

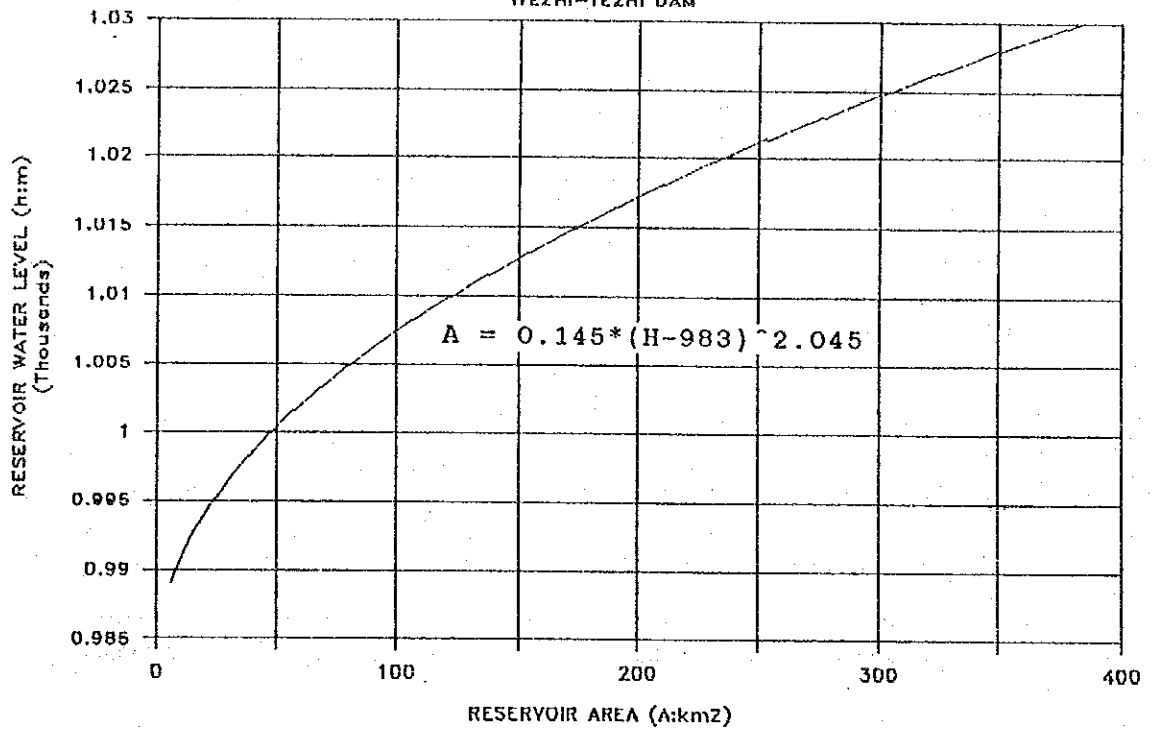
SUPPLEMENT - 4.4

RESERVOIR WATER BALANCE

ITEZHI-TEZHI DAM.....	4.4- 1
KAFUE GORGE DAM.....	4.4-18
KARIBA DAM.....	4.4-36

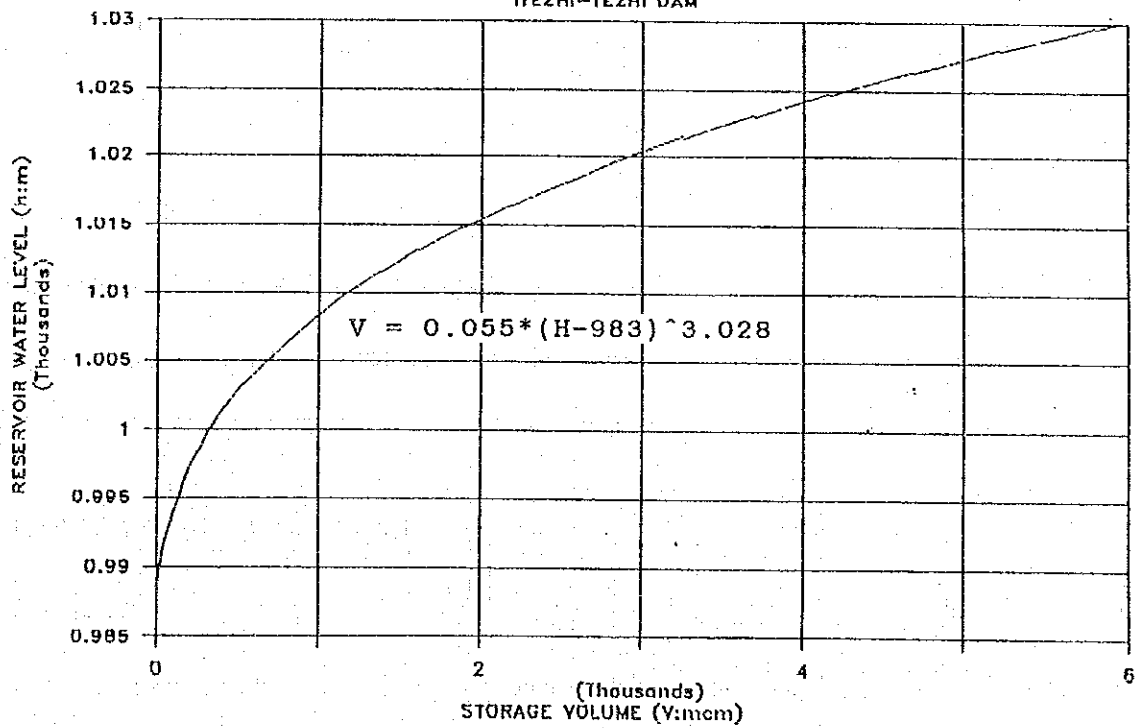
WATER LEVEL(h) – RES. AREA(A) CURVE

HEZHI-HEZHI DAM



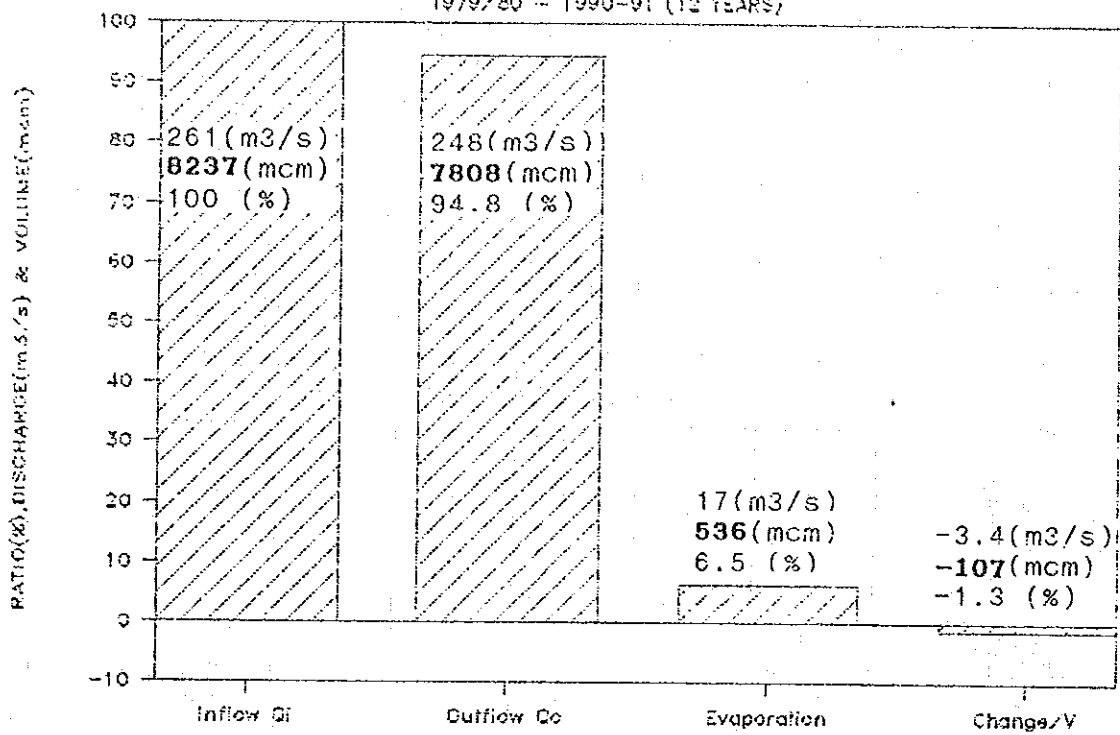
WATER LEVEL(h) – VOLUME(V) CURVE

HEZHI-HEZHI DAM



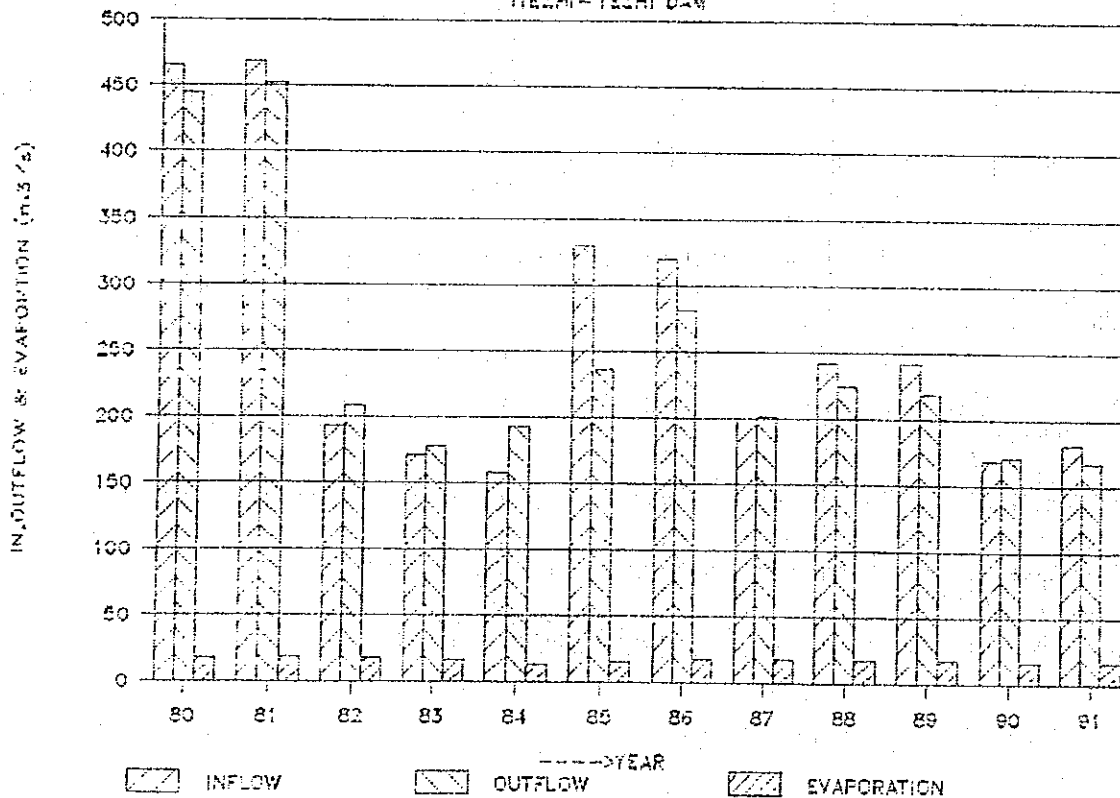
ITEZHI-TEZHI RESERVOIR WATER BALANCE

1979/80 - 1990-91 (12 YEARS)



