm/10days)
R': Rainfall at " " (mm/month)

1.4 Climate

Climatological monthly data at Serang and Cikadu are presented in tables I-9 to I-13, and the mean value is shown in the following Table A-1.

Table A-1 Meteorological Data

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Temperature (°C)	26.3	26.5	27.3	26.0	26.0	26.5	25.5	25.5	25.8	26.3	26.5	26.0
	26.3	26.7	26.6	27.0	27.1	26.6	26.4	26.6	26.8	27.2	27.1	26.6
Humidity (%)	87	84	86	84	83	79	79	83	83	82	84	85
	84	82	84	82	81	80	80	78	77	77	78	82
Sunshine (hr/8)	2.7	4.1	4.7	5.3	5.9	5.9	6.3	6.4	5.2	4.6	4.5	3.6
	3.1	3.3	3.8	4.0	4.2	4.4	5.2	5.3	5.2	4.4	4.0	3.0
Wind speed (km/d)	79.2	74.4	74.4	57.6	55.2	52.8	55.2	62.4	64.8	62.4	79.2	79.2
	158.6	177.5	158.6	145.9	158.6	158.6	155.5	172.0	166.5	148.0	155.5	184.0
Wind Direction	-	-	-	-	-	-	-	-	-	-	-	-
	N	W	W/N	N	N	N	N	N	N	N	N	W
Pan-Evaporation	2.6	3.9	3.8	4.1	4.4	4.5	4.5	4.7	4.2	4.2	4.3	3.4
	-	-	-	-	-	-	-	-	-	-	-	-

Notes: Upper figure: Cikadu (1978 - 1981)
Lower figure: Serang (1971 - 1979)
Wind Speed: at 10m above the ground

2. HYDROLOGY

2.1 Cibeureum River

The Cibeureum river originates from Mt. Gede (1,050m above sea level), about 80km south of the Java sea, collects water and flows toward the northwest. Gathering water from the northern foot-hill of the mountain, the Cibeureum shifts its general course toward the north at a point of about 20km from its origin before reaching Gadeg, the proposed intake dam site. The catchment area up to this point is estimated to be 117km^2 and the Cibeureum drains about 272x10^{6}m^3 of water annually at the proposed intake dam site. The river continues flowing northward from the dam site, joining the Cidurian river near the cross point with the national road connecting Jakarta to Merak, and emptying its water into the Java Sea.

2.2 Observation

Water level records at Gadeg site on the Cibeureum river are available for about 2 years but it cannot be used because some data are missing. Accordingly, the estimation of the discharge of Cibeureum river at Gadeg will be made using the discharge data of the Cidurian river at Kopomaja station, one of the hydrological gauging stations listed in Table I-3 and Fig.I-1. The reasons: 1) the shape of catchment is similar, 2) the area of the river basin for Kopomaja station is closer to that of Gadeg in comparison with that of other stations, 3) characteristics of rainfall are almost the same at both sites, and 4) data for about 10 years are available.

Rating Curve

Rating Curve at Kopomaja point is shown in Fig. I-6, from which a table of water level-discharge is prepared for the conversion from water level to discharge.

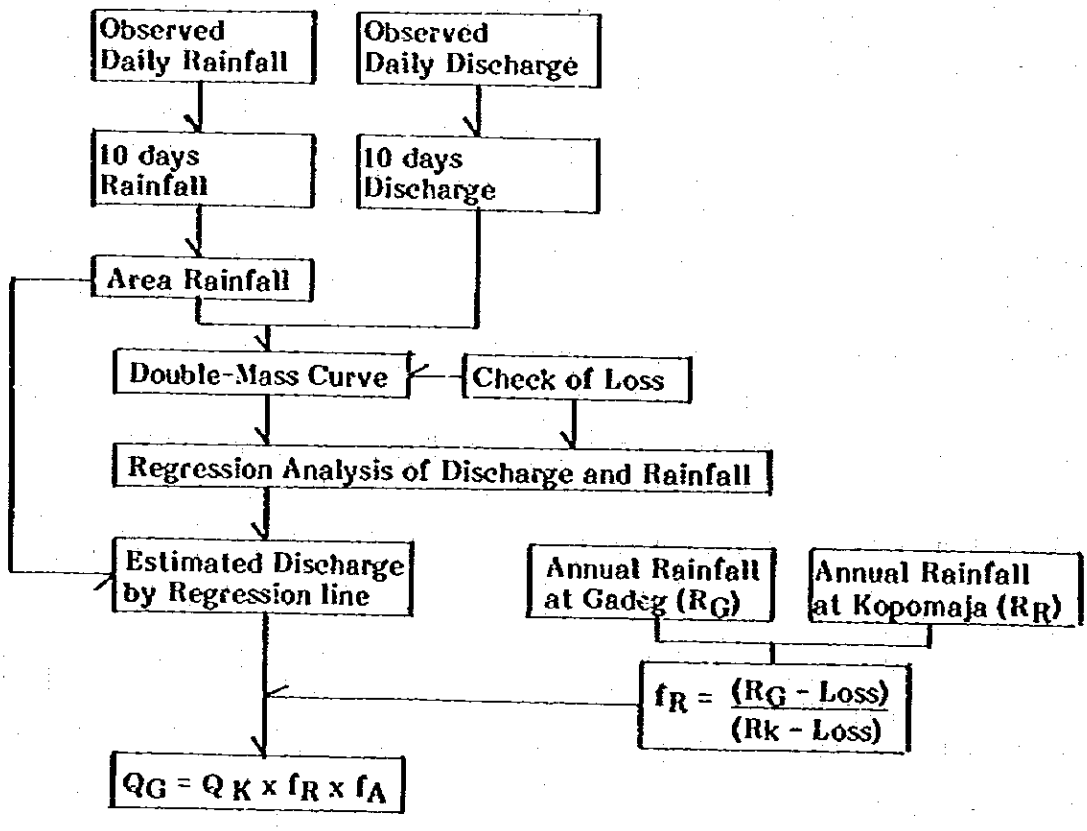
2.3 Streamflow of the Cibeureum River at Gadeg

2.3.1 Analysis Method

Method-I Double-Mass Curve

Discharge of the river for the years of missing records has been estimated from the rainfall by using a correlation regression line based on the actual curve of the accumulated rainfall and accumulated discharge in the river basin during 1972-1977. The method of analysis is as follows:

Fig. A-1 Flow of Double Mass Curve Method



Where:

f_R : Catchment Rainfall Ratio

Q_G: Discharge of Gadeg

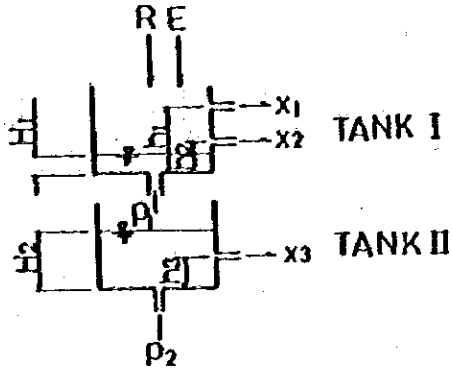
Q_K: Discharge at Kopomaja

f_A: Catchment Rainfall Ratio

$= \frac{\text{Basin Area of Gadeg}}{\text{Basin Area of Kopomaja}}$

Method-I Double-Mass Curve

Depth of water in tank I and tank II is calculated in the following manner;



tank I:

$$H_{1i+1} = H_{1i} + R_{i+1} - E_{i+1}$$

tank II:

$$H_{2i+1} = H_{2i} + (H_{1i+1} \times P_1)$$

where,

H_{1i} = depth of water in tank I after i hours

H_{2i} = depth of water in tank II after i hours

R_{i+1} = rainfall

E_{i+1} = evaporation

Discharge Q is calculated in the following manner;

1) for $h_i < H_{1i+1}$: $Q_{i+1} = (H_{1i+1} - h_1) \times x_1 + (H_{1i+1} - h_2) \times x_2 + (H_{2i+1} - h_3) \times x_3$

2) for $h_2 < H_{1i+1} < h_1$: $Q_{i+1} = (H_{1i+1} - h_2) \times x_2 + (H_{2i+1} - h_3) \times x_3$

3) for $H_{1i+1} < h_2$: $Q_{i+1} = (H_{2i+1} - h_3) \times x_3$

The above calculation is done repeatedly using different data per each factor until the measured value and calculated value become equivalent. As a result of the calculation, the Tank Model*is prepared for the estimation of discharge.

In order to evaluate the soundness of the estimated discharge as calculated in the above manner, adequate checking is made on the basis of the discharge data obtained from other gauging stations in the neighbourhood. Comparison has been made with discharge data at Rangkasbitung on the Ciujung river and the rainfall ratio has also been adopted for checking.

2.3.2 Estimated Discharge at Gadeg - Catchment Rainfall Loss -

The actual rainfall loss is presented in the following Table A-2.

Table A-2 Rainfall, Runoff and Loss

River	Catchment Area (km^2)	Rain (mm)	Runoff (mm)	Loss (mm)
Cibanten	143	4,935	3,747	1,188
Ciberang	58	4,650	3,357	1,293
Ciujung	1,418	3,179	1,946	1,233

(average loss = 1,238mm)

Source: Land Capability Appraisal, Indonesia, FAO, Feb. 1973

Rainfall loss at Kopomaja is calculated from measured discharge and catchment discharge (using 2a, 21a) as per Table A-3.

Table A-3 Loss at Kopomaja

Unit: mm/year

Year	Rain	Runoff	Loss
71/72	3,592	2,459	1,133
72/73	4,825	2,853	1,972
73/74	4,011	3,021	990
74/75	3,671	2,534	1,137
75/76	3,089	2,326	727
76/77	3,965	2,646	1,319
Total	23,153	15,875	7,278
Average	3,859	2,646	1,213

From Table A-2 and A-3, the rainfall loss of this area is estimated at about 1,200mm.

(i) Catchment Rainfall Ratio (fR)

From Fig.I-3, the mean rainfall of the river basin area at Kopomaja and Gadeg is calculated at 3,700mm and 3,420mm respectively. Then the discharge ratio is calculated as below:

$$fR = (3,420 - 1,200)/(3,700 - 1,200) = 0.89$$

(ii) Catchment Area Ratio (fA)

$$fA = 117\ km^2/304\ km^2 \doteq 0.38$$

The conversion factor is: $F = fR \times fA = 0.89 \times 0.38 = 0.34$

2.3.3 Adjustment of Discharge at Minimum River Flow

In the Double-Mass Curve method, the discharge becomes zero (0) when the rainfall is zero (0), and adjustment is necessary. Base-flow discharge is assumed to be influenced by the rainfall occurring during the preceding one month. The correlation regression analysis is made using the discharge of 10 days with less than 20mm and the discharge during the preceding one month, based on the correlation between the actual discharge and the rainfall. The result is as per Table I-22. The adjustment of discharge at the time of minimum river flow has been made by the following formula;

$$Q = 0.0183 \times R + 1.376 \qquad R \leq 20$$

in which,

R = rainfall during the preceding one month with rainfall of less than 20mm per each 10 days

2.3.4 Establishment of Double Mass Curve

Based on the daily discharge and rainfall data during the period of 1972 to 1977, the double mass curve has been prepared as shown in Table I-17. The regressional analysis to show the relationship between the accumulated rainfall and discharge has been made utilizing the results given in Table I-17 and the results of the analysis are presented in Table I-18. Judging from the results given in Table I-18, it may be said that the contours of the regressional lines obtained tend to change at the point where the rainfall is around 1,000mm. Accordingly, following two equations

have been formulated for the estimation of the discharge during the period of 1964 to 1969. The results of the estimation are presented in Table I-19.

$$\Sigma Q = 0.4649 \Sigma R + 46.26 \text{ for } \Sigma R \leq 271 \text{mm} \quad \ldots\ldots(1)$$

$$\Sigma Q = 0.7184 \Sigma R - 22.57 \text{ for } \Sigma R > 271 \text{mm} \quad \ldots\ldots(2)$$

The summary of the above-mentioned analyses is given in tables A-4 and A-5.

Table A-4 Observed and Calculated Discharge at Kopomaja by Double-Mass Curve

Year	Rain (mm/year)	Observed values (1) (mm/year)	Estimated values (2) (mm/year)	(1)/(2)
71/72	3,592	2,459	2,558	1.04
72/73	4,825	2,853	3,444	1.21
73/74	4,011	3,021	2,859	0.95
74/75	3,671	2,534	2,615	1.03
75/76	3,089	2,326	2,196	0.93
76/77	3,965	2,646	2,826	1.07

(Average: 1.04)

Table A-5 Monthly Mean Discharge at Gadeg

(Unit: m^3/s)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Mean	13.47	11.08	9.98	11.63	10.34	6.27	4.56	5.09	7.79	7.60	8.17	7.40

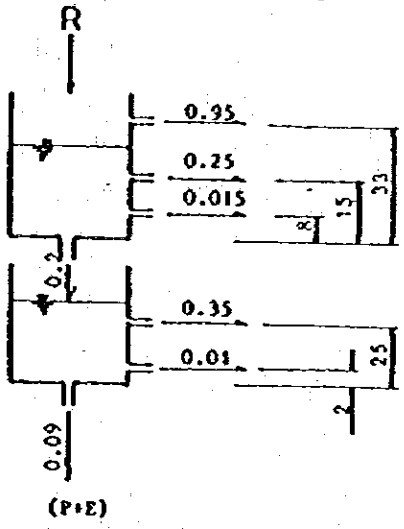
(Average: 8.61)

2.3.5 Establishment of Tank Model

Tank Model Method is usually applied for the estimation of river discharge using area rainfall to clarify the charasteristics of the river basin. The basis of data applied in this method vary according to its purpose. In this study, the method has been applied for the estimation of river discharge at Gadeg on 10-day basis using the observed river discharge at Kopomaja and area rainfall on the 10-day basis. The tank has been prepared as a two staged tank for the following reasons.

(a) Run-off starts immediately after rainfall.

(b) As area rainfall on a 10 day's basis has been used in the preparation of the model, a single model will not adequately represent the actual hydrologic phenomena to be studied. The two staged tank model is as shown below.



Using this model, the discharge has been worked out as shown in Table I-20 and its representative results are summarized as shown in Table A-6.

Table A-6 Observed and Calculated Discharge by Tank Model

Year	Areal Rainfall (mm/year)	Observed values (1) (mm/year)	Estimated values (2) (mm/year)	(1)/(2) (mm/year)
71/72	3,592	2,459	2,511	1.02
72/73	4,825	2,853	3,583	1.26
73/74	4,011	3,021	2,946	0.98
74/75	3,671	2,534	2,591	1.02
75/76	3,089	2,326	2,165	0.92
76/77	3,965	2,645	2,922	1.10

(Average: 1.05)

2.3.6 Comparison of Estimated Discharge

The discharges estimated from the Double Mass Curve and the Tank Model are compared as shown in Table A-7. As is seen from the Table, there are no significant differences between both values.

Table A-7 Comparison of Double-Mass Curve and Tank Model Methods

Year	(1) Rainfall (mm)	(2) Less (mm)	(3) (1)-(2) (mm)	(4) D.M.C. (mm)	(5) T.M (mm)	(4)/(3)	(5)/(3)
63/64	4,643	1,200	3,443	3,313	3,374	0.96	0.98
64/65	3,930	"	2,730	2,800	2,997	1.03	1.10
65/66	2,973	"	1,773	2,113	1,893	1.19	1.07
66/67	2,818	"	1,618	2,002	1,926	1.24	1.19
67/68	3,978	"	2,778	2,836	2,763	1.02	0.99
68/69	3,844	"	2,644	2,739	2,814	1.04	1.06

Note: D.M.C.: Double-Mass Curve
T.M: Tank Model

2.3.7 Check of the Estimated Discharge in Due Consideration of the Ciujung River

The monthly mean discharge at Rangkasbitung are shown in Table I-21. Table A-8 shows the discharge at Kopomaja, Gadeg (estimated) and Rangasbitung.

Table A-8 Comparison of Discharge at Kopomaja, Gadeg and Rangkasbitung

		Kopomaja	Gadeg	Rangkasbitung
(1)	Catchment Area (km^2)	304	117	1,383
(2)	Areal Rainfall (mm)	3,700	3,420	3,300
(3)	Average loss (mm)	1,200	1,200	1,200
(4)	Estimate Areal Runoff (mm) (2)-(3)	2,500	2,220	2,100
(5)	Mean Annual Discharge Discharge (m^3/s)	25.3	(8.61)	96.73
(6)	" (mm)	2,625	(2,321)	2,206
(7)	(4)/(6)	0.95	0.96	0.95

Note: ( ) : Estimated Discharge from Kopomaja

Check-1 Estimated Gadeg Discharge from Rangkasbitung (Q_{G1})

Using the figures given in Table A-8, the mean annual discharge at Gadeg is estimated as follows considering the discharge at Rangkasbitung.

Q_{G1} = 96.73 x 117/1,383 x 2,220/2,100 = 8.65 m^3/sec, say 8.61 m^3/sec.

Accordingly, the mean annual discharge at Gadeg estimated from the discharge at Kopomaja is considered acceptable.

Table I-23 shows the correlative regressional equations between Kopomaja and Rangkasbitung with respects to its specific discharge.

Using these equations, the mean annual discharge of Q_K = 25.3 m^3/sec at Kopomaja is converted into the mean annual discharge of Q_R = 97.7 m^3/sec at Rangkasbitung, which is nearly equal to the figure presented in Table A-8.

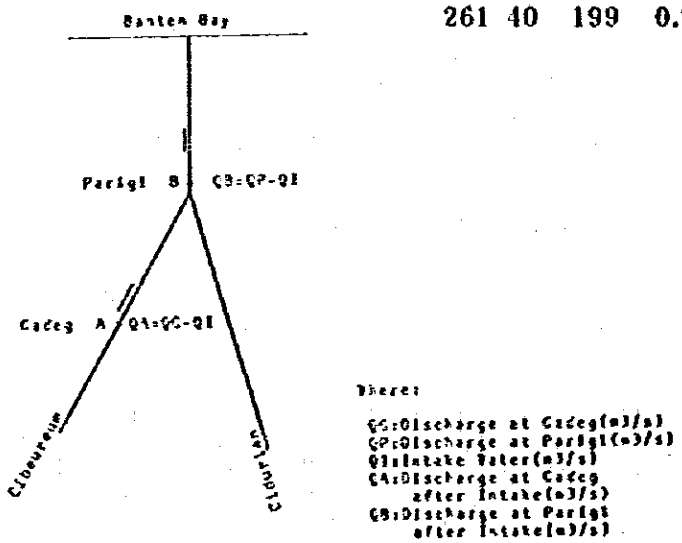
The discharge value estimated by Double Mass Curve method is utilized in the study of the Project as this is considered to be most suitable for the culculation.

2.4. Assessment of River Discharge After Completion of the Project

The plan to draw water from Gadeg for the K-C-C Irrigation Development Project will influence the river discharge conditions of the Cibeureum and Cidurian rivers. As such, brief assessment for the above has been made taking into consideration the assumed future river discharge at lower reaches of Gadeg, in comparison with the present river discharge conditions. The assessment has been made only for the basic year of planning at two check points, i.e. point A near Gadeg and point B at Parigi station as shown in Table I-27. The total value is summarized in the following table. From this table, the ratio of cutoff discharge is only 5% which would have little effect on the lower reaches of the river.

QG	QI	QA	QA/QG	QP	QB	QB/QP
261	40	199	0.76	854	814	0.95

(Unit: $10^6 m^3$)



2.5 Flood Runoff Analysis

According to the hearing from the people at Gadeg, the historically maximum discharge at Gadeg is estimated at Q = 400 m^3/sec, which flows with a depth of 8.0m.

On the other hand according to the flood discharge survey results (Flood Design Manual for Java; May 1982. D.P.M.A., the flood discharge is summarized as per Table A-9. From the above results the flood discharge at Gadeg is estimated at

97 - 119 m^3/sec. Using the Manual i.e. Average Flood Frequency Growth Curve for Java, the flood discharge is also estimated by the following equation.

$$QBAR = 0.000246 \cdot AREA^{x} \cdot PBAR^{2.0} \cdot (1 + FOREST)^{-1.13} \cdot (1 + LAKE)^{-0.85}$$

Where: $x = 0.954 - 0.0644 \log_{10} ARBA$

In the above equation "FOREST" means the ratio of forest cover, which has been estimated at 60%. Also, "LAKE", infers the ratio of marshy area, which is nil. And "PBAR" means the mean maximum daily rainfall in the basin which is determined at 120 mm/day according to the Manual.

Thus, $x = 0.952 - 0.0644 \log_{10} 117 = 0.82$

Namely, $QBAR = 0.000246 \times (117)^{0.82} \times (120)^{2.0} \times (1 + 0.6)^{-1.13} \times (1 + 0)^{-0.85}$
$= 103.4\ (m^3/sec)$

From Fig.-7, for return period of 1/1000, Q = 103.4 x 3.68 = 396.3 (m^3/sec) and for return period of 1/500, Q = 103.4 x 3.13 = 328.6 (m^3/sec) are obtained.

Annual maximum flood at Kopomaja is as follows:

Table A-9 Annual Maximum Flood at Kopomaja

Year	Flood (unit: m^3/s)
72/73	273.49
73/74	371.17
74/75	310.58
75/76	356.47
76/77	315.93
77/78	259.00
78/79	250.77
79/80	285.94
Average	302.92

Source: DPMA (1982) Flood Design Manual for Java

From the average value of 302.92, conversion is made to obtain the value

at Gadeg; Q = 302.92 x 0.34 = 103.00 m^3/s which is almost same as 103.4 m/s (= QBAR) mentioned above. Therefore, the estimated flood is considered to be justifiable.

Based on the estimated figures above, the design flood is calculated as below:

Q (1/1000) = 400 m^3/s
Q (1/500) = 320 m^3/s

2.6 Water Quality and Sedimentation

A field investigation on the water quality of the Cibeureum river was conducted at Gadeg during the first field survey on K-C-C irrigation development project. The results are shown in Tables I-24 and I-25. Judging from the data obtained, there will be no problem in the water quality of the Cibeureum river for irrigation use.

The sedimentation of the Cibeureum river has been calculated from the following formula, which derived from the Sedimentation Rating Curve (Fig. I-8).

$$y = 2.7\ x^{2.975}$$

where, y: sedimentation (ton/hr)
x: discharge (m^3/s)

Based on the formula, the discharge at Gadeg has been calculated as follows:

Discharge (10 days mean)		Sedimentation	
	(m^3/s)	(ton/hr)	(ton/day)
Minimum	0.3	0.075	1.8
Mean	8.61	1,633	39,193
Maximum	34.6	102,356	2,456,554

From the above table, annual sedimentation will be:

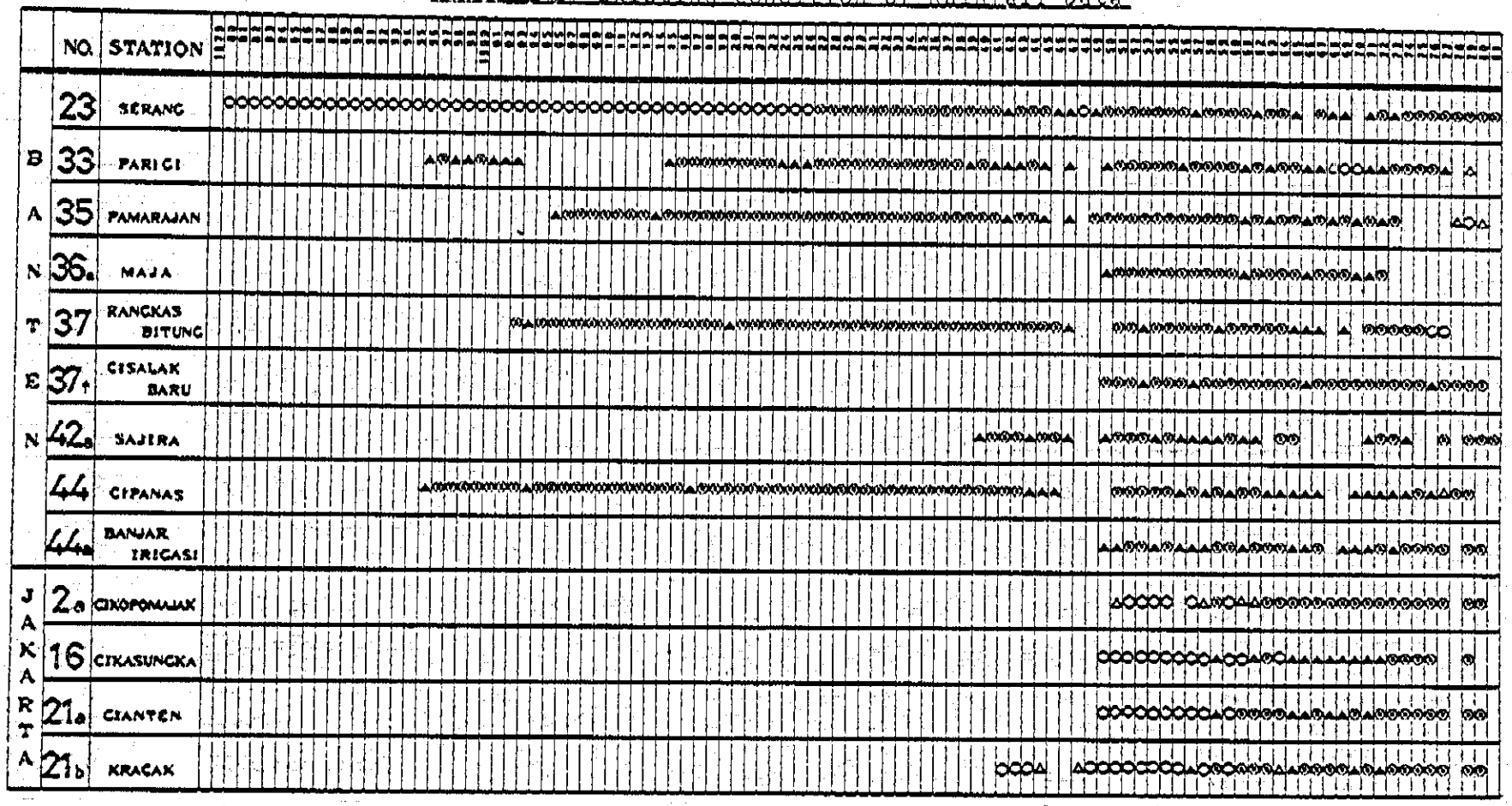
$$39{,}193\ ton/day \times 365\ days = 14{,}305{,}445\ ton$$

Table I-1 Meteorological and Rainfall Gauging Station

	Rf	Station	Elevation	S	E	Available Data	Remarks
BANTEN	23	Serang	25	6°7'	106°9'	1879	R,T,H,S,W
	33	Parigi	30	6°13'	106°22'	1896	R
	23c	Kramatwetan	-	-	-	1933	R
	35	Pamarayan	15	6°16'	106°17'	1906	R
	36a	Maja	150	-	-	1951	R
	37	Rangkasbitung	-	6°21'	106°15'	1903	R
	37f	Cisalak-Baru	-	-	-	1951	R
	42a	Sajira	91	-	-	1940	R
	44	Cipanas	185	-	-	1896	R
	44a	Banjaririgasi	-	-	-	1950	R
	37b	Cikadu	94	6°23'	106°18'	1977	T,H,S,W,PE
JAKARTA	2a	Cikopomaja	110	-	-	1951	R
	16	Cikasungka	690	-	-	1950	R
	21a	Cianten	942	-	-	1950	R
	21b	Kracak	380	-	-	1942	R
	25b	Baiaraja	27	6°12'	106°28'	1942	R

Note: R Rainfall
T Temperature
H Relative Humidity
S Sunshine
W Wind Velocity
PE Pan-Evaporation

Table I-2 Existing Condition of Rainfall Data



Note:

- ○ Monthly Available Data
- △ Monthly Partial Available Data
- ⊙ Daily Avalable Data
- ▲ Daily Partial Avalable Data

Table I-3 Water Level Gauging Station

River	Station	Catchment Area(km2)	Type	Installed by	Data	Remarks
Cidurian	Parigi	649	A	DPMA	1970-1975	
	Rancasumur	-	A&S	CJC	1979-1981	
	Kopomaja	304	S	DPMA	1969-1981	
	Tanjung	265	S	CJC	1978-1980	
Ciujung	Rangkasbitung	1383	A&S	DPMA	1972-1981	
	Sajira	233	A&S	P3SA	1978-1981	

Note:

A: Automatic Water Level Recorder

S: Staff Gauge

Table I-4 Average Monthly Rainfall at Serang (1/2)