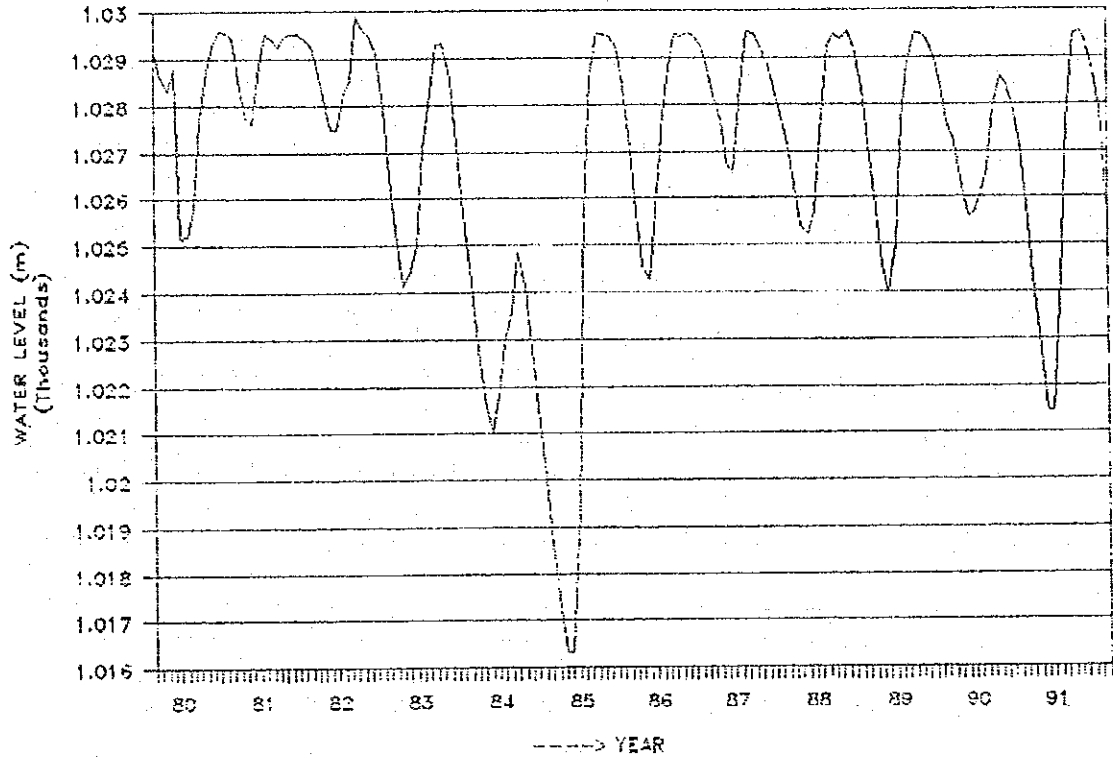
ANNUAL INFLOW, OUTFLOW & EVAPORATION

ITEZHI-TEZHI DAM



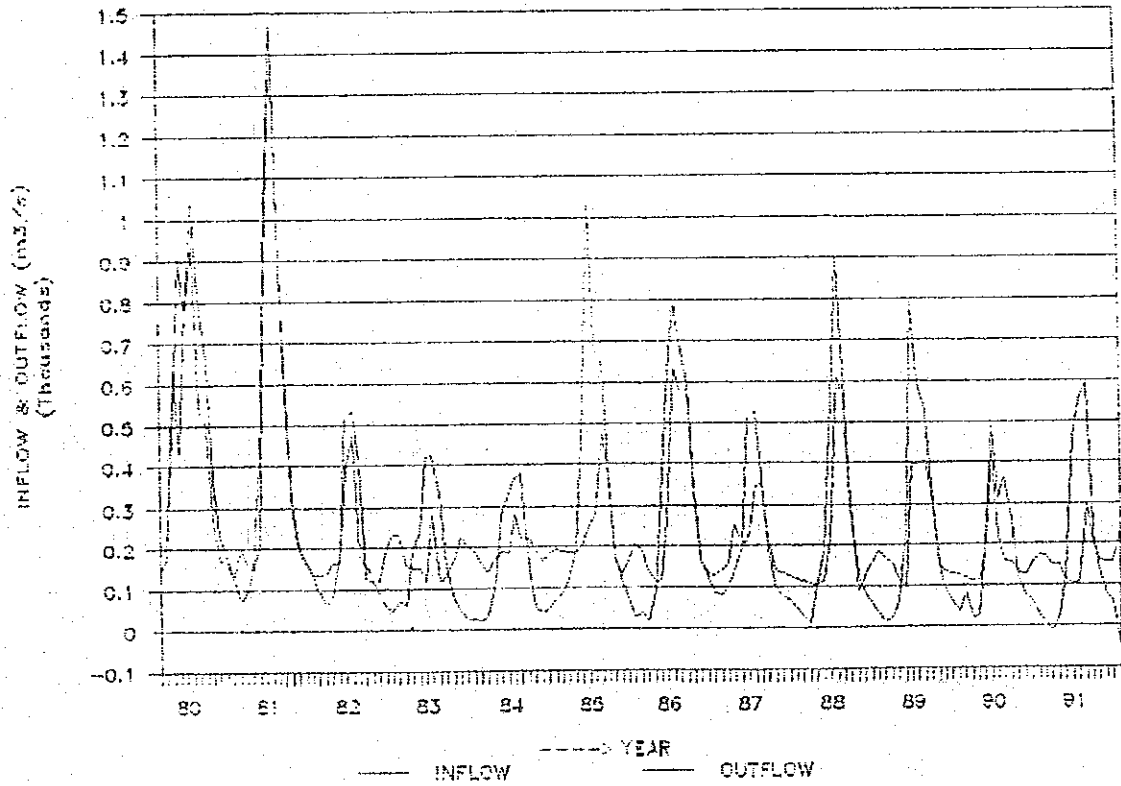
MONTHLY WATER LEVEL

ITECHI-TECHI DAM



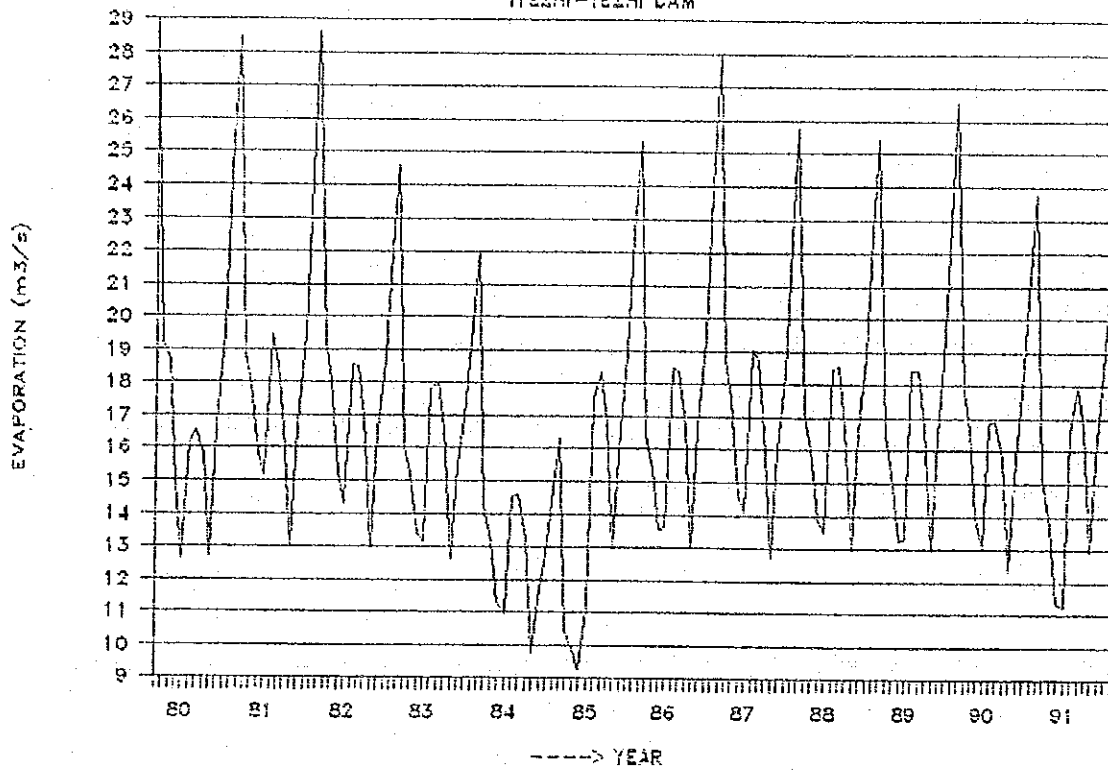
MONTHLY INFLOW & OUTFLOW

ITECHI-TECHI DAM



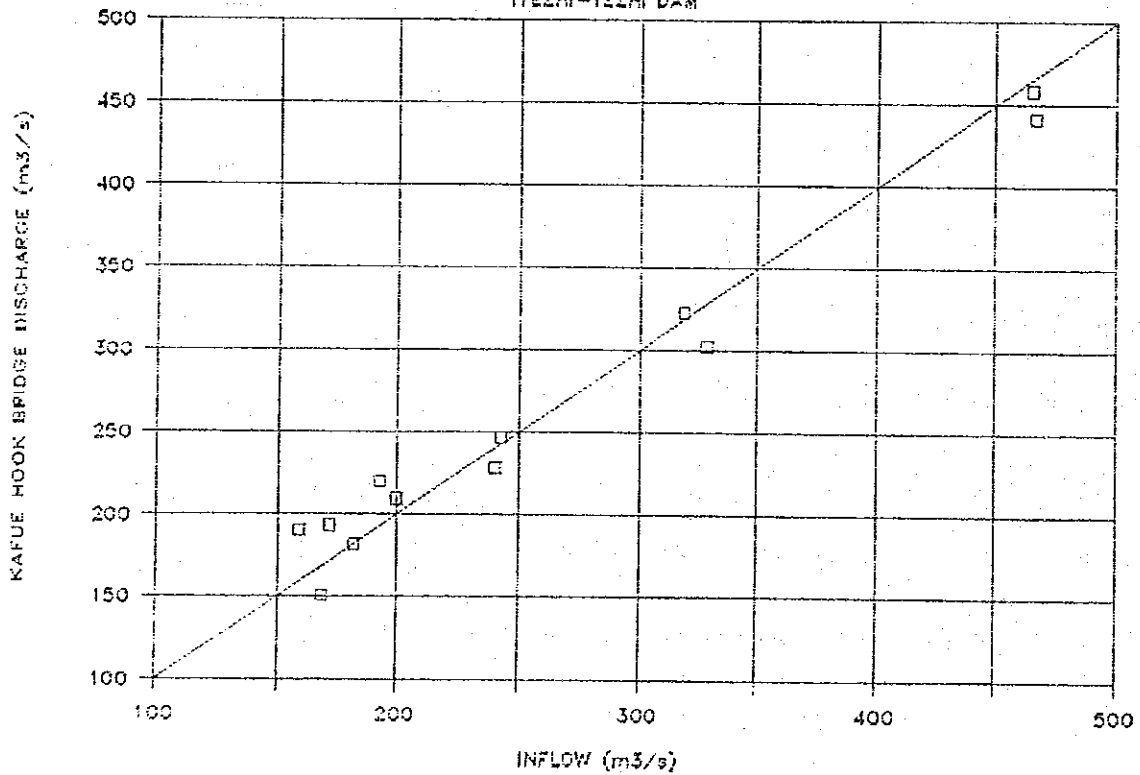
MONTHLY EVAPORATION

ITEZHI-TEZHI DAM



RESERVOIR INFLOW — KAFUE H/B DISCHARGE

ITEZHI-TEZHI DAM



[RESERVOIR OPERATION] PERIOD: 1979/80 - 1990/91 (12 YEARS) DAM: ITEZHI-TEZHI												
Year	W/Level	Volume	R.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Kafue	H/B	Qi-Qf
H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)	Qf(m3/s)		(m3/s)
1978/79	1029.17	6026	367									
1979/80	1029.42	6126	371	859	1620	3.1	466.8	18.0	445.6	441.1		25.6
1980/81	1029.26	6062	369	1013	1620	-2.0	465.8	18.7	449.1	458.5		7.4
1981/82	1026.48	5025	325	496	1620	-32.9	192.3	18.3	206.9	219.3		-26.9
1982/83	1024.22	4275	291	705	1620	-23.8	171.4	16.7	178.5	193.0		-21.6
1983/84	1018.64	2752	216	533	1620	-48.2	158.6	13.6	193.2	190.2		-31.5
1984/85	1027.06	5230	334	520	1620	78.6	328.8	15.1	235.2	302.1		26.7
1985/86	1028.80	5881	361	523	1620	20.6	318.8	17.6	280.6	322.3		-3.5
1986/87	1027.13	5256	335	644	1620	-19.8	199.3	18.1	201.1	208.8		-9.5
1987/88	1027.14	5259	335	518	1620	0.1	242.6	17.6	224.9	246.5		-3.9
1988/89	1027.63	5438	343	608	1620	5.7	240.3	17.4	217.2	227.9		12.4
1989/90	1025.82	4797	315	771	1620	-20.3	168.2	17.1	171.4	150.9		17.3
1990/91	1025.60	4723	312	640	1620	-2.4	181.6	16.3	167.6	181.9		-0.3
MEAN(mm & m3/s)			653	1620		-3.4	261.2	17.0	247.6	261.9		-0.7
TOTAL(mm & mcm)						-107	8237	536	7808	8259		-22

[RESERVOIR OPERATION J (1)]

DAM: ITEZHI-TEZHI

Year: 1979/80

Month	H(m)	V(mcm)	A(Km2)	R(mm)	P(mm)	R.Area	P.Evap	Change/V	Inflow	A.Evap	Outflow	Kafue	H/B	Qi-Qf
								dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)		(m3/s)
SEP	1029.17	6026	367											
OCT	1028.64	5819	359	14	210	-77.3	151.2	28.5	200.0	137.0	14.2			
NOV	1028.32	5697	354	202	140	-47.3	175.9	19.2	204.0	161.0	14.9			
DEC	1028.78	5873	361	293	140	66.0	631.2	18.7	546.5	366.0	265.2			
JAN	1025.18	4583	305	39	120	-481.6	436.7	14.9	903.4	551.0	-114.3			
FEB	1025.19	4587	305	200	100	1.3	778.3	12.2	764.8	722.0	56.3			
MAR	1025.82	4797	315	103	140	78.6	1035.8	16.2	941.0	961.0	74.8			
APR	1027.71	5467	344	6	130	258.6	809.9	16.5	534.8	806.0	3.9			
MAY	1028.75	5862	360	0	120	147.2	657.4	15.8	494.4	647.0	10.4			
JUN	1029.30	6078	369	0	90	83.3	371.8	12.7	275.8	364.0	7.8			
JUL	1029.59	6194	374	0	120	43.3	234.2	16.7	174.2	237.0	-2.8			
AUG	1029.56	6182	374	0	140	-4.5	179.6	19.5	164.6	191.0	-11.4			
SEP	1029.42	6126	371	2	170	-21.6	132.0	24.4	129.2	145.0	-13.0			
MEAN(mm & m3/s)														
TOTAL(mm & mcm)														
				72	135	3.2	466.8	18.0	445.6	441.1	25.6			
				859	1620	99	14720	568	14052	13911	809			

[RESERVOIR OPERATION] (2)		DAM: ITEZHI-TEZHI										Year: 1980/81																							
80/81	W/Level	Volume	R.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Kafue H/B	Qi-Qf	Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dv(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)	(m3/s)												
SEP	1029.42	6126	371																																
OCT	1028.86	5712	354	21	210	-154.5	73.4	28.4	199.5	111.0	-37.6																								
NOV	1027.73	5475	344	59	140	-91.4	93.9	18.9	166.4	122.0	-28.1																								
DEC	1027.61	5431	342	189	140	-16.6	149.0	17.9	147.6	161.0	-12.0																								
JAN	1028.86	5905	362	313	120	177.0	401.4	15.8	208.7	375.0	26.4																								
FEB	1029.51	6162	373	246	100	106.3	1024.7	15.2	903.2	792.0	232.7																								
MAR	1029.39	6114	371	178	140	-17.9	1472.8	19.4	1471.3	1439.0	33.8																								
APR	1029.23	6050	368	1	130	-24.5	970.0	18.5	976.0	1039.0	-69.0																								
MAY	1029.47	6146	372	0	120	35.7	630.3	16.6	578.0	629.0	1.3																								
JUN	1029.53	6170	373	0	90	9.3	309.5	12.9	287.3	321.0	-11.5																								
JUL	1029.52	6166	373	0	120	-1.5	205.4	16.7	190.2	221.0	-15.6																								
AUG	1029.43	6130	372	0	140	-13.5	168.0	19.5	162.0	178.0	-10.0																								
SEP	1029.26	6062	369	6	170	-26.1	134.2	24.3	136.0	139.0	-4.8																								
MEAN(mm & m3/s)													84	135		465.8	18.7	449.1	458.5	7.4															
TOTAL(mm & mcm)													1013	1620		-64	14690	590	14164	14458	232														

[RESERVOIR OPERATION] (3)

DAM: ITEZHI-TEZHI

Year: 1981/82

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Kafue H/B	Qi-Qf
					R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)	(m3/s)
SEP	1029.26	6062	369									
OCT	1028.82	5889	362	24	210	-64.6	99.1	28.6	135.0	106.0		-6.9
NOV	1028.19	5647	352	74	140	-93.3	66.2	19.3	140.2	89.0		-22.8
DEC	1027.48	5383	340	31	140	-98.7	84.4	18.1	165.0	120.0		-35.6
JAN	1027.49	5386	340	218	120	1.4	183.1	15.3	166.5	191.0		-7.9
FEB	1028.25	5670	352	76	100	117.2	519.0	14.3	387.5	518.0		1.0
MAR	1028.54	5781	357	65	140	41.3	532.3	18.5	472.4	569.0		-36.7
APR	1029.91	6323	379	8	130	209.4	408.8	18.5	180.9	358.0		50.8
MAY	1029.60	6198	374	0	120	-46.9	127.7	16.9	157.7	233.0		-105.3
JUN	1029.44	6134	372	0	90	-24.8	122.2	13.0	134.0	157.0		-34.8
JUL	1029.11	6003	366	0	120	-48.9	87.6	16.5	120.0	123.0		-35.4
AUG	1027.94	5553	348	0	140	-167.8	57.0	18.7	206.1	103.0		-46.0
SEP	1026.48	5025	325	0	170	-203.9	48.2	22.0	230.0	87.0		-38.8
MEAN(mm & m3/s)				41	135	-32.9	192.3	18.3	206.9	219.3		-26.9
TOTAL(mm & mcm)				496	1620	-1037	6065	578	6524	6915		-850

[RESERVOIR OPERATION] (4)										DAM: ITEZHI-TEZHI			Year:1982/83												
82/83	W/Level	Volume	R.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Kafue H/B	Qi-Qf	Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qc(m3/s)	Qf(m3/s)	(m3/s)		
SEP	1026.48	5025	325																						
OCT	1025.04	4537	303	16	210	-181.9	72.7	24.6	230.0	74.0	-1.3														
NOV	1024.13	4247	290	34	140	-112.2	63.1	16.0	159.3	88.0	-24.9														
DEC	1024.38	4325	294	238	140	29.4	194.6	15.3	150.0	204.0	-9.4														
JAN	1025.02	4531	303	103	120	76.8	240.2	13.4	150.0	230.0	10.2														
FEB	1027.06	5230	334	208	100	289.1	421.6	13.2	119.3	385.0	36.6														
MAR	1027.99	5572	348	98	140	127.5	425.9	17.8	280.6	450.0	-24.1														
APR	1029.31	6082	370	8	130	196.7	331.7	18.0	117.0	337.0	-5.3														
MAY	1029.33	6090	370	0	120	3.0	154.5	16.6	135.0	184.0	-29.5														
JUN	1028.54	5781	357	0	90	-119.2	71.3	12.6	177.9	122.0	-50.7														
JUL	1027.14	5259	335	0	120	-194.7	45.1	15.5	224.3	99.0	-53.9														
AUG	1025.65	4740	312	0	140	-193.9	28.4	16.9	205.4	85.0	-56.6														
SEP	1024.22	4275	291	0	170	-179.4	25.8	19.8	185.4	72.0	-46.2														
MEAN(mm & m3/s)													59	135	-23.8	171.4	16.7	178.5	193.0	-21.6					
TOTAL(mm & mcm)													705	1620	-750	5406	526	5630	6087	-682					

[RESERVOIR OPERATION] (5)

DAM: ITEZHI-TEZHI

Year: 1983/84

83/84 Month	H(m)	W/Level	Volume V(mcm)	R.Area A(Km2)	Rain R(mm)	P.Evap Eo(mm)	Change/V dV(m3/s)	Inflow Qi(m3/s)	A.Evap E(m3/s)	Outflow Qo(m3/s)	Kafue H/B	Qi-Qf (m3/s)
SEP	1024.22		4275	291								
OCT	1022.81		3847	271	8	210	-159.6	23.8	22.1	161.4	74.0	-50.2
NOV	1021.72		3537	256	54	140	-119.7	32.7	14.2	138.1	85.0	-52.3
DEC	1021.02		3347	247	160	140	-71.0	116.4	13.1	174.2	206.0	-89.6
JAN	1021.78		3554	257	209	120	77.2	279.1	11.3	190.6	229.0	50.1
FEB	1022.94		3885	273	102	100	132.4	328.5	10.6	185.5	385.0	-56.5
MAR	1023.62		4089	283	0	140	76.1	369.2	14.5	278.6	450.0	-80.8
APR	1024.84		4472	300	0	130	147.9	380.1	14.6	217.6	336.0	44.1
MAY	1024.13		4247	290	0	120	-84.3	149.2	13.2	220.3	184.0	-34.8
JUN	1022.84		3856	272	0	90	-150.7	54.2	9.8	195.1	112.0	-57.8
JUL	1021.53		3485	254	0	120	-138.6	41.4	11.8	168.2	86.0	-44.6
AUG	1020.07		3100	234	0	140	-143.6	54.9	12.8	185.8	74.0	-19.1
SEP	1018.64		2752	216	0	170	-134.3	75.6	14.8	195.1	62.0	13.6
MEAN(mm & m3/s)					44	135	-48.3	158.5	13.6	193.2	190.2	-31.7
TOTAL(mm & mcm)					533	1620	-1523	4999	429	6092	5997	-998

[RESERVOIR OPERATION] (6) DAM: ITEZHI-TEZHI Year:1984/85

84/85 Month	W/Level H(m)	Volume V(mcm)	R.Area A(Km2)	Rain R(mm)	P.Evap Eo(mm)	Change/dV(m3/s)	Inflow Qi(m3/s)	A.Evap E(m3/s)	Outflow Qo(m3/s)	Kafue H/B	Qi-Qf (m3/s)
SEP	1018.64	2752	216								
OCT	1017.25	2440	199	0	210	-116.6	89.7	16.3	190.0	50.0	39.7
NOV	1016.32	2244	188	70	140	-75.3	122.0	10.5	186.8	58.0	64.0
DEC	1016.34	2249	189	89	140	1.5	198.3	9.9	186.9	130.0	68.3
JAN	1019.34	2919	225	157	120	250.3	461.3	9.3	201.8	386.0	75.3
FEB	1025.74	4770	314	136	100	765.3	1029.5	11.1	253.1	795.0	234.5
MAR	1028.58	5796	358	60	140	383.0	678.4	17.5	277.8	650.0	28.4
APR	1029.55	6178	373	0	130	147.2	646.0	18.3	480.4	651.0	-5.0
MAY	1029.50	6158	373	8	120	-7.5	379.5	16.7	370.3	403.0	-23.5
JUN	1029.46	6142	372	0	90	-6.2	178.0	12.9	171.3	203.0	-25.0
JUL	1029.21	6042	368	0	120	-37.2	113.9	16.6	134.5	141.0	-27.1
AUG	1028.43	5738	355	0	140	-113.3	75.2	18.9	169.6	111.0	-35.8
SEP	1027.06	5230	334	0	170	-196.0	31.1	22.6	204.5	88.0	-56.9
MEAN(mm & m3/s)				43	135	78.6	328.8	15.1	235.2	302.1	26.7
TOTAL(mm & mcm)				520	1620	2478	10370	475	7416	9527	843

[RESERVOIR OPERATION] (7)

DAM: ITEZHI-TEZHI

Year: 1985/86

Month	H(m)	V(mcm)	A(Km2)	R(mm)	P.Evap Change/V	Inflow Qi(m3/s)	A.Evap. E(m3/s)	Outflow Kafue H/B Qi-Qf
SEP	1027.06	5230	334					
OCT	1025.70	4757	313	10	-176.9	40.0	25.4	191.5 63.0 -23.0
NOV	1024.59	4392	297	0	-140.7	19.7	16.5	143.9 64.0 -44.3
DEC	1024.25	4284	292	165	-40.3	91.4	15.4	116.3 101.0 -9.6
JAN	1025.73	4767	313	136	180.2	312.1	13.6	118.4 284.0 28.1
FEB	1027.80	5501	345	132	303.5	581.5	13.6	264.4 548.0 33.5
MAR	1028.80	5881	361	80	142.0	797.2	18.5	636.8 700.0 97.2
APR	1029.48	6150	372	0	103.5	694.0	18.4	572.1 725.0 -31.0
MAY	1029.46	6142	372	0	-3.0	592.4	16.7	578.7 623.0 -30.6
JUN	1029.54	6174	373	0	12.4	337.1	12.9	311.8 340.0 -2.9
JUL	1029.46	6142	372	0	-12.0	169.5	16.7	164.8 187.0 -17.5
AUG	1029.27	6066	369	0	-28.3	125.9	19.4	134.8 143.0 -17.1
SEP	1028.80	5881	361	0	-71.2	85.6	23.9	132.9 110.0 -24.4
MEAN(mm & m3/s)			44	135	20.6	318.8	17.6	280.6 322.3 -3.5
TOTAL(mm & mcm)			523	1620	651	10054	555	8848 10165 -111

[RESERVOIR OPERATION] (8)										DAM: ITEZHI-TEZHI			Year: 1986/87										
86/87	W/Level	Volume	R Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Kafue H/B	Qi-Qf	Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dv(m3/s)	Qi(m3/s)	Qo(m3/s)	Qf(m3/s)	(m3/s)	
SEP	1028.80	5881	361																				
OCT	1028.18	5643	351	166	210	-88.8	81.9	27.9	142.7	91.0	-9.1												
NOV	1027.68	5456	343	73	140	-72.1	103.0	18.8	156.4	125.0	-22.0												
DEC	1026.72	5109	329	171	140	-129.7	141.2	17.6	253.3	166.0	-24.8												
JAN	1026.54	5046	326	147	120	-23.7	198.0	14.7	207.0	195.0	3.0												
FEB	1028.40	5727	355	43	100	281.6	511.0	14.1	215.3	448.0	63.0												
MAR	1029.54	6174	373	44	140	166.8	530.5	19.0	344.7	502.0	28.5												
APR	1029.52	6166	373	0	130	-3.1	368.2	18.7	352.6	377.0	-8.8												
MAY	1029.22	6046	368	0	120	-44.7	189.2	16.6	217.3	209.0	-19.8												
JUN	1028.83	5893	362	0	90	-59.1	95.2	12.7	141.6	132.0	-36.8												
JUL	1028.34	5704	354	0	120	-70.5	79.6	16.0	134.0	106.0	-26.4												
AUG	1027.81	5505	345	0	140	-74.5	70.3	18.3	126.5	98.0	-27.7												
SEP	1027.13	5256	335	0	170	-96.1	48.0	22.3	121.8	76.0	-28.0												
MEAN(mm & m3/s)														54	135	199.3	18.1	201.1	208.8	-9.5			
TOTAL(mm & mcm)														644	1620	6286	570	6341	6585	-300			

[RESERVOIR OPERATION] (9)

DAM: ITEZHI-TEZHI

Year: 1987/88

Month	H(m)	V(mcm)	Δ(Km2)	R(mm)	P.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Qi-Qf
								dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)
SEP	1027.13	5256	335									
OCT	1026.28	4955	322	40	210	-112.2	29.8	25.7	116.3	61.0	-31.2	
NOV	1025.40	4656	309	13	140	-115.3	12.0	17.0	110.3	46.0	-34.0	
DEC	1025.23	4600	306	177	140	-21.0	101.2	16.1	106.2	91.0	10.2	
JAN	1025.70	4757	313	67	120	58.5	187.6	13.9	115.2	179.0	8.6	
FEB	1027.39	5350	339	66	100	236.8	466.6	13.0	216.8	411.0	55.6	
MAR	1029.26	6062	369	131	140	265.8	893.8	18.5	609.5	800.0	93.8	
APR	1029.50	6158	373	24	130	36.9	617.2	18.6	561.7	631.0	-13.8	
MAY	1029.40	6118	371	0	120	-14.9	297.3	16.7	295.6	310.0	-12.7	
JUN	1029.56	6182	374	0	90	24.7	126.6	12.9	88.9	148.0	-21.4	
JUL	1029.18	6030	367	0	120	-56.6	85.7	16.6	125.7	113.0	-27.3	
AUG	1028.34	5704	354	0	140	-121.7	57.9	18.9	160.8	94.0	-36.1	
SEP	1027.14	5259	335	0	170	-171.7	36.7	22.6	185.8	74.0	-37.3	
MEAN(mm & m3/s)				43	135	0.1	242.6	17.6	224.9	246.5	-3.9	
TOTAL(mm & mcm)				518	1620	4	7652	555	7093	7774	-122	

[RESERVOIR OPERATION] (10)

DAM: ITEZHI-TEZHI

Year: 1988/89

Month	H(m)	V(mcm)	Λ(Km2)	R(mm)	P(mm)	Evap(mm)	Q1(m3/s)	Q0(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)	Qi-Qf
SEP	1027.14	5259	335									
OCT	1025.76	4777	314	9	210	-180.1	16.6	25.4	171.2	59.0	-42.4	
NOV	1024.56	4382	296	29	140	-152.2	21.9	16.5	157.6	61.0	-39.1	
DEC	1023.96	4194	288	131	140	-70.5	66.1	15.3	121.3	87.0	-20.9	
JAN	1025.02	4531	303	156	120	125.9	236.3	13.2	97.1	188.0	48.3	
FEB	1027.64	5442	343	211	100	376.4	787.2	13.3	397.4	590.0	197.2	
MAR	1028.88	5912	363	61	140	175.7	593.8	18.4	399.6	498.0	95.8	
APR	1029.52	6166	373	11	130	97.7	527.9	18.4	411.7	485.0	42.9	
MAY	1029.49	6154	372	0	120	-4.5	337.8	16.7	325.6	322.0	15.8	
JUN	1029.36	6102	370	0	90	-20.0	144.1	12.9	151.2	184.0	-39.9	
JUL	1028.96	5944	364	0	120	-59.0	91.3	16.4	133.9	120.0	-28.7	
AUG	1028.38	5719	355	0	140	-83.7	65.6	18.8	130.5	97.0	-31.4	
SEP	1027.63	5438	343	0	170	-108.6	40.4	22.9	126.1	75.0	-34.6	
MEAN(mm & m3/s)												
TOTAL(mm & mcm)												
				51	135	5.7	240.3	17.4	217.2	227.9	12.4	
				608	1620	179	7577	548	6850	7186	391	

[RESERVOIR OPERATION J (11)]

DAM: ITEZHI-TEZHI

Year: 1989/90

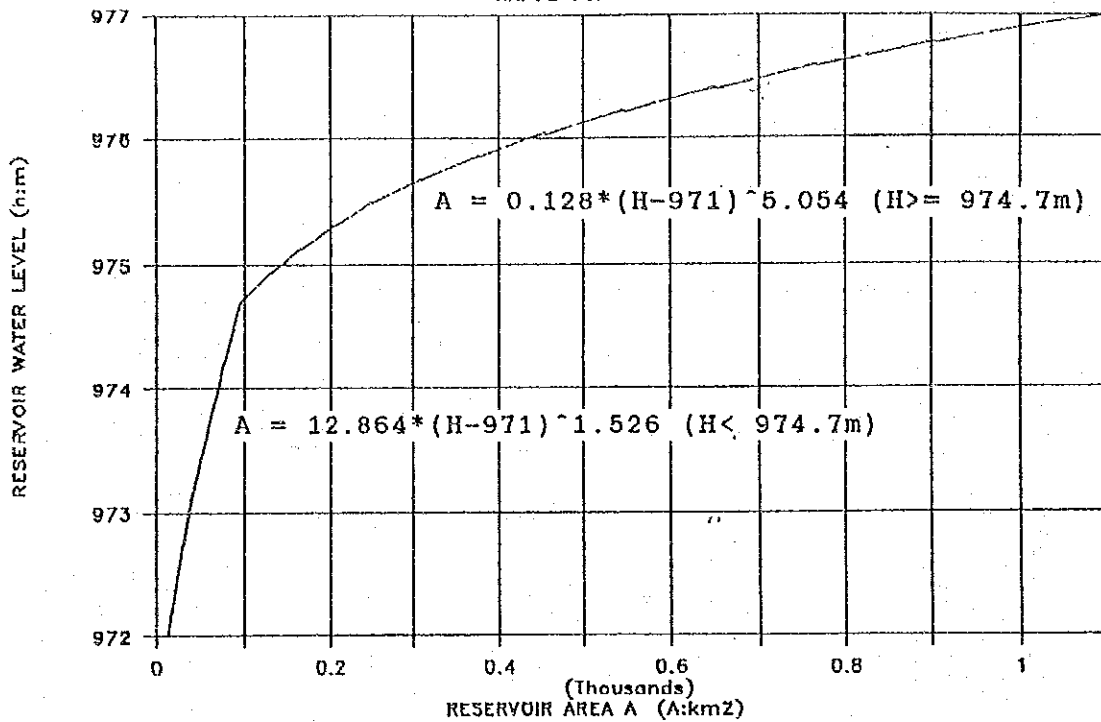
Month	H(m)	W/Level	Volume	R.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Kafue H/B	Qi-Qf
		V(mcm)	A(Km2)	R(mm)	Eo(mm)	dv(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qf(m3/s)		(m3/s)
SEP	1027.63	5438	343									
OCT	1027.19	5277	336	11	210	-60.0	86.6	26.6	120.0	35.0	51.6	
NOV	1026.40	4997	324	40	140	-108.2	23.6	17.8	114.0	26.0	-2.4	
DEC	1025.62	4730	312	193	140	-99.7	25.9	16.6	109.0	54.0	-28.1	
JAN	1025.65	4740	312	222	120	3.8	194.7	14.0	177.0	177.0	17.7	
FEB	1026.03	4869	318	133	100	53.3	489.4	13.0	423.0	446.0	43.4	
MAR	1026.61	5070	327	97	140	75.2	312.1	16.9	220.0	326.0	-13.9	
APR	1027.95	5557	348	76	130	187.7	365.6	16.9	161.0	350.0	15.6	
MAY	1028.57	5792	358	0	120	87.9	259.7	15.8	156.0	185.0	74.7	
JUN	1028.42	5735	355	0	90	-22.2	125.2	12.4	135.0	104.0	21.2	
JUL	1027.95	5557	348	0	120	-66.4	75.4	15.7	126.0	61.0	14.4	
AUG	1027.13	5256	335	0	140	-112.5	64.3	17.8	159.0	43.0	21.3	
SEP	1025.82	4797	315	0	170	-176.8	22.5	21.3	178.0	29.0	-6.5	
MEAN(mm & m3/s)												
				64	135	-20.3	168.2	17.1	171.4	150.9	17.3	
TOTAL(mm & mcm)				771	1620	-641	5304	539	5405	4758	546	