Unit (mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1881-1890	256.00	284.00	226.00	119.00	121.00	79.00	62.00	96.00	85.00	143.00	171.00	255.00	1897.00
1891-1900	310.00	232.00	166.00	148.00	78.00	99.00	72.00	81.00	67.00	122.00	175.00	246.00	1796.00
1901-1910	286.00	261.00	183.00	141.00	150.00	112.00	99.00	99.00	114.00	145.00	148.00	181.00	1919.00
1911-1920	335.00	231.00	208.00	134.00	115.00	87.00	78.00	77.00	64.00	110.00	166.00	231.00	1836.00
1921-1930	243.00	211.00	187.00	161.00	129.00	111.00	56.00	70.00	58.00	132.00	122.00	236.00	1716.00
1931-1940	272.00	233.00	169.00	157.00	134.00	114.00	100.00	61.00	77.00	133.00	164.00	209.00	1818.00
1941-1950	264.00	214.00	228.00	78.00	113.00	67.00	64.00	59.00	91.00	81.00	187.00	151.00	1600.00
1951-1960	253.00	226.00	190.00	118.00	114.00	101.00	103.00	108.00	81.00	101.00	141.00	207.00	1746.00
1961-1970	291.00	229.00	184.00	134.00	162.00	53.00	49.00	62.00	42.00	68.00	149.00	152.00	1575.00
1971-1980	333.00	252.00	201.00	126.00	89.00	70.00	57.00	45.00	72.00	92.00	99.00	212.00	1639.00
TOTAL	2843.00	2373.00	1942.00	1311.00	1196.00	893.00	740.00	758.00	754.00	1127.00	1525.00	2080.00	17542.00
MEAN	284.30	237.30	194.20	131.10	119.60	89.30	74.00	75.80	75.40	112.70	152.50	208.00	146.18
MAX	335.00	284.00	228.00	161.00	162.00	114.00	103.00	108.00	114.00	145.00	187.00	255.00	
MIN	243.00	211.00	166.00	78.00	78.00	53.00	49.00	45.00	42.00	68.00	99.00	151.00	

Table I-4 Average Monthly Rainfall at Serang (2/2)

Unit (mm)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1881-1900	283.00	258.00	196.00	133.00	100.00	89.00	66.00	88.00	76.00	132.00	173.00	251.00	1845.00
1901-1920	310.00	246.00	195.00	138.00	132.00	99.00	89.00	83.00	89.00	127.00	157.00	206.00	1876.00
1921-1940	257.00	222.00	178.00	156.00	132.00	113.00	78.00	66.00	68.00	133.00	143.00	223.00	1769.00
1941-1960	258.00	220.00	208.00	99.00	113.00	84.00	85.00	83.00	87.00	91.00	164.00	189.00	1672.00
1961-1980	313.00	242.00	193.00	127.00	113.00	62.00	53.00	52.00	59.00	81.00	120.00	188.00	1605.00
TOTAL	1421.00	1188.00	970.00	655.00	590.00	447.00	371.00	372.00	379.00	564.00	757.00	1048.00	8767.00
MEAN	284.20	237.60	194.00	131.00	118.00	89.40	74.20	75.40	75.80	112.80	151.40	209.60	146.12
MAX	313.00	258.00	208.00	156.00	132.00	113.00	89.00	88.00	89.00	133.00	173.00	251.00	
MIN	257.00	220.00	178.00	99.00	100.00	62.00	53.00	52.00	59.00	81.00	120.00	189.00	

Table I-5 Monthly Rainfall (1/2)

STATION Parigi (33)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1897	152	221	267	170	17	29	43	25	9	144	206	153	1418
1898	306	218	35	56	-	-	37	104	81	202	110	448	(1597)
1899	396	399	74	64	-	135	36	175	64	132	35	269	(1710)
1900	285	241	135	224	128	99	171	123	214	189	146	84	2042
1901	-	406	381	60	90	283	42	78	105	174	343	201	2143
1902	597	238	276	46	187	69	0	19	0	35	77	69	1613
1903	293	488	115	57	177	42	141	9	0	-	-	-	1232
1915	-	-	202	181	169	120	59	26	95	70	342	186	(1450)
1916	521	114	351	117	73	46	106	101	122	187	68	327	2133
1917	326	170	118	111	60	66	49	82	162	209	244	496	2083
1918	423	437	96	136	203	22	42	29	52	16	196	259	1911
1919	282	323	232	110	263	97	35	66	96	72	255	128	1959
1920	377	273	315	89	164	122	7	203	150	125	292	87	2105
1921	101	371	240	142	44	256	142	64	108	175	152	272	2047
1922	181	313	313	209	75	69	50	73	36	200	195	161	1875
1923	313	130	235	96	117	108	107	15	0	215	145	381	1862
1924	149	127	232	297	249	11	11	0	129	179	179	251	1805
1925	285	172	148	157	39	10	21	0	3	52	55	244	1186
1926	367	245	136	110	143	0	68	58	40	142	204	126	1699
1927	227	193	137	52	167	186	85	122	141	144	341	111	1886
1928	209	265	356	22	452	299	51	110	138	57	259	311	2511
1929	447	365	359	36	20	182	45	57	90	114	133	160	1989
1930	265	318	224	367	306	20	65	70	71	288	148	129	2271
1931	157	128	328	106	143	66	107	213	111	76	72	462	1969
1932	357	427	387	116	112	64	116	87	154	133	137	221	2313
1933	139	388	193	159	169	107	78	407	171	167	72	123	2178
1934	260	109	221	161	125	37	72	0	102	9	221	154	1471
1935	264	151	195	69	84	55	0	22	0	315	284	99	1538
1936	193	233	291	189	111	136	227	45	66	181	366	215	2244
1937	398	195	221	495	142	55	35	0	178	173	130	305	2237
1938	237	430	190	153	72	25	80	45	40	77	20	100	1519
1939	280	210	82	90	-	-	134	211	239	238	142	235	(1841)
1940	573	234	114	143	139	138	57	76	0	11	213	238	1936
1941	205	219	181	126	459	132	97	-	137	173	299	110	2048
1942	258	194	-	-	-	-	47	73	182	101	250	144	(1249)
1943	392	282	189	91	75	134	85	0	-	-	-	-	(1248)
1944	93	262	339	234	119	28	16	34	84	151	200	99	1650
1945	255	160	180	-	-	-	-	-	-	-	-	-	(595)
1947	232	165	104	112	49	-	-	-	-	-	-	-	(662)
1950	42	-	-	-	-	-	-	-	-	-	-	224	(266)
1951	153	406	124	83	83	186	183	152	103	234	178	190	2019
1952	202	109	286	109	85	32	26	91	121	157	196	288	1693
1953	172	170	250	137	165	94	40	12	28	113	60	86	1327
1954	207	246	51	134	155	77	112	156	79	81	306	139	1743
1955	125	227	152	41	31	89	144	54	36	125	169	238	1431
1956	175	78	-	30	18	30	66	0	8	128	228	344	(1105)
1957	146	148	184	67	112	30	22	129	80	31	59	253	1261
1958	285	239	220	91	158	240	84	167	41	48	85	308	1966
1959	269	89	392	54	150	53	95	12	64	21	311	157	1628
1960	581	357	60	290	93	55	77	15	89	63	159	161	2000

Table I-5 Monthly Rainfall (2/2)

STATION Parigi (33)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1961	-	265.0	77.0	58.0	173.0	29.0	10.0	0.0	12.0	6.0	72.0	152.0	854.0
1962	157.0	311.0	103.0	140.0	58.0	245.0	150.0	60.0	25.0	92.0	140.0	185.0	1666.0
1963	427.0	250.0	-	-	108.0	24.0	0.0	0.0	0.0	65.0	152.0	78.0	1104.0
1964	41.0	67.0	158.0	24.0	122.0	25.0	111.0	101.0	12.0	159.0	126.0	108.0	1054.0
1965	298.0	181.0	264.0	193.0	200.0	138.0	55.0	6.0	0.0	16.0	286.0	132.0	1765.0
1966	157.0	328.0	139.0	142.0	113.0	117.0	86.0	0.0	58.0	102.0	185.0	264.0	1691.0
1967	415.0	398.0	285.0	216.0	139.0	0.0	28.0	10.0	8.0	35.0	90.0	191.0	1815.0
1968	415.0	326.0	205.0	152.0	165.0	205.0	152.0	129.0	81.0	55.0	180.0	341.0	2407.0
1969	85.0	368.0	133.0	263.0	179.0	62.0	32.0	0.0	228.0	84.0	190.0	94.0	1718.0
1970	325.0	431.0	86.0	233.0	225.0	127.0	69.0	66.0	119.0	197.0	465.0	305.0	2637.0
1971	227.0	409.0	372.0	83.0	186.0	380.0	29.0	57.0	96.0	230.0	117.0	139.0	2298.0
1972	420.0	315.0	215.0	109.0	229.0	12.0	25.0	27.0	0.0	0.0	61.0	149.0	1562.0
1973	276.0	480.0	172.0	213.0	288.0	212.0	104.0	159.0	66.0	178.0	133.0	101.0	2382.0
1974	402.0	278.0	255.0	221.0	227.0	142.0	41.0	265.0	227.0	50.0	157.0	206.0	2471.0
1975	356.0	321.0	173.0	174.0	117.0	0.0	85.0	124.0	83.0	215.0	102.0	237.0	1992.0
1976	422.0	23.0	280.0	77.0	121.0	80.0	16.0	6.0	66.0	122.0	195.0	73.0	1481.0
1977	310.0	257.0	145.0	170.0	77.0	249.0	12.0	0.0	0.0	0.0	0.0	89.0	1369.0
1981	304.0	130.0	138.0	108.0	527.0	-	181.0	-	-	-	318.0	-	1686.0
TOTAL	5097.0	5129.0	3201.0	2576.0	3254.0	2047.0	1146.0	1008.0	1026.0	1601.0	2969.0	2835.0	31952.0
MEAN	299.8	284.9	188.3	151.5	189.8	120.4	63.7	59.3	63.9	94.1	164.9	166.8	153.2
MAX	427.0	480.0	372.0	263.0	527.0	380.0	181.0	265.0	228.0	230.0	465.0	341.0	
MIN	41.0	23.0	77.0	24.0	58.0	0.0	0.0	0.0	0.0	0.0	0.0	73.0	

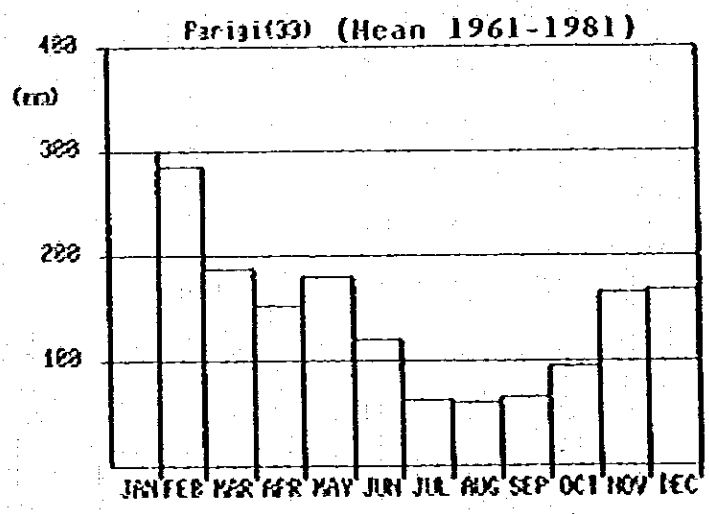


Table I-6 Monthly Effective Rainfall

STATION Parigi(33)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1963	257.0	173.0	-	-	59.0	17.0	0.0	0.0	0.0	46.0	109.0	44.0	696.0
1964	29.0	35.0	110.0	169.0	86.0	18.0	78.0	71.0	9.0	110.0	89.0	75.0	879.0
1965	185.0	127.0	172.0	136.0	141.0	97.0	35.0	4.0	0.0	10.0	183.0	92.0	1182.0
1966	108.0	202.0	94.0	98.0	79.0	56.0	56.0	0.0	41.0	72.0	126.0	159.0	1091.0
1967	272.0	201.0	157.0	148.0	88.0	0.0	20.0	7.0	6.0	23.0	61.0	191.0	1174.0
1968	272.0	217.0	143.0	97.0	103.0	146.0	102.0	109.0	56.0	39.0	75.0	210.0	1569.0
1969	57.0	161.0	94.0	186.0	170.0	44.0	22.0	0.0	137.0	58.0	127.0	61.0	1095.0
1970	253.0	230.0	60.0	109.0	149.0	128.0	37.0	35.0	77.0	101.0	279.0	188.0	1646.0
1971	157.0	258.0	260.0	59.0	122.0	131.0	14.0	40.0	64.0	136.0	79.0	92.0	1412.0
1972	294.0	221.0	151.0	59.0	155.0	8.0	18.0	26.0	0.0	0.0	40.0	98.0	1070.0
1973	190.0	397.0	122.0	142.0	203.0	137.0	73.0	165.0	46.0	125.0	88.0	71.0	1609.0
1974	222.0	195.0	171.0	115.0	124.0	78.0	29.0	151.0	100.0	35.0	104.0	148.0	1485.0
1975	233.0	207.0	121.0	122.0	76.0	0.0	60.0	87.0	62.0	151.0	71.0	136.0	1326.0
1976	291.0	16.0	179.0	55.0	65.0	56.0	11.0	4.0	47.0	85.0	109.0	52.0	999.0

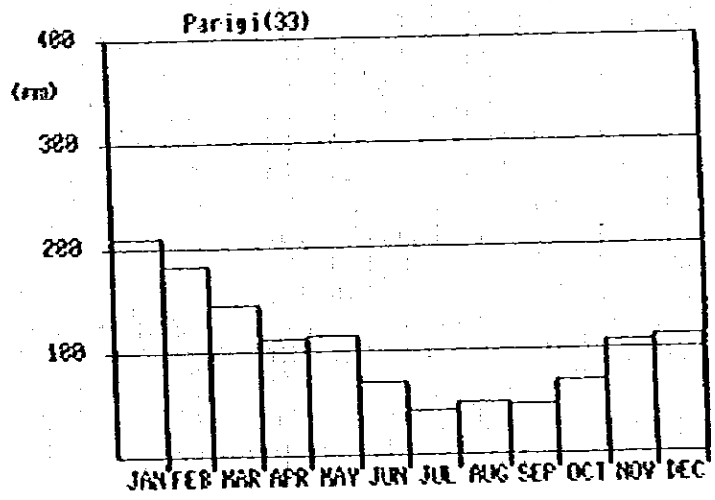


Table I-7 10 Days Effective Rainfall

Station Parigi (33)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
OCT-1	0.0	74.0	10.0	18.0	23.0	12.0	4.0	16.0	0.0	0.0	18.0	0.0	25.0
OCT-2	27.0	21.0	0.0	17.0	0.0	7.0	0.0	5.0	8.0	0.0	10.0	35.0	57.0
OCT-3	19.0	15.0	0.0	37.0	0.0	20.0	54.0	80.0	178.0	0.0	97.0	0.0	69.0
NOV-1	35.0	60.0	29.0	42.0	26.0	27.0	90.0	92.0	17.0	7.0	5.0	39.0	51.0
NOV-2	9.0	4.0	18.0	36.0	24.0	27.0	37.0	143.0	57.0	22.0	0.0	65.0	20.0
NOV-3	56.0	25.0	136.0	48.0	11.0	21.0	0.0	44.0	5.0	11.0	83.0	0.0	0.0
DEC-1	9.0	0.0	50.0	94.0	40.0	46.0	0.0	27.0	36.0	16.0	15.0	78.0	45.0
DEC-2	0.0	36.0	21.0	42.0	43.0	13.0	43.0	92.0	25.0	15.0	29.0	11.0	34.0
DEC-3	35.0	39.0	21.0	23.0	108.0	151.0	18.0	69.0	31.0	67.0	27.0	55.0	57.0
JAN-1	18.0	39.0	53.0	46.0	73.0	15.0	61.0	46.0	119.0	75.0	153.0	78.0	73.0
JAN-2	0.0	43.0	13.0	154.0	131.0	27.0	111.0	56.0	135.0	43.0	57.0	46.0	102.0
JAN-3	11.0	98.0	42.0	75.0	68.0	15.0	81.0	55.0	70.0	22.0	12.0	111.0	118.0
FEB-1	35.0	35.0	50.0	85.0	54.0	35.0	135.0	116.0	0.0	209.0	29.0	127.0	16.0
FEB-2	0.0	60.0	113.0	81.0	81.0	114.0	72.0	72.0	149.0	55.0	120.0	74.0	0.0
FEB-3	0.0	32.0	39.0	35.0	79.0	12.0	23.0	70.0	81.0	42.0	46.0	6.0	0.0
MAR-1	43.0	60.0	26.0	69.0	52.0	34.0	37.0	54.0	70.0	29.0	77.0	0.0	119.0
MAR-2	49.0	56.0	20.0	0.0	55.0	16.0	16.0	125.0	46.0	59.0	58.0	90.0	41.0
MAR-3	19.0	56.0	48.0	88.0	36.0	44.0	7.0	81.0	35.0	34.0	36.0	31.0	19.0
APR-1	70.0	69.0	6.0	31.0	32.0	58.0	41.0	35.0	53.0	13.0	35.0	54.0	20.0
APR-2	25.0	69.0	39.0	48.0	41.0	55.0	35.0	19.0	6.0	40.0	62.0	36.0	0.0
APR-3	74.0	16.0	53.0	69.0	21.0	51.0	33.0	4.0	0.0	89.0	18.0	32.0	35.0
MAY-1	41.0	34.0	31.0	63.0	33.0	92.0	50.0	16.0	91.0	53.0	18.0	35.0	80.0
MAY-2	20.0	12.0	12.0	25.0	48.0	17.0	37.0	94.0	64.0	69.0	64.0	41.0	5.0
MAY-3	25.0	95.0	33.0	0.0	22.0	81.0	62.0	12.0	0.0	81.0	42.0	0.0	0.0
JUN-1	0.0	0.0	35.0	0.0	58.0	9.0	37.0	83.0	8.0	45.0	0.0	0.0	56.0
JUN-2	0.0	38.0	21.0	0.0	45.0	28.0	91.0	21.0	0.0	41.0	8.0	0.0	0.0
JUN-3	18.0	59.0	0.0	0.0	43.0	7.0	0.0	27.0	0.0	51.0	70.0	0.0	0.0
JUL-1	6.0	35.0	35.0	13.0	0.0	20.0	19.0	0.0	0.0	5.0	7.0	0.0	11.0
JUL-2	72.0	0.0	21.0	7.0	49.0	2.0	15.0	14.0	0.0	35.0	8.0	26.0	0.0
JUL-3	0.0	0.0	0.0	0.0	62.0	0.0	3.0	0.0	18.0	33.0	14.0	31.0	0.0
AUG-1	0.0	0.0	0.0	0.0	35.0	0.0	0.0	4.0	26.0	55.0	0.0	0.0	0.0
AUG-2	25.0	4.0	0.0	0.0	23.0	0.0	35.0	16.0	0.0	29.0	98.0	41.0	0.0
AUG-3	46.0	0.0	0.0	7.0	42.0	0.0	0.0	20.0	0.0	23.0	53.0	46.0	4.0
SEP-1	4.0	0.0	11.0	6.0	22.0	26.0	17.0	25.0	0.0	7.0	17.0	18.0	25.0
SEP-2	0.0	0.0	30.0	0.0	0.0	92.0	56.0	26.0	0.0	0.0	35.0	16.0	0.0
SEP-3	5.0	0.0	0.0	0.0	34.0	19.0	4.0	13.0	0.0	39.0	48.0	28.0	22.0
TOTAL	795	1171	1019	1256	1511	1173	1324	1673	1359	1453	1459	1251	1102

Table I-8 Daily Rainfall Parigi (33) (1/13)

YEAR 1960

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	17	0	0	0	0	40	0	0	0	0	0
2	15	0	0	54	0	0	0	0	0	0	26	0
3	110	40	0	0	0	0	0	0	0	0	0	0
4	50	0	0	0	0	0	0	0	0	0	0	0
5	0	44	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	78	0	0	0	0	0	0	22	0
8	0	9	0	15	0	0	0	0	0	0	0	0
9	42	6	0	8	10	0	0	0	0	0	6	0
10	0	19	0	0	45	45	0	0	0	0	0	0
	(217)	(135)	(0)	(155)	(85)	(45)	(40)	(0)	(0)	(0)	(54)	(0)
11	0	95	0	0	8	0	0	0	0	0	24	0
12	0	13	31	0	0	0	0	9	0	0	6	0
13	0	9	0	0	0	0	14	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	9	0	0	0	0	0	0	0	0	31	0
16	0	0	0	0	6	0	0	0	0	0	0	20
17	0	26	0	0	0	0	0	0	0	0	16	0
18	16	0	0	33	0	0	0	0	0	0	6	0
19	6	22	13	0	0	0	0	0	0	0	0	0
20	0	0	0	6	0	0	0	0	0	0	0	0
	(22)	(174)	(44)	(39)	(14)	(0)	(14)	(9)	(0)	(0)	(83)	(20)
21	18	0	0	0	0	0	0	0	0	0	0	0
22	10	0	8	15	0	0	0	0	0	15	0	10
23	15	16	0	0	24	0	0	0	0	0	0	6
24	7	10	0	0	0	0	0	0	0	50	0	0
25	0	15	8	16	0	0	0	6	19	0	0	0
26	17	7	0	65	0	0	0	0	30	0	0	72
27	57	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	16	0
30	18		0	0	0	10	23	0	40	0	0	53
31	0		0		0		0	0		0		0
	(142)	(48)	(16)	(96)	(24)	(10)	(23)	(6)	(89)	(65)	(16)	(141)
										ANNUAL =		1796
TOTAL	381	357	60	290	93	55	77	15	89	65	153	161
RAINY DAYS	13	16	4	9	5	2	3	2	3	2	9	5
MAX	110	95	31	78	45	45	40	9	40	50	31	72

Table I-8 Daily Rainfall — Parigi(33) (2/13)

YEAR 1961

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-1	0	0	0	0	19	0	-1	0	0	0	0
2	-1	22	0	0	30	0	0	-1	0	0	0	0
3	-1	0	0	0	0	0	0	-1	0	0	10	0
4	-1	0	6	30	26	0	0	-1	0	0	0	0
5	-1	0	0	0	26	0	0	-1	0	0	0	0
6	-1	0	20	0	0	0	0	-1	0	0	0	0
7	-1	38	7	0	0	0	0	-1	0	0	20	0
8	-1	45	0	0	0	0	0	-1	0	0	0	0
9	-1	0	0	0	0	0	0	-1	0	0	0	0
10	-1	0	0	0	0	0	0	-1	0	0	5	0
(	0)	(105)	(33)	(30)	(82)	(19)	(0)	(0)	(0)	(0)	(35)	(0)
11	-1	0	0	0	0	0	0	-1	0	0	0	0
12	-1	0	0	0	0	0	0	-1	0	0	0	12
13	-1	30	0	0	0	0	10	-1	0	0	0	38
14	-1	0	0	8	0	0	0	-1	0	0	0	0
15	-1	17	0	0	56	0	0	-1	0	0	0	13
16	-1	0	15	0	0	0	0	-1	0	6	7	0
17	-1	25	0	0	0	0	0	-1	0	0	0	0
18	-1	0	0	0	0	0	0	-1	0	0	0	0
19	-1	40	0	0	0	0	0	-1	0	0	0	0
20	-1	0	0	20	0	0	0	-1	12	0	10	0
(	0)	(112)	(15)	(28)	(56)	(0)	(10)	(0)	(12)	(6)	(17)	(63)
21	-1	20	0	0	0	0	0	-1	0	0	0	0
22	-1	0	0	0	0	0	0	-1	0	0	0	0
23	-1	0	0	0	23	0	0	-1	0	0	0	0
24	-1	0	0	0	0	0	0	-1	0	0	20	0
25	-1	0	0	0	0	0	0	-1	0	0	0	0
26	-1	0	0	0	0	0	0	-1	0	0	0	24
27	-1	0	0	0	0	0	0	-1	0	0	0	0
28	-1	28	0	0	0	0	0	-1	0	0	0	0
29	-1	0	0	0	0	0	0	-1	0	0	0	0
30	-1		29	0	0	10	0	-1	0	0	0	65
31	-1		0		12		0	-1		0		0
(	0)	(48)	(29)	(0)	(35)	(10)	(0)	(0)	(0)	(0)	(20)	(89)
										ANNUAL =		
TOTAL	0	265	77	58	173	29	10	0	12	6	72	
RAINY DAYS	13	9	5	3	6	2	1	2	1	1	6	152
MAX	0	45	29	30	56	19	10	0	12	6	20	
												152
												5
												65

Table I-8 Daily Rainfall Parigi (33) (3/13)

YEAR 1962

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20	50	0	0	0	0	0	0	0	0	21	0
2	0	0	0	6	0	10	0	0	0	0	0	0
3	0	0	0	0	0	0	23	0	0	0	23	0
4	14	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	42	0
6	25	0	0	9	0	72	0	10	0	0	0	0
7	0	31	0	24	0	0	0	0	0	0	18	0
8	0	19	0	0	0	0	0	0	0	0	0	0
9	0	0	9	0	0	0	0	0	0	3	6	0
10	20	0	10	0	23	0	0	0	0	0	0	0
	(79)	(100)	(19)	(39)	(23)	(82)	(23)	(10)	(0)	(3)	(110)	(0)
11	0	0	0	0	35	0	0	7	12	0	11	9
12	0	0	0	0	0	0	26	0	0	12	0	0
13	0	60	11	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	34	0	0	0	0	0
15	0	29	0	0	0	0	0	0	0	21	0	0
16	20	0	0	0	0	0	14	24	0	13	8	0
17	0	0	0	0	0	0	0	0	0	0	0	16
18	0	0	0	0	0	0	28	4	0	0	0	0
19	0	0	0	0	0	0	18	0	0	0	3	52
20	0	0	0	0	0	0	0	6	0	0	0	0
	(20)	(89)	(11)	(0)	(35)	(0)	(120)	(41)	(12)	(46)	(22)	(77)
21	16	31	0	0	0	42	0	0	0	0	0	0
22	0	0	50	0	0	0	0	3	0	5	20	7
23	0	0	0	0	0	25	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	11	14	0
25	0	0	0	70	0	33	0	0	0	17	0	0
26	10	91	0	31	0	0	0	0	0	0	0	51
27	11	0	0	0	0	0	0	0	13	0	0	50
28	0	0	0	0	0	14	0	6	0	0	4	0
29	0	0	7	0	0	49	0	0	0	10	0	0
30	10		0	0	0	0	7	0	0	0	0	0
31	11		16		0		0	0		0		0
	(58)	(122)	(73)	(101)	(0)	(163)	(7)	(9)	(13)	(43)	(38)	(108)
										ANNUAL =		1696
TOTAL	157	311	103	140	58	245	150	60	25	92	170	185
RAINY DAYS	10	7	6	5	2	7	7	7	2	8	11	6
MAX	25	91	50	70	35	72	34	24	13	21	42	52

Table I-8 Daily Rainfall Parigi(33) (4/13)

YEAR 1963

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7	0	-1	-1	0	0	0	0	0	0	0	0
2	0	30	-1	-1	0	0	0	0	0	0	0	0
3	0	0	-1	-1	0	0	0	0	0	0	0	0
4	0	30	-1	-1	0	24	0	0	0	0	0	0
5	23	13	-1	-1	0	0	0	0	0	0	0	13
6	0	0	-1	-1	0	0	0	0	0	0	59	0
7	4	0	-1	-1	0	0	0	0	0	0	0	0
8	10	13	-1	-1	0	0	0	0	0	0	0	0
9	7	12	-1	-1	0	0	0	0	0	0	0	0
10	14	0	-1	-1	0	0	0	0	0	0	0	0
	(65)	(98)	(0)	(0)	(0)	(24)	(0)	(0)	(0)	(0)	(59)	(13)
11	0	0	-1	-1	75	0	0	0	0	18	0	0
12	0	0	-1	-1	0	0	0	0	0	0	0	0
13	0	0	-1	-1	15	0	0	0	0	0	0	0
14	0	54	-1	-1	13	0	0	0	0	0	0	0
15	0	25	-1	-1	0	0	0	0	0	0	0	0
16	50	0	-1	-1	0	0	0	0	0	0	0	0
17	4	0	-1	-1	0	0	0	0	0	0	0	0
18	21	0	-1	-1	0	0	0	0	0	0	13	0
19	3	0	-1	-1	0	0	0	0	0	20	0	0
20	0	0	-1	-1	0	0	0	0	0	0	0	0
	(78)	(79)	(0)	(0)	(103)	(0)	(0)	(0)	(0)	(38)	(13)	(0)
21	40	0	-1	-1	0	0	0	0	0	0	0	0
22	55	0	-1	-1	0	0	0	0	0	0	0	0
23	0	36	-1	-1	0	0	0	0	0	27	16	0
24	60	0	-1	-1	0	0	0	0	0	0	0	0
25	85	0	-1	-1	0	0	0	0	0	0	33	0
26	44	0	-1	-1	0	0	0	0	0	0	0	0
27	0	15	-1	-1	0	0	0	0	0	0	0	0
28	0	22	-1	-1	0	0	0	0	0	0	0	0
29	0	0	-1	-1	0	0	0	0	0	0	31	0
30	0		-1	-1	5	0	0	0	0	0	0	65
31	0		-1		0		0	0		0		0
	(284)	(73)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(27)	(80)	(65)
											ANNUAL =	1704
TOTAL	627	250	0	0	108	24	0	0	0	65	152	78
RAINY DAYS	15	10	6	5	4	1	7	5	2	3	5	2
MAX	85	54	0	0	75	24	0	0	0	27	59	65

Table I-8 Daily Rainfall Parigi(33) (5/13)