[RESERVOIR OPERATION] (12) DAM: ITEZHI-TEZHI Year:1990/91

90/91 Month	W/Level H(m)	Volume V(mcm)	R.Area A(Km2)	Rain R(mm)	P.Evap Eo(mm)	Change/V dV(m3/s)	Inflow Qi(m3/s)	A.Evap E(m3/s)	Outflow Qo(m3/s)	Kafue H/B	Qi-Qf (m3/s)
SEP	1025.92	4797	315								
OCT	1024.29	4297	292	0	210	-186.8	10.0	23.8	173.0	19.0	-9.0
NOV	1022.77	3835	271	87	140	-178.0	-10.8	15.2	152.0	12.0	-22.8
DEC	1021.47	3468	253	197	140	-137.1	28.6	13.7	152.0	32.0	-3.4
JAN	1021.46	3466	253	223	120	-1.0	123.3	11.3	113.0	234.0	-110.7
FEB	1024.27	4290	292	42	100	341.0	458.2	11.3	106.0	512.0	-53.8
MAR	1027.59	5423	342	91	140	422.9	549.5	16.6	110.0	514.0	35.5
APR	1029.48	6150	372	0	130	280.2	596.2	17.9	298.0	417.0	179.2
MAY	1029.55	6178	373	0	120	10.5	228.2	16.7	201.0	209.0	19.2
JUN	1029.32	6086	370	0	90	-35.5	139.4	12.9	162.0	101.0	38.4
JUL	1028.65	5823	359	0	120	-98.1	74.3	16.3	156.0	69.0	5.3
AUG	1027.84	5516	346	0	140	-114.7	60.7	18.4	157.0	53.0	7.7
SEP	1025.60	4723	312	0	170	-305.9	-53.3	21.6	231.0	38.0	-91.3
MEAN(mm & m3/s)				53	135	-2.4	181.6	16.3	167.6	181.9	-0.3
TOTAL(mm & mcm)				640	1620	-74	5727	515	5286	5737	-10

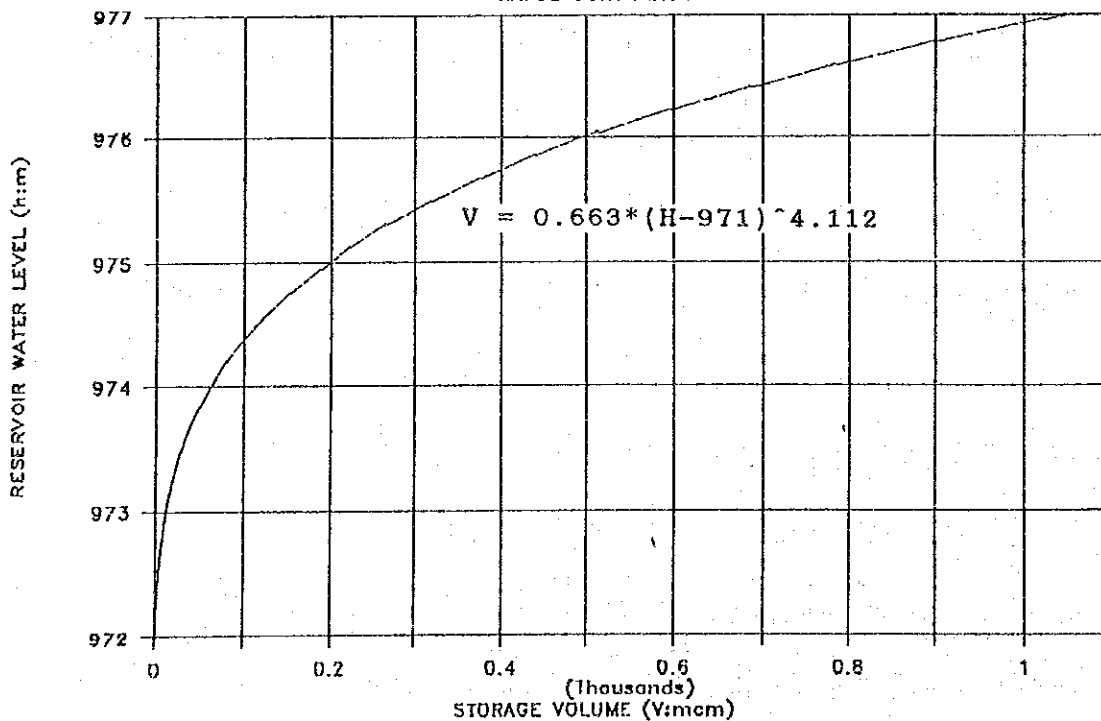
WATER LEVEL(h) – AREA(V) CURVE

KAFUE GORGE DAM



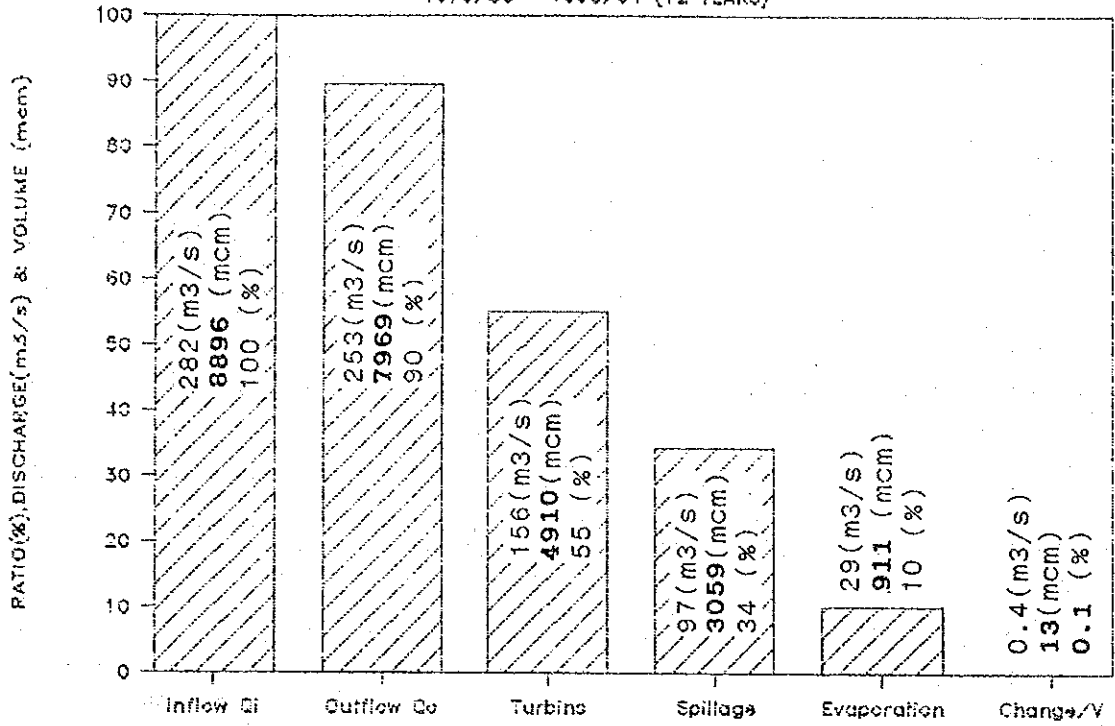
WATER LEVEL(h) – VOLUME(V) CURVE

KAFUE GORGE DAM



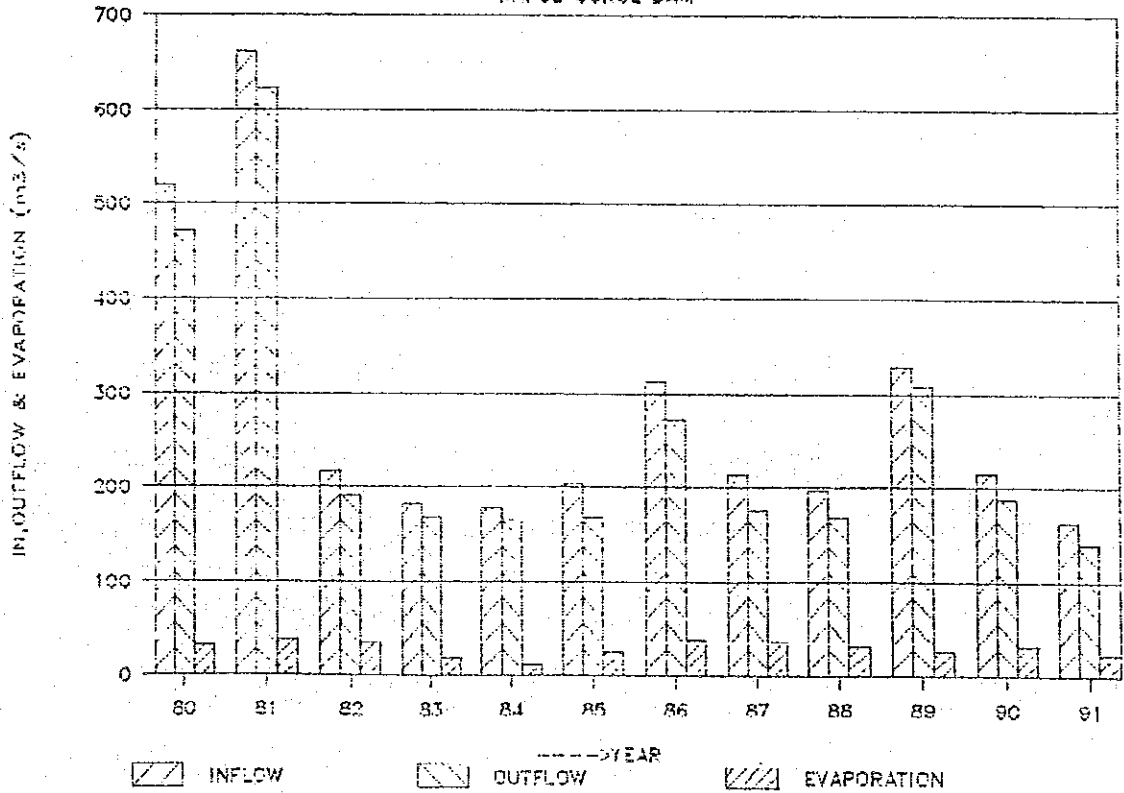
KAFUE GORGE RESERVOIR WATER BALANCE

1979/80 - 1990/91 (12 YEARS)