YEAR 1964

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	50	0
3	0	69	6	12	0	0	0	0	0	25	28	0
4	6	0	0	0	7	0	0	0	0	0	0	0
5	0	0	0	0	32	0	0	0	0	0	7	0
6	19	0	18	0	0	0	0	0	0	25	0	0
7	0	0	0	0	0	0	0	0	0	25	0	0
8	0	0	0	48	0	0	8	0	5	0	0	0
9	0	0	0	40	20	0	0	0	0	0	0	0
10	0	0	38	0	0	0	0	0	0	30	0	0
	(25)	(69)	(62)	(100)	(59)	(0)	(8)	(0)	(5)	(105)	(85)	(0)
11	0	0	13	0	28	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	30	0	6
13	0	0	0	0	0	0	26	0	0	0	5	0
14	0	0	17	0	0	0	34	0	0	0	0	31
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	39	0	0	0	43	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	35	0	0	0	15
20	0	0	0	35	0	0	0	0	0	0	0	0
	(0)	(0)	(69)	(35)	(28)	(0)	(103)	(35)	(0)	(30)	(5)	(52)
21	16	0	0	0	0	0	0	0	0	0	0	33
22	0	0	0	0	35	25	0	44	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	23
24	0	0	15	35	0	0	0	0	7	0	0	0
25	0	0	0	25	0	0	0	22	0	0	0	0
26	0	0	0	46	0	0	0	0	0	15	36	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	7	0	0
30	0		0	0	0		0	0		0		0
31	0		12		0		0	0		0		0
	(16)	(0)	(27)	(106)	(35)	(25)	(0)	(66)	(7)	(22)	(36)	(56)
											ANNUAL =	1271
TOTAL	41	69	158	241	122	25	111	101	12	157	126	108
RAINY DAYS	3	1	8	7	5	1	4	3	2	7	5	5
MAX	19	69	39	48	35	25	43	44	7	30	50	33

Table I-8 Daily Rainfall Parigi(33) (6/13)

YEAR 1965

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	18	0	0	0	53	0	0	0	20	0
2	0	0	7	25	0	0	0	0	0	0	0	0
3	0	0	0	20	0	0	0	0	0	0	0	25
4	0	0	0	0	12	0	0	0	0	8	0	0
5	0	0	10	0	13	0	0	0	0	6	0	0
6	26	0	0	0	0	0	0	0	0	0	0	0
7	0	0	54	0	0	0	0	0	0	0	0	10
8	0	0	0	40	23	0	0	0	0	0	22	0
9	30	0	0	0	0	0	0	0	0	0	0	37
10	0	51	0	0	0	0	0	0	0	0	0	0
	(56)	(51)	(89)	(85)	(48)	(0)	(53)	(0)	(0)	(14)	(42)	(72)
11	8	0	0	0	0	0	0	0	0	0	0	0
12	29	35	30	0	0	0	0	0	0	0	0	0
13	0	0	0	8	0	0	0	0	0	0	0	0
14	7	0	0	0	0	0	0	0	0	0	25	0
15	0	0	0	0	0	0	0	0	0	0	0	30
16	24	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	22	0	24	0	0	0	0	0	0
18	0	0	20	0	0	0	0	0	0	0	0	0
19	0	0	30	35	0	0	0	0	0	0	0	0
20	0	50	0	20	17	30	0	6	0	0	0	0
	(68)	(85)	(80)	(85)	(17)	(54)	(0)	(6)	(0)	(0)	(25)	(30)
21	69	0	0	0	0	12	0	0	0	0	35	0
22	0	0	0	0	25	0	0	0	0	0	75	0
23	0	0	65	0	12	35	0	0	0	0	6	9
24	0	25	0	0	0	0	0	0	0	0	14	0
25	65	0	0	15	8	0	0	0	0	0	14	0
26	40	20	20	0	27	0	0	0	0	0	30	0
27	0	0	0	8	13	0	0	0	0	0	0	0
28	0	0	10	0	50	37	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	45	15
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		6
	(174)	(45)	(95)	(23)	(135)	(84)	(0)	(0)	(0)	(0)	(219)	(30)
											ANNUAL =	1765
TOTAL	298	181	264	193	200	138	53	6	0	14	286	132
RAINY DAYS	9	5	10	9	10	5	1	1	0	2	10	7
MAX	69	51	65	40	50	37	53	6	0	8	75	37

Table I-8 Daily Rainfall Parigi(33) (7/13)

YEAR 1966

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	10	-1
2	0	0	0	0	0	0	56	0	0	0	29	-1
3	2	25	0	0	19	0	0	0	15	0	14	-1
4	0	0	5	8	0	87	0	0	0	0	0	-1
5	28	0	13	0	0	0	0	0	0	0	0	-1
6	0	0	19	0	0	0	0	0	0	0	0	-1
7	6	37	0	0	0	0	0	0	0	0	0	-1
8	30	10	0	0	0	0	0	0	0	0	0	-1
9	7	2	0	0	30	0	0	0	0	0	0	-1
10	5	0	0	0	0	0	0	0	0	25	7	-1
	(78)	(74)	(37)	(8)	(49)	(87)	(56)	(0)	(15)	(25)	(60)	(0)
11	6	86	0	10	0	0	0	0	0	14	0	-1
12	0	41	0	0	0	0	0	0	0	10	0	-1
13	0	0	0	12	0	0	0	0	0	0	0	-1
14	0	22	0	24	0	0	0	0	10	0	10	-1
15	0	10	29	0	0	0	0	0	8	0	10	-1
16	0	3	0	0	17	0	0	0	0	0	7	-1
17	13	20	0	0	0	0	0	0	5	0	10	-1
18	0	5	0	0	0	0	0	0	0	0	15	-1
19	0	0	0	10	0	0	0	0	0	0	0	-1
20	0	14	0	3	0	30	30	0	20	0	0	-1
	(19)	(201)	(29)	(59)	(17)	(30)	(30)	(0)	(43)	(24)	(52)	(0)
21	0	4	0	15	14	0	0	0	0	0	27	-1
22	0	0	4	20	0	0	0	0	0	0	0	-1
23	0	5	10	0	0	0	0	0	0	0	0	-1
24	0	3	0	0	0	0	0	0	0	0	4	-1
25	0	6	0	0	0	0	0	0	0	0	12	-1
26	0	0	0	25	0	0	0	0	0	11	0	-1
27	50	0	0	0	0	0	0	0	0	0	0	-1
28	0	45	0	15	0	0	0	0	0	7	0	-1
29	0	0	12	0	0	0	0	0	0	35	30	-1
30	0		47	0	26	0	0	0	0	0	0	-1
31	10		0		7		0	0		0		-1
	(60)	(63)	(73)	(75)	(47)	(0)	(0)	(0)	(0)	(53)	(73)	(0)
										ANNUAL =		1437
TOTAL	157	338	139	142	113	117	86	0	58	102	185	0
RAINY DAYS	10	17	8	10	6	2	2	0	5	6	13	0
MAX	50	86	47	25	30	87	56	0	20	35	30	0

Table I-8 Daily Rainfall Parigi (33) (8/13)

YEAR 1967

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-1	130	0	33	0	0	0	0	8	-1	-1	-1
2	-1	5	5	0	0	0	0	0	0	-1	-1	-1
3	-1	0	0	11	40	0	0	0	0	-1	-1	-1
4	-1	60	24	0	0	0	0	0	0	-1	-1	-1
5	-1	0	0	0	0	0	0	0	0	-1	-1	-1
6	-1	0	15	0	0	0	18	0	0	-1	-1	-1
7	-1	5	3	0	64	0	0	0	0	-1	-1	-1
8	-1	11	63	0	0	0	0	0	0	-1	-1	-1
9	-1	0	5	0	0	0	0	0	0	-1	-1	-1
10	-1	0	0	0	0	0	0	0	0	-1	-1	-1
(	0)	(211)	(115)	(44)	(104)	(0)	(18)	(0)	(8)	(0)	(0)	(0)
11	-1	60	0	0	0	0	0	0	0	-1	-1	-1
12	-1	0	0	0	0	0	0	0	0	-1	-1	-1
13	-1	30	0	0	10	0	0	0	0	-1	-1	-1
14	-1	4	0	0	0	0	0	0	0	-1	-1	-1
15	-1	0	0	0	0	0	10	0	0	-1	-1	-1
16	-1	0	0	9	0	0	0	0	0	-1	-1	-1
17	-1	35	0	0	0	0	0	0	0	-1	-1	-1
18	-1	0	0	10	0	0	0	0	0	-1	-1	-1
19	-1	0	0	51	0	0	0	0	0	-1	-1	-1
20	-1	0	0	0	25	0	0	0	0	-1	-1	-1
(	0)	(129)	(0)	(70)	(35)	(0)	(10)	(0)	(0)	(0)	(0)	(0)
21	-1	0	0	10	0	0	0	0	0	-1	-1	-1
22	-1	0	0	0	0	0	0	0	0	-1	-1	-1
23	-1	58	0	0	0	0	0	0	0	-1	-1	-1
24	-1	0	0	0	0	0	0	0	0	-1	-1	-1
25	-1	0	0	0	0	0	0	0	0	-1	-1	-1
26	-1	0	0	37	0	0	0	0	0	-1	-1	-1
27	-1	0	76	27	0	0	0	0	0	-1	-1	-1
28	-1	0	0	3	0	0	0	0	0	-1	-1	-1
29	-1	0	0	25	0	0	0	0	0	-1	-1	-1
30	-1		25	0	0	0	0	0	0	-1	-1	-1
31	-1		69		0		0	10		-1		-1
(	0)	(58)	(170)	(102)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)
										ANNUAL =		1084
TOTAL	0	398	285	216	139	0	28	10	8	0	0	0
RAINY DAYS	0	10	9	10	4	0	2	1	1	0	0	0
MAX	0	130	76	51	64	0	18	10	8	0	0	0

Table I-8 Daily Rainfall Parigi (33) (9/13)

YEAR 1972

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	20	0	0	0	0	0	0	20	0	0	10	5
3	45	0	25	0	0	12	0	5	0	0	0	7
4	10	0	20	75	0	0	0	0	0	0	0	0
5	20	0	25	0	52	0	0	0	0	0	0	4
6	0	0	10	0	50	0	0	0	0	0	0	0
7	25	0	0	0	0	0	0	0	0	0	0	2
8	25	0	0	25	30	0	0	0	0	0	0	11
9	0	0	10	0	0	0	0	12	0	0	0	0
10	25	0	10	0	0	0	0	0	0	0	0	0
	(170)	(0)	(100)	(100)	(132)	(12)	(0)	(37)	(0)	(0)	(10)	(29)
11	10	0	0	0	0	0	0	0	0	0	0	8
12	10	0	20	0	0	0	0	0	0	0	0	0
13	30	0	20	0	0	0	0	0	0	0	0	0
14	30	35	0	0	0	0	0	0	0	0	0	4
15	20	35	0	0	25	0	0	0	0	0	0	0
16	0	35	25	0	30	0	0	0	0	0	0	0
17	0	35	0	0	0	0	0	0	0	0	5	0
18	0	10	0	0	0	0	0	0	0	0	5	0
19	25	25	0	9	17	0	0	0	0	0	0	13
20	25	25	0	0	19	0	0	0	0	0	22	0
	(150)	(200)	(65)	(9)	(91)	(0)	(0)	(0)	(0)	(0)	(32)	(25)
21	25	30	0	0	0	0	0	0	0	0	0	40
22	25	25	50	0	0	0	0	0	0	0	3	5
23	25	25	0	0	0	0	0	0	0	0	0	0
24	25	35	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	25	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	25
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	16	0
30	0		0	0	0	0	0	0	0	0	0	25
31	0		0		0		0	0		0		0
	(100)	(115)	(50)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(19)	(95)
											ANNUAL =	1966
TOTAL	420	315	215	109	223	12	25	37	0	0	61	149
RAINY DAYS	18	11	10	3	7	1	1	3	0	0	6	12
MAX	45	35	50	75	52	12	25	20	0	0	22	40

Table I-8 Daily Rainfall Parlgl(33) (10/13)

YEAR 1973

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	5	11	0	50	0	0	0	0	0	0	9
2	0	0	0	0	0	0	0	0	0	12	0	0
3	21	25	0	0	0	0	0	11	0	0	0	0
4	0	50	0	0	0	0	0	0	0	0	0	0
5	7	50	0	0	0	40	7	30	0	0	7	0
6	7	50	0	0	0	0	0	0	0	14	0	0
7	25	0	0	0	0	10	0	35	0	0	0	0
8	29	89	0	0	0	0	0	0	10	0	0	0
9	0	34	30	0	25	14	0	0	0	0	0	0
10	18	34	0	18	0	0	0	0	0	0	0	12
	(107)	(337)	(41)	(18)	(75)	(64)	(7)	(76)	(10)	(26)	(7)	(21)
11	0	53	0	8	11	0	0	7	0	0	0	25
12	0	0	6	0	32	0	0	10	0	14	0	0
13	9	0	0	24	0	13	12	0	0	0	0	0
14	0	0	15	0	20	0	18	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	17
16	0	0	0	19	0	0	0	17	0	0	0	0
17	0	0	0	6	0	45	20	0	0	0	0	0
18	0	0	0	0	35	0	0	8	0	0	0	0
19	37	0	20	0	0	0	0	0	0	0	0	0
20	16	30	43	0	0	0	0	0	0	0	0	0
	(62)	(83)	(84)	(57)	(98)	(58)	(50)	(42)	(0)	(14)	(0)	(42)
21	0	0	10	15	15	0	7	0	42	0	0	0
22	18	16	0	0	0	10	0	14	14	0	35	0
23	0	0	20	62	37	0	40	0	0	28	25	0
24	0	20	0	0	0	0	0	11	0	19	25	6
25	0	10	0	31	0	0	0	0	0	0	25	0
26	50	0	11	6	0	13	0	0	0	0	8	0
27	0	0	0	0	50	0	0	0	0	50	0	10
28	0	14	0	0	13	67	0	0	0	0	0	0
29	35	0	0	0	0	0	0	8	0	35	0	0
30	4		7	25	0	0	0	0	0	0	0	0
31	0		0		0		0	0		6		22
	(107)	(60)	(48)	(139)	(115)	(90)	(47)	(33)	(56)	(138)	(118)	(38)

ANNUAL = 2368

TOTAL	276	480	173	214	288	212	104	151	66	178	125	101
RAINY DAYS	13	14	10	10	10	8	6	10	3	8	6	7
MAX	50	89	43	62	50	67	40	35	42	50	35	25

Table 1-8 Daily Rainfall Parigi (33) (11/13)

YEAR 1974

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	10	0	0	0	0	0
2	18	10	0	0	0	0	0	0	0	0	25	0
3	25	0	60	0	10	0	0	0	0	0	0	12
4	30	15	0	0	15	0	0	0	0	0	0	0
5	35	0	0	0	0	0	0	0	0	0	0	24
6	35	6	0	0	0	0	0	0	0	0	25	33
7	0	0	0	0	0	0	0	0	0	0	0	26
8	135	0	20	0	0	0	0	0	0	0	0	0
9	0	0	40	82	0	0	0	0	0	0	0	0
10	25	10	0	0	0	0	0	0	24	0	6	17
	(303)	(41)	(120)	(82)	(25)	(0)	(10)	(0)	(24)	(0)	(56)	(112)
11	10	45	48	0	0	0	0	50	135	0	0	0
12	15	10	0	75	0	0	11	100	0	0	0	0
13	0	0	25	0	15	12	0	32	0	0	0	0
14	0	25	0	0	17	0	0	8	0	25	0	0
15	20	37	10	38	10	0	0	0	0	25	54	0
16	7	22	0	0	0	0	0	0	0	0	0	0
17	10	7	0	0	0	0	0	0	0	0	0	9
18	12	0	0	0	9	0	0	0	0	0	19	0
19	8	15	0	0	20	0	0	0	0	0	0	0
20	0	10	0	0	21	0	0	0	0	0	24	6
	(82)	(171)	(83)	(113)	(92)	(12)	(11)	(190)	(135)	(50)	(97)	(15)
21	0	0	35	0	0	15	0	40	0	0	4	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	10	0	0	0	0	0	0	0	0	35
24	6	0	0	0	0	0	0	10	0	0	0	0
25	0	0	0	0	0	7	0	25	31	0	0	0
26	0	31	0	0	0	0	20	0	0	0	0	22
27	0	24	0	0	100	0	0	0	0	0	0	12
28	0	11	0	0	0	18	0	0	37	0	0	10
29	0		0	0	10	10	0	0	0	0	0	0
30	0		7	26	0	80	0	0	0	0	0	0
31	11		0		0		0	0		0		0
	(17)	(66)	(52)	(26)	(110)	(130)	(20)	(75)	(68)	(0)	(4)	(79)
											ANNUAL =	2445
TOTAL	402	278	255	221	227	142	41	265	227	50	157	206
RAINY DAYS	16	15	9	3	10	6	3	7	4	2	7	11
MAX	135	45	60	82	100	80	20	100	135	25	54	35

Table Effective Rainfall Parigi (33)

YEAR 1974

Table I-8 Daily Rainfall Parigi (33) (12/13)

YEAR 1975

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	25	0	0	0	0	0	0	0	35	8	17
2	0	56	0	39	0	0	0	0	0	0	0	14
3	29	40	0	0	0	0	0	0	0	0	0	8
4	0	0	0	0	0	0	0	0	0	0	22	18
5	0	7	0	0	0	0	0	0	25	0	0	0
6	0	6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	75	0	0	38	0	0	0	0	0	0	13	7
9	23	34	0	0	53	0	0	0	0	0	0	0
10	10	19	0	0	0	0	0	0	0	0	30	0
	(137)	(187)	(0)	(77)	(53)	(0)	(0)	(0)	(25)	(35)	(73)	(64)
11	10	19	40	0	8	0	25	18	14	25	0	18
12	17	0	36	12	0	0	0	0	0	0	0	0
13	0	0	0	40	0	0	0	25	0	34	8	0
14	0	6	0	0	0	0	0	0	0	0	6	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	17	0	0	0	12	15	0	8	0	0
17	0	8	0	0	0	0	0	0	0	0	0	14
18	36	69	0	0	0	0	0	0	0	0	15	11
19	0	11	36	0	56	0	0	0	9	0	0	6
20	0	12	0	0	0	0	0	0	0	15	0	0
	(63)	(125)	(129)	(52)	(64)	(0)	(37)	(58)	(23)	(82)	(29)	(49)
21	0	9	0	45	0	0	11	40	0	0	0	0
22	0	0	22	0	0	0	0	0	40	18	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	24	0	0	0	0	0	0	0	0	0	0	7
25	24	0	0	0	0	0	0	0	0	43	0	0
26	0	0	0	0	0	0	30	0	0	0	0	0
27	16	0	0	0	0	0	0	11	0	0	0	0
28	10	0	0	0	0	0	7	0	0	0	0	0
29	49		22	0	0	0	0	0	0	0	0	92
30	35		0	0	0	0	0	0	0	19	0	15
31	0		0		0		0	15		18		10
	(158)	(9)	(44)	(45)	(0)	(0)	(48)	(66)	(40)	(98)	(0)	(124)
										ANNUAL =		1994
TOTAL	358	321	173	174	117	0	85	124	88	215	102	237
RAINY DAYS	13	14	6	5	3	0	5	6	4	9	7	13
MAX	75	69	40	45	56	0	30	40	40	43	30	92

Table I-8 Daily Rainfall — Parigi (33) (13/13)

YEAR 1976

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	29	0	45	0	0	35	0	30	0
2	14	7	9	0	0	0	0	0	0	0	0	0
3	26	0	25	0	0	0	0	0	0	0	0	0
4	0	0	75	0	0	35	0	0	0	0	0	0
5	30	0	0	0	0	0	0	0	0	10	0	0
6	16	0	37	0	50	0	0	0	0	40	10	0
7	0	0	0	0	16	0	9	0	0	0	0	0
8	0	0	49	0	0	0	7	0	0	0	0	0
9	7	6	0	0	48	0	0	0	0	0	0	0
10	9	10	0	0	0	0	0	0	0	0	0	0
	(102)	(23)	(195)	(29)	(114)	(80)	(16)	(0)	(35)	(50)	(40)	(0)
11	0	0	0	0	0	0	0	0	0	0	0	0
12	15	0	6	0	0	0	0	0	0	50	0	15
13	11	0	0	0	7	0	0	0	0	15	0	0
14	7	0	0	0	0	0	0	0	0	7	25	8
15	16	0	15	0	0	0	0	0	0	0	8	0
16	22	0	17	0	0	0	0	0	0	0	0	0
17	58	0	0	0	0	0	0	0	0	0	0	0
18	0	0	9	0	0	0	0	0	0	0	90	0
19	6	0	11	0	0	0	0	0	0	0	7	15
20	19	0	0	0	0	0	0	0	0	0	25	0
	(154)	(0)	(58)	(0)	(7)	(0)	(0)	(0)	(0)	(72)	(155)	(38)
21	0	0	0	0	0	0	0	0	0	0	0	0
22	52	0	0	0	0	0	0	0	0	0	0	0
23	6	0	0	0	0	0	0	0	7	0	0	0
24	0	0	0	0	0	0	0	0	6	0	0	0
25	0	0	0	25	0	0	0	0	0	0	0	0
26	26	0	0	25	0	0	0	0	6	0	0	35
27	0	0	27	0	0	0	0	0	0	0	0	0
28	25	0	0	0	0	0	0	0	0	0	0	0
29	7		0	0	0	0	0	6	0	0	0	0
30	25		0	0	0	0	0	0	12	0	0	0
31	30		0		0		0	0		0		0
	(171)	(0)	(27)	(50)	(0)	(0)	(0)	(6)	(31)	(0)	(0)	(35)
										ANNUAL =		1488
TOTAL	427	23	280	79	121	80	16	6	66	122	195	73
RAINY DAYS	21	3	11	3	4	2	2	1	5	5	7	4
MAX	58	10	75	29	50	45	9	6	35	50	90	35

Table I-9 Mean Monthly Temperature (1/2)

STATION Serang

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1971	-	-	-	-	-	-	26.20	26.50	27.10	-	-	26.60	106.40
1972	25.60	26.50	25.80	26.80	26.70	27.00	26.20	26.50	27.10	-	-	26.60	264.80
1973	-	-	-	-	-	-	-	-	-	-	-	-	0.00
1974	25.80	-	26.80	27.40	27.70	27.00	27.60	27.30	27.00	27.40	27.20	-	271.20
1975	27.40	27.00	27.00	26.90	26.60	26.40	26.00	26.30	26.60	26.40	26.80	26.30	319.70
1976	25.50	25.90	26.20	26.40	26.80	26.30	26.40	26.80	26.80	27.30	27.20	27.10	318.50
1977	26.50	26.50	26.50	27.10	27.30	26.40	26.60	26.40	26.70	27.80	27.60	26.70	322.10
1978	26.60	26.90	26.80	27.10	27.50	26.80	26.30	26.60	26.60	26.70	26.90	26.80	321.40
1979	26.40	26.60	26.80	27.10	27.30	26.60	26.20	26.40	26.70	27.30	27.10	26.40	320.90
TOTAL	183.80	159.40	185.90	188.80	189.90	185.50	211.50	212.60	214.60	162.90	162.80	186.30	2245.00
MEAN	26.26	26.57	26.56	26.97	27.13	26.64	26.44	26.58	26.83	27.15	27.13	26.61	26.74
MAX	27.40	27.00	27.00	27.40	27.70	27.00	27.60	27.30	27.10	27.80	27.60	27.10	
MIN	25.50	25.90	25.80	26.40	26.60	26.30	26.00	26.30	26.60	26.40	26.80	26.30	

Table I-9 Mean Monthly Temperature (2/2)

STATION Cikadu (C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1978	-	-	-	-	-	-	24.7	25.1	24.5	25.1	25.4	24.8	149.6
1979	25.5	25.3	25.9	26.2	26.2	26.6	25.9	26.2	26.7	27.9	27.1	27.7	317.2
1980	27.3	28.6	28.7	29.7	29.9	30.0	29.5	29.4	29.9	30.1	29.8	-	322.9
1981	29.9	29.8	30.7	-	32.3	32.1	30.9	31.3	31.4	31.7	32.4	32.6	345.1
TOTAL	82.7	83.7	85.3	55.9	88.4	88.7	111.0	112.0	112.5	114.8	114.7	85.1	1134.8
MEAN	27.6	27.9	28.4	28.0	29.5	29.6	27.8	28.0	28.1	28.7	28.7	28.4	28.4
MAX	29.9	29.8	30.7	29.7	32.3	32.1	30.9	31.3	31.4	31.7	32.4	32.6	
MIN	25.5	25.3	25.9	26.2	26.2	26.6	24.7	25.1	24.5	25.1	25.4	24.8	

Table I-10 Mean Monthly Relative Humidity (1/2)

Station Serang (°C)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1971	-	-	-	-	-	-	81	77	77	-	-	81	316
1972	86	82	86	81	83	77	81	77	77	-	-	81	811
1973	-	-	-	-	-	-	-	-	-	-	-	-	0
1974	-	-	-	-	-	-	-	-	-	-	-	-	0
1975	-	-	-	-	82	80	80	80	79	80	79	81	641
1976	85	82	83	83	81	80	77	78	74	75	77	79	954
1977	84	82	84	83	81	83	77	76	76	72	77	81	956
1978	81	80	83	80	80	80	80	79	78	79	78	84	962
1979	84	85	84	83	80	81	82	78	78	78	81	84	978
TOTAL	420	411	420	410	487	481	558	545	539	384	392	571	5618
MEAN	84	82	84	82	81	80	80	78	77	77	78	82	80
MAX	86	85	86	83	83	83	82	80	79	80	81	84	
MIN	81	80	83	80	80	77	77	76	74	72	77	79	

Table I-10 Mean Monthly Relative Humidity (2/2)

STATION Cikadu (%)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1978	-	-	-	-	-	-	84.3	82.1	82.5	-	-	-	248.9
1979	86.8	87.8	86.1	84.6	83.4	80.4	78.9	79.4	80.4	77.8	81.8	80.7	988.1
1980	84.1	81.6	79.6	80.8	78.1	77.8	76.6	77.1	82.9	82.8	85.6	-	887.0
1981	81.7	81.4	77.9	-	80.9	85.9	83.8	85.7	88.9	86.1	89.6	88.9	939.8
TOTAL	252.6	250.8	243.6	165.4	242.4	244.1	323.6	324.3	334.7	245.7	257.0	169.6	3054.8
MEAN	84.2	83.6	81.2	82.7	80.8	81.4	80.9	81.1	83.7	82.2	85.7	84.8	82.7
MAX	86.8	87.8	86.1	84.6	83.4	85.9	84.3	85.7	88.9	86.1	89.6	88.9	
MIN	81.7	81.4	77.9	80.8	78.1	77.8	76.6	77.1	80.4	77.8	81.8	80.7	

Table I-11 Mean Monthly Wind Speed (1/2)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1971	-	-	-	-	-	-	221.3	221.3	221.3	-	-	265.7
1972	221.3	221.3	221.3	221.3	221.3	265.7	221.3	221.3	221.3	-	-	265.7
1973	-	-	-	-	-	-	-	-	-	-	-	-
1974	135.9	132.8	132.8	132.8	132.8	132.8	132.8	176.9	176.9	132.8	176.9	-
1975	176.9	-	176.9	132.8	132.8	132.8	132.8	132.8	132.8	221.3	221.3	221.3
1976	132.8	176.9	132.8	132.8	176.9	176.9	132.8	221.3	132.8	132.8	88.5	132.8
1977	88.5	132.8	88.5	132.8	132.8	88.5	132.8	132.8	132.8	132.8	132.8	132.8
1978	176.9	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8	176.9	132.8
1979	176.9	265.7	221.3	132.8	132.8	132.8	88.5	88.5	132.8	132.8	132.8	132.8
TOTAL	1109	1062	1106	1018	1062	1062	1195	1328	1284	885	929	1284
MEAN	158.6	177.5	158.6	145.9	158.6	158.6	155.5	172.0	166.5	148.0	155.5	184.0
MAX	221.3	265.7	221.3	221.3	221.3	265.7	221.3	221.3	221.3	221.3	221.3	265.7
MIN	88.5	132.8	88.5	132.8	132.8	88.5	88.5	88.5	132.8	132.8	88.5	132.8

Table I-11 Mean Monthly Wind Speed (2/2)

STATION Cikadu (km/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1978	-1.0	67.9	81.8	57.5	58.8	67.8	78.0	89.6	102.0	77.4	89.8	75.1	824.7
1979	83.2	77.1	105.0	81.0	87.0	60.8	63.3	70.0	75.7	79.8	71.6	102.0	956.5
1980	80.4	68.7	80.7	37.9	36.5	32.3	40.6	50.2	44.2	56.5	70.0	77.4	675.4
1981	62.6	84.2	53.1	51.8	41.6	46.3	37.1	35.2	40.5	34.9	80.3	58.7	626.3
TOTAL	226.2	297.9	300.6	228.2	223.9	207.2	219.0	245.0	262.4	248.6	310.7	313.2	3082.9
MEAN	75.4	74.5	75.2	57.1	56.0	51.8	54.8	61.3	65.6	62.2	77.7	78.3	65.8
MAX	83.2	84.2	105.0	81.0	87.0	67.8	78.0	89.6	102.0	79.8	89.8	102.0	
MIN	62.6	67.9	53.1	37.9	36.5	32.3	37.1	35.2	40.5	34.9	70.0	58.7	

Table I-12 Mean Monthly Sunshine (1/2)

STATION Serang (hours 8-16)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1971	-	-	-	-	-	-	-	-	-	-	-	-	0.0
-1	-	-	-	-	-	-	-	-	-	-	-	-	0.0
1973	-	-	-	-	-	-	-	-	-	-	-	-	0.0
1974	-	-	4.6	5.0	4.4	5.4	5.5	5.4	5.0	4.4	3.8	-	43.5
1975	3.5	2.6	4.1	4.6	3.8	5.0	4.6	3.9	5.4	2.8	4.6	0.8	45.3
1976	-	4.0	2.1	3.9	5.4	5.6	6.0	5.4	5.0	4.7	4.1	3.8	50.0
1977	2.7	2.7	3.0	3.7	3.0	1.8	5.8	6.2	5.8	-	-	3.3	38.0
1978	3.0	3.8	4.8	5.0	3.8	3.3	3.2	4.6	-	-	-	-	31.3
1979	-	-	4.4	5.3	5.1	5.3	6.0	6.0	5.0	5.8	3.6	3.9	50.4
TOTAL	9.2	13.1	22.8	27.5	25.1	26.4	31.1	31.5	26.2	17.7	16.1	11.8	258.5
MEAN	3.1	3.3	3.8	4.6	4.2	4.4	5.2	5.3	5.2	4.4	4.0	3.0	4.2
MAX	3.5	4.0	4.6	5.3	5.4	5.6	6.0	6.2	5.8	5.8	4.6	3.9	
MIN	2.7	2.6	2.1	3.7	3.0	1.8	3.2	3.9	5.0	2.8	3.6	0.8	