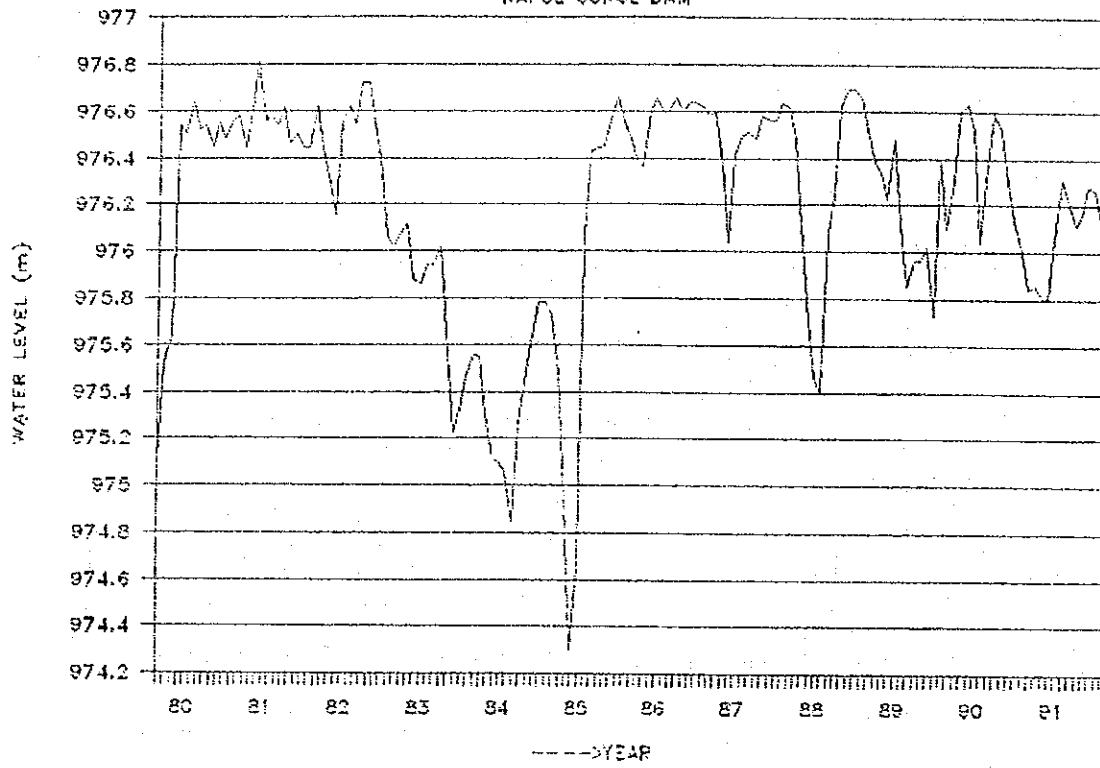
ANNUAL INFLOW, OUTFLOW & EVAPORATION

KAFUE GORGE DAM



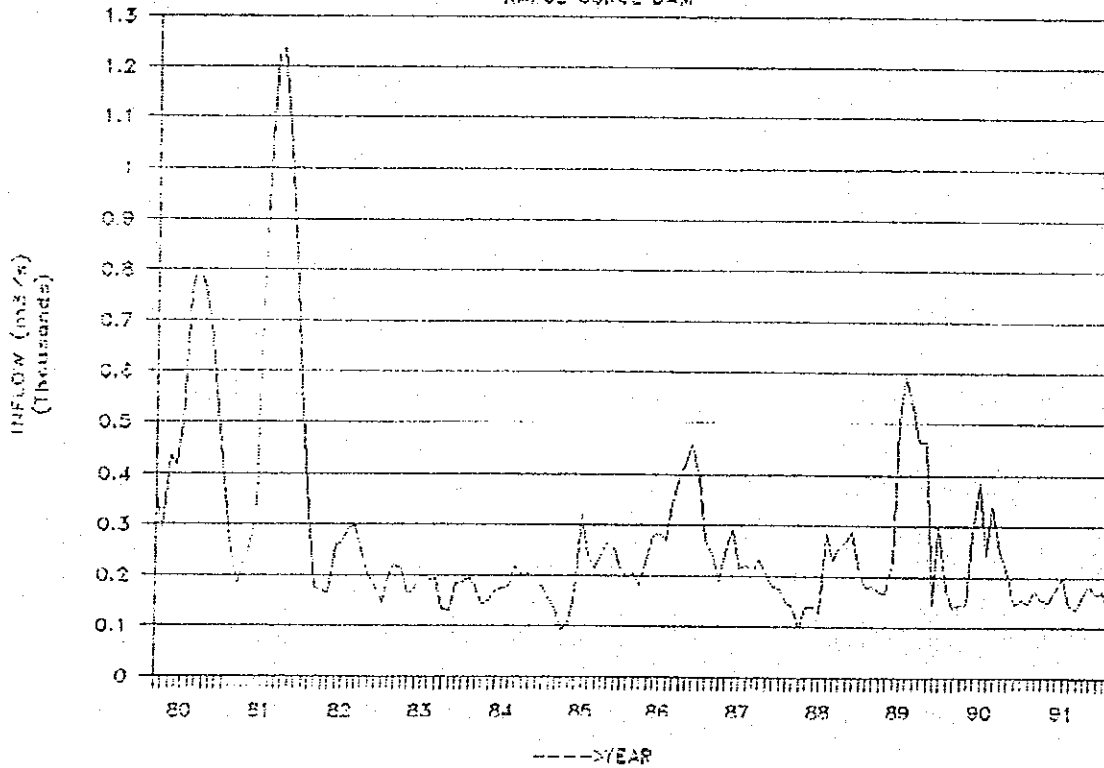
MONTHLY WATER LEVEL

KAFUE GORGE DAM



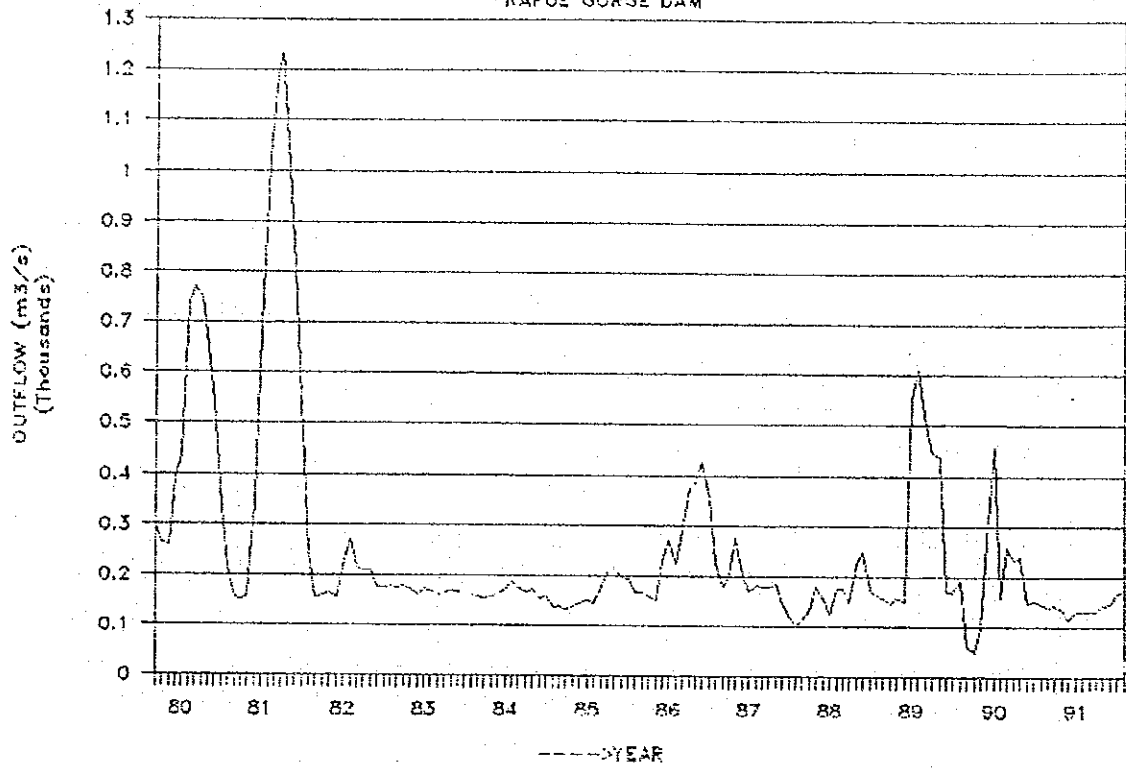
MONTHLY INFLOW

KAFUE GORGE DAM



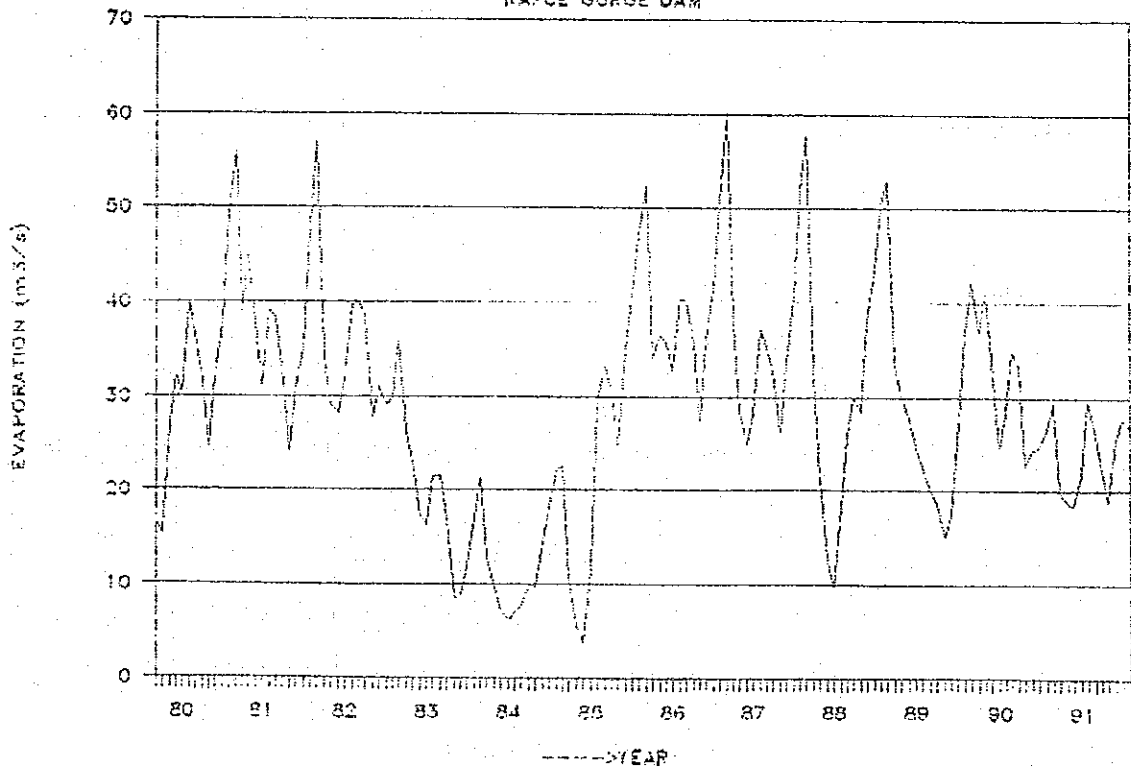
MONTHLY OUTFLOW

KAFUE GORGE DAM

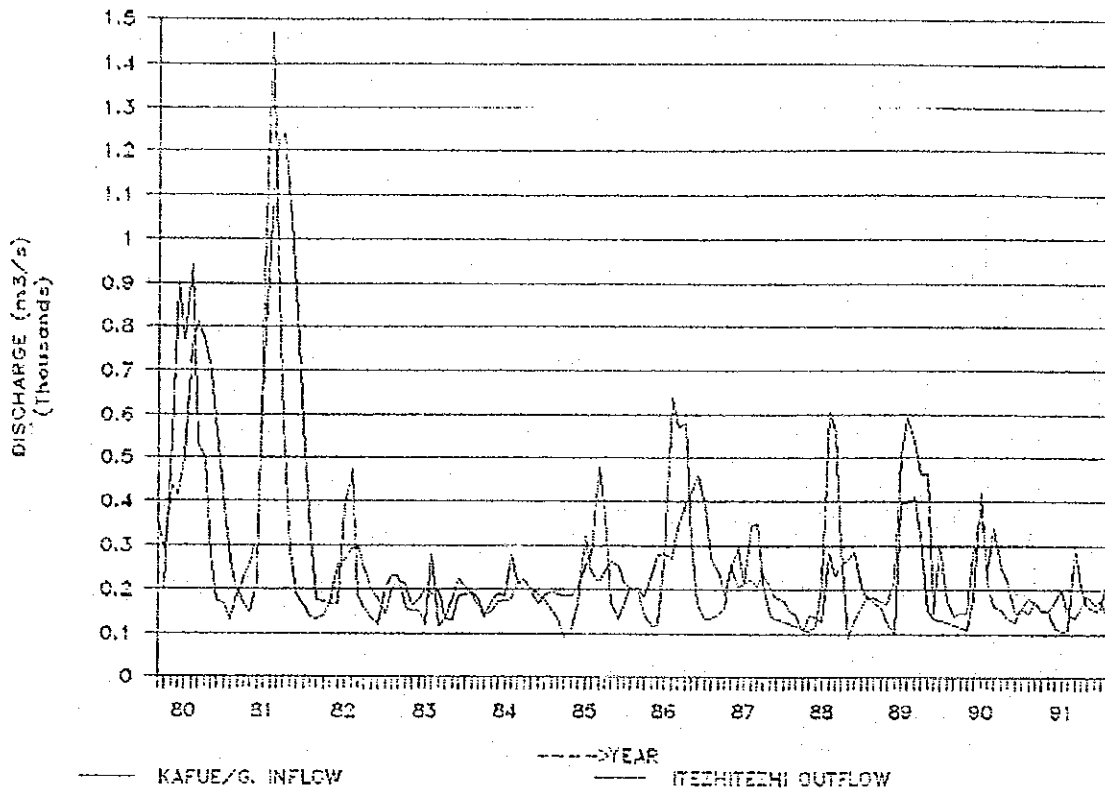


MONTHLY EVAPORATION

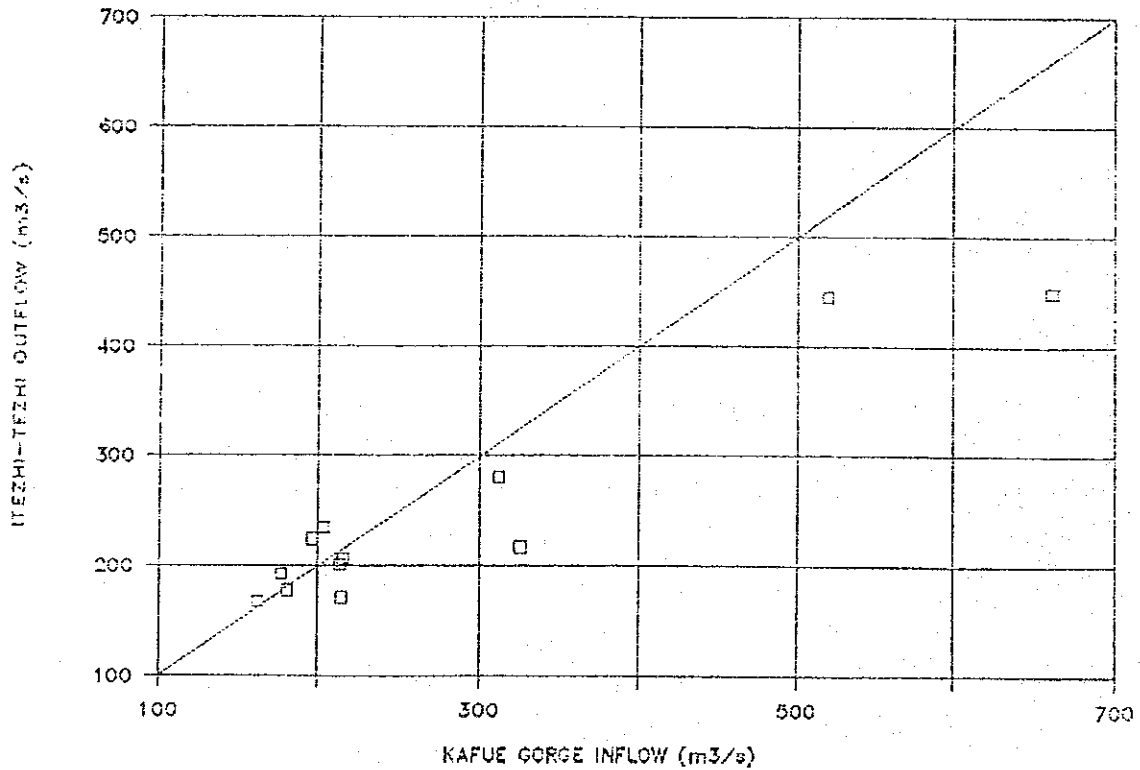
KAFUE GORGE DAM



KAFUE/G. INFLOW ITEZHI TEZHI OUTFLOW



KAFUE/G. INFLOW - ITEZHI-TEZHI OUTFLOW



[RESERVOIR OPERATION]												PERIOD: 1979/80 - 1990/91 (12 YEARS)												DAM: KAFUE GORGE											
Year	W/Level	Volume	R.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Turbi.	Spill.	IT-Qoi	QI-Qoi	H(m)	V(mcm)	A(Km2)	R(mm)	Fo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(m3/s)	(m3/s)	(m3/s)									
1978/79	975.10	219	160																																
L1979/80	976.58	779	760	673	1620	17.7	519.7	31.0	470.9	140.3	330.6	444.4	75.3																						
1980/81	976.62	802	788	1048	1620	0.7	660.2	38.1	621.4	161.4	460.0	449.1	211.1																						
1981/82	976.02	504	445	726	1620	-9.5	215.8	34.7	190.5	182.1	8.4	206.9	8.9																						
1982/83	975.56	340	274	543	1620	-5.2	182.0	18.7	168.5	168.5	0.0	178.5	3.5																						
L1983/84	975.72	392	326	462	1620	1.6	177.7	12.2	163.9	163.9	0.0	192.6	-14.9																						
1984/85	976.48	723	693	640	1620	10.5	203.1	24.6	168.0	168.0	0.0	235.2	-32.1																						
1985/86	976.58	779	760	769	1620	1.8	311.8	38.6	271.4	178.7	92.7	280.6	31.2																						
1986/87	976.61	797	781	644	1620	0.6	213.8	36.4	176.9	155.6	21.3	201.1	12.8																						
L1987/88	976.52	745	719	587	1620	-1.6	197.1	30.7	168.1	149.1	18.9	224.3	-27.2																						
1988/89	976.10	538	482	1045	1620	-6.6	326.0	27.1	305.5	73.9	231.6	217.2	108.8																						
1989/90	975.84	434	370	733	1620	-3.3	214.9	31.1	187.1	187.1	0.0	171.4	43.5																						
1990/91	975.70	385	319	538	1620	-1.6	162.4	23.8	140.2	140.2	0.0	167.6	-5.2																						
MEAN(mm & m3/s)												0.4	282.1	28.9	252.7	155.7	97.0	247.4	34.6																
TOTAL(mm & mcm)												13	8896	911	7969	4910	3059	7802	1091																

[RESERVOIR OPERATION] (1)

DAM: KAFUE GORGE

Year: 1979/80

79/80 W/Level	Volume R.Area	Rain	P.Evap	Change/V	Inflow A.Evap.	Outflow Turbi.	Spill.	IT-Qoi	Qi-Qoi
Month H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(m3/s)
SEP 975.10	219	160							
OCT 975.53	331	265	26	210	41.5	355.6	16.7	297.4	140.2
NOV 975.64	365	299	84	140	13.2	290.5	15.2	262.0	142.0
DEC 976.54	757	733	236	140	146.2	434.6	27.0	261.4	124.5
JAN 976.50	734	706	126	120	-8.3	416.5	32.2	392.6	130.1
FEB 976.64	814	802	127	100	31.9	497.7	30.1	435.7	126.6
MAR 976.52	745	719	67	140	-25.7	754.8	39.8	740.8	127.5
APR 976.54	757	733	7	130	4.3	812.1	36.4	771.4	131.4
MAY 976.45	707	674	0	120	-18.4	763.5	31.5	750.4	140.4
JUN 976.55	762	739	0	90	21.2	696.0	24.5	650.3	146.2
JUL 976.48	723	693	0	120	-14.5	557.7	32.1	540.1	156.2
AUG 976.56	768	746	0	140	16.6	388.7	37.6	334.5	157.1
SEP 976.58	779	760	0	170	4.4	266.7	49.4	212.9	161.6
MEAN(mm & m3/s)		56		135	17.7	519.7	31.0	470.9	140.3
TOTAL(mm & mcm)		673		1620	560	16434	982	14892	4438
								10455	14052
								164.6	224.1
								51.3	129.2
								330.6	444.4
								14052	2382

Year: 1980/81

DAM: KAFUE GORGE

[RESERVOIR OPERATION] (2)

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Spill. (m3/s)	IT-Qoi (m3/s)	Q1-Qoi (m3/s)
SEP	976.58	779	760									
OCT	976.44	702	668	5	210	-28.9	181.1	56.0	154.0	154.0	0.0	199.5 -18.4
NOV	976.60	791	774	71	140	34.3	226.0	38.9	152.8	152.8	0.0	166.4 59.6
DEC	976.82	927	940	174	140	50.7	254.8	44.8	159.3	152.9	6.4	147.6 107.2
JAN	976.56	768	746	305	120	-59.3	324.6	37.8	346.1	157.8	188.3	208.7 115.9
FEB	976.58	779	760	348	100	4.7	720.7	31.1	684.9	165.9	519.0	903.2 -182.5
MAR	976.54	757	733	101	140	-8.5	1049.8	39.0	1019.3	161.2	858.1	1471.3 -421.5
APR	976.62	802	788	44	130	17.7	1225.3	38.1	1169.4	174.8	994.6	976.0 249.3
MAY	976.46	713	681	0	120	-33.6	1238.6	32.9	1239.3	156.4	1082.9	578.0 660.6
JUN	976.50	734	706	0	90	8.4	1040.2	24.1	1007.7	185.2	822.5	287.3 752.9
JUL	976.44	702	668	0	120	-12.1	829.3	30.8	810.6	158.9	651.7	190.2 639.1
AUG	976.44	702	668	0	140	0.0	516.0	34.9	481.1	156.8	324.3	162.0 354.0
SEP	976.62	802	788	0	170	38.8	327.7	47.7	241.2	161.1	80.1	136.0 191.7
MEAN(mm & m3/s)				87	135	0.7	660.2	38.1	621.4	161.4	460.0	449.1 211.1
TOTAL(mm & mcm)				1048	1620	23	20821	1201	19596	5089	14507	14164 6656

[RESERVOIR OPERATION] (3)

DAM: KAFUE GORGE

Year: 1981/82

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	Qi(m3/s)	Qo(m3/s)	E(m3/s)	Evap.	Inflow	P.Evap	Change/V	Outflow	Turbi.	Spill.	IT-Qoi	Qi-Qoi	
SEP	976.62	802	788															
OCT	976.44	702	668	0	210	-37.5	175.6	57.1	156.1	156.1	0.0	135.0	40.6					
NOV	976.32	640	597	203	140	-23.7	170.1	34.2	159.7	159.7	0.0	140.2	29.9					
DEC	976.16	565	512	159	140	-28.2	167.5	29.0	166.7	166.7	0.0	165.0	2.5					
JAN	976.56	768	746	290	120	75.8	260.3	28.2	156.3	156.3	0.0	166.5	93.8					
FEB	976.62	802	788	56	100	14.3	265.1	31.7	219.1	180.1	39.0	387.5	-122.4					
MAR	976.54	757	733	7	140	-17.2	293.3	39.7	270.7	210.5	60.2	472.4	-179.1					
APR	976.72	863	861	2	130	41.0	295.9	40.0	214.9	211.1	3.8	180.9	115.0					
MAY	976.72	863	861	1	120	0.0	247.3	38.6	208.7	208.7	0.0	157.7	89.6					
JUN	976.54	757	733	0	90	-41.0	195.8	27.7	209.1	209.1	0.0	134.0	61.8					
JUL	976.40	681	644	0	120	-28.2	177.7	30.8	175.1	175.1	0.0	120.0	57.7					
AUG	976.06	521	463	0	140	-59.7	144.6	28.9	175.3	175.3	0.0	206.1	-61.5					
SEP	976.02	504	445	8	170	-6.5	200.9	29.8	177.6	177.6	0.0	230.0	-29.1					
MEAN(mm & m3/s)				61	135	-9.5	215.8	34.7	190.5	182.1	8.4	206.9	8.9					
TOTAL(mm & mcm)				726	1620	-298	6805	1094	6009	5744	265	6524	281					

Year: 1982/83

DAM: KAFUE GORGE

[RESERVOIR OPERATION] (4)

Month	H(m)	V(mcm)	A(Km2)	R(mm)	P.Evap	Change/V	Q1(m3/s)	E(m3/s)	Qo(m3/s)	Outflow	Turbi.	Spill.	IT-Qoi	Qi-Qoi
SEP	976.02	504	445											
OCT	976.08	530	473	72	210	9.4	219.8	36.0	174.4	174.4	0.0	230.0	-10.2	
NOV	976.12	547	492	113	140	6.7	210.9	26.1	178.2	178.2	0.0	159.3	51.6	
DEC	975.88	449	386	51	140	-36.6	160.3	22.9	173.9	173.9	0.0	150.0	10.3	
JAN	975.86	442	378	173	120	-2.8	176.8	17.1	162.5	162.5	0.0	150.0	26.8	
FEB	975.94	472	410	83	100	12.7	200.3	16.3	171.3	171.3	0.0	119.3	81.0	
MAR	975.94	472	410	19	140	0.0	189.9	21.5	168.4	168.4	0.0	230.6	-90.7	
APR	976.02	504	445	32	130	12.4	195.3	21.5	161.4	161.4	0.0	117.0	78.3	
MAY	975.66	371	306	0	120	-49.6	134.5	16.8	167.3	167.3	0.0	135.0	-0.5	
JUN	975.22	247	185	0	90	-48.0	130.4	8.5	169.9	169.9	0.0	177.9	-47.5	
JUL	975.32	272	208	0	120	9.3	185.5	8.8	167.4	167.4	0.0	224.3	-38.8	
AUG	975.46	310	245	0	140	14.2	188.8	11.8	162.7	162.7	0.0	205.4	-16.6	
SEP	975.56	340	274	0	170	11.4	193.5	17.0	165.1	165.1	0.0	185.4	8.1	
MEAN(mm & m3/s)														
TOTAL(mm & mcm)														
				45	135	-5.2	182.0	18.7	168.5	168.5	0.0	178.5	3.5	
				543	1620	-165	5740	590	5314	5314	0	5630	110	

[RESERVOIR OPERATION] (5)

DAM: KAFUE GORGE

Year: 1983/84

83/84 W/Level	Volume	R.Area	Rain	P.Evap	Change/V	Inflow	A.Evap.	Outflow	Turbi.	Spill.	IT-Qoi	Qi-Qoi
Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(m3/s)	(m3/s)	(m3/s)
SEP	975.56	340	274									
OCT	975.55	337	271	17	210	-1.1	178.3	21.4	158.1	158.1	0.0	161.4
NOV	975.30	267	204	6	140	-26.9	141.8	12.8	155.9	155.9	0.0	138.1
DEC	975.12	224	164	135	140	-16.1	152.6	9.6	159.1	159.1	0.0	174.2
JAN	975.10	219	160	83	120	-1.7	170.0	7.3	164.4	164.4	0.0	190.6
FEB	975.06	211	152	109	100	-3.5	175.1	6.2	172.3	172.3	0.0	185.5
MAR	974.84	168	115	104	140	-16.1	178.4	7.0	187.5	187.5	0.0	278.6
APR	975.26	257	194	8	130	34.4	217.2	7.8	175.0	175.0	0.0	217.6
MAY	975.48	316	250	0	120	22.1	198.8	10.0	166.8	166.8	0.0	220.3
JUN	975.64	365	299	0	90	18.9	202.3	9.5	173.8	173.8	0.0	195.1
JUL	975.78	412	348	0	120	17.7	187.7	14.5	155.5	155.5	0.0	168.2
AUG	975.78	412	348	0	140	0.0	178.2	18.2	160.0	160.0	0.0	185.8
SEP	975.72	392	326	0	170	-8.1	152.1	22.1	138.1	138.1	0.0	195.1
MEAN(mm & m3/s)				39	135	1.6	177.7	12.2	163.9	163.9	0.0	192.6
TOTAL(mm & mcm)				462	1620	52	5620	386	5182	5182	0	6092

Year: 1984/85

DAM: KAFUE GORGE

[RESERVOIR OPERATION J (6)

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi.	Spill.	IT-Qoi	Qi-Qoi
													(m3/s)
SEP	975.72	392	326										
OCT	975.48	316	250	0	210	-28.2	133.8	22.6	139.4	139.4	0.0	190.0	-56.2
NOV	974.94	186	131	58	140	-50.0	91.8	10.3	131.5	131.5	0.0	186.8	-95.0
DEC	974.30	90	80	169	140	-36.0	109.2	5.5	139.7	139.7	0.0	186.9	-77.7
JAN	974.66	138	93	177	120	17.8	166.9	3.9	145.2	145.2	0.0	201.8	-34.9
FEB	976.06	521	463	172	100	158.6	320.4	11.5	150.3	150.3	0.0	253.1	67.3
MAR	976.43	697	662	64	140	65.5	239.5	29.4	144.6	144.6	0.0	277.8	-38.3
APR	976.44	702	668	0	130	2.0	215.6	33.4	180.2	180.2	0.0	480.4	-264.8
MAY	976.45	707	674	0	120	2.0	242.0	30.1	209.9	209.9	0.0	370.3	-128.3
JUN	976.56	768	746	0	90	23.4	262.1	24.7	214.1	214.1	0.0	171.3	90.8
JUL	976.66	826	816	0	120	21.8	253.9	35.0	197.1	197.1	0.0	134.5	119.4
AUG	976.56	768	746	0	140	-21.8	214.0	40.8	195.0	195.0	0.0	169.6	44.4
SEP	976.48	723	693	0	170	-17.1	197.9	47.2	167.8	167.8	0.0	204.5	-6.6
MEAN(mm & m3/s)													
TOTAL(mm & mcm)													
				53	135	10.5	203.1	24.6	168.0	168.0	0.0	235.2	-32.1
				640	1620	332	6405	775	5298	5298	0	7416	-1011

[RESERVOIR OPERATION] (7)

DAM: KAFUE GORGE

Year: 1985/86

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi.	Spill.	IT-Qoi	Qi-Qoi
						Change/V							(m3/s)
SEP	976.48	723	693										
OCT	976.40	681	644	18	210	-15.8	202.5	52.4	165.9	165.9	0.0	191.5	11.0
NOV	976.36	660	620	44	140	-7.9	183.4	34.1	157.2	157.2	0.0	143.9	39.5
DEC	976.60	791	774	227	140	48.7	235.8	36.4	150.7	150.7	0.0	116.3	119.5
JAN	976.66	826	816	182	120	13.2	279.9	35.6	231.1	169.5	61.6	118.4	161.5
FEB	976.59	785	767	84	100	-17.0	283.6	32.7	267.9	185.3	82.6	264.4	19.2
MAR	976.61	797	781	70	140	4.3	268.0	40.4	223.2	181.0	42.2	636.8	-368.8
APR	976.66	826	816	144	130	11.4	340.6	40.1	289.1	185.1	104.0	572.1	-231.5
MAY	976.60	791	774	0	120	-13.2	396.2	35.6	373.8	191.3	182.5	578.7	-182.5
JUN	976.64	814	802	0	90	9.1	421.9	27.4	385.5	208.6	176.9	311.8	110.1
JUL	976.64	814	802	0	120	0.0	461.0	35.9	425.1	178.7	246.4	164.8	296.2
AUG	976.62	802	788	0	140	-4.4	394.6	41.5	357.5	183.0	174.5	134.8	259.8
SEP	976.58	779	760	0	170	-9.0	270.2	50.7	228.4	189.1	39.3	132.9	137.3
MEAN(mm & m3/s)				64	135	1.8	311.8	38.6	271.4	178.7	92.7	280.6	31.2
TOTAL(mm & mcm)				769	1620	56	9833	1219	8558	5634	2924	8848	985

[RESERVOIR OPERATION] (8)

DAM: KAFUE GORGE

Year: 1986/87

Month	H(m)	V(mcm)	A(Km2)	R(mm)	P.Evap	Change/V	Qo(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Qi(m3/s)	IT-Qoi	Spill.	IT-Qoi	Qi-Qoi
SEP	976.58	779	760												
OCT	976.60	791	774	166	210	4.3	242.4	60.1	178.0	178.0	0.0	142.7	99.7		
NOV	976.38	671	632	73	140	-46.4	190.3	38.0	198.7	159.7	39.0	156.4	33.9		
DEC	976.04	513	454	171	140	-58.9	246.0	28.4	276.6	134.5	142.1	253.3	-7.3		
JAN	976.42	691	656	147	120	66.7	293.0	24.9	201.4	157.2	44.2	207.0	86.0		
FEB	976.50	734	706	43	100	17.7	216.2	28.2	170.3	170.3	0.0	215.3	0.9		
MAR	976.51	740	713	41	140	2.1	222.0	37.1	182.9	182.9	0.0	344.7	-122.7		
APR	976.48	723	693	0	130	-6.3	206.2	35.3	177.3	177.3	0.0	352.6	-146.4		
MAY	976.58	779	760	0	120	20.8	234.0	32.6	180.6	180.6	0.0	217.3	16.7		
JUN	976.56	768	746	0	90	-4.4	207.2	26.1	185.5	185.5	0.0	141.6	65.6		
JUL	976.56	768	746	0	120	0.0	179.9	33.4	146.5	127.1	19.4	134.0	45.9		
AUG	976.64	814	802	0	140	17.3	176.5	40.5	118.7	111.4	7.3	126.5	50.0		
SEP	976.61	797	781	0	170	-6.8	149.1	51.9	104.0	104.0	0.0	121.8	27.3		
MEAN(mm & m3/s)				54	135	0.6	213.8	36.4	176.9	155.6	21.3	201.1	12.8		
TOTAL(mm & mcm)				644	1620	17	6744	1148	5578	4906	672	6341	403		

[RESERVOIR OPERATION] (9)

DAM: KAFUE GORGE

Year: 1987/88

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi.	Spill.	IT-Qoi	Qi-Qoi
SEP	976.61	797	781										
OCT	976.48	723	693	25	210	-27.3	143.6	57.8	113.1	113.1	0.0	116.3	27.3
NOV	976.12	547	492	23	140	-68.0	98.9	32.0	134.9	114.1	20.8	110.3	-11.4
DEC	975.70	385	319	177	140	-60.6	139.6	21.2	179.0	152.9	26.1	106.2	33.4
JAN	975.46	310	245	147	120	-27.9	138.6	12.6	153.8	148.2	5.6	115.2	23.4
FEB	975.40	293	229	133	100	-6.7	128.4	9.4	125.7	125.7	0.0	216.8	-88.4
MAR	976.08	530	473	80	140	88.2	283.4	18.3	176.8	176.8	0.0	609.5	-326.1
APR	976.24	602	553	2	130	27.8	229.1	25.7	175.6	175.6	0.0	561.7	-332.6
MAY	976.62	802	788	0	120	74.9	254.6	30.0	149.6	149.6	0.0	295.6	-41.0
JUN	976.70	850	846	0	90	18.5	269.9	28.4	223.0	185.2	37.8	88.9	181.0
JUL	976.70	850	846	0	120	0.0	286.8	37.9	248.9	147.1	101.8	125.7	161.1
AUG	976.66	826	816	0	140	-9.1	208.4	43.5	174.0	140.5	33.5	160.8	47.6
SEP	976.52	745	719	0	170	-31.2	179.5	50.4	160.3	160.3	0.0	185.8	-6.3
MEAN(mm & m3/s)													
TOTAL(mm & mcm)													
				49	135	-1.6	197.1	30.7	168.1	149.1	18.9	224.3	-27.2
				587	1620	-51	6233	970	5315	4715	599	7093	-860