Table I-12 Mean Monthly Sunshine (2/2)

STATION Cikadu (hours)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1978	-	-	-	-	-	-	4.4	4.0	5.0	5.2	5.0	2.6	26.2
1979	3.3	4.1	4.1	5.3	5.1	5.5	6.4	6.5	5.2	6.5	5.3	4.2	61.5
1980	2.4	4.1	5.4	4.5	6.5	7.0	6.5	6.5	5.3	5.5	4.5	3.3	61.5
1981	2.4	4.0	4.5	6.1	6.2	5.1	6.1	6.3	5.3	6.5	3.3	4.3	60.1
TOTAL	8.1	12.2	14.0	15.9	17.8	17.6	23.4	23.3	20.8	23.7	18.1	14.4	209.3
MEAN	2.7	4.1	4.7	5.3	5.9	5.9	5.9	5.8	5.2	5.9	4.5	3.6	5.0
MAX	3.3	4.1	5.4	6.1	6.5	7.0	6.5	6.5	5.3	6.5	5.3	4.3	
MIN	2.4	4.0	4.1	4.5	5.1	5.1	4.4	4.0	5.0	5.2	3.3	2.6	

Table I-13 Mean Monthly Pan-Evaporation

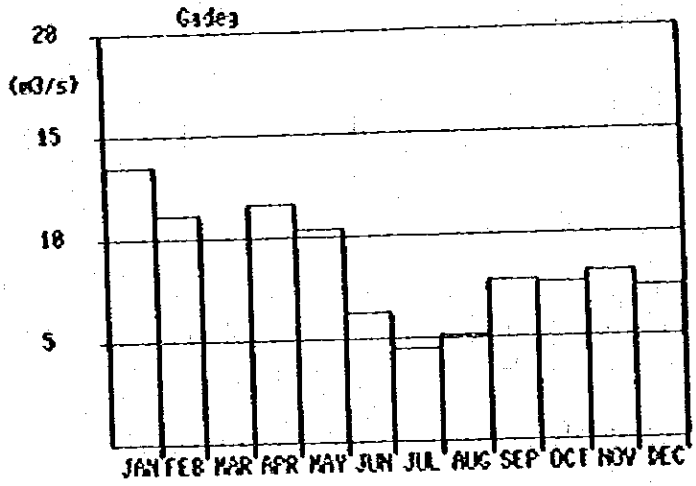
STATION Cikadu (mm/day)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1978	2.1	4.9	3.4	4.5	4.1	3.9	4.1	4.8	4.5	4.8	5.6	3.1	49.8
1979	3.3	3.2	3.8	4.3	4.9	4.8	4.8	5.1	4.8	5.9	5.0	4.7	54.6
1980	2.3	3.5	4.2	3.4	4.3	4.9	4.5	4.3	3.6	4.0	3.6	2.6	45.2
1981	2.8	3.1	3.8	4.1	4.7	5.1	4.6	4.6	4.0	4.3	2.8	4.3	48.2
TOTAL	10.5	14.7	15.2	16.3	18.0	18.7	18.0	18.8	16.9	19.0	17.0	14.7	197.8
MEAN	2.6	3.7	3.8	4.1	4.5	4.7	4.5	4.7	4.2	4.8	4.3	3.7	4.1
MAX	3.3	4.9	4.2	4.5	4.9	5.1	4.8	5.1	4.8	5.9	5.6	4.7	
MIN	2.1	3.1	3.4	3.4	4.1	3.9	4.1	4.3	3.6	4.0	2.8	2.6	

Table I-14 Momthly Mean Discharge

STATION Gadeg

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1964	12.55	11.98	9.30	18.91	11.08	8.47	6.54	12.93	13.26	13.70	9.51	9.35	137.59
1965	12.06	14.23	6.52	8.44	16.18	12.25	5.01	3.49	3.20	5.27	7.92	4.51	99.13
1966	9.76	9.87	9.89	9.96	8.69	6.41	2.42	3.97	8.24	11.13	6.95	6.01	93.31
1967	8.19	9.81	11.07	13.17	7.51	2.76	1.33	1.61	3.36	11.13	9.56	9.00	88.50
1968	11.71	8.36	10.84	11.23	6.42	7.70	9.38	7.58	11.22	10.57	10.08	13.23	118.36
1969	9.63	6.33	9.40	14.42	13.67	4.57	7.64	2.84	9.46	7.40	7.69	4.76	97.82
1970	8.04	12.66	7.99	7.56	13.94	6.71	2.82	2.54	6.57	2.80	10.29	5.05	86.97
1971	7.57	17.31	8.65	10.07	6.09	6.46	4.67	4.93	2.36	9.21	5.13	6.74	89.19
1972	21.37	11.55	16.83	9.65	11.33	3.51	0.93	2.89	0.63	1.88	4.39	9.05	93.92
1973	10.16	16.66	11.08	17.80	11.58	8.18	5.27	6.09	14.66	9.37	6.57	8.28	125.68
1974	17.11	11.60	8.31	10.63	12.42	6.06	5.45	8.03	19.49	8.82	7.18	4.13	119.21
1975	9.04	11.61	7.18	11.53	13.33	5.56	5.26	8.97	11.82	7.58	7.86	5.19	104.93
1976	28.67	10.37	10.05	8.98	6.93	3.82	1.63	3.22	2.49	6.98	7.91	3.84	94.87
1977	18.32	11.96	11.72	15.82	14.83	7.71	4.11	1.61	2.66	2.81	5.38	8.81	105.72
1978	13.36	6.64	11.60	7.49	4.75	4.74	4.43	4.99	9.03	7.45	6.37	7.17	88.03
1979	12.66	8.57	9.53	11.28	5.39	5.42	6.07	5.10	4.18	6.38	16.46	6.31	97.35
1980	16.51	10.83	6.79	8.59	11.70	-	-	5.79	9.74	8.71	9.89	8.05	94.60
1981	15.69	9.03	12.81	13.88	-0.62	-	-	-	-	-	8.02	13.65	73.08
TOTAL	242.48	199.37	179.56	209.42	175.84	100.32	72.95	86.48	132.40	129.19	147.12	133.15	1808.27
MEAN	13.47	11.08	9.98	11.63	10.34	6.27	4.56	5.09	7.79	7.60	8.17	7.40	8.61
MAX	28.67	17.31	16.83	18.91	16.18	12.25	9.38	12.93	19.49	13.70	16.46	13.65	
MIN	7.57	6.33	6.52	7.49	4.75	2.76	0.93	1.61	0.63	1.88	4.39	3.84	



Note: 1964-1969.10 Estimate Data

Table I-1510 Days Mean Discharge (m3/s)

Station Gadeg

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
OCT-1	8.09	14.09	8.70	12.91	17.01	12.10	12.75	2.50	3.09	0.30	9.90	9.64	7.92	9.36	1.59	7.51	8.21	4.74
OCT-2	3.67	14.29	1.36	6.13	7.96	5.93	2.34	2.04	4.68	0.58	5.56	9.04	8.00	8.22	2.12	4.90	3.47	6.15
OCT-3	5.11	12.80	4.47	13.57	7.66	12.34	6.18	3.08	18.64	3.67	12.18	7.01	6.10	2.99	3.91	9.47	6.68	8.43
NOV-1	11.94	5.88	5.09	8.80	7.80	11.00	10.82	7.45	4.30	2.97	8.98	3.76	6.85	4.30	9.42	7.64	17.93	6.78
NOV-2	8.90	11.28	9.10	8.30	12.26	9.51	5.18	12.39	5.93	5.20	2.97	13.60	11.58	13.21	3.63	7.68	24.35	13.40
NOV-3	11.74	11.38	8.63	2.97	7.91	8.70	6.05	10.26	4.12	4.50	7.32	3.51	4.42	5.41	2.39	3.26	6.45	7.84
DEC-1	11.86	7.70	4.00	10.57	6.82	18.39	5.93	3.12	8.09	6.03	8.95	4.57	4.06	2.85	5.15	5.37	5.52	5.50
DEC-2	9.51	14.13	3.61	4.71	12.53	8.22	3.72	2.30	4.59	9.57	5.70	2.15	6.81	4.96	9.20	5.17	5.10	8.10
DEC-3	6.39	6.52	5.03	2.63	7.23	12.28	3.45	8.87	7.01	10.71	9.18	4.77	4.37	3.25	11.42	9.83	7.49	9.70
JAN-1	14.09	19.15	13.85	5.74	15.06	2.58	4.07	5.18	16.20	12.50	27.70	5.07	18.70	10.30	11.27	3.93	12.09	9.11
JAN-2	10.79	7.39	8.73	7.53	7.41	14.73	10.20	10.95	22.92	6.62	18.91	5.55	31.20	10.73	12.03	14.94	21.24	20.62
JAN-3	12.74	9.72	5.89	10.14	11.92	10.33	8.82	5.93	23.98	9.32	4.92	14.28	34.60	29.90	14.81	17.31	15.09	15.70
FEB-1	11.84	6.98	8.83	15.85	5.19	5.62	17.41	18.78	15.55	21.06	10.00	8.66	15.31	7.56	7.12	9.57	7.53	10.89
FEB-2	11.96	18.32	9.18	4.19	11.65	8.94	10.03	23.80	10.35	13.63	12.95	13.57	5.88	16.08	2.86	8.68	12.02	6.16
FEB-3	12.18	16.67	10.25	8.05	8.98	2.50	9.23	5.79	5.87	13.49	9.83	11.41	8.54	11.02	9.27	6.35	12.40	9.05
MAR-1	14.64	7.86	10.14	13.92	5.28	1.96	8.54	4.32	20.32	10.80	13.10	9.77	18.66	13.97	19.25	11.01	9.01	13.96
MAR-2	4.55	8.56	12.20	1.95	18.99	15.66	8.58	12.69	16.68	11.87	4.28	3.97	4.72	8.28	8.87	6.45	5.15	11.97
MAR-3	8.77	2.61	6.97	15.88	7.48	9.50	6.69	8.20	13.00	9.08	6.60	6.99	6.41	11.68	6.03	9.94	5.41	11.90
APR-1	25.90	12.01	8.35	8.41	5.16	18.25	9.23	9.41	6.49	12.80	7.38	8.98	7.82	16.87	6.07	13.57	7.43	13.19
APR-2	16.43	5.91	12.17	19.72	20.95	11.77	6.28	10.16	9.84	19.44	16.58	12.03	6.89	13.66	3.96	8.51	8.07	16.02
APR-3	14.40	5.52	8.53	10.35	6.27	12.12	5.72	9.88	11.82	20.18	6.15	12.51	11.07	16.03	10.86	11.02	9.15	11.58
MAY-1	20.45	19.90	9.69	6.33	6.29	18.24	12.32	7.08	13.37	11.16	11.16	13.12	12.35	22.95	5.99	6.36	16.03	-
MAY-2	3.90	14.64	4.86	11.07	6.17	15.25	20.24	4.63	9.64	11.72	17.43	12.88	5.55	7.52	2.79	3.26	6.81	-
MAY-3	9.08	15.92	9.78	4.55	6.09	7.50	8.45	5.25	10.46	10.80	7.98	12.80	2.65	13.46	4.06	6.60	11.73	-
JUN-1	5.83	14.70	11.07	1.74	6.43	7.80	6.51	5.09	6.28	11.45	5.37	11.00	6.22	11.52	2.21	9.43	-	-
JUN-2	12.44	7.79	5.19	0.91	8.18	3.01	9.61	6.20	2.18	4.46	4.02	3.01	3.40	8.63	5.61	3.87	-	-
JUN-3	7.15	13.42	1.74	4.95	8.22	2.13	3.49	7.42	1.42	8.28	7.96	2.05	1.27	4.59	5.64	2.50	-	-
JUL-1	5.95	8.97	2.89	0.91	8.85	15.52	1.96	5.21	0.95	6.81	5.67	3.42	2.27	5.83	3.69	6.75	-	-
JUL-2	5.07	2.77	0.89	1.00	12.05	4.97	1.81	6.54	0.75	7.35	6.39	3.36	0.85	2.67	3.42	8.10	-	-
JUL-3	8.41	2.86	2.94	1.78	7.30	2.65	3.85	2.23	0.65	3.70	3.92	8.17	1.27	3.75	5.72	3.19	-	-
AUG-1	11.57	2.58	0.93	0.71	3.39	0.93	1.78	3.76	3.49	5.26	7.37	15.53	3.63	1.61	3.55	5.86	4.72	-
AUG-2	15.74	4.98	4.00	3.03	3.70	3.40	2.89	6.36	2.86	6.47	9.31	5.16	1.21	1.06	3.88	6.69	9.97	-
AUG-3	11.61	1.78	6.39	0.78	16.77	3.39	2.65	4.46	1.86	8.25	6.90	5.74	3.86	1.81	7.16	2.50	2.50	-
SEP-1	14.30	1.04	9.61	0.82	5.51	9.97	2.03	2.92	0.60	14.89	16.12	12.07	3.24	1.31	10.20	2.57	12.68	-
SEP-2	12.34	5.09	9.97	0.63	14.32	12.99	9.93	1.42	0.47	9.38	20.35	8.69	1.06	4.90	7.95	3.57	10.89	-
SEP-3	13.15	2.15	4.83	7.82	13.44	4.39	6.81	2.08	0.59	19.65	20.24	12.75	1.99	1.52	8.68	5.51	5.23	-
TOTAL	413.1	348.1	249.9	239.4	334.4	324.3	255.0	247.7	288.7	340.0	359.6	300.6	289.0	312.0	241.6	259.3	283.9	234.7

Table I-16 Daily Discharge at Kopomaja (1/13)

1969 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	36.20	10.60
2	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	28.80	17.60
3	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	30.40	12.80
4	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	61.50	9.40
5	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	26.60	10.60
6	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	42.00	32.40
7	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	32.00	27.90
8	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	27.20	21.80
9	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	16.60	14.70
10	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	13.50	16.00
11	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	11.00	12.60
12	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	14.70	19.00
13	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	18.70	13.50
14	*******	*******	*******	*******	*******	*******	*******	*******	*******	*******	11.90	9.20
15	*******	*******	*******	*******	*******	*******	*******	*******	*******	7.70	34.30	13.30
16	*******	*******	*******	*******	*******	*******	*******	*******	*******	3.79	16.00	8.60
17	*******	*******	*******	*******	*******	*******	*******	*******	*******	9.40	16.30	6.48
18	*******	*******	*******	*******	*******	*******	*******	*******	*******	4.42	11.80	6.32
19	*******	*******	*******	*******	*******	*******	*******	*******	*******	4.42	9.40	6.00
20	*******	*******	*******	*******	*******	*******	*******	*******	*******	7.70	7.52	14.20
21	*******	*******	*******	*******	*******	*******	*******	*******	*******	8.06	6.00	13.00
22	*******	*******	*******	*******	*******	*******	*******	*******	*******	11.00	5.68	8.06
23	*******	*******	*******	*******	*******	*******	*******	*******	*******	4.29	10.20	9.80
24	*******	*******	*******	*******	*******	*******	*******	*******	*******	11.30	14.00	17.60
25	*******	*******	*******	*******	*******	*******	*******	*******	*******	13.30	49.20	7.70
26	*******	*******	*******	*******	*******	*******	*******	*******	*******	24.80	17.90	5.52
27	*******	*******	*******	*******	*******	*******	*******	*******	*******	13.30	14.70	5.36
28	*******	*******	*******	*******	*******	*******	*******	*******	*******	19.60	18.40	8.80
29	*******	*******	*******	*******	*******	*******	*******	*******	*******	32.70	19.30	10.20
30	*******	*******	*******	*******	*******	*******	*******	*******	*******	29.80	21.80	6.48
31	*******	*******	*******	*******	*******	*******	*******	*******	*******	12.80	*******	8.42
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	218.58	645.60	383.94
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.86	21.52	12.39
MAX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.70	61.50	32.40
MIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.68	5.36

Table I-16 Daily Discharge at Kopomaja (2/13)

1970 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.52	25.10	57.00	6.00	12.40	11.30	3.35	27.00	1.59	2.91	4.68	16.00
2	5.68	45.00	28.20	26.90	12.60	9.00	2.80	6.00	1.38	2.80	18.20	13.30
3	21.20	35.60	29.20	34.60	25.40	7.70	2.50	4.94	1.17	2.70	10.00	13.00
4	6.16	81.40	16.60	12.80	90.80	9.00	2.10	3.79	0.96	5.07	33.00	10.00
5	11.50	57.60	20.30	13.30	32.70	9.60	1.90	2.00	1.03	4.42	76.60	8.06
6	13.50	25.70	11.70	46.80	21.20	11.70	2.20	1.73	0.56	3.68	24.20	7.88
7	13.80	65.40	38.00	23.00	14.70	27.60	15.70	1.52	0.76	7.16	13.00	6.80
8	7.70	32.70	14.50	62.60	14.00	43.30	14.20	1.66	0.76	12.80	16.00	6.00
9	16.00	24.50	39.30	26.90	19.00	23.60	8.06	1.45	1.03	19.50	14.50	4.94
10	18.20	77.00	14.00	17.60	118.00	38.60	3.79	1.24	50.30	12.40	8.24	4.42
11	9.60	56.90	15.00	15.00	126.00	15.70	2.70	4.81	53.80	17.00	30.40	5.68
12	25.40	96.00	36.90	17.40	60.40	39.60	2.10	0.48	21.80	6.32	19.00	4.16
13	34.60	35.90	36.50	61.80	117.00	15.00	1.73	2.80	6.00	4.03	20.90	3.90
14	20.90	20.10	13.80	20.90	73.00	10.20	1.59	2.40	22.40	5.07	18.70	3.57
15	20.10	13.50	15.50	15.20	39.30	68.00	1.59	2.91	79.50	3.35	35.60	4.81
16	24.20	10.60	23.00	10.60	25.10	61.10	1.60	24.20	36.90	3.02	45.40	11.00
17	18.40	13.30	21.80	12.40	43.30	20.60	1.45	30.80	15.50	2.60	79.50	8.24
18	17.90	13.30	26.90	10.80	32.70	29.50	1.31	5.84	9.80	5.20	34.00	12.40
19	66.20	14.20	39.30	9.80	33.30	13.80	20.90	2.50	9.00	3.02	33.00	6.16
20	61.50	19.80	22.70	10.20	43.00	8.80	17.90	2.00	35.00	9.60	29.20	7.16
21	34.60	48.20	42.00	11.90	32.00	0.98	17.10	3.13	11.30	5.84	43.00	5.20
22	26.90	15.20	26.90	6.16	18.40	5.52	4.42	14.00	40.30	13.80	21.80	5.20
23	25.10	35.60	20.10	30.10	32.70	4.55	2.01	3.24	41.30	8.06	16.80	14.00
24	16.80	16.30	13.80	16.00	16.30	4.42	2.50	2.00	44.70	4.42	16.80	7.52
25	12.60	33.60	13.30	38.20	27.90	17.10	1.24	1.52	15.70	4.68	42.00	39.90
26	48.20	19.00	26.00	19.80	24.80	22.10	1.59	16.60	18.20	4.94	42.00	29.50
27	28.50	28.50	10.20	10.60	13.80	6.80	1.31	28.20	10.20	4.55	32.00	37.20
28	16.00	20.10	16.60	7.88	9.40	23.60	40.30	6.32	7.34	20.60	38.90	73.00
29	15.00	*******	9.40	5.68	56.20	6.80	16.80	2.68	5.52	6.98	33.00	38.60
30	10.00	*******	10.60	21.50	26.30	4.42	29.20	2.80	4.68	13.50	13.50	21.50
31	50.30	*******	7.16	*******	14.50	*******	6.64	1.90	*******	5.52	*******	13.30
TOTAL	702.06	1020.10	697.46	622.42	1226.20	575.99	233.68	222.06	549.68	232.14	863.52	443.20
MEAN	22.65	36.43	22.50	20.75	39.55	19.20	7.54	7.16	18.32	7.49	28.78	14.30
MAX	66.20	96.00	42.00	62.60	126.00	68.00	40.30	30.80	79.50	26.60	79.50	73.00
MIN	5.52	10.60	7.16	5.68	9.40	4.42	1.24	1.24	0.56	2.00	3.68	3.57

Table I-16 Daily Discharge at Kopomaja (3/13)

1971 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	18.20	16.60	10.00	23.60	26.60	5.68	34.30	6.00	15.50	4.81	17.60	17.40
2	11.30	78.40	8.06	22.10	16.00	5.52	15.70	22.70	8.06	12.80	24.50	26.30
3	8.42	43.30	6.48	16.80	12.80	13.00	15.50	9.20	7.16	19.50	15.50	29.50
4	6.48	38.90	7.52	22.10	30.80	9.00	10.60	6.32	6.16	21.50	11.90	53.10
5	28.80	43.70	10.20	14.70	30.40	10.00	8.06	6.00	15.70	9.40	9.60	35.20
6	9.40	49.90	16.60	29.20	20.10	24.80	6.80	30.10	9.20	6.00	8.24	24.20
7	8.80	130.00	12.80	16.00	26.30	25.40	6.16	8.24	6.64	4.68	10.80	16.80
8	13.30	55.90	21.50	58.30	16.80	10.60	10.60	11.90	5.68	3.90	7.88	13.50
9	20.30	45.40	21.20	42.30	11.50	10.60	10.80	4.68	6.16	4.42	11.50	11.70
10	26.30	44.70	11.70	29.50	15.70	34.90	34.30	4.03	5.20	3.68	8.42	9.20
11	12.80	141.00	15.00	29.50	10.00	44.00	11.00	3.79	4.68	3.68	12.00	8.80
12	11.70	88.00	21.20	20.10	9.00	53.40	13.00	4.42	4.42	26.90	14.00	8.24
13	18.70	62.20	21.80	29.50	8.06	17.90	45.40	4.68	4.29	6.16	21.80	7.70
14	12.10	41.00	98.80	19.80	7.70	14.50	29.20	3.79	3.90	6.16	19.80	13.80
15	61.80	160.00	73.00	36.50	12.80	10.80	44.00	53.10	3.90	15.20	13.30	23.00
16	35.20	64.70	38.90	20.60	10.00	8.60	16.00	26.00	3.57	10.60	13.80	10.60
17	27.60	44.70	38.60	14.00	16.60	6.80	10.60	43.00	3.57	11.70	21.50	8.24
18	68.00	32.00	20.00	46.40	12.10	6.32	8.42	17.40	3.35	9.20	11.70	9.00
19	46.40	26.90	20.30	31.40	32.70	5.84	7.52	16.00	4.03	11.70	11.30	16.30
20	25.40	34.60	17.10	49.20	16.60	13.50	6.48	14.00	6.00	35.60	34.50	28.80
21	15.50	20.60	16.80	23.90	13.50	15.50	6.16	8.60	16.00	13.80	15.20	17.60
22	11.30	15.70	15.20	15.70	55.50	8.80	6.32	16.40	9.80	13.50	9.60	14.70
23	9.00	14.00	12.80	12.40	16.60	7.34	13.30	31.70	5.36	116.00	8.24	43.30
24	7.52	26.30	12.60	17.10	14.00	39.90	7.34	24.80	4.42	60.10	6.32	17.60
25	6.80	20.60	12.80	20.90	10.40	49.20	5.64	12.40	3.90	100.00	5.84	30.80
26	7.16	13.30	12.10	28.20	18.70	23.90	5.07	10.00	3.90	66.50	6.00	35.60
27	32.00	14.50	66.20	82.20	10.20	12.10	4.55	8.06	4.03	35.20	23.00	17.40
28	45.40	10.40	43.00	25.40	8.80	17.10	4.55	6.98	5.07	58.00	11.50	13.30
29	24.20	*******	21.80	25.10	8.42	14.00	5.07	6.16	4.29	60.10	7.70	16.30
30	17.10	*******	17.40	37.60	7.16	29.50	5.36	5.36	4.94	51.30	27.20	9.20
31	14.50	*******	32.70	*******	6.16	*******	8.24	11.30	*******	26.30	*******	10.00
TOTAL	661.48	1377.30	760.16	860.10	512.00	546.50	416.24	439.91	189.48	828.39	420.24	597.18
MEAN	21.34	49.19	24.52	28.67	16.52	18.28	13.43	14.19	6.32	26.72	14.01	19.26
MAX	68.00	160.00	98.80	82.20	55.50	53.40	45.40	53.10	16.60	116.00	34.50	53.10
MIN	6.48	10.40	6.48	12.40	6.16	5.52	4.55	3.79	3.35	3.68	5.84	7.70

Table I-16 Daily Discharge at Kopomaja (4/13)

1972 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.60	67.20	36.50	20.90	90.40	12.80	5.07	3.02	2.00	0.96	8.24	12.00
2	14.70	76.20	95.60	29.80	37.20	98.80	4.29	16.80	1.90	0.89	8.06	12.10
3	64.70	50.60	75.20	38.60	26.60	20.60	3.24	10.40	1.80	0.96	5.84	16.30
4	82.20	40.60	37.60	23.30	36.50	12.60	2.80	4.42	1.73	0.96	4.42	9.20
5	81.10	60.10	32.40	14.50	35.60	9.20	2.30	2.70	1.90	0.75	6.00	7.88
6	44.70	51.30	27.20	11.30	18.40	7.52	2.20	2.40	1.66	0.82	11.50	13.30
7	64.00	29.50	52.70	10.00	29.80	6.32	2.10	2.00	1.52	0.75	4.81	14.50
8	47.50	24.80	112.00	20.90	31.40	5.84	2.10	48.20	1.38	0.82	3.24	8.24
9	31.10	27.60	60.10	11.70	49.20	5.30	1.90	7.70	2.10	0.82	2.60	40.60
10	34.00	27.60	66.00	9.40	36.90	4.94	1.80	4.42	1.59	1.10	32.40	42.00
11	41.30	21.80	75.50	8.24	31.70	4.68	1.80	7.16	2.60	1.59	6.98	55.50
12	27.20	34.30	69.80	21.20	25.10	4.94	1.59	5.07	1.59	2.84	11.70	21.20
13	88.80	34.60	52.70	60.80	19.00	4.94	1.52	3.79	1.38	2.80	17.40	14.00
14	59.40	53.40	51.70	17.10	22.10	4.68	1.38	14.20	1.38	1.52	16.20	11.00
15	71.60	24.80	64.40	12.60	37.20	20.90	1.45	15.50	1.24	1.24	16.30	24.50
16	84.10	42.30	46.80	8.80	18.70	7.34	1.38	17.10	1.17	1.10	7.88	20.10
17	71.20	20.90	50.30	14.70	15.00	5.07	1.24	6.98	1.03	1.10	25.70	41.60
18	49.20	19.00	31.70	9.60	66.20	4.16	1.00	4.68	1.10	1.59	11.00	55.90
19	71.60	24.80	23.90	55.50	24.20	3.79	6.98	3.68	1.10	2.00	24.80	19.80
20	107.00	27.20	21.80	79.90	23.30	3.57	3.57	5.68	1.03	1.24	12.40	16.80
21	90.80	19.30	32.00	56.90	18.40	3.46	2.30	12.80	4.42	1.03	7.88	19.80
22	114.00	26.90	31.10	30.80	51.70	3.35	1.80	9.40	2.60	2.20	8.42	19.00
23	65.80	23.60	22.10	48.50	19.30	3.24	1.66	4.68	1.66	20.30	7.16	30.10
24	62.20	17.60	38.60	38.20	34.00	3.02	1.52	3.35	1.38	34.50	10.20	30.10
25	52.00	14.00	32.00	19.80	38.90	2.91	1.32	2.60	1.74	3.68	10.60	15.50
26	47.80	11.50	27.90	17.90	68.70	4.55	1.31	5.52	1.17	2.50	6.80	47.50
27	33.00	13.50	51.30	21.80	33.60	4.29	1.38	3.79	1.03	14.20	4.94	20.30
28	40.30	17.60	23.90	13.00	28.80	3.24	1.38	3.68	1.03	3.68	16.60	42.30
29	114.00	11.00	45.00	26.60	16.30	2.80	1.31	2.91	1.10	2.50	29.50	39.90
30	108.00	*******	76.60	66.90	14.50	10.80	2.10	2.60	1.03	5.52	29.80	59.40
31	45.00	*******	38.60	*******	13.00	*******	4.94	2.20	*******	28.20	*******	21.20
TOTAL	1918.90	913.60	1503.00	819.24	1011.70	289.65	70.73	239.43	48.36	144.16	371.37	802.22
MEAN	61.90	31.50	48.48	27.31	32.64	9.65	2.28	7.72	1.61	4.65	12.38	25.88
MAX	114.00	76.20	112.00	79.90	90.40	98.80	6.98	48.20	4.42	34.50	32.40	59.40
MIN	10.60	11.00	21.80	8.24	13.00	2.80	1.00	2.00	1.03	0.75	2.60	7.88

Table I-16 Daily Discharge at Kopomaja (5/13)