[RESERVOIR OPERATION J (10)

DAM: KAFUE GORGE

Year: 1988/89

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. (m3/s)	Spill. (m3/s)	IT-Qoi (m3/s)	Qi-Qoi (m3/s)
SEP	976.52	745	719										
OCT	976.38	671	632	23	210	-27.9	182.6	53.0	157.5	157.5	0.0	171.2	11.4
NOV	976.34	650	608	43	140	-7.8	170.5	33.5	144.8	144.8	0.0	157.6	12.9
DEC	976.22	592	542	126	140	-21.7	166.5	30.1	158.1	158.1	0.0	121.3	45.2
JAN	976.48	723	693	268	120	48.9	226.5	27.7	149.9	149.9	0.0	97.1	129.4
FEB	976.12	547	492	516	100	-72.9	505.8	24.5	554.2	141.3	412.9	397.4	108.4
MAR	975.85	438	374	69	140	-40.8	591.8	22.6	610.0	137.4	472.6	399.6	192.2
APR	975.96	480	419	0	130	16.3	536.2	19.9	500.0	0.0	500.0	411.7	124.5
MAY	975.96	480	419	0	120	0.0	464.6	18.8	445.8	0.0	445.8	325.6	139.0
JUN	976.02	504	445	0	90	9.4	464.4	15.0	440.0	0.0	440.0	151.2	313.2
JUL	975.73	395	330	0	120	-40.9	146.5	17.4	170.0	0.0	170.0	133.9	12.6
AUG	976.39	676	638	0	140	104.9	300.1	25.3	170.0	0.0	170.0	130.5	169.6
SEP	976.10	538	482	0	170	-53.0	175.4	36.7	191.7	0.0	191.7	126.1	49.3
MEAN(mm & m3/s)				87	135	-6.6	326.0	27.1	305.5	73.9	231.6	217.2	108.8
TOTAL(mm & mcm)				1045	1620	-207	10281	853	9635	2332	7303	6850	3431

[RESERVOIR OPERATION] (11)

DAM: KAFUE GORGE

Year: 1989/90

Month	H(m)	V(mcm)	A(Km2)	R(mm)	Eo(mm)	P.Evap	Change/V	QI(m3/s)	E(m3/s)	Qo(m3/s)	Outflow	Turbi.	Spill.	IT-Qoi	Qi-Qoi
SEP	976.10	538	482												
OCT	976.31	635	591	1	210	36.3	139.4	42.1	61.0	61.0	0.0	120.0	19.4		
NOV	976.60	791	774	27	140	59.9	146.8	36.9	50.0	50.0	0.0	114.0	32.8		
DEC	976.63	808	795	110	140	6.6	145.6	41.0	98.0	98.0	0.0	109.0	36.6		
JAN	976.52	745	719	410	120	-23.5	283.4	33.9	273.0	273.0	0.0	177.0	106.4		
FEB	976.04	513	454	106	100	-96.2	385.1	24.3	457.0	457.0	0.0	423.0	-37.9		
MAR	976.37	666	626	25	140	57.0	242.3	28.2	157.0	157.0	0.0	220.0	22.3		
APR	976.59	785	767	53	130	46.1	338.0	34.9	257.0	257.0	0.0	161.0	177.0		
MAY	976.52	745	719	0	120	-14.8	251.5	33.3	233.0	233.0	0.0	156.0	95.5		
JUN	976.30	631	586	0	90	-44.3	216.4	22.7	238.0	238.0	0.0	135.0	81.4		
JUL	976.14	556	502	0	120	-27.9	145.5	24.4	149.0	149.0	0.0	126.0	19.5		
AUG	976.00	496	436	0	140	-22.3	153.2	24.5	151.0	151.0	0.0	159.0	-5.8		
SEP	975.84	434	370	0	170	-24.0	147.5	26.4	145.0	145.0	0.0	178.0	-30.5		
MEAN(mm & m3/s)				61	135	-3.3	214.9	31.1	187.1	187.1	0.0	171.4	43.5		
TOTAL(mm & mcm)				733	1620	-104	6776	981	5899	5899	0	5405	1371		

[RESERVOIR OPERATION] (12)

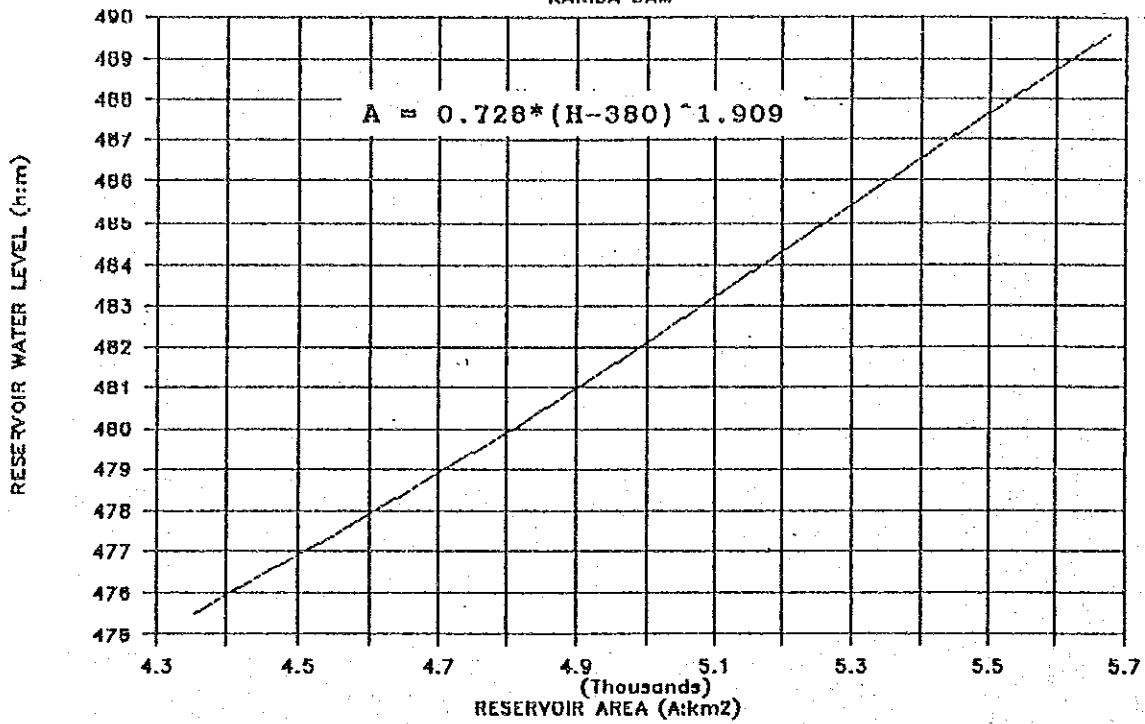
DAM: KAFUE GORGE

Year: 1990/91

Month	H(m)	V(mcm)	A(Km2)	R(mm)	P.Evap	Change/V	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi.	Spill.	IT-Qoi	Qi-Qoi
						dV(m3/s)							(m3/s)
SEP	975.84	434	370										
OCT	975.86	442	378	0	210	2.8	172.1	29.3	140.0	140.0	0.0	173.0	-0.9
NOV	975.81	423	359	33	140	-7.1	155.8	19.9	143.0	143.0	0.0	152.0	3.8
DEC	975.81	423	359	177	140	0.0	152.8	18.8	134.0	134.0	0.0	152.0	0.8
JAN	976.06	521	463	201	120	36.6	172.0	18.4	117.0	117.0	0.0	113.0	59.0
FEB	976.31	635	591	127	100	47.3	200.1	21.8	131.0	131.0	0.0	106.0	94.1
MAR	976.22	592	542	0	140	-16.1	142.5	29.6	129.0	129.0	0.0	110.0	32.5
APR	976.11	543	487	0	130	-19.2	135.7	25.8	129.0	129.0	0.0	298.0	-162.3
MAY	976.16	565	512	0	120	8.3	159.6	22.4	129.0	129.0	0.0	201.0	-41.4
JUN	976.28	621	575	0	90	21.6	134.5	18.9	144.0	144.0	0.0	162.0	22.5
JUL	976.26	611	564	0	120	-3.6	166.9	25.5	145.0	145.0	0.0	156.0	10.9
AUG	976.13	551	497	0	140	-22.3	173.4	27.7	168.0	168.0	0.0	157.0	16.4
SEP	975.70	385	319	0	170	-64.3	136.4	26.8	174.0	174.0	0.0	231.0	-94.6
MEAN(mm & m3/s)				45	135	-1.6	162.4	23.8	140.2	140.2	0.0	167.6	-5.2
TOTAL(mm & mcm)				538	1620	-49	5123	749	4423	4423	0	5286	-163

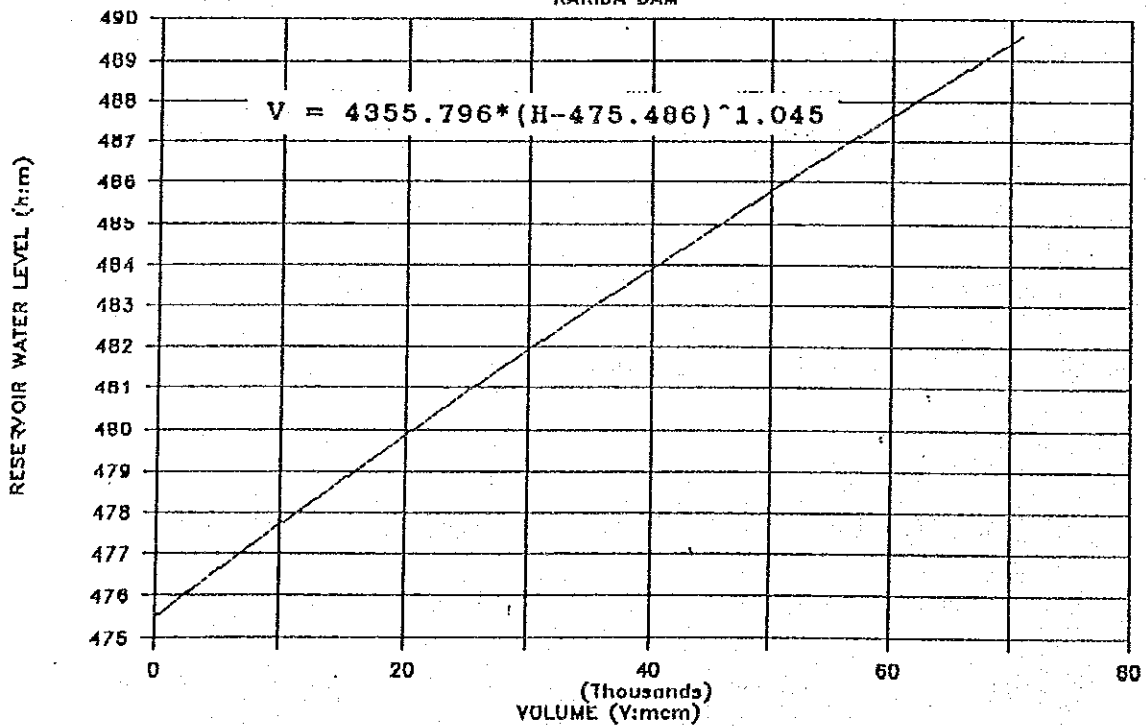
WATER LEVEL(h) – RES. AREA(A) CURVE

KARIBA DAM



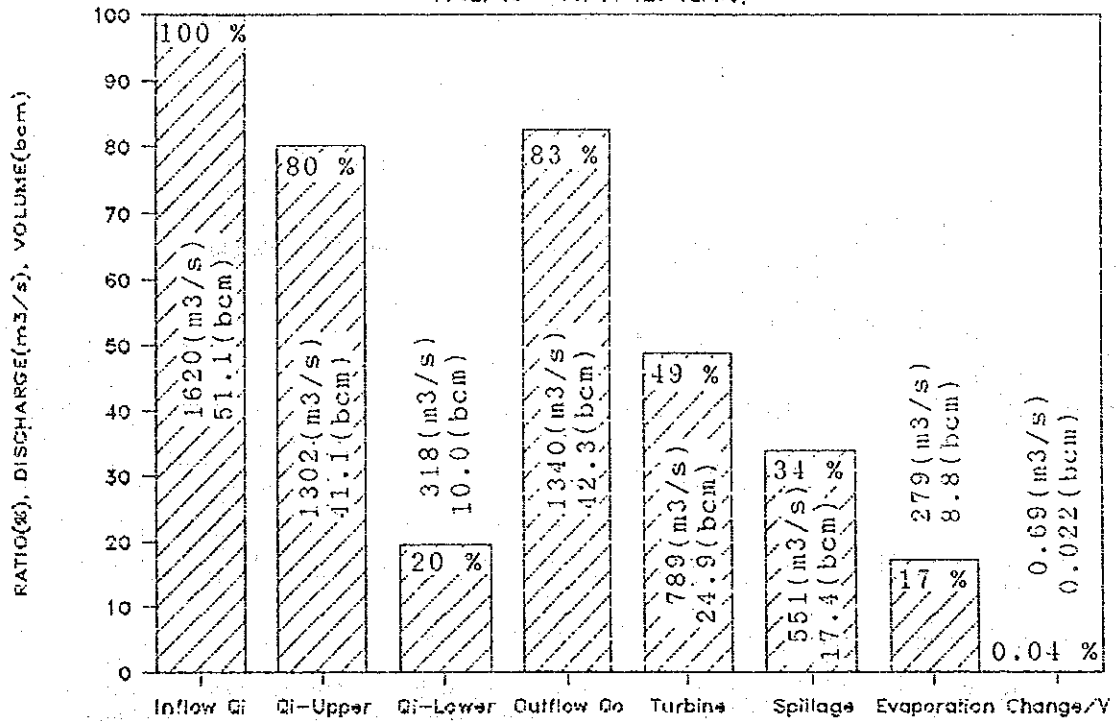
WATER LEVEL(h) – VOLUME(V) CURVE

KARIBA DAM



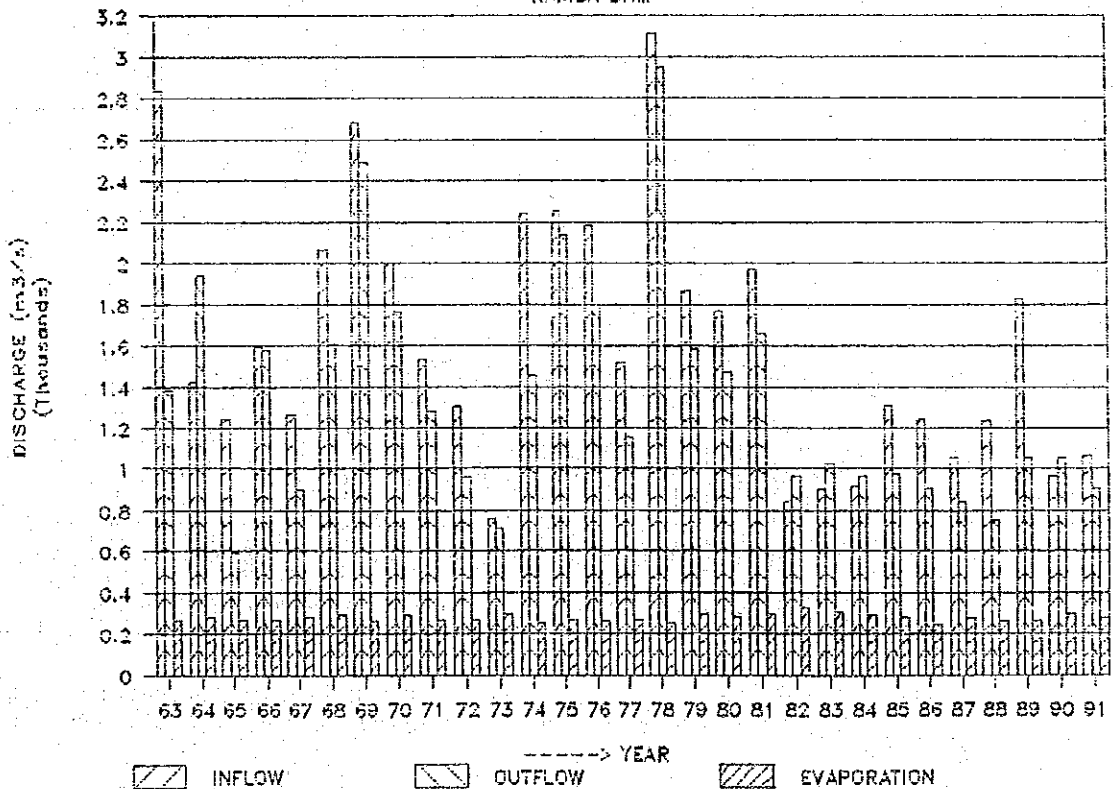
KARIBA-RESERVOIR WATER BALANCE

1962/63 - 90/91 (29 YEARS)