1973 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.30	10.60	34.00	32.60	22.70	49.30	17.80	5.52	28.90	41.20	62.80	21.20
2	46.20	10.40	26.00	112.00	40.10	50.10	12.60	5.00	25.00	26.30	29.20	17.30
3	30.50	8.26	17.30	31.60	33.70	25.00	10.20	34.70	21.20	48.50	19.60	13.30
4	26.90	7.26	30.20	22.40	19.90	17.80	8.62	17.30	99.50	20.10	15.90	14.90
5	29.80	18.80	39.70	38.20	41.20	27.50	10.40	9.88	*******	38.80	18.60	28.90
6	45.80	81.20	38.60	20.90	35.40	19.00	7.10	19.30	*******	34.00	28.50	43.50
7	42.00	163.00	19.90	19.00	39.70	43.50	15.10	19.30	*******	33.00	24.70	37.90
8	43.50	192.00	16.60	22.40	28.90	47.30	29.50	9.52	*******	22.40	32.60	29.80
9	42.70	78.90	60.40	51.60	33.00	29.20	19.60	22.40	*******	14.20	17.50	31.60
10	39.40	46.60	33.70	24.10	32.30	26.60	10.20	11.30	*******	11.50	13.50	23.80
11	25.70	39.70	26.60	40.80	23.50	17.50	7.90	13.30	22.70	10.60	11.10	22.10
12	43.90	33.30	35.40	59.00	42.30	12.80	11.30	12.60	18.20	16.10	15.40	13.50
13	14.70	65.20	35.80	47.70	21.20	18.00	23.20	12.20	34.70	24.40	11.00	11.50
14	18.50	45.80	38.60	94.50	32.30	10.80	16.50	9.52	28.90	19.60	8.80	11.10
15	15.10	39.40	22.90	99.00	35.10	8.98	10.40	9.88	66.50	27.50	9.70	15.10
16	18.30	28.20	16.80	54.80	31.20	8.08	30.90	8.98	24.70	18.80	7.58	9.16
17	20.40	45.40	16.30	62.00	60.40	7.26	52.40	39.70	16.80	10.20	6.78	9.34
18	13.90	28.90	28.90	29.80	47.00	7.26	32.60	35.40	20.70	8.26	5.91	9.16
19	10.80	26.30	57.40	43.90	22.10	15.10	15.60	34.70	26.90	13.30	5.65	36.60
20	12.80	47.30	69.00	38.20	28.20	25.00	14.70	13.50	14.70	14.20	5.26	29.20
21	11.90	44.60	60.20	167.00	32.30	10.60	32.30	11.90	207.00	10.20	5.26	13.00
22	20.70	30.50	35.40	63.20	21.20	8.08	13.70	49.70	83.00	19.60	6.94	9.88
23	41.60	35.10	25.70	93.00	15.00	7.74	17.10	16.10	91.00	17.30	26.00	10.60
24	27.20	41.20	19.30	56.80	15.40	5.91	10.40	12.20	45.80	54.40	36.10	66.90
25	15.10	40.50	19.30	47.30	34.00	5.52	8.62	11.30	33.30	52.40	16.60	56.00
26	10.60	69.50	19.30	48.50	17.50	5.65	7.74	11.10	33.30	29.20	11.30	24.70
27	60.80	33.30	13.30	26.30	30.20	7.90	6.62	10.10	19.30	12.80	14.90	30.20
28	45.00	21.50	12.40	23.80	22.90	115.00	5.91	7.90	25.00	57.20	38.20	25.70
29	36.80	*******	13.50	40.80	25.30	51.20	5.52	25.10	22.70	49.70	22.90	24.10
30	17.80	*******	18.00	24.40	105.00	25.00	5.65	14.70	15.10	48.10	36.10	17.50
31	12.80	*******	50.40	*******	29.20	*******	5.65	21.20	*******	41.60	*******	17.10
TOTAL	860.50	1332.72	956.90	1535.60	1018.20	706.68	475.83	545.50	1024.90	845.46	564.38	724.84
MEAN	27.76	47.60	30.87	51.19	32.85	23.62	15.35	17.59	42.70	27.27	18.81	23.38
MAX	60.80	192.00	69.00	167.00	105.00	115.00	52.40	49.70	207.00	57.20	62.80	66.90
MIN	10.60	7.26	12.40	19.00	15.00	5.52	5.52	5.00	0.0	8.26	5.26	9.16

Table I-16 Daily Discharge at Kopomaja (6/13)

1974 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	21.80	29.50	43.10	48.50	39.40	12.40	49.70	15.40	12.60	28.50	9.70	5.52
2	81.60	32.30	44.20	24.10	29.50	10.80	26.90	11.90	9.16	38.20	8.08	7.26
3	100.00	20.40	69.00	13.30	26.30	9.52	13.70	19.60	7.58	22.70	15.90	6.62
4	123.00	39.40	61.20	10.40	22.90	13.50	11.00	8.80	45.80	47.00	9.52	5.26
5	85.20	26.00	33.70	15.10	31.20	59.40	11.00	7.26	59.80	54.80	9.34	5.91
6	126.00	20.90	21.50	13.50	68.20	15.60	8.62	15.90	94.00	23.50	10.20	11.50
7	83.90	13.50	18.00	33.00	27.20	11.10	7.42	34.70	55.20	21.80	10.10	34.00
8	53.20	12.20	18.80	19.00	18.30	9.52	10.20	34.00	30.50	15.60	9.16	34.00
9	39.40	20.90	37.50	18.00	33.00	8.26	8.44	28.90	66.50	15.40	7.26	13.50
10	97.50	79.40	36.80	21.50	30.90	7.42	19.30	39.40	100.00	14.90	20.70	10.40
11	156.00	50.50	26.90	23.80	16.80	6.78	18.50	10.30	30.10	34.70	43.50	6.94
12	91.90	27.20	18.50	28.20	89.00	6.62	12.80	16.80	66.60	14.20	16.10	6.04
13	64.40	55.20	17.50	30.90	99.00	13.00	28.20	48.90	83.40	11.50	43.10	5.26
14	45.00	26.00	13.30	82.10	51.60	8.44	27.90	21.20	105.00	22.90	73.50	4.74
15	50.90	21.80	10.60	48.90	55.60	7.10	14.70	60.40	170.00	56.80	79.40	4.35
16	46.60	85.20	9.52	66.10	52.40	6.30	12.80	19.90	50.50	45.40	33.00	4.35
17	30.20	35.80	8.26	26.90	41.60	9.16	9.34	14.40	34.70	33.70	30.20	3.96
18	28.50	22.10	7.74	108.00	39.40	22.90	31.90	14.20	7.67	16.00	36.10	5.91
19	22.90	30.90	6.46	39.00	39.40	8.80	20.90	18.30	26.90	16.60	19.30	5.91
20	18.50	24.70	6.46	31.90	26.00	28.90	10.10	42.30	35.40	12.40	24.10	15.60
21	15.60	35.40	7.58	25.00	35.40	18.00	7.74	15.40	114.00	17.80	17.50	9.34
22	13.30	20.90	29.20	20.40	29.20	18.50	6.62	22.90	48.90	17.30	14.80	6.46
23	11.90	17.80	9.52	19.90	18.80	11.90	6.17	12.80	29.50	14.20	13.00	6.94
24	11.70	22.70	7.74	14.40	14.90	22.40	6.78	22.70	46.60	22.90	11.10	6.62
25	11.10	17.80	29.80	11.90	12.80	14.20	16.30	15.90	22.70	16.00	13.90	27.50
26	12.20	21.80	11.90	10.80	11.50	14.90	10.20	9.70	18.30	50.90	8.08	34.00
27	13.50	50.50	8.08	9.70	27.20	16.30	14.40	28.90	15.10	25.00	7.10	13.90
28	24.10	43.50	10.60	8.98	62.40	10.10	31.20	25.70	208.00	15.40	6.04	26.90
29	14.70	*******	16.10	10.00	17.80	11.90	10.20	14.20	55.20	22.40	5.65	9.70
30	11.30	*******	31.90	48.50	14.40	95.00	7.74	27.90	34.70	12.20	5.65	6.78
31	19.30	*******	50.50	*******	12.20	*******	8.98	26.30	*******	11.00	*******	5.78
TOTAL	1524.30	904.30	721.96	882.38	1094.30	508.72	479.75	710.96	1670.41	772.90	611.08	350.95
MEAN	49.17	32.30	23.29	29.41	35.30	16.96	15.48	22.93	55.68	24.93	20.37	11.32
MAX	156.00	85.20	69.00	108.00	99.00	95.00	49.70	60.40	208.00	56.80	79.40	34.00
MIN	11.10	12.20	6.46	8.98	11.50	6.30	6.17	7.26	7.58	11.00	5.65	3.96

Table I-16 Daily Discharge at Kopomaja (7/13)

1975 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.13	36.80	32.00	18.00	39.70	15.10	7.58	52.00	11.10	45.40	23.20	12.20
2	6.46	35.10	17.10	17.30	25.30	11.50	5.26	17.30	19.90	18.30	14.40	16.80
3	8.26	20.70	22.70	13.00	18.50	9.70	7.42	138.00	43.90	16.10	10.60	13.30
4	10.10	31.20	20.40	13.00	19.90	8.80	5.65	60.80	22.40	12.60	27.50	9.52
5	7.74	25.30	53.20	39.70	13.90	12.40	4.48	25.30	16.60	13.00	20.90	13.30
6	26.90	22.10	34.70	12.60	19.60	61.60	18.80	25.30	66.50	45.80	12.80	10.20
7	17.10	17.10	17.30	47.70	45.40	96.00	18.50	20.70	17.10	25.30	9.88	13.70
8	24.10	14.40	18.00	38.60	34.40	21.50	15.90	35.80	59.80	14.20	26.00	11.90
9	32.30	12.20	34.40	30.20	106.00	14.40	6.46	60.80	47.00	22.90	22.40	8.62
10	10.60	38.60	35.40	33.00	61.60	71.30	10.20	19.00	49.30	18.30	33.00	9.16
11	10.60	25.70	15.10	21.80	66.10	9.08	10.10	14.40	47.30	38.20	60.20	32.60
12	17.10	31.60	17.30	44.60	39.40	8.80	5.78	12.20	29.30	37.20	50.50	23.20
13	16.60	60.40	13.50	48.50	71.30	11.70	4.61	11.30	17.30	20.90	66.90	17.10
14	7.90	45.40	14.40	36.50	27.50	13.50	4.35	13.70	36.80	14.70	25.30	11.50
15	6.94	59.40	10.20	69.50	50.00	8.62	12.60	13.00	24.70	18.00	24.70	24.10
16	6.04	43.10	9.52	34.00	23.20	8.80	20.70	10.40	20.10	33.30	34.00	46.20
17	5.26	40.80	8.98	42.30	48.10	7.42	7.90	8.80	15.60	16.60	23.80	15.90
18	33.30	35.10	7.58	19.00	22.10	7.10	5.65	37.20	16.30	22.40	22.10	12.60
19	40.50	22.70	11.00	17.80	16.10	6.78	15.10	12.20	14.90	14.70	17.10	7.88
20	18.30	33.30	8.62	18.30	13.70	6.30	11.50	17.80	35.40	18.50	14.70	8.26
21	18.30	77.10	8.08	20.10	11.50	6.17	8.26	21.20	14.40	16.30	15.10	9.70
22	24.10	50.90	8.26	34.70	47.30	5.52	41.60	13.90	11.10	15.90	19.00	15.90
23	14.70	28.90	8.26	33.00	41.20	5.26	19.90	8.80	42.70	13.00	14.70	10.10
24	30.20	25.70	11.00	15.60	46.60	5.00	22.90	7.90	33.70	10.10	13.50	10.20
25	43.50	23.80	34.00	12.40	74.40	4.74	49.30	8.62	24.70	11.70	17.30	8.26
26	89.50	23.20	19.30	10.80	39.40	4.48	55.20	32.30	33.70	18.80	13.90	6.62
27	44.20	15.40	18.80	15.10	18.30	4.48	19.00	17.00	45.00	16.10	12.60	11.90
28	55.60	22.40	19.90	16.30	31.20	4.35	11.70	34.70	108.00	9.88	8.80	11.70
29	36.80	*******	12.60	117.00	23.20	3.83	14.20	18.00	37.50	8.26	7.58	12.90
30	73.50	*******	41.20	91.50	52.80	16.30	13.00	11.00	22.90	36.10	7.10	20.70
31	29.80	*******	43.90	*******	20.60	*******	8.26	11.50	*******	40.50	*******	22.90
TOTAL	771.43	918.40	627.70	981.90	1174.30	470.53	461.86	790.92	982.00	663.04	669.56	458.62
MEAN	24.88	32.80	20.25	32.73	37.88	15.68	14.90	25.51	32.73	21.39	22.32	14.79
MAX	89.50	77.10	53.20	117.00	106.00	96.00	55.20	138.00	108.00	45.80	66.90	46.20
MIN	5.13	12.20	7.58	10.80	11.50	3.83	4.35	7.90	11.10	8.26	7.10	6.62

Table I-16 Daily Discharge at Kopomaja (8/13)

1976 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	14.20	64.40	11.50	12.60	83.40	33.70	2.93	2.93	10.80	7.42	7.26	9.16
2	45.80	99.00	10.20	9.52	25.30	17.30	2.93	17.30	6.17	4.74	6.94	11.10
3	25.70	91.00	32.60	13.70	20.70	38.60	3.26	6.30	4.07	4.22	7.26	13.30
4	57.80	37.20	156.00	8.98	14.70	11.70	2.82	23.80	4.35	4.61	28.90	7.90
5	101.00	27.20	103.00	8.08	14.70	22.90	9.88	9.16	15.90	95.10	28.20	6.78
6	59.40	22.90	86.10	12.40	24.10	12.40	12.80	29.20	8.80	16.60	13.50	6.78
7	107.00	26.60	39.40	19.00	40.10	8.80	18.80	5.91	5.39	58.20	7.90	7.74
8	48.90	33.30	45.40	26.90	49.70	6.62	5.52	4.35	27.20	17.10	13.50	7.10
9	43.90	19.90	29.50	20.10	40.50	5.78	4.09	3.83	6.94	25.00	6.94	6.17
10	44.20	28.50	33.00	98.00	48.50	24.40	3.37	3.37	5.26	41.20	5.78	7.26
11	53.20	18.00	23.80	19.60	22.40	8.44	3.15	3.04	4.22	47.70	5.00	19.10
12	55.60	14.40	17.50	12.80	13.30	6.46	3.04	2.82	3.83	37.50	9.61	24.40
13	82.10	14.20	14.40	13.50	29.50	6.04	2.71	2.60	3.89	34.70	30.20	15.60
14	43.10	11.70	12.80	44.60	27.50	8.44	2.60	2.52	3.15	40.50	19.30	9.88
15	69.90	14.40	13.70	13.90	19.30	6.04	2.52	3.59	2.93	18.30	77.60	7.92
16	145.00	9.16	11.10	27.50	17.30	39.70	2.36	3.15	2.93	13.90	30.50	6.62
17	125.00	15.60	10.60	23.20	10.10	8.80	2.20	8.08	2.76	11.70	28.20	11.20
18	68.20	9.34	9.52	16.60	8.80	6.17	2.04	4.22	2.22	13.90	47.70	14.20
19	102.00	27.90	9.88	19.60	7.42	5.13	2.04	3.04	2.60	9.52	79.40	26.50
20	170.00	31.20	15.10	10.60	7.10	4.35	2.04	2.52	2.44	13.00	60.40	10.10
21	73.50	14.40	15.10	11.00	6.17	4.22	1.96	2.44	2.60	8.98	35.10	8.62
22	159.00	14.40	11.30	26.00	6.04	4.09	1.96	2.28	2.44	8.80	20.90	14.20
23	121.00	9.16	15.40	65.60	5.78	3.83	1.88	2.20	2.28	6.46	18.50	14.40
24	97.00	12.80	12.20	47.70	5.91	3.70	1.88	2.60	2.44	5.91	13.30	21.50
25	144.00	17.30	14.70	22.40	5.56	3.48	2.44	4.87	2.60	5.39	18.00	13.50
26	67.70	63.20	26.60	22.90	5.00	3.37	2.93	5.65	11.10	4.61	13.90	7.90
27	41.60	54.80	13.90	33.30	11.50	3.48	2.26	7.90	11.90	4.35	11.70	6.30
28	53.20	22.90	9.52	21.20	6.30	4.09	2.04	10.40	4.22	7.10	11.30	10.20
29	60.20	16.10	39.40	45.00	5.13	3.83	9.88	50.10	4.61	13.30	9.52	15.60
30	156.00	*******	29.50	29.50	4.61	3.15	9.52	10.20	14.20	23.80	6.26	11.70
31	142.00	*******	18.80	*******	4.35	*******	4.22	25.70	*******	7.58	*******	17.50
TOTAL	2577.20	840.96	891.52	755.78	590.77	319.01	132.07	266.07	184.24	611.19	672.57	370.23
MEAN	83.14	29.00	28.76	25.19	19.06	10.63	4.26	8.58	6.14	19.72	22.42	11.94
MAX	170.00	99.00	156.00	98.00	83.40	39.70	18.80	50.10	27.20	95.10	79.40	26.50
MIN	14.20	9.16	9.52	8.08	4.35	3.15	1.88	2.20	2.22	4.22	5.00	6.17

Table I-16 Daily Discharge at Kopomaja (9/13)

1977 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	9.88	25.70	58.20	26.00	67.70	30.20	10.00	8.53	12.30	6.28	9.42	5.32
2	9.88	18.00	59.00	24.10	16.80	20.30	66.40	4.32	4.54	4.01	5.80	6.16
3	1.31	16.20	24.70	16.00	99.50	18.70	13.90	3.65	3.29	3.47	7.18	5.92
4	90.50	20.30	26.60	63.20	31.60	47.70	29.80	3.04	2.88	3.74	41.90	6.79
5	23.20	13.00	83.90	17.80	104.00	43.10	10.90	2.88	2.64	3.56	65.50	5.92
6	15.00	17.60	10.30	15.00	48.10	56.80	8.98	2.72	2.48	5.68	67.50	5.32
7	18.50	36.50	43.50	55.60	105.00	23.00	8.28	2.80	2.43	4.76	14.70	27.20
8	10.20	34.00	39.40	135.00	85.70	28.50	7.76	2.80	2.40	7.70	22.10	12.00
9	71.30	18.20	39.70	89.00	52.80	20.80	7.52	12.00	2.26	4.21	12.50	48.30
10	52.00	22.10	24.10	52.80	61.20	48.40	7.40	4.43	2.88	3.47	29.30	27.90
11	25.00	41.00	24.10	74.40	41.20	25.00	6.92	3.56	2.80	3.12	11.20	21.00
12	18.20	23.50	20.80	72.20	46.60	17.10	6.70	3.12	7.31	2.80	20.20	10.50
13	19.20	164.00	24.70	29.50	25.00	14.00	6.60	2.88	3.74	3.20	12.50	8.68
14	16.00	37.20	51.60	26.40	21.00	17.60	6.40	2.80	4.87	2.96	8.68	12.50
15	14.60	74.90	43.90	14.50	19.20	14.40	6.30	2.66	6.04	3.29	7.31	7.57
16	40.50	59.80	21.00	14.20	16.00	11.40	15.80	4.65	25.90	2.96	6.40	55.20
17	34.70	26.30	17.80	43.90	14.60	40.80	8.98	3.38	5.80	2.88	7.57	51.20
18	36.50	18.00	13.70	18.50	12.60	21.90	6.92	2.96	36.90	2.56	7.57	30.70
19	62.00	14.20	13.50	21.00	13.00	15.40	6.30	2.56	33.60	2.96	6.79	13.70
20	47.70	12.30	11.40	85.70	11.20	16.90	6.00	2.33	16.70	35.40	17.90	58.40
21	170.00	34.40	10.20	83.00	13.70	11.90	5.80	2.26	8.12	48.30	8.26	20.20
22	177.00	26.80	60.40	41.20	10.80	16.40	5.72	2.26	5.56	18.60	7.31	51.20
23	88.00	27.50	23.80	32.30	171.00	19.20	5.63	2.26	4.54	8.82	7.44	20.50
24	42.70	45.00	13.70	26.00	30.50	15.40	5.46	11.40	4.10	6.79	6.66	21.30
25	266.00	41.60	52.80	41.00	20.00	22.70	4.95	3.92	3.74	5.80	5.92	18.10
26	58.60	16.70	16.60	28.50	12.10	12.60	11.20	9.58	3.65	5.32	8.40	14.50
27	36.50	24.70	17.30	31.20	10.30	10.20	11.10	3.83	3.38	4.87	6.40	11.40
28	22.70	39.70	35.00	40.80	12.80	9.26	16.60	3.12	4.32	4.65	6.04	38.80
29	30.20	*******	27.50	114.00	90.30	8.56	8.28	2.96	4.21	7.44	5.68	108.00
30	16.40	*******	85.70	31.60	18.70	8.28	6.70	3.74	3.04	7.44	5.32	38.80
31	55.20	*******	39.70	*******	43.50	*******	39.40	12.90	*******	7.98	*******	25.20
TOTAL	1579.47	951.20	1034.60	1364.40	1326.50	666.50	368.70	136.30	226.42	235.02	449.45	788.28
MEAN	50.95	32.97	33.37	45.48	42.79	22.22	11.89	4.40	7.55	7.58	14.98	25.43
MAX	266.00	164.00	85.70	135.00	171.00	56.80	66.40	12.90	36.90	48.30	67.50	108.00
MIN	1.31	12.30	10.20	14.20	10.30	8.28	4.95	2.26	2.26	2.56	5.32	5.32

Table I-16 Daily Discharge at Kopomaja (10/13)

1978 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.90	21.30	10.50	25.20	15.40	7.31	8.40	10.50	146.00	20.50	18.00	24.00
2	14.10	41.50	22.10	15.60	12.90	6.92	17.20	12.50	35.00	12.50	34.30	11.60
3	12.10	43.80	57.90	12.90	14.50	5.68	12.30	7.44	20.50	57.00	35.00	11.10
4	14.50	26.20	25.20	51.60	20.20	5.92	16.70	6.53	14.90	23.40	28.20	12.10
5	17.20	18.10	59.30	23.00	37.70	5.80	9.26	5.92	12.70	14.90	13.50	19.60
6	47.80	15.60	70.00	13.30	21.50	5.32	9.26	12.90	23.00	13.50	14.10	12.10
7	23.70	12.70	25.90	9.90	18.10	4.76	7.31	6.06	12.50	14.50	12.00	9.90
8	21.50	10.90	115.00	8.40	13.10	4.43	7.57	12.10	9.90	41.50	14.70	12.00
9	125.00	10.70	134.00	10.50	11.40	12.90	10.70	15.80	8.96	12.70	23.40	26.60
10	34.30	7.70	38.10	7.31	10.90	5.68	6.53	7.70	15.40	9.58	30.00	17.70
11	38.80	14.10	67.00	6.28	7.98	6.28	5.44	5.68	9.10	7.98	19.10	12.50
12	18.60	9.26	35.00	5.92	8.40	7.44	15.20	2.66	51.60	7.70	19.10	13.10
13	37.30	7.31	35.00	5.92	7.31	18.60	7.44	7.70	45.80	6.92	25.60	9.74
14	34.70	11.60	27.50	6.40	7.70	15.80	25.90	6.04	14.70	6.28	17.40	6.86
15	21.00	6.53	20.70	12.70	6.92	15.80	9.10	5.32	12.10	12.70	42.60	19.10
16	30.70	5.44	16.90	7.84	6.16	69.20	8.26	18.10	24.00	10.50	40.30	24.00
17	68.00	7.18	14.10	8.12	13.30	12.70	6.40	7.98	16.50	10.10	16.90	14.30
18	44.20	7.44	17.20	5.80	7.98	8.92	6.40	19.10	17.20	36.50	17.90	19.00
19	25.90	8.40	12.50	14.90	8.40	6.53	10.40	29.60	20.50	33.20	15.20	16.90
20	33.20	6.40	14.50	42.20	7.57	5.09	5.80	11.60	21.50	11.80	11.10	15.20
21	21.30	22.10	17.90	42.60	10.90	5.44	4.98	57.90	16.50	9.74	10.50	89.60
22	17.20	8.40	13.10	17.70	5.92	19.10	4.43	15.20	58.40	21.30	13.50	32.10
23	43.40	15.80	13.50	13.90	11.10	12.00	6.53	10.00	62.00	32.40	19.90	49.10
24	74.50	14.50	38.40	31.40	6.79	19.90	15.60	9.42	21.80	40.30	13.30	25.90
25	46.60	106.00	15.20	43.80	5.56	11.10	33.60	7.70	29.30	52.10	8.26	14.50
26	31.00	24.00	16.70	15.60	21.30	20.50	44.60	8.40	16.00	32.10	6.79	12.50
27	30.00	15.40	12.90	33.60	11.40	24.90	31.70	26.20	12.70	42.60	6.04	12.90
28	39.60	10.90	16.50	63.60	14.70	13.50	14.10	11.20	9.90	24.60	6.04	9.90
29	65.00	*******	19.10	25.90	16.90	28.20	14.10	43.40	8.54	24.30	5.56	9.58
30	71.00	*******	16.90	30.00	15.80	10.40	11.60	21.50	18.40	13.70	5.68	24.30
31	37.70	*******	14.40	*******	10.40	*******	12.50	13.70	*******	12.10	*******	36.50
TOTAL	1159.80	509.26	1019.00	611.89	388.19	394.12	399.31	448.45	786.00	669.00	544.57	625.48
MEAN	37.41	18.19	32.87	20.40	12.52	13.14	12.88	14.47	26.20	21.58	18.15	20.18
MAX	125.00	106.00	134.00	63.60	37.70	69.20	44.60	57.90	146.00	57.00	42.60	89.60
MIN	12.10	5.44	12.50	5.80	5.56	4.43	4.43	2.66	8.54	6.28	5.56	6.86

Table I-16 Daily Discharge at Kopomaja (11/13)

1979 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	22.40	10.90	14.00	3.92	18.20	20.50	36.80	12.80	5.80	12.60	55.60	14.80
2	13.30	13.90	23.00	2.65	34.40	13.00	9.40	8.00	6.00	2.92	54.80	11.40
3	11.80	23.30	81.20	33.30	19.50	11.10	17.30	7.04	5.72	95.50	20.50	11.80
4	9.26	14.60	63.60	39.70	15.80	56.40	13.50	6.92	5.63	28.90	25.30	12.10
5	8.12	12.80	34.70	2.80	15.60	25.00	7.88	6.70	5.90	18.00	33.30	24.70
6	6.92	18.50	26.00	66.90	12.80	13.50	6.92	8.14	5.55	18.50	61.20	24.70
7	6.66	16.60	21.00	6.70	11.80	54.40	6.70	42.30	9.12	25.00	88.00	22.10
8	7.31	88.50	22.70	120.00	12.10	16.40	74.90	29.20	6.70	13.90	125.00	15.40
9	8.68	44.60	18.20	59.00	26.60	31.60	13.90	32.60	8.98	15.00	34.40	13.70
10	20.70	30.50	18.20	62.40	19.50	34.40	10.50	18.00	15.80	10.00	27.20	10.90
11	24.60	19.00	16.00	41.60	12.60	16.00	16.40	37.20	18.20	9.55	28.20	8.70
12	67.00	33.70	28.90	31.20	10.90	15.60	9.55	43.90	9.12	12.60	159.00	9.26
13	21.80	18.00	27.50	56.40	10.20	12.30	9.55	27.90	7.88	13.00	47.70	7.40
14	22.70	43.50	21.30	6.70	9.26	10.50	53.60	17.30	6.60	16.00	64.00	10.00
15	37.30	36.80	30.20	20.80	8.84	9.70	50.50	15.60	6.40	10.20	121.00	12.60
16	121.00	21.60	14.40	17.60	8.98	9.12	27.20	11.80	6.40	8.28	86.10	13.10
17	39.60	19.50	12.60	14.80	8.56	8.70	20.50	14.40	5.90	7.52	88.00	14.00
18	24.30	21.30	10.80	16.00	3.72	8.84	13.90	10.00	5.55	7.28	64.00	31.00
19	34.30	21.60	13.90	22.10	12.40	14.00	15.60	8.84	21.90	8.70	34.00	6.40
20	45.00	19.20	13.50	22.10	10.20	8.70	20.50	8.98	16.90	8.56	21.60	36.50
21	32.10	18.70	16.20	18.50	21.90	7.88	13.70	8.84	13.00	9.85	32.30	32.60
22	28.90	14.80	35.80	15.60	10.60	7.52	10.80	7.88	8.56	8.28	16.20	25.70
23	17.70	13.90	19.70	37.90	13.30	7.16	9.55	7.52	7.52	13.50	16.40	28.90
24	33.90	13.00	30.20	42.00	13.50	6.80	8.70	7.52	18.20	14.60	17.10	28.50
25	19.10	12.80	15.20	80.30	9.85	6.70	8.28	8.70	20.50	26.30	13.70	20.50
26	207.00	15.60	31.20	30.90	9.85	6.50	7.76	7.52	18.50	15.00	24.40	20.80
27	85.70	41.60	60.20	22.70	36.10	6.50	7.28	6.92	19.50	12.30	16.00	34.00
28	37.90	18.20	21.90	33.00	12.30	7.88	7.16	6.60	23.00	19.70	21.60	17.10
29	47.00	*******	42.70	20.00	26.00	7.16	6.92	7.16	10.60	13.30	15.00	12.40
30	21.90	*******	27.90	22.10	16.00	9.12	9.20	6.10	22.10	13.30	16.20	10.60
31	26.60	*******	19.20	*******	23.40	*******	13.30	5.90	*******	69.00	*******	10.30
TOTAL	1110.55	683.00	831.90	969.67	475.36	462.98	537.81	448.28	341.53	557.14	1427.80	552.56
MEAN	35.82	24.39	26.84	32.32	15.33	15.43	17.35	14.46	11.38	17.97	47.59	17.82
MAX	207.00	88.50	81.20	120.00	36.10	56.40	74.90	43.90	23.00	95.50	159.00	36.50
MIN	6.66	12.60	10.80	2.65	3.72	6.50	6.70	5.90	5.55	2.92	13.70	6.40

Table I-16 Daily Discharge at Kopomaja (12/13)

1980 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	11.20	39.20	30.30	30.40	43.00	*******	*******	13.20	8.35	9.50	23.50	10.10
2	15.00	61.30	22.00	14.00	78.50	*******	*******	11.00	7.02	8.67	16.00	9.18
3	12.80	24.70	15.00	10.70	69.00	*******	*******	8.85	13.40	7.85	35.00	8.98
4	30.50	17.30	31.90	22.40	29.50	*******	*******	15.50	30.40	11.90	17.80	13.40
5	52.70	13.90	35.00	33.20	69.00	*******	*******	20.50	80.50	10.50	13.40	39.00
6	37.30	12.00	22.60	23.50	29.50	*******	*******	12.90	61.20	17.40	12.50	14.40
7	28.30	12.00	22.00	12.00	63.90	*******	*******	8.85	21.50	8.85	20.50	19.30
8	50.80	11.00	33.20	30.90	39.00	*******	*******	7.85	21.20	8.00	19.50	14.80
9	51.20	12.00	27.20	19.30	23.50	*******	*******	19.00	95.50	26.70	25.50	17.00
10	64.50	17.30	18.60	21.20	24.60	*******	*******	20.50	32.50	29.50	15.00	15.10
11	48.90	27.80	13.20	14.20	38.00	*******	*******	53.50	64.50	16.00	36.10	24.10
12	104.00	53.50	12.00	26.00	10.00	*******	*******	21.70	36.30	25.20	33.20	35.20
13	66.00	19.60	11.20	38.20	14.00	*******	*******	43.00	40.50	30.00	24.10	48.50
14	34.00	47.80	11.00	38.50	12.90	*******	*******	15.50	22.00	11.90	44.40	27.80
15	33.30	23.00	11.30	19.30	14.40	*******	*******	26.00	19.50	14.40	53.50	16.00
16	42.80	23.00	17.50	45.50	21.50	*******	*******	16.00	30.90	28.00	41.50	11.90
17	61.70	23.80	17.40	19.00	12.50	*******	*******	21.50	42.30	22.40	34.00	16.00
18	87.30	15.30	23.90	13.40	10.80	*******	*******	64.10	22.00	12.50	36.60	27.00
19	86.30	27.10	15.50	11.50	36.30	*******	*******	18.30	25.20	9.98	45.50	18.00
20	57.90	91.20	18.60	10.80	29.00	*******	*******	12.70	16.00	9.98	43.50	12.70
21	50.00	77.20	11.20	11.90	153.00	*******	*******	10.10	11.90	13.40	31.90	10.00
22	76.00	27.10	9.50	10.00	80.50	*******	*******	10.00	11.30	10.50	23.00	17.80
23	93.30	31.20	8.35	15.50	25.50	*******	*******	8.35	9.80	15.10	23.20	22.60
24	48.20	41.30	8.50	12.50	17.40	*******	*******	7.68	13.70	30.00	24.10	39.80
25	41.20	22.50	8.00	14.00	14.00	*******	*******	7.10	14.40	24.10	29.70	19.60
26	33.20	20.00	7.85	27.80	12.50	*******	*******	7.00	38.00	27.80	19.30	15.10
27	44.20	13.90	15.10	28.50	15.50	*******	*******	6.49	18.00	15.50	34.40	17.50
28	35.60	68.70	8.67	62.00	21.50	*******	*******	6.30	11.70	16.50	19.00	62.50
29	22.30	25.00	19.00	42.30	16.50	*******	*******	6.00	14.40	22.00	13.70	34.40
30	18.00	*******	31.90	43.50	11.50	*******	*******	5.95	9.98	71.50	11.50	39.00
31	24.10	*******	46.50	*******	10.00	*******	*******	5.85	*******	25.20	*******	28.50
TOTAL	1462.60	899.70	589.07	722.00	1046.80			511.27	843.95	590.83	820.90	711.26
MEAN	47.18	31.02	19.00	24.07	33.77			16.49	28.13	19.06	27.36	22.94
MAX	104.00	91.20	46.50	62.00	153.00			64.10	95.50	71.50	53.50	62.50
MIN	11.20	11.00	7.85	10.00	10.00			5.85	7.02	7.85	11.50	8.98

Table I-16 Daily Discharge at Kopomaja (13/13)

1981 CIDURIAN RIV. AT KOPOMAJA

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	23.20	20.80	41.50	19.50	*******	*******	*******	*******	*******	*******	44.60	9.01
2	24.10	19.30	23.90	23.90	*******	*******	*******	*******	*******	*******	24.90	10.60
3	15.50	35.00	81.30	62.40	*******	*******	*******	*******	*******	*******	26.70	9.18
4	12.00	55.50	28.00	21.70	*******	*******	*******	*******	*******	*******	22.40	8.00
5	14.00	30.40	19.60	54.60	*******	*******	*******	*******	*******	*******	18.60	7.45
6	47.20	42.70	22.40	84.50	*******	*******	*******	*******	*******	*******	12.70	7.02
7	20.00	25.50	54.00	26.70	*******	*******	*******	*******	*******	*******	10.10	7.10
8	25.20	38.20	52.30	21.70	*******	*******	*******	*******	*******	*******	11.70	8.67
9	19.50	28.00	52.60	46.50	*******	*******	*******	*******	*******	*******	10.10	8.67
10	66.00	20.80	33.50	24.90	*******	*******	*******	*******	*******	*******	30.00	7.00
11	45.90	15.50	21.20	16.50	*******	*******	*******	*******	*******	*******	15.50	6.60
12	40.00	14.20	20.20	17.00	*******	*******	*******	*******	*******	*******	11.50	7.20
13	36.60	13.20	28.50	19.60	*******	*******	*******	*******	*******	*******	34.00	9.18
14	38.50	12.00	26.00	12.90	*******	*******	*******	*******	*******	*******	19.50	7.02
15	65.00	24.90	17.40	14.70	*******	*******	*******	*******	*******	*******	28.50	6.20
16	46.00	17.40	48.00	26.50	*******	*******	*******	*******	*******	*******	105.00	5.82
17	123.00	14.00	26.50	31.50	*******	*******	*******	*******	*******	*******	64.10	5.50
18	77.10	16.50	19.00	178.00	*******	*******	*******	*******	*******	*******	35.00	16.00
19	61.60	19.00	94.50	87.50	*******	*******	*******	*******	*******	*******	22.00	8.35
20	70.50	34.00	49.50	65.10	*******	*******	*******	*******	*******	*******	16.50	15.10
21	31.50	15.10	23.90	62.00	*******	*******	*******	*******	*******	*******	14.20	165.00
22	23.50	19.60	24.10	68.60	*******	*******	*******	*******	*******	*******	13.70	78.10
23	94.50	30.00	19.60	34.50	*******	*******	*******	*******	*******	*******	12.20	35.00
24	50.00	31.90	101.00	32.50	*******	*******	*******	*******	*******	*******	12.90	54.00
25	61.70	32.80	28.70	30.00	*******	*******	*******	*******	*******	*******	10.80	20.20
26	34.40	50.60	21.20	29.70	*******	*******	*******	*******	*******	*******	10.10	263.00
27	52.30	19.00	24.90	19.50	*******	*******	*******	*******	*******	*******	9.75	258.00
28	53.00	13.40	48.50	16.00	*******	*******	*******	*******	*******	*******	10.00	64.10
29	39.80	*******	23.00	27.00	*******	*******	*******	*******	*******	*******	9.50	38.20
30	36.60	*******	42.00	19.30	*******	*******	*******	*******	*******	*******	8.67	45.50
31	28.50	*******	26.50	*******	*******	*******	*******	*******	*******	*******	*******	24.60
TOTAL	1376.70	709.30	1143.30	1194.80							675.22	1216.07
MEAN	44.41	25.33	36.88	39.83							22.51	39.23
MAX	123.00	55.50	101.00	178.00							105.00	263.00
MIN	12.00	12.00	17.40	12.90							8.67	5.50

Table I-17 Double-Mass Curve(Rain and Discharge)at Kopomaja(1/6)

YEAR 1972

MONTH	ST-1	ST-2	A.R	CUM.R	Q	CUM.Q
1	39	105	65	65	91	26
2	110	321	194	260	137	65
3	196	193	195	455	601	236
4	23	195	92	546	126	271
5	127	112	121	667	174	321
6	71	56	65	732	121	355
7	66	196	118	850	237	423
8	75	119	93	943	135	461
9	86	217	138	1081	226	525
10	192	117	162	1243	475	660
11	278	105	209	1452	671	851
12	255	182	226	1678	773	1071
13	95	87	92	1770	456	1200
14	108	104	106	1876	303	1286
15	27	89	52	1928	142	1327
16	194	194	194	2122	595	1496
17	182	128	160	2282	489	1635
18	282	104	211	2493	419	1754
19	33	104	61	2555	190	1808
20	201	111	165	2720	288	1890
21	94	207	139	2859	340	1986
22	106	144	121	2980	392	2098
23	43	135	80	3060	283	2178
24	122	46	92	3151	337	2274
25	0	0	0	3151	184	2326
26	50	44	48	3199	64	2344
27	0	20	8	3207	42	2356
28	6	39	19	3226	28	2364
29	1	55	23	3249	22	2371
30	25	45	33	3282	21	2377
31	108	138	120	3402	102	2406
32	41	85	59	3460	84	2429
33	7	158	67	3528	54	2445
34	0	27	11	3539	18	2450
35	13	55	30	3568	14	2454
36	3	55	24	3592	17	2459
TOTAL	3259	4092	3592	3592	8651	2459

Where
A.R= Areal Rainfall(mm/10 DAYS)
CUM.R= Cumulate Rainfall(mm)
Q= Discharge(m3/s/10 DAYS)
CUM.Q= Cumulate Discharge(mm)

ST-1:Cikopomaja(2a)
ST-2:Cianten(21a)

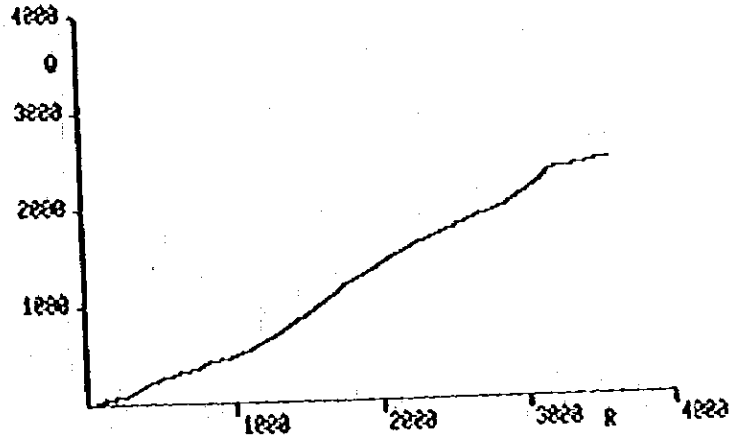


Table I-17 Double-Mass Curve(Rain and Discharge)at Kopomaja(2/6)

YEAR 1973

MONTH	ST-1	ST-2	A.R	CUM.R	Q	CUM.Q
1	0	40	16	16	9	3
2	45	119	75	91	17	7
3	137	242	179	270	118	41
4	51	78	62	331	87	66
5	205	251	223	555	152	109
6	40	180	96	651	132	146
7	116	145	128	778	177	197
8	71	107	85	864	280	276
9	87	293	169	1033	345	374
10	159	207	178	1211	366	478
11	58	162	100	1311	194	533
12	114	98	108	1419	300	619
13	163	187	173	1591	617	794
14	128	162	142	1733	400	908
15	59	122	84	1817	316	998
16	97	152	119	1936	316	1087
17	143	75	116	2052	348	1186
18	76	108	89	2141	293	1270
19	143	161	150	2291	375	1376
20	296	223	267	2558	570	1538
21	66	315	166	2723	591	1706
22	88	202	134	2857	327	1799
23	302	214	267	3124	343	1897
24	144	151	147	3270	348	1995
25	50	198	109	3380	335	2091
26	46	107	70	3450	131	2128
27	137	294	200	3650	243	2197
28	22	177	84	3734	141	2237
29	149	129	141	3875	216	2298
30	0	74	30	3904	119	2332
31	111	247	165	4070	154	2376
32	56	231	126	4196	190	2430
33	91	108	98	4294	201	2487
34	106	327	194	4488	437	2611
35	186	180	184	4672	275	2689
36	144	168	154	4825	576	2853
TOTAL	3886	6234	4825	4825	10039	2853

Where
A.R= Areal Rainfall(mm/10 DAYS)
CUM.R= Cumulate Rainfall(mm)
Q= Discharge(m3/s/10 DAYS)
CUM.Q= Cumulate Discharge(mm)

ST-1:Cikopomaja(2a)
ST-2:Cianten(21a)

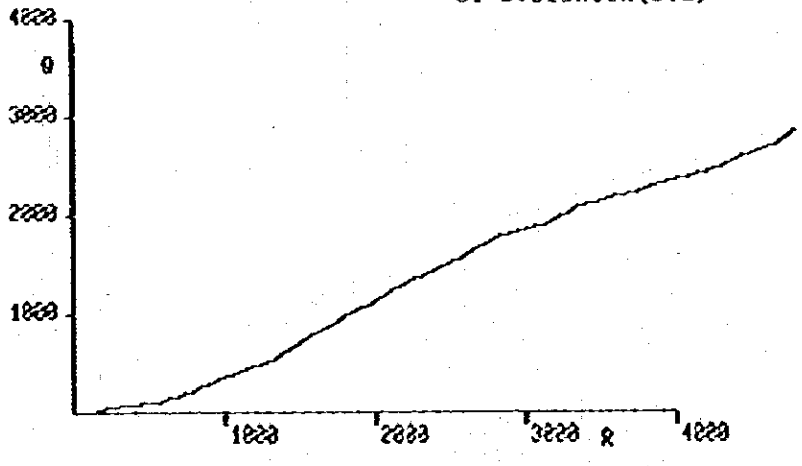


Table I-17 Double-Mass Curve(Rain and Discharge)at Kopomaja(3/6)

YEAR 1974

MONTH	ST-1	ST-2	A.R	CUM.R	Q	CUM.Q
1	47	65	54	54	290	82
2	81	223	138	192	163	129
3	184	354	252	444	393	240
4	99	42	76	520	263	315
5	14	68	36	556	87	340
6	187	123	161	717	214	401
7	137	168	149	867	262	475
8	74	86	79	945	167	523
9	88	122	102	1047	293	606
10	266	173	229	1276	812	837
11	51	107	73	1349	554	994
12	96	90	94	1443	159	1039
13	126	90	112	1554	295	1123
14	86	116	98	1652	379	1231
15	60	59	60	1712	230	1296
16	146	35	102	1814	384	1405
17	4	0	2	1816	125	1441
18	92	106	98	1914	213	1501
19	57	123	83	1997	216	1563
20	132	203	160	2157	486	1701
21	44	26	37	2194	180	1752
22	106	150	124	2318	327	1845
23	156	216	180	2498	511	1990
24	71	31	55	2553	257	2063
25	25	22	24	2577	158	2108
26	109	130	117	2694	118	2142
27	121	144	130	2824	233	2208
28	27	213	101	2926	166	2255
29	55	123	82	3008	187	2308
30	92	147	114	3122	126	2344
31	53	164	97	3219	216	2406
32	86	157	114	3334	273	2483
33	14	190	84	3418	222	2546
34	152	226	182	3600	481	2683
35	187	275	222	3822	596	2852
36	103	318	189	4011	593	3021
TOTAL	3428	4885	4011	4011	10629	3021

Where
A.R= Areal Rainfall(mm/10 DAYS)
CUM.R= Cumulate Rainfall(mm)
Q= Discharge(m3/s/10 DAYS)
CUM.Q= Cumulate Discharge(mm)

ST-1:Cikoponaja(2a)

ST-2:Cianten(21a)

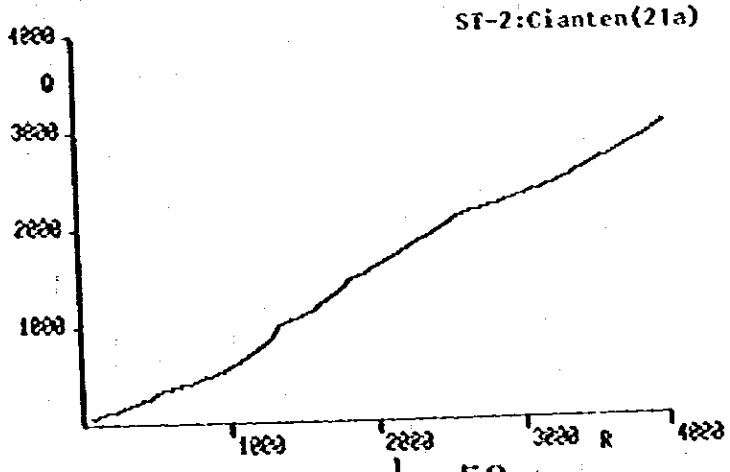


Table I-17 Double-Mass Curve(Rain and Discharge)at Kopomaja (4/6)

YEAR 1975

MONTH	ST-1	ST-2	A.R	CUM.R	Q	CUM.Q
1	32	140	75	75	282	80
2	34	151	81	156	265	155
3	64	187	113	269	226	220
4	57	86	69	338	110	251
5	142	126	136	473	398	364
6	0	218	87	561	103	393
7	65	63	64	625	134	431
8	28	13	22	647	63	449
9	149	50	109	756	154	493
10	81	143	106	862	149	535
11	93	77	87	949	163	582
12	203	138	177	1126	460	713
13	72	108	86	1212	254	785
14	167	95	138	1350	398	898
15	37	114	68	1418	267	974
16	48	185	103	1521	286	1055
17	11	31	19	1540	116	1088
18	92	44	73	1613	225	1152
19	61	148	96	1708	263	1227
20	57	112	79	1787	352	1327
21	135	124	131	1918	367	1431
22	210	81	158	2076	384	1540
23	34	135	74	2151	378	1648
24	168	150	161	2312	413	1765
25	100	41	76	2388	322	1856
26	6	159	67	2455	88	1881
27	62	15	43	2498	60	1899
28	34	68	48	2546	100	1927
29	65	236	133	2679	98	1955
30	126	193	153	2832	263	2030
31	159	207	178	3010	455	2159
32	36	209	105	3116	151	2202
33	112	142	124	3240	185	2254
34	153	179	163	3403	354	2355
35	23	302	135	3538	255	2427
36	99	185	133	3671	374	2534
TOTAL	3015	4655	3671	3671	8915	2534

Where
A.R= Areal Rainfall(mm/10 DAYS)
CUM.R= Cumulate Rainfall(mm)
Q= Discharge(m3/s/10 DAYS)
CUM.Q= Cumulate Discharge(mm)

ST-1:Cikoponaja(2a)
ST-2:Cianten(21a)

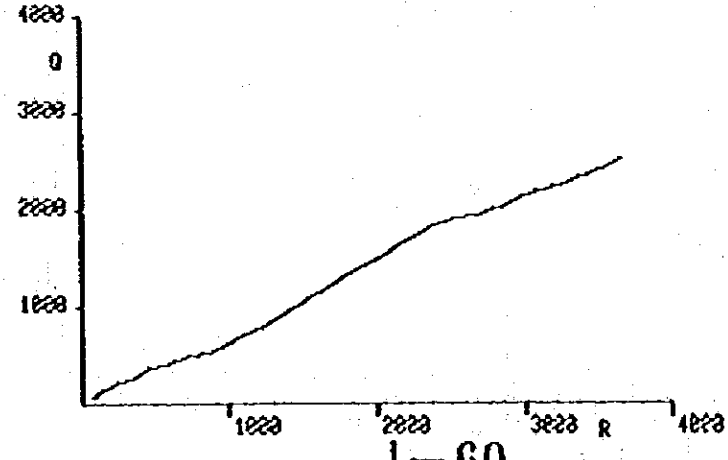


Table I-17 Double-Mass Curve(Rain and Discharge)at Kopomaja (5/6)

YEAR 1976

MONTH	ST-1	ST-2	A.R	CUM.R	Q	CUM.Q
1	77	134	100	100	232	66
2	63	150	98	198	235	133
3	122	144	131	328	197	189
4	91	151	115	443	201	246
5	34	158	84	527	339	342
6	15	49	29	556	130	379
7	119	103	113	668	119	413
8	82	24	59	727	199	470
9	69	71	70	797	141	510
10	211	193	204	1001	548	665
11	214	163	194	1194	914	925
12	253	134	205	1400	1115	1242
13	57	43	51	1451	450	1370
14	27	95	54	1505	166	1417
15	80	174	118	1623	186	1470
16	160	182	169	1792	547	1625
17	29	75	47	1839	138	1665
18	57	196	113	1952	206	1723
19	133	80	112	2063	229	1788
20	23	209	97	2161	202	1846
21	144	204	168	2329	325	1938
22	48	189	104	2433	362	2041
23	14	0	8	2442	163	2087
24	46	0	28	2469	66	2106
25	69	174	111	2580	182	2158
26	67	86	75	2655	100	2186
27	0	0	0	2655	37	2197
28	38	79	54	2709	66	2215
29	0	0	0	2709	25	2223
30	8	76	35	2744	41	2234
31	44	127	77	2822	106	2264
32	3	6	4	2826	36	2275
33	82	128	100	2926	124	2310
34	68	71	69	2995	95	2337
35	0	15	6	3001	31	2346
36	71	112	87	3089	58	2362
TOTAL	2618	3795	3089	3089	8311	2362

Where
A.R= Areal Rainfall(mm/10 DAYS)
CUM.R= Cumulate Rainfall(mm)
Q= Discharge(m3/s/10 DAYS)
CUM.Q= Cumulate Discharge(mm)

ST-1:Cikopomaja(2a)

ST-2:Cianten(21a)

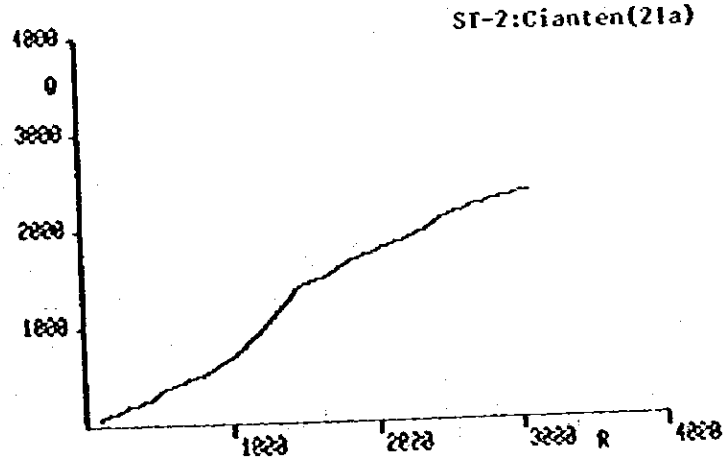


Table I-17 Double-Mass Curve(Rain and Discharge)at Kopomaja (6/6)

YEAR 1977

MONTH	ST-1	ST-2	A.R	CUM.R	Q	CUM.Q
1	178	291	223	223	274	78
2	40	196	102	326	241	146
3	26	101	56	382	96	174
4	61	262	141	523	126	209
5	217	194	208	731	388	320
6	0	118	47	778	159	365
7	48	115	75	853	83	389
8	123	122	123	975	146	430
9	73	207	127	1102	141	470
10	153	240	188	1290	302	556
11	126	125	126	1415	314	645
12	239	126	194	1609	963	919
13	80	121	96	1706	222	982
14	110	91	102	1808	471	1116
15	100	181	132	1940	258	1189
16	130	195	156	2096	409	1305
17	33	86	54	2151	243	1374
18	112	319	195	2345	383	1483
19	183	225	200	2545	495	1624
20	212	102	168	2713	400	1738
21	141	181	157	2870	470	1871
22	109	307	188	3058	672	2062
23	0	194	78	3136	220	2125
24	31	133	72	3208	434	2248
25	221	70	161	3368	338	2344
26	36	79	53	3422	195	2400
27	7	214	90	3511	135	2438
28	109	25	75	3587	171	2487
29	113	0	68	3655	77	2508
30	79	54	69	3724	121	2543
31	31	33	32	3755	47	2556
32	1	15	7	3762	31	2565
33	64	48	58	3820	58	2581
34	3	37	17	3836	38	2592
35	101	84	94	3930	144	2633
36	29	44	35	3965	45	2646
TOTAL	3319	4935	3965	3965	9310	2646

Where
A.R= Areal Rainfall(mm/10 DAYS)
CUM.R= Cumulate Rainfall(mm)
Q= Discharge(m3/s/10 DAYS)
CUM.Q= Cumulate Discharge(mm)
ST-1:Cikopomaja(2a)
ST-2:Cianten(21a)

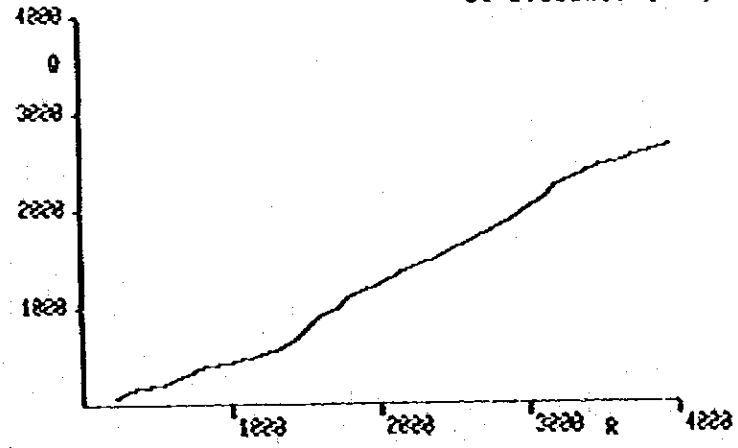


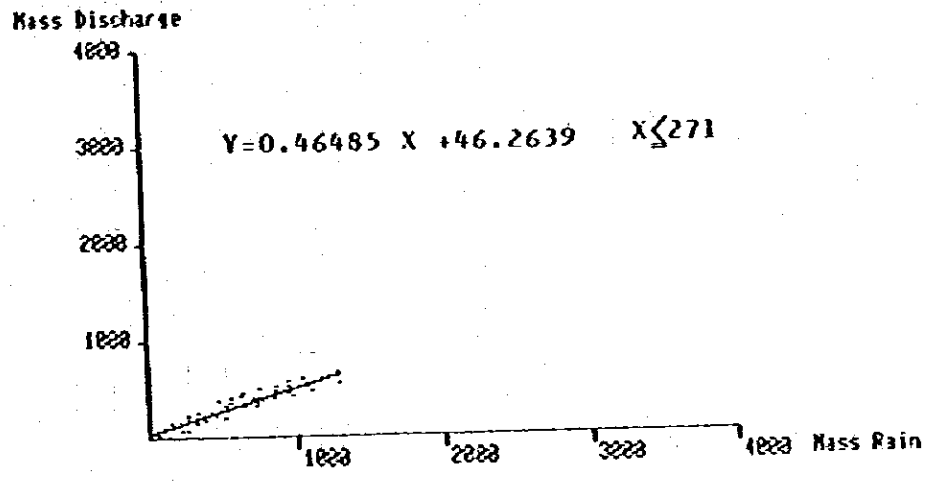
Table I-18 Regression Analysis of Mass Rain and Mass Discharge(1/2)

INPUT DATA:--------

X	Y	X	Y	X	Y	X	Y
65.0	26.0	260.0	65.0	455.0	236.0	546.0	271.0
667.0	321.0	732.0	355.0	850.0	423.0	943.0	461.0
1081.0	525.0	54.0	82.0	192.0	129.0	444.0	240.0
520.0	315.0	556.0	340.0	717.0	401.0	867.0	475.0
945.0	523.0	1047.0	606.0	75.0	80.0	156.0	155.0
269.0	220.0	338.0	251.0	473.0	364.0	561.0	393.0
625.0	431.0	647.0	449.0	756.0	493.0	862.0	535.0
949.0	582.0	223.0	78.0	326.0	146.0	382.0	174.0
523.0	209.0	731.0	320.0	778.0	365.0	853.0	389.0
975.0	430.0	1102.0	470.0	1290.0	556.0		

OUT PUT:----------

VARIANCE= 47633.4
CORRELATION COEFFICIENT= .924625
REGRESSION COEFFICIENT
A= .46485
B= 46.2639
AVERAGE
X= 611.154
Y= 330.359



where:
X:Mass rain(mm)
Y:Mass discharge(mm)

Table I-18 Regression Analysis of Mass Rain and Mass Discharge(2/2)

X=Mass Rain
Y=Mass Discharge

INPUT DATA:---------

X	Y	X	Y	X	Y	X	Y
1243.0	660.0	1452.0	851.0	1678.0	1071.0	1770.0	1200.0
1876.0	1286.0	1928.0	1327.0	2122.0	1496.0	2282.0	1635.0
2493.0	1754.0	2555.0	1808.0	2720.0	1890.0	2859.0	1986.0
2980.0	2098.0	3060.0	2178.0	3151.0	2274.0	3151.0	2326.0
3199.0	2344.0	3207.0	2356.0	3226.0	2364.0	3249.0	2371.0
3282.0	2377.0	3402.0	2406.0	3460.0	2429.0	3528.0	2445.0
3539.0	2450.0	3568.0	2454.0	3592.0	2459.0	1276.0	837.0
1349.0	994.0	1443.0	1039.0	1554.0	1123.0	1652.0	1231.0
1712.0	1296.0	1814.0	1405.0	1816.0	1441.0	1914.0	1501.0
1997.0	1563.0	2157.0	1701.0	2194.0	1752.0	2318.0	1845.0
2498.0	1990.0	2553.0	2063.0	2577.0	2108.0	2694.0	2142.0
2824.0	2208.0	2926.0	2255.0	3008.0	2308.0	3122.0	2344.0
3219.0	2406.0	3334.0	2483.0	3418.0	2546.0	3600.0	2683.0
3822.0	2852.0	4011.0	3021.0	1126.0	713.0	1212.0	785.0
1350.0	898.0	1418.0	974.0	1521.0	1055.0	1540.0	1088.0
1613.0	1152.0	1708.0	1227.0	1787.0	1327.0	1918.0	1431.0
2076.0	1540.0	2151.0	1648.0	2312.0	1765.0	2388.0	1856.0
2455.0	1881.0	2498.0	1899.0	2546.0	1927.0	2679.0	1955.0
2832.0	2030.0	3010.0	2159.0	3116.0	2202.0	3240.0	2254.0
3403.0	2355.0	3538.0	2427.0	3671.0	2534.0	1415.0	645.0
1609.0	919.0	1706.0	982.0	1808.0	1116.0	1940.0	1189.0
2096.0	1305.0	2151.0	1374.0	2345.0	1483.0	2545.0	1624.0
2713.0	1738.0	2870.0	1871.0	3058.0	2062.0	3136.0	2125.0
3208.0	2248.0	3368.0	2344.0	3422.0	2400.0	3511.0	2438.0
3587.0	2487.0	3655.0	2508.0	3724.0	2543.0	3755.0	2556.0
3762.0	2565.0	3820.0	2581.0	3836.0	2592.0	3930.0	2633.0
3965.0	2646.0						

OUT PUT:----------

VARIANCE= 467344
CORRELATION COEFFICIENT= .977485
REGRESSION COEFFICIENT
A= .718394
B=-22.5713
AVERAGE
X= 2623.02
Y= 1861.79

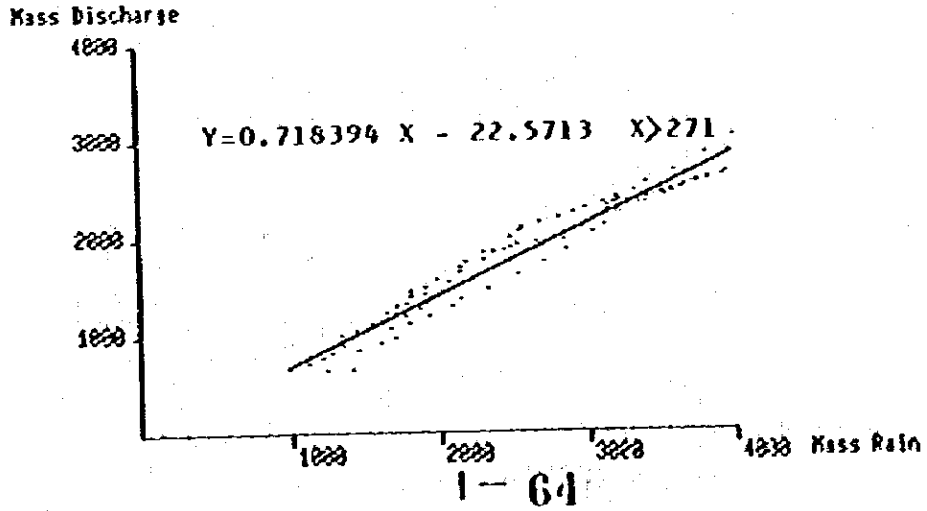


Table I-19Estimated Discharge(Kopomaja and Gadeg) (1/14)

						YEAR	1964	
NO.	ST-1	ST-2	A.R	MASSR	MASSO1	O1	MASSO2	O2	O3
OCT-1	50	40	46	46	68	238	23	81	8.09
OCT-2	40	105	66	112	98	108	33	37	3.67
OCT-3	91	116	101	213	145	165	49	56	5.11
NOV-1	138	192	160	373	245	351	83	119	11.94
NOV-2	80	139	104	476	320	262	109	89	8.90
NOV-3	25	304	137	613	418	345	142	117	11.74
DEC-1	10	330	138	751	517	349	176	119	11.86
DEC-2	33	227	111	861	596	280	203	95	9.51
DEC-3	35	152	82	943	655	207	223	70	6.39
JAN-1	84	284	164	1107	773	415	263	141	14.09
JAN-2	82	191	126	1233	863	317	293	108	10.79
JAN-3	151	181	163	1396	980	412	333	140	12.74
FEB-1	77	229	138	1534	1079	348	367	118	11.84
FEB-2	68	246	139	1673	1179	352	401	120	11.96
FEB-3	53	204	113	1786	1261	287	429	97	12.18
MAR-1	140	216	170	1957	1383	431	470	146	14.64
MAR-2	35	80	53	2010	1421	134	483	46	4.55
MAR-3	75	168	112	2122	1502	284	511	96	8.77
APR-1	261	362	301	2423	1718	762	584	259	25.90
APR-2	136	274	191	2614	1856	483	631	164	16.43
APR-3	96	275	168	2782	1976	424	672	144	14.40
MAY-1	298	148	238	3020	2147	602	730	205	20.45
MAY-2	9	100	45	3065	2180	115	741	39	3.90
MAY-3	33	241	116	3182	2263	294	769	100	9.08
JUN-1	3	165	68	3249	2312	171	786	58	5.83
JUN-2	56	278	145	3394	2416	366	821	124	12.44
JUN-3	20	178	83	3477	2476	210	842	72	7.15
JUL-1	20	143	69	3547	2525	175	859	59	5.95
JUL-2	77	32	59	3606	2568	149	873	51	5.07
JUL-3	44	203	108	3713	2645	272	899	92	8.41
AUG-1	41	275	135	3848	2742	340	932	116	11.57
AUG-2	134	257	183	4031	2873	463	977	157	15.74
AUG-3	77	256	149	4180	2980	376	1013	128	11.61
SEP-1	102	263	166	4346	3100	421	1054	143	14.30
SEP-2	68	257	144	4490	3203	363	1089	123	12.34
SEP-3	57	297	153	4643	3313	387	1126	131	13.15
TOTAL	2999	7708	4643	4643	3313	11656	1126	3963	392.52

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
O1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
O3=10 Days Mean Discharge(m3/s)

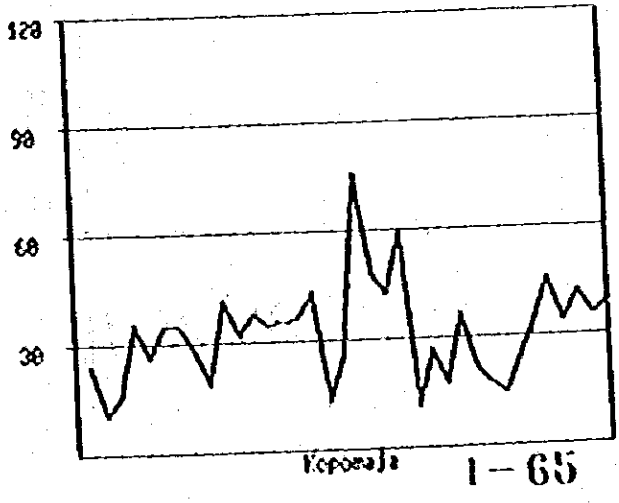


Table I-19 Estimated Discharge(Kopomaja and Gadeg) (2/14)

NO.	ST-1	ST-2	A.R	MASSR	MASSO1	Q1	MASSO2	YEAR 1965 Q2	Q3
OCT-1	81	263	154	154	118	414	40	141	14.09
OCT-2	175	257	208	362	237	420	81	143	14.29
OCT-3	75	297	164	525	355	414	121	141	12.80
NOV-1	94	30	68	594	404	173	137	59	5.88
NOV-2	70	223	131	725	498	332	169	113	11.28
NOV-3	54	250	132	857	593	335	202	114	11.38
DEC-1	6	215	90	947	658	226	224	77	7.70
DEC-2	130	216	164	1111	776	416	264	141	14.13
DEC-3	77	93	83	1195	836	211	284	72	6.52
JAN-1	316	83	223	1418	996	563	339	191	19.15
JAN-2	96	71	86	1504	1058	217	360	74	7.39
JAN-3	102	126	112	1615	1138	282	387	96	8.72
FEB-1	50	128	81	1696	1196	205	407	70	6.98
FEB-2	290	98	213	1910	1349	539	459	183	18.32
FEB-3	234	37	155	2065	1461	392	497	133	16.67
MAR-1	135	26	91	2156	1526	231	519	79	7.86
MAR-2	122	66	100	2256	1598	252	543	86	8.56
MAR-3	11	67	33	2289	1622	84	551	29	2.61
APR-1	219	21	140	2429	1722	353	586	120	12.01
APR-2	54	91	69	2498	1772	174	602	59	5.91
APR-3	53	81	64	2562	1818	162	618	55	5.52
MAY-1	318	102	232	2794	1984	585	675	199	19.90
MAY-2	21	307	135	2929	2082	342	708	116	11.64
MAY-3	139	301	204	3133	2228	515	758	175	15.92
JUN-1	23	393	171	3304	2351	432	799	147	14.70
JUN-2	69	123	91	3394	2416	229	821	78	7.79
JUN-3	139	182	156	3551	2528	395	860	134	13.42
JUL-1	124	75	104	3655	2603	264	885	90	8.97
JUL-2	11	64	32	3687	2626	81	893	28	2.77
JUL-3	23	57	37	3724	2653	93	902	31	2.86
AUG-1	0	75	30	3754	2674	76	909	26	2.58
AUG-2	46	76	58	3812	2716	147	923	50	4.98
AUG-3	4	51	23	3835	2732	58	929	20	1.78
SEP-1	0	27	11	3845	2740	31	932	10	1.04
SEP-2	50	73	59	3905	2782	150	946	51	5.09
SEP-3	13	43	25	3930	2800	63	952	21	2.15
TOTAL	3424	5118	3930	3930	2800	9857	952	3351	333.34

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

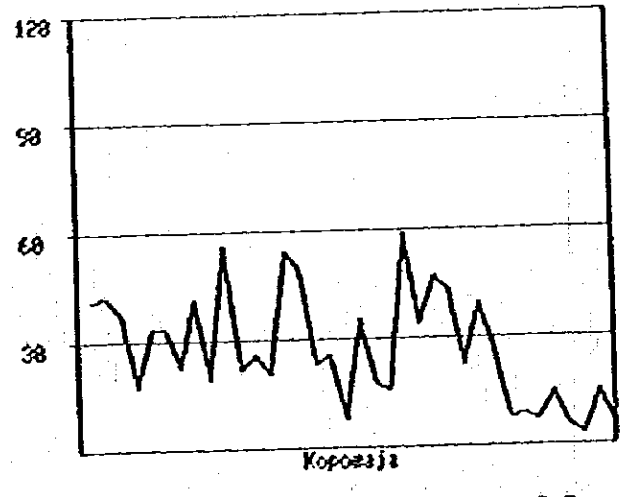


Table I-19 Estimated Discharge(Kopomaja and Gadeg) (3/14)

YEAR 1966

NO.	BT-1	BT-2	A.R	MASSR	MASSQ1	Q1	MASSQ2	Q2	Q3
OCT-1	41	81	57	57	73	256	25	87	8.70
OCT-2	4	55	24	81	84	40	29	14	1.36
OCT-3	48	149	88	170	125	145	43	49	4.47
NOV-1	34	178	92	261	168	150	57	51	5.09
NOV-2	39	215	109	371	244	268	83	91	9.10
NOV-3	68	149	100	471	316	254	107	86	8.63
DEC-1	23	82	47	518	349	118	119	40	4.00
DEC-2	38	48	42	560	380	106	129	36	3.61
DEC-3	68	59	64	624	426	163	145	55	5.03
JAN-1	146	184	161	785	542	407	184	139	13.85
JAN-2	80	134	102	887	615	257	209	87	8.73
JAN-3	47	118	75	962	669	191	227	65	5.89
FEB-1	86	128	103	1065	743	260	253	88	8.83
FEB-2	108	105	107	1172	819	270	279	92	9.18
FEB-3	95	96	95	1267	888	241	302	82	10.25
MAR-1	98	148	118	1385	973	298	331	101	10.14
MAR-2	166	106	142	1527	1075	359	365	122	12.20
MAR-3	44	157	89	1617	1139	225	387	77	6.97
APR-1	104	87	97	1714	1209	246	411	84	8.35
APR-2	156	120	142	1855	1310	358	446	122	12.17
APR-3	78	131	99	1955	1382	251	470	85	8.53
MAY-1	30	237	113	2067	1463	285	497	97	9.69
MAY-2	49	68	57	2124	1503	143	511	49	4.86
MAY-3	128	121	125	2249	1593	316	542	108	9.78
JUN-1	134	121	129	2378	1686	326	573	111	11.07
JUN-2	6	142	60	2438	1729	153	588	52	5.19
JUN-3	0	36	14	2453	1740	51	591	17	1.74
JUL-1	52	6	34	2486	1764	85	600	29	2.89
JUL-2	10	33	19	2506	1777	26	604	9	0.89
JUL-3	16	70	38	2543	1804	95	614	32	2.94
AUG-1	0	43	17	2560	1817	27	618	9	0.93
AUG-2	15	94	47	2607	1850	118	629	40	4.00
AUG-3	31	158	82	2689	1909	207	649	70	6.39
SEP-1	3	275	112	2801	1989	283	676	96	9.61
SEP-2	56	206	116	2917	2073	293	705	100	9.97
SEP-3	15	118	56	2973	2113	142	718	48	4.83
TOTAL	2116	4258	2973	2973	2113	7411	718	2520	249.88

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSQ1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSQ2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

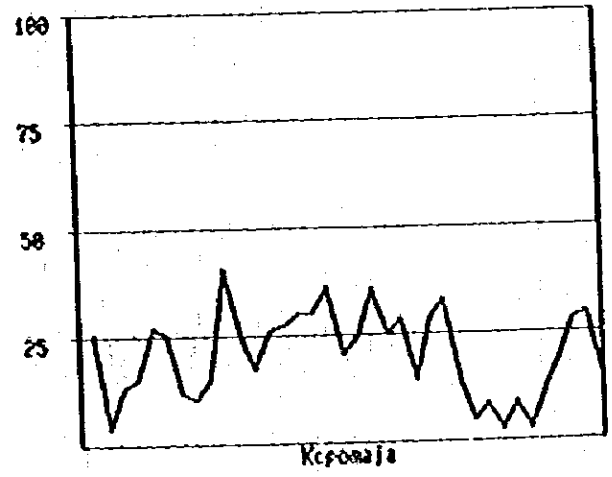


Table I-19 Estimated Discharge (Kopomaja and Gadeg) (4/14)

NO.	ST-1	ST-2	A.R	MASSR	MASSQ1	Q1	MASSQ2	YEAR 1967 Q2	Q3
OCT-1	175	69	133	133	108	380	37	129	12.91
OCT-2	79	157	110	243	159	180	54	61	6.13
OCT-3	137	254	184	427	284	439	97	149	13.57
NOV-1	74	145	102	529	357	259	122	88	8.80
NOV-2	85	114	97	626	427	244	145	83	8.30
NOV-3	11	70	35	660	452	87	154	30	2.97
DEC-1	157	72	123	783	540	311	184	106	10.57
DEC-2	34	86	55	838	579	139	197	47	4.71
DEC-3	28	42	34	872	604	85	205	29	2.63
JAN-1	56	83	67	938	652	169	222	57	5.74
JAN-2	104	63	88	1026	715	221	243	75	7.53
JAN-3	193	35	130	1156	808	328	275	112	10.14
FEB-1	224	125	184	1340	940	466	320	158	15.85
FEB-2	62	29	49	1389	975	123	332	42	4.19
FEB-3	89	54	75	1464	1029	190	350	64	8.06
MAR-1	196	111	162	1626	1146	409	389	139	13.92
MAR-2	1	2	1	1627	1147	57	390	20	1.95
MAR-3	210	193	203	1831	1293	514	439	175	15.88
APR-1	59	157	98	1929	1363	248	463	84	8.44
APR-2	275	161	229	2158	1528	580	519	197	19.72
APR-3	94	160	120	2279	1614	304	549	103	10.35
MAY-1	48	112	74	2352	1667	186	567	63	6.33
MAY-2	58	235	129	2481	1760	326	598	111	11.07
MAY-3	85	18	58	2539	1802	147	613	50	4.55
JUN-1	0	42	17	2556	1814	51	617	17	1.74
JUN-2	0	1	0	2556	1814	28	617	9	0.94
JUN-3	48	72	58	2614	1855	146	631	50	4.95
JUL-1	12	14	13	2627	1865	27	634	9	0.91
JUL-2	12	19	15	2642	1875	29	638	10	1.00
JUL-3	14	36	23	2664	1892	58	643	20	1.78
AUG-1	0	3	1	2666	1892	21	643	7	0.71
AUG-2	0	88	35	2701	1918	89	652	30	3.03
AUG-3	8	24	14	2715	1928	25	656	9	0.78
SEP-1	0	16	6	2722	1933	24	657	8	0.82
SEP-2	0	13	5	2727	1936	19	658	6	0.63
SEP-3	63	133	91	2818	2002	230	681	78	7.82
TOTAL	2691	3008	2818	2818	2002	7139	681	2427	239.39

Where
A.R= Areal Rainfall (mm/10 Days)
MASSR= Mass Rain (mm)
MASSQ1=Estimated Mass Discharge at Kopomaja (mm)
Q1=Estimated Discharge at Kopomaja (m3/s/10 Days)
MASSQ2=Mass Discharge at Gadeg (mm)
Q3=10 Days Mean Discharge (m3/s)

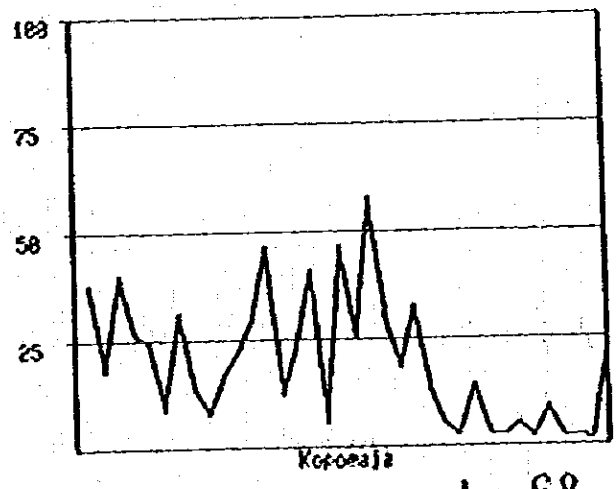


Table I-19 Estimated Discharge(Kopomaja and Gadeg) (5/14)

YEAR 1968

NO.	ST-1	ST-2	A.R	MASSR	MASSQ1	Q1	MASSQ2	Q2	Q3
OCT-1	172	258	206	206	142	500	48	170	17.01
OCT-2	118	112	116	322	209	234	71	80	7.96
OCT-3	80	125	98	420	279	248	95	84	7.66
NOV-1	58	140	91	511	344	230	117	78	7.80
NOV-2	87	226	143	653	447	360	152	123	12.26
NOV-3	46	161	92	745	513	233	174	79	7.91
DEC-1	69	95	79	825	570	201	194	68	6.82
DEC-2	187	84	146	971	675	369	229	125	12.53
DEC-3	123	47	93	1063	741	234	252	80	7.23
JAN-1	218	111	175	1238	867	443	295	151	15.06
JAN-2	101	64	86	1325	929	218	316	74	7.41
JAN-3	199	85	153	1478	1039	388	353	132	11.99
FEB-1	86	22	60	1538	1083	153	368	52	5.19
FEB-2	174	78	136	1674	1180	343	401	117	11.65
FEB-3	85	35	65	1739	1227	164	417	56	6.98
MAR-1	81	32	61	1800	1271	155	432	53	5.28
MAR-2	245	185	221	2021	1430	559	486	190	18.99
MAR-3	21	208	96	2117	1498	242	509	82	7.48
APR-1	56	66	60	2177	1542	152	524	52	5.16
APR-2	221	278	244	2421	1717	616	584	210	20.95
APR-3	29	139	73	2494	1769	185	602	63	6.27
MAY-1	56	99	73	2567	1822	185	619	63	6.29
MAY-2	31	133	72	2639	1873	181	637	62	6.17
MAY-3	50	120	78	2717	1929	197	656	67	6.09
JUN-1	58	100	75	2792	1983	189	674	64	6.43
JUN-2	116	64	95	2887	2051	241	697	82	8.18
JUN-3	104	83	96	2983	2120	242	721	82	8.22
JUL-1	61	166	103	3086	2194	260	746	89	8.85
JUL-2	73	241	140	3226	2295	354	780	120	12.05
JUL-3	9	220	93	3319	2362	236	803	80	7.30
AUG-1	53	19	39	3359	2390	100	813	34	3.39
AUG-2	41	46	43	3402	2421	109	823	37	3.70
AUG-3	97	327	189	3591	2557	478	869	162	14.77
SEP-1	88	30	65	3655	2603	164	885	56	5.57
SEP-2	95	274	167	3822	2723	421	926	143	14.32
SEP-3	136	187	156	3978	2836	395	964	134	13.44
TOTAL	3524	4660	3978	3978	2836	9977	964	3392	334.36

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSQ1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSQ2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

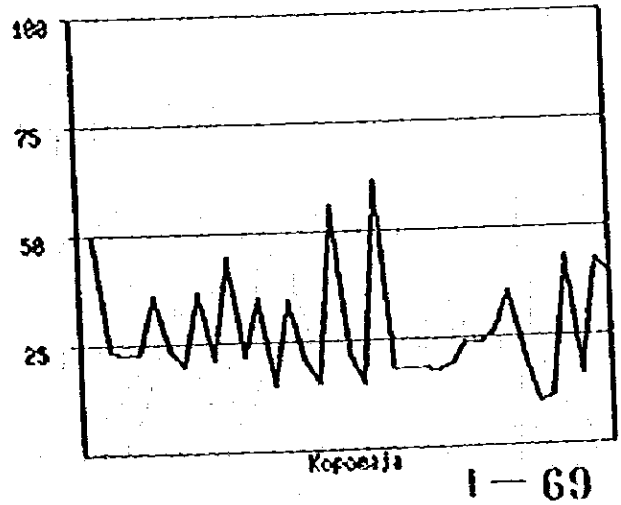


Table I-19 Estimated Discharge (Kopomaja and Gadeg) (6/14)

NO.	ST-1	ST-2	A.R	MASSR	MASSQ1	Q1	MASSQ2	YEAR 1969 Q2	Q3
OCT-1	94	154	118	118	101	356	34	121	12.10
OCT-2	56	185	108	226	151	176	51	60	5.98
OCT-3	199	137	174	400	265	399	90	136	12.34
NOV-1	90	185	128	528	357	324	121	110	11.00
NOV-2	141	65	111	638	436	280	148	95	9.51
NOV-3	102	100	101	740	509	256	173	87	8.70
DEC-1	242	172	214	954	662	541	225	184	18.39
DEC-2	116	65	96	1049	731	242	249	82	8.22
DEC-3	220	63	157	1206	844	397	287	135	12.28
JAN-1	12	57	30	1236	866	76	294	26	2.58
JAN-2	43	364	171	1408	989	433	336	147	14.73
JAN-3	101	179	132	1540	1084	334	368	114	10.33
FEB-1	69	60	65	1605	1131	165	384	56	5.62
FEB-2	58	173	104	1709	1205	263	410	89	8.94
FEB-3	17	42	27	1736	1225	68	416	23	2.90
MAR-1	16	33	23	1759	1241	58	422	20	1.96
MAR-2	189	172	182	1941	1372	461	467	157	15.66
MAR-3	88	172	122	2063	1459	307	496	105	9.50
APR-1	202	228	212	2275	1612	537	548	183	18.25
APR-2	137	137	137	2412	1710	346	582	118	11.77
APR-3	47	282	141	2553	1812	356	616	121	12.12
MAY-1	167	280	212	2766	1964	536	668	182	18.24
MAY-2	77	328	177	2943	2092	448	711	152	15.25
MAY-3	58	153	96	3039	2161	243	735	83	7.50
JUN-1	94	86	91	3130	2226	230	757	78	7.80
JUN-2	5	80	35	3165	2251	88	765	30	3.01
JUN-3	18	35	25	3190	2269	63	771	21	2.13
JUL-1	199	153	181	3370	2399	457	816	155	15.52
JUL-2	51	68	58	3428	2440	146	830	50	4.97
JUL-3	1	36	15	3443	2451	66	833	23	2.05
AUG-1	0	2	1	3444	2451	27	833	9	0.93
AUG-2	36	45	40	3483	2480	100	843	34	3.40
AUG-3	27	68	43	3527	2511	110	854	37	3.39
SEP-1	42	227	116	3643	2594	293	882	100	9.97
SEP-2	88	246	151	3794	2703	382	919	130	12.99
SEP-3	46	56	50	3844	2739	126	931	43	4.30
TOTAL	3148	4888	3844	3844	2739	9691	931	3295	324.32

Where
A.R= Areal Rainfall (mm/10 Days)
MASSR= Mass Rain (mm)
MASSQ1=Estimated Mass Discharge at Kopomaja (mm)
Q1=Estimated Discharge at Kopomaja (m3/s/10 Days)
MASSQ2=Mass Discharge at Gadeg (mm)
Q3=10 Days Mean Discharge (m3/s)

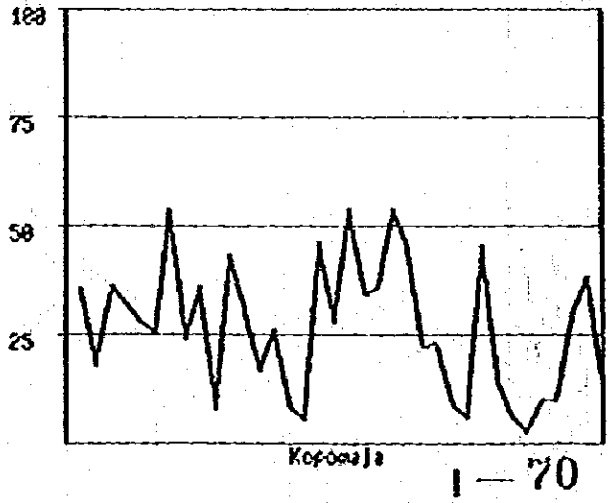


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(7/14)

						YEAR	1970		
NO.	8T-1	8T-2	A.R	MASSR	MASSO1	O1	MASSO2	O2	O3
OCT-1	89	191	130	130	107	375	36	128	12.75
OCT-2	5	192	80	210	144	131	49	44	4.44
OCT-3	184	193	188	397	263	419	89	142	12.95
NOV-1	68	207	124	521	352	312	120	106	10.62
NOV-2	37	134	76	597	406	192	138	65	6.51
NOV-3	51	94	68	665	455	172	155	59	5.86
DEC-1	85	139	107	771	532	269	181	92	9.16
DEC-2	72	93	80	852	589	203	200	69	6.91
DEC-3	22	118	60	912	633	153	215	52	4.72
JAN-1	60	142	93	1005	699	235	238	80	7.98
JAN-2	275	219	253	1258	881	638	300	217	21.71
JAN-3	183	249	209	1467	1031	529	351	180	16.36
FEB-1	119	160	135	1602	1129	342	384	116	11.64
FEB-2	160	48	115	1718	1211	291	412	99	9.90
FEB-3	67	96	79	1796	1268	199	431	68	8.44
MAR-1	92	115	101	1897	1341	256	456	87	8.70
MAR-2	138	214	168	2066	1462	426	497	145	14.47
MAR-3	63	66	64	2130	1508	162	513	55	5.02
APR-1	211	187	201	2331	1652	509	562	173	17.31
APR-2	64	173	108	2439	1730	272	588	92	9.25
APR-3	74	124	94	2533	1797	238	611	81	8.08
MAY-1	234	202	221	2754	1956	559	665	190	19.01
MAY-2	142	188	160	2915	2071	405	704	138	13.79
MAY-3	48	351	169	3084	2193	428	746	145	13.22
JUN-1	72	218	130	3214	2287	330	777	112	11.21
JUN-2	208	47	144	3358	2390	363	812	123	12.34
JUN-3	69	56	64	3422	2436	161	828	55	5.48
JUL-1	7	70	32	3454	2459	81	836	28	2.77
JUL-2	26	21	24	3478	2476	61	842	21	2.06
JUL-3	98	134	112	3590	2557	284	869	97	8.78
AUG-1	12	33	20	3611	2571	52	874	18	1.75
AUG-2	90	88	89	3700	2635	225	896	77	7.67
AUG-3	44	91	63	3763	2680	159	911	54	4.91
SEP-1	92	194	133	3895	2776	336	944	114	11.41
SEP-2	85	125	101	3996	2848	255	968	87	8.68
SEP-3	26	214	101	4098	2921	256	993	87	8.70
TOTAL	3372	5186	4098	4098	2921	10278	993	3495	344.55

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
O1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
O3=10 Days Mean Discharge(m3/s)

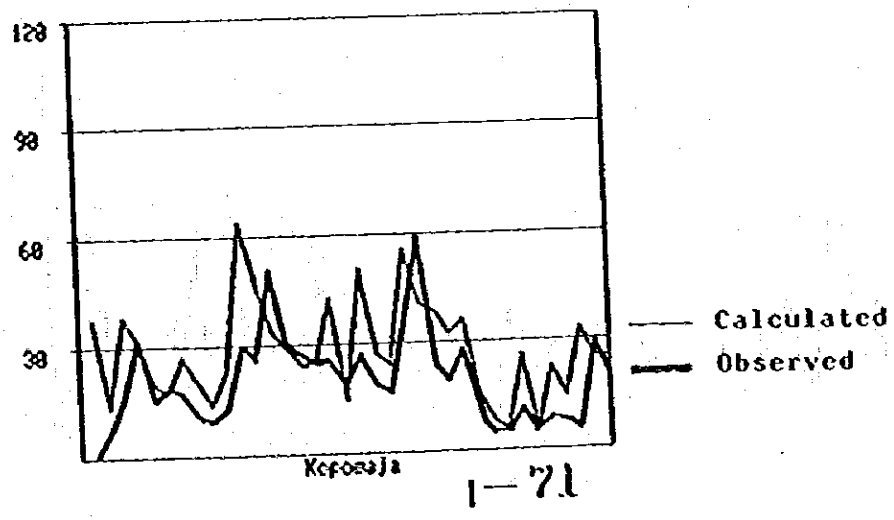


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(8/14)

YEAR 1971

NO.	ST-1	ST-2	A.R	MASSR	MASSQ1	Q1	MASSQ2	Q2	Q3
OCT-1	99	133	113	113	99	347	34	118	11.80
OCT-2	5	90	39	152	117	64	40	22	2.17
OCT-3	72	258	146	298	192	263	65	89	8.13
NOV-1	160	231	188	486	327	476	111	162	16.19
NOV-2	209	263	231	717	493	583	167	198	19.82
NOV-3	40	255	126	843	583	318	198	108	10.83
DEC-1	25	43	32	875	606	81	206	28	2.77
DEC-2	39	83	57	932	647	143	220	49	4.86
DEC-3	172	163	168	1100	768	426	261	145	13.16
JAN-1	50	96	68	1169	817	173	278	59	5.88
JAN-2	154	136	147	1315	922	371	314	126	12.62
JAN-3	78	39	62	1378	967	158	329	54	4.88
FEB-1	244	102	187	1565	1102	473	375	161	16.09
FEB-2	195	82	150	1715	1209	379	411	129	12.87
FEB-3	35	68	48	1763	1244	122	423	41	5.18
MAR-1	66	49	59	1822	1286	150	437	51	5.09
MAR-2	129	132	130	1952	1380	329	469	112	11.19
MAR-3	108	55	87	2039	1442	219	490	75	6.78
APR-1	95	78	88	2127	1506	223	512	76	7.58
APR-2	46	40	44	2171	1537	110	523	37	3.75
APR-3	100	10	64	2235	1583	162	538	55	5.50
MAY-1	27	34	30	2265	1604	75	546	26	2.56
MAY-2	85	95	89	2354	1668	225	567	76	7.65
MAY-3	75	102	86	2440	1730	217	588	74	6.70
JUN-1	86	66	78	2518	1786	197	607	67	6.70
JUN-2	72	111	88	2605	1849	221	629	75	7.53
JUN-3	105	74	93	2698	1916	234	651	80	7.96
JUL-1	25	66	41	2739	1945	105	661	36	3.56
JUL-2	21	43	30	2769	1967	75	669	26	2.56
JUL-3	1	20	9	2778	1973	31	671	11	0.97
AUG-1	53	119	79	2857	2030	201	690	68	6.82
AUG-2	70	148	101	2958	2103	256	715	87	8.70
AUG-3	71	200	123	3081	2191	310	745	105	9.58
SEP-1	18	176	81	3162	2249	205	765	70	6.98
SEP-2	75	77	76	3238	2303	192	783	65	6.51
SEP-3	19	77	42	3280	2334	107	793	36	3.63
TOTAL	2924	3814	3280	3280	2334	8221	793	2795	275.53

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSQ1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSQ2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

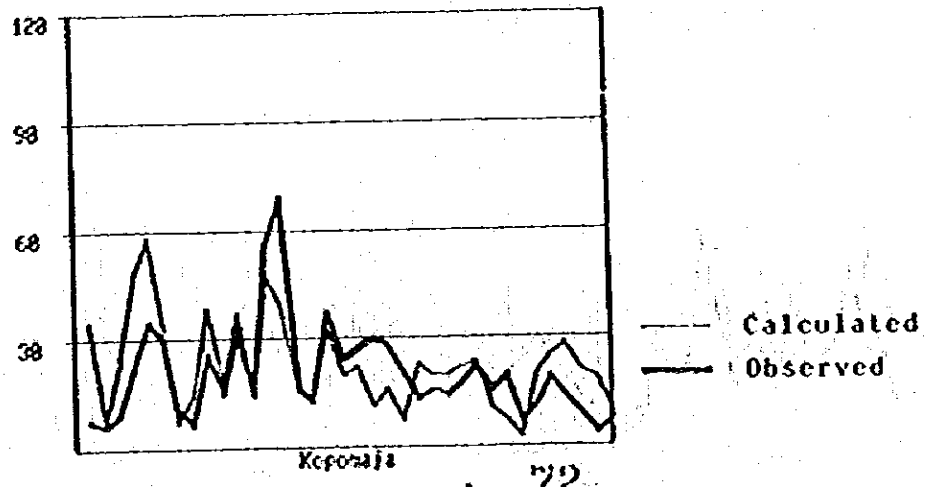


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(9/14)

YEAR 1972

NO.	ST-1	ST-2	A.R	MASSR	MASS01	Q1	MASS02	Q2	Q3
OCT-1	39	105	65	65	77	270	26	92	9.17
OCT-2	110	321	194	260	167	318	57	108	10.81
OCT-3	196	193	195	455	304	482	103	164	14.90
NOV-1	23	195	92	546	370	232	126	79	7.89
NOV-2	127	112	121	667	457	306	155	104	10.40
NOV-3	71	56	65	732	504	164	171	56	5.59
DEC-1	66	196	118	850	588	298	200	101	10.14
DEC-2	75	119	93	943	655	234	223	80	7.96
DEC-3	86	217	138	1081	754	350	256	119	10.81
JAN-1	192	117	162	1243	871	409	296	139	13.92
JAN-2	278	105	209	1452	1021	528	347	179	17.94
JAN-3	255	182	226	1678	1183	571	402	194	17.64
FEB-1	95	87	92	1770	1249	232	425	79	7.89
FEB-2	108	104	106	1876	1325	269	451	91	9.14
FEB-3	27	89	52	1928	1363	131	463	45	5.56
MAR-1	194	194	194	2122	1502	490	511	167	16.67
MAR-2	182	128	160	2282	1617	405	550	138	13.79
MAR-3	282	104	211	2493	1769	533	601	181	16.47
APR-1	33	104	61	2555	1813	155	616	53	5.28
APR-2	201	111	165	2720	1931	417	657	142	14.18
APR-3	94	207	139	2859	2031	352	691	120	11.96
MAY-1	106	144	121	2980	2118	306	720	104	10.42
MAY-2	43	135	80	3060	2176	202	740	69	6.86
MAY-3	122	46	92	3151	2241	232	762	79	7.16
JUN-1	0	0	0	3151	2241	45	762	15	1.54
JUN-2	50	44	48	3199	2276	120	774	41	4.09
JUN-3	0	20	8	3207	2281	24	776	8	0.81
JUL-1	6	39	19	3226	2295	27	780	9	0.93
JUL-2	1	55	23	3249	2311	57	786	19	1.94
JUL-3	25	45	33	3282	2335	83	794	28	2.58
AUG-1	108	138	120	3402	2421	303	823	103	10.31
AUG-2	41	85	59	3460	2463	148	838	50	5.04
AUG-3	7	158	67	3528	2512	170	854	58	5.27
SEP-1	0	27	11	3539	2520	39	857	13	1.32
SEP-2	13	55	30	3568	2541	75	864	26	2.56
SEP-3	3	55	24	3592	2558	60	870	20	2.05
TOTAL	3259	4092	3592	3592	2558	9040	870	3074	300.99

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASS01=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASS02=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

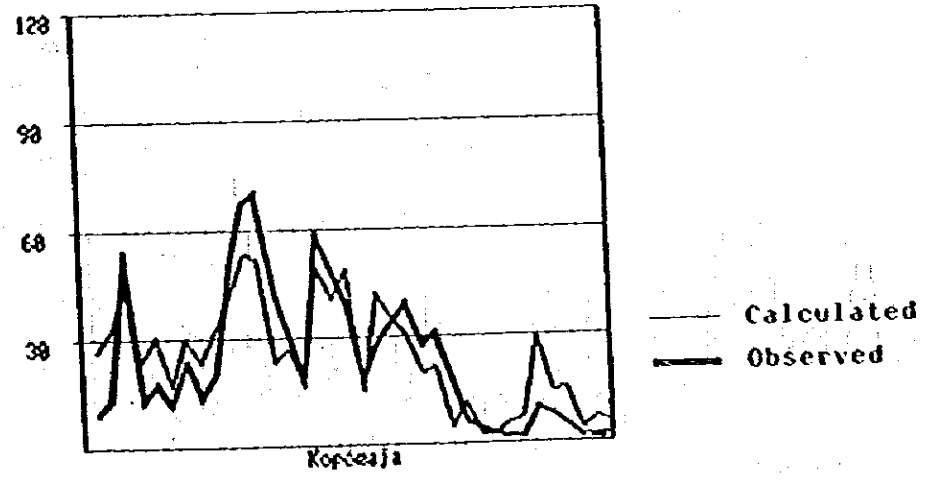


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(10/14)

NO.	ST-1	ST-2	A.R	MASSR	MASSQ1	Q1	MASSQ2	YEAR 1973 Q2	Q3
OCT-1	0	40	16	16	54	189	18	64	6.42
OCT-2	45	119	75	91	88	122	30	41	4.15
OCT-3	137	242	179	270	172	293	58	100	9.05
NOV-1	51	78	62	331	216	155	73	53	5.25
NOV-2	205	251	223	555	376	565	128	192	19.20
NOV-3	40	180	96	651	445	243	151	83	8.25
DEC-1	116	145	128	778	537	323	182	110	10.97
DEC-2	71	107	85	864	598	216	203	73	7.34
DEC-3	87	293	169	1033	720	428	245	146	13.24
JAN-1	159	207	178	1211	848	450	288	153	15.31
JAN-2	58	162	100	1311	919	252	313	86	8.56
JAN-3	114	98	108	1419	997	272	339	92	8.41
FEB-1	163	187	173	1591	1121	436	381	148	14.83
FEB-2	128	162	142	1733	1222	358	416	122	12.17
FEB-3	59	122	84	1817	1283	213	436	72	9.05
MAR-1	97	152	119	1936	1368	301	465	102	10.23
MAR-2	143	75	116	2052	1451	293	493	100	9.95
MAR-3	76	108	89	2141	1515	224	515	76	6.94
APR-1	143	161	150	2291	1623	380	552	129	12.91
APR-2	296	223	267	2558	1815	674	617	229	22.93
APR-3	66	315	166	2723	1934	419	657	142	14.23
MAY-1	88	202	134	2857	2030	338	690	115	11.48
MAY-2	302	214	267	3124	2221	674	755	229	22.93
MAY-3	144	151	147	3270	2327	371	791	126	11.47
JUN-1	50	198	109	3380	2405	276	818	94	9.38
JUN-2	46	107	70	3450	2456	178	835	61	6.05
JUN-3	137	294	200	3650	2599	505	884	172	17.17
JUL-1	22	177	84	3734	2660	212	904	72	7.22
JUL-2	149	129	141	3875	2761	356	939	121	12.12
JUL-3	0	74	30	3904	2782	75	946	25	2.31
AUG-1	111	247	165	4070	2901	418	986	142	14.21
AUG-2	56	231	126	4196	2992	318	1017	108	10.83
AUG-3	91	108	98	4294	3062	247	1041	84	7.64
SEP-1	106	327	194	4488	3202	491	1089	167	16.71
SEP-2	186	180	184	4672	3334	464	1133	158	15.78
SEP-3	144	168	154	4825	3444	388	1171	132	13.20
TOTAL	3886	6234	4825	4825	3444	12117	1171	4120	407.89

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSQ1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSQ2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

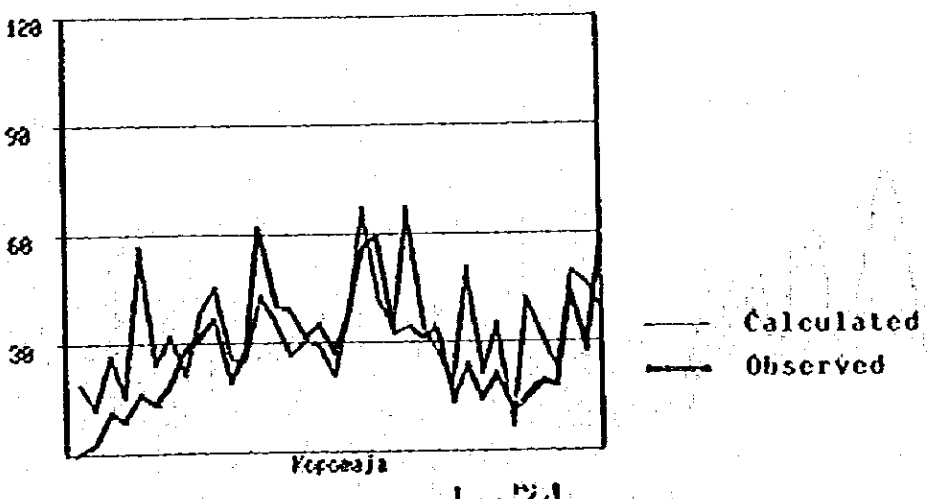


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(11/14)

YEAR 1974

NO.	ST-1	ST-2	A.R	MASSR	MASSO1	O1	MASSO2	O2	O3
OCT-1	47	65	54	54	71	251	24	85	8.55
OCT-2	81	223	138	192	136	225	46	77	7.66
OCT-3	184	354	252	444	296	566	101	192	17.50
NOV-1	99	42	76	520	351	193	119	65	6.55
NOV-2	14	68	36	556	377	90	128	31	3.06
NOV-3	187	123	161	717	493	408	168	139	13.87
DEC-1	137	168	149	867	600	378	204	128	12.84
DEC-2	74	86	79	945	657	199	223	68	6.77
DEC-3	88	122	102	1047	730	257	248	87	7.94
JAN-1	266	173	229	1276	894	578	304	197	19.66
JAN-2	51	107	73	1349	947	186	322	63	6.31
JAN-3	96	90	94	1443	1014	237	345	80	7.31
FEB-1	126	90	112	1554	1094	282	372	96	9.59
FEB-2	86	116	98	1652	1165	248	396	84	8.42
FEB-3	60	59	60	1712	1207	151	410	51	6.40
MAR-1	146	35	102	1814	1280	257	435	87	8.73
MAR-2	4	0	2	1816	1282	44	436	15	1.49
MAR-3	92	106	98	1914	1352	247	460	84	7.63
APR-1	87	123	83	1997	1412	211	480	72	7.17
APR-2	132	203	160	2157	1527	405	519	138	13.79
APR-3	44	26	37	2194	1554	93	528	32	3.16
MAY-1	106	150	124	2318	1643	312	558	106	10.62
MAY-2	156	216	180	2498	1772	455	602	155	15.47
MAY-3	71	31	55	2553	1811	139	616	47	4.30
JUN-1	25	22	24	2577	1828	60	622	20	2.05
JUN-2	109	130	117	2694	1913	297	650	101	10.09
JUN-3	121	144	130	2824	2006	329	682	112	11.19
JUL-1	27	213	101	2926	2079	256	707	87	8.71
JUL-2	55	123	82	3008	2138	208	727	71	7.06
JUL-3	92	147	114	3122	2220	288	755	98	8.91
AUG-1	53	164	97	3219	2290	246	779	84	8.37
AUG-2	86	157	114	3334	2372	289	807	98	9.83
AUG-3	14	190	84	3418	2433	213	827	73	6.59
SEP-1	152	226	182	3600	2563	459	872	156	15.61
SEP-2	187	275	222	3822	2723	562	926	191	19.10
SEP-3	103	318	189	4011	2859	478	972	162	16.24
TOTAL	3428	4885	4011	4011	2859	10096	972	3433	338.54

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
O1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
O3=10 Days Mean Discharge(m3/s)

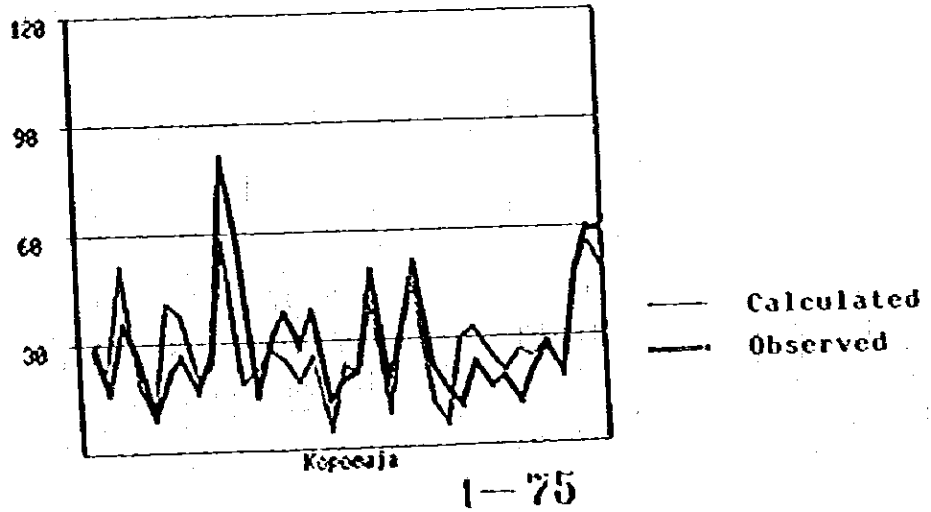


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(12/14)

YEAR 1975

NO.	ST-1	ST-2	A.R	MASSR	MASSO1	Q1	MASSO2	Q2	Q3
OCT-1	32	140	75	75	81	286	28	97	9.72
OCT-2	34	151	81	156	119	132	40	45	4.49
OCT-3	64	187	113	269	171	185	58	63	5.72
NOV-1	57	86	69	338	220	171	75	58	5.83
NOV-2	142	126	136	473	318	343	108	117	11.65
NOV-3	0	218	87	561	380	220	129	75	7.49
DEC-1	65	63	64	625	426	162	145	55	5.52
DEC-2	28	13	22	647	442	56	150	19	1.89
DEC-3	149	50	109	756	521	277	177	94	8.55
JAN-1	81	143	106	862	597	267	203	91	9.09
JAN-2	93	77	87	949	659	219	224	74	7.44
JAN-3	203	138	177	1126	786	447	267	152	13.83
FEB-1	72	108	86	1212	848	218	288	74	7.43
FEB-2	167	95	138	1350	947	349	322	119	11.88
FEB-3	37	114	68	1418	996	171	339	58	7.28
MAR-1	48	185	103	1521	1070	260	364	88	8.83
MAR-2	11	31	19	1540	1084	49	368	16	1.65
MAR-3	92	44	73	1613	1136	184	386	63	5.69
APR-1	61	148	96	1708	1205	242	410	82	8.23
APR-2	57	112	79	1787	1261	200	429	68	6.79
APR-3	135	124	131	1918	1355	330	461	112	11.22
MAY-1	210	81	158	2076	1469	400	499	136	13.61
MAY-2	34	135	74	2151	1523	188	518	64	6.39
MAY-3	168	150	161	2312	1638	406	557	138	12.56
JUN-1	100	41	76	2388	1693	193	576	66	6.57
JUN-2	6	159	67	2455	1741	170	592	58	5.78
JUN-3	62	15	43	2498	1772	109	603	37	3.71
JUL-1	34	68	48	2546	1806	120	614	41	4.09
JUL-2	65	236	133	2679	1902	337	647	115	11.46
JUL-3	126	193	153	2832	2012	386	684	131	11.94
AUG-1	159	207	178	3010	2140	450	728	153	15.31
AUG-2	36	209	105	3116	2216	266	753	90	9.04
AUG-3	112	142	124	3240	2305	313	784	107	9.69
SEP-1	153	179	163	3403	2422	413	824	140	14.04
SEP-2	23	302	135	3538	2519	340	856	116	11.57
SEP-3	99	185	133	3671	2615	337	889	115	11.46
TOTAL	3015	4655	3671	3671	2615	9200	889	3128	307.47

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

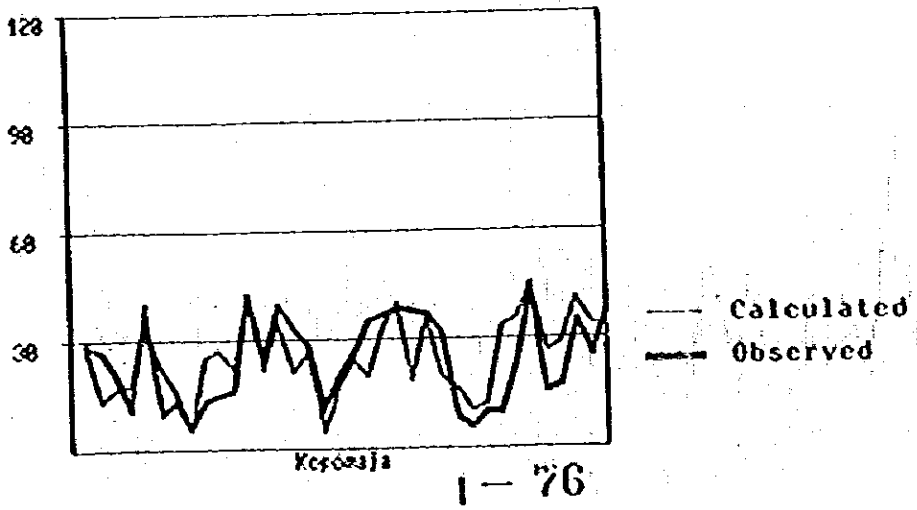


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(13/14)

YEAR 1976

NO.	ST-1	ST-2	A.R	MASSR	MASSO1	Q1	MASSO2	Q2	Q3
OCT-1	77	134	100	100	93	326	32	111	11.08
OCT-2	63	150	98	198	138	160	47	54	5.44
OCT-3	122	144	131	328	213	265	73	90	8.18
NOV-1	91	151	115	443	296	291	101	99	9.88
NOV-2	34	158	84	527	356	211	121	72	7.18
NOV-3	15	49	29	556	377	72	128	25	2.46
DEC-1	119	103	113	668	457	285	156	97	9.68
DEC-2	82	24	59	727	500	149	170	51	5.05
DEC-3	69	71	70	797	550	176	187	60	5.45
JAN-1	211	193	204	1001	696	515	237	175	17.51
JAN-2	214	163	194	1194	835	489	284	166	16.64
JAN-3	253	134	205	1400	983	519	334	177	16.05
FEB-1	57	43	51	1451	1020	130	347	44	4.42
FEB-2	27	95	54	1505	1059	137	360	47	4.66
FEB-3	80	174	118	1623	1143	297	389	101	12.63
MAR-1	160	182	169	1792	1265	427	430	145	14.51
MAR-2	29	75	47	1839	1299	120	442	41	4.07
MAR-3	57	196	113	1952	1379	285	469	97	8.80
APR-1	133	80	112	2063	1460	283	496	96	9.61
APR-2	23	209	97	2161	1530	246	520	84	8.37
APR-3	144	204	168	2329	1650	425	561	144	14.44
MAY-1	48	189	104	2433	1725	264	587	90	8.97
MAY-2	14	0	8	2442	1731	65	589	22	2.22
MAY-3	46	0	28	2469	1751	70	595	24	2.16
JUN-1	69	174	111	2580	1831	281	623	95	9.54
JUN-2	67	86	75	2655	1885	189	641	64	6.41
JUN-3	0	0	0	2655	1885	48	641	16	1.62
JUL-1	38	79	54	2709	1924	138	654	47	4.68
JUL-2	0	0	0	2709	1924	24	654	8	0.81
JUL-3	8	76	35	2744	1949	89	663	30	2.75
AUG-1	44	127	77	2822	2004	195	682	66	6.63
AUG-2	3	6	4	2826	2007	35	683	12	1.19
AUG-3	82	128	100	2926	2080	254	707	86	7.84
SEP-1	68	71	69	2995	2129	175	724	59	5.95
SEP-2	0	15	6	3001	2134	46	725	16	1.56
SEP-3	71	112	87	3089	2196	221	747	75	7.51
TOTAL	2618	3795	3089	3089	2196	7899	747	2686	265.97

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)

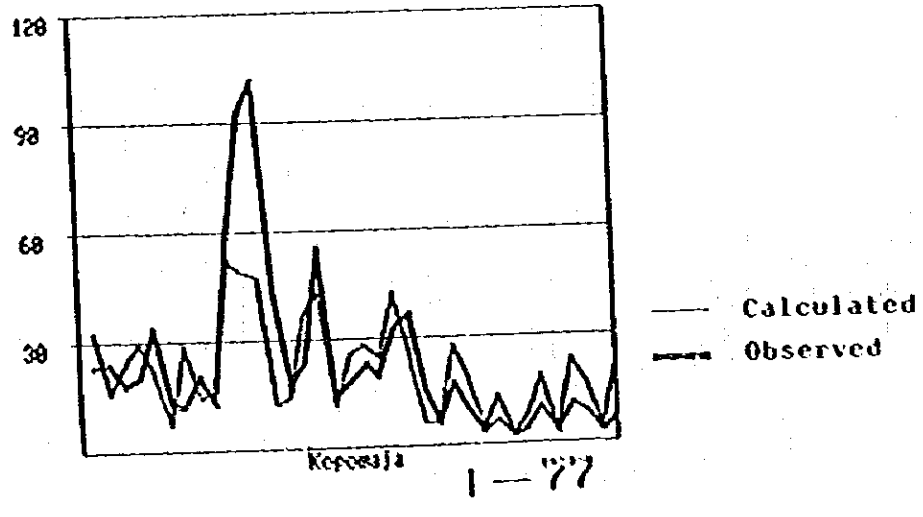


Table I-19 Estimated Discharge(Kopomaja and Gadeg)(14/14)

YEAR 1977

NO.	ST-1	ST-2	A.R	MASSR	MASSO1	Q1	MASSO2	Q2	Q3
OCT-1	178	291	223	223	150	528	51	179	17.95
OCT-2	40	196	102	326	211	216	72	73	7.34
OCT-3	26	101	56	382	252	142	86	48	4.38
NOV-1	61	262	141	523	353	357	120	122	12.15
NOV-2	217	194	208	731	502	525	171	179	17.86
NOV-3	0	118	47	778	536	119	182	41	4.06
DEC-1	48	115	75	853	590	189	201	64	6.43
DEC-2	123	122	123	975	678	310	231	105	10.54
DEC-3	73	207	127	1102	769	320	261	109	9.89
JAN-1	153	240	188	1290	904	475	307	161	16.14
JAN-2	126	125	126	1415	994	317	338	108	10.79
JAN-3	239	126	194	1609	1133	490	385	167	15.14
FEB-1	80	121	96	1706	1203	244	409	83	8.28
FEB-2	110	91	102	1808	1276	259	434	88	8.80
FEB-3	100	181	132	1940	1371	335	466	114	14.22
MAR-1	130	195	156	2096	1483	394	504	134	13.41
MAR-2	33	86	54	2151	1522	137	518	47	4.66
MAR-3	112	319	195	2345	1662	492	565	167	15.22
APR-1	183	225	200	2545	1806	505	614	172	17.17
APR-2	212	102	168	2713	1927	425	655	144	14.44
APR-3	141	181	157	2870	2039	397	693	135	13.49
MAY-1	109	307	188	3058	2175	476	739	162	16.17
MAY-2	0	194	78	3136	2230	196	758	67	6.67
MAY-3	31	133	72	3208	2282	181	776	62	5.61
JUN-1	221	70	161	3368	2397	406	815	138	13.80
JUN-2	36	79	53	3422	2436	134	828	46	4.57
JUN-3	7	214	90	3511	2500	227	850	77	7.72
JUL-1	109	25	75	3587	2554	191	868	65	6.48
JUL-2	113	0	68	3655	2603	171	885	58	5.83
JUL-3	79	54	69	3724	2652	174	902	59	5.39
AUG-1	31	33	32	3755	2675	80	910	27	2.73
AUG-2	1	15	7	3762	2680	33	911	11	1.14
AUG-3	64	48	58	3820	2721	146	925	50	4.50
SEP-1	3	37	17	3836	2733	29	929	10	0.97
SEP-2	101	84	94	3930	2801	238	952	81	8.10
SEP-3	29	44	35	3965	2826	88	961	30	3.01
TOTAL	3319	4935	3965	3965	2826	9947	961	3382	335.04

Where
A.R= Areal Rainfall(mm/10 Days)
MASSR= Mass Rain(mm)
MASSO1=Estimated Mass Discharge at Kopomaja(mm)
Q1=Estimated Discharge at Kopomaja(m3/s/10 Days)
MASSO2=Mass Discharge at Gadeg(mm)
Q3=10 Days Mean Discharge(m3/s)