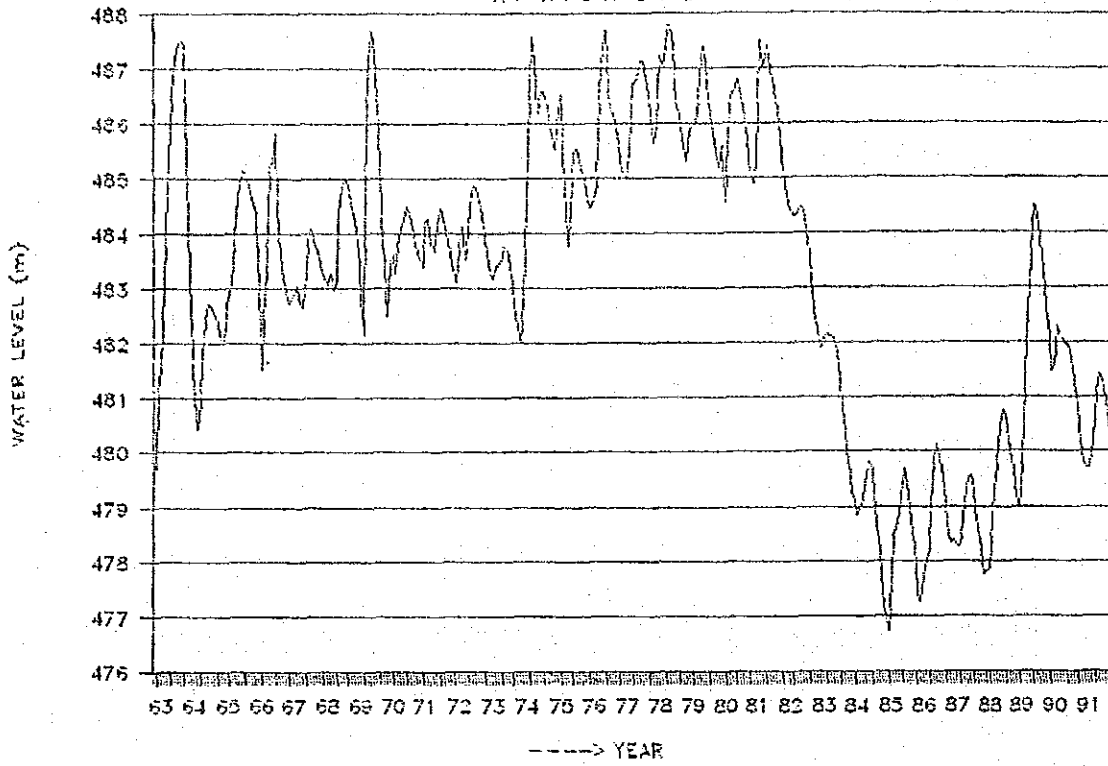


ANNUAL INFLOW, OUTFLOW & EVAPORATION

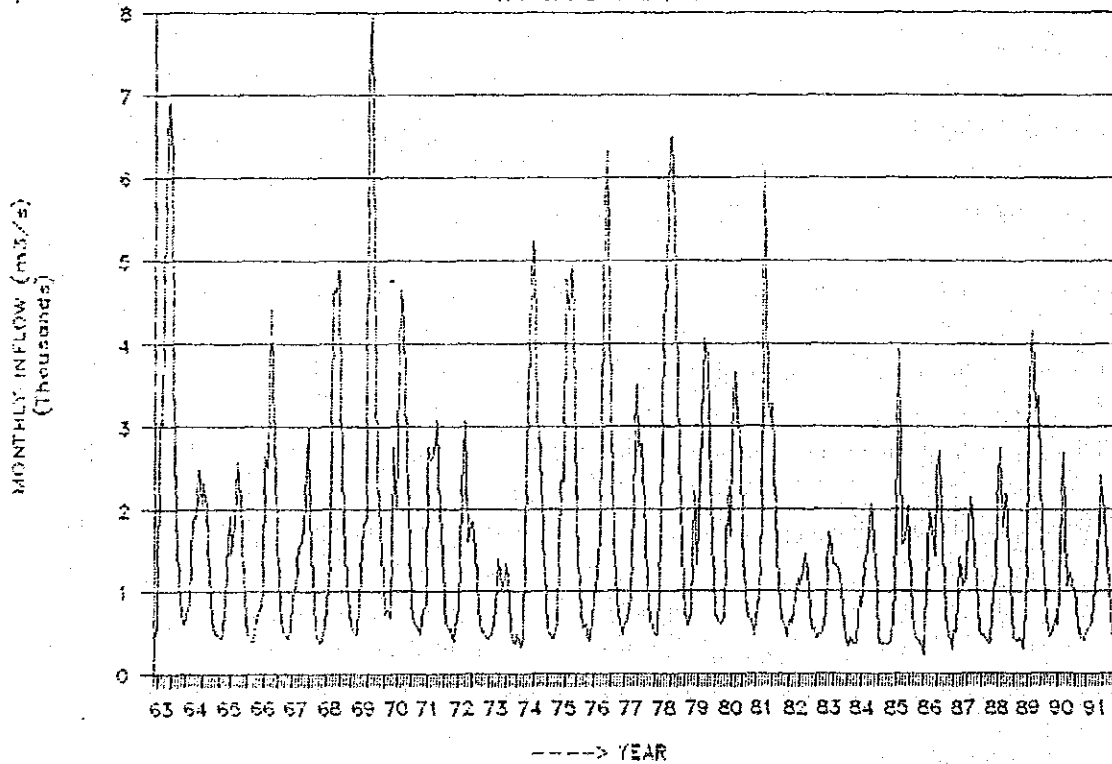
KARIBA DAM



MONTHLY WATER LEVEL KARIBA DAM

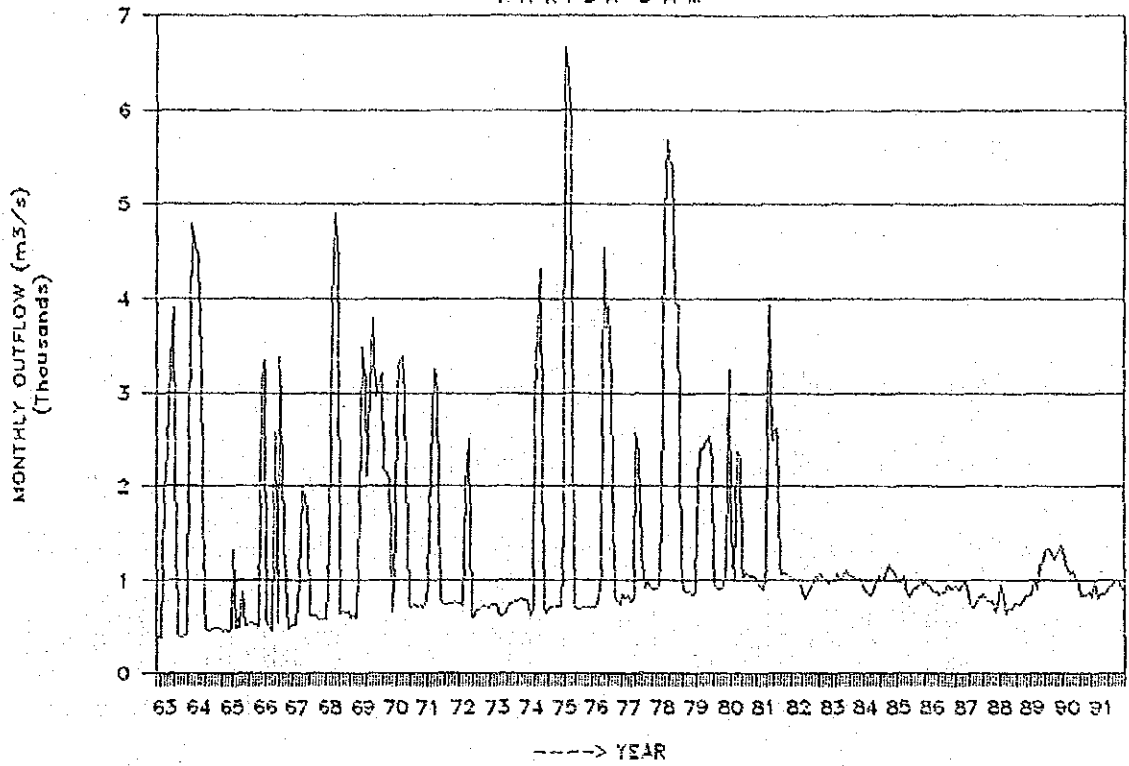


MONTHLY INFLOW KARIBA DAM



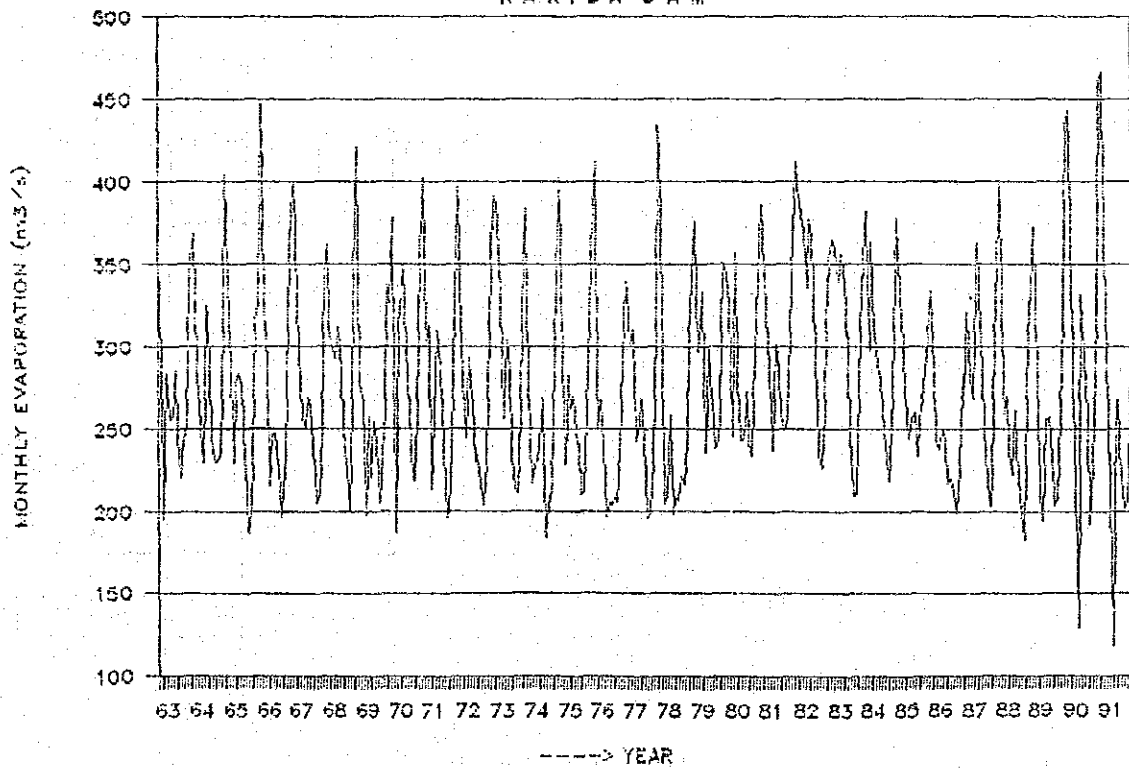
MONTHLY OUTFLOW

KARIBA DAM

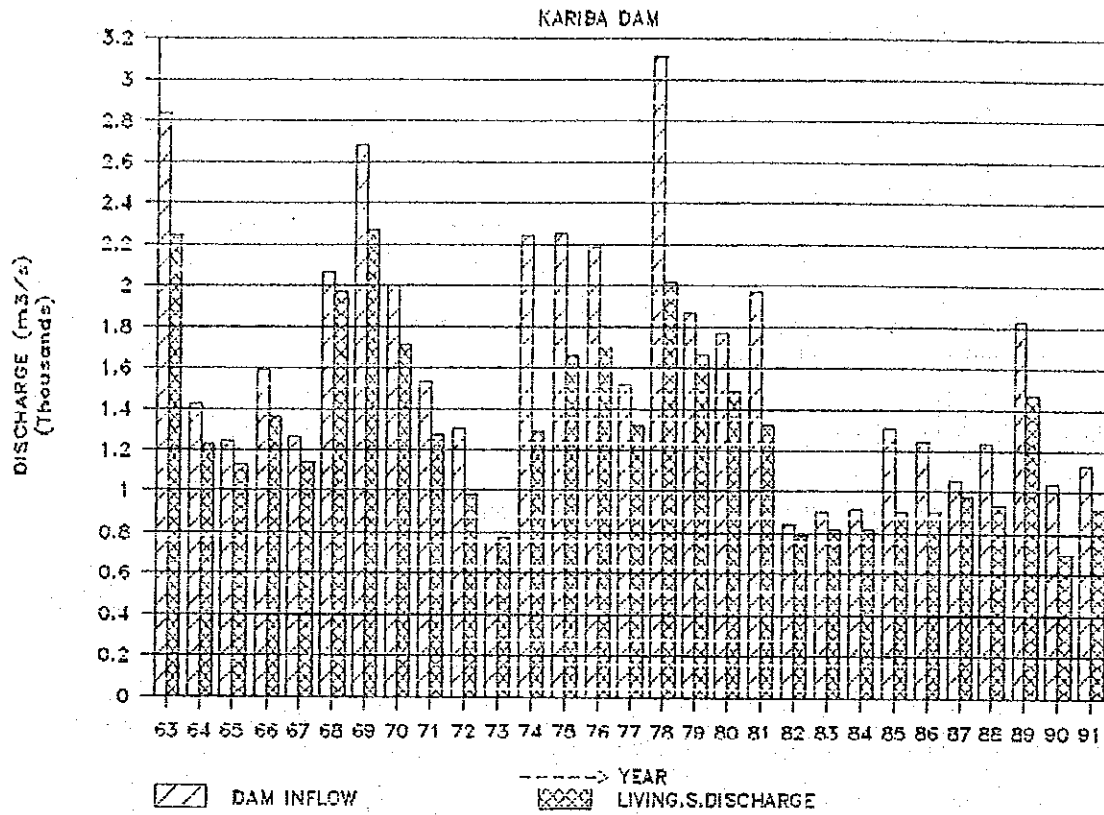


MONTHLY EVAPORATION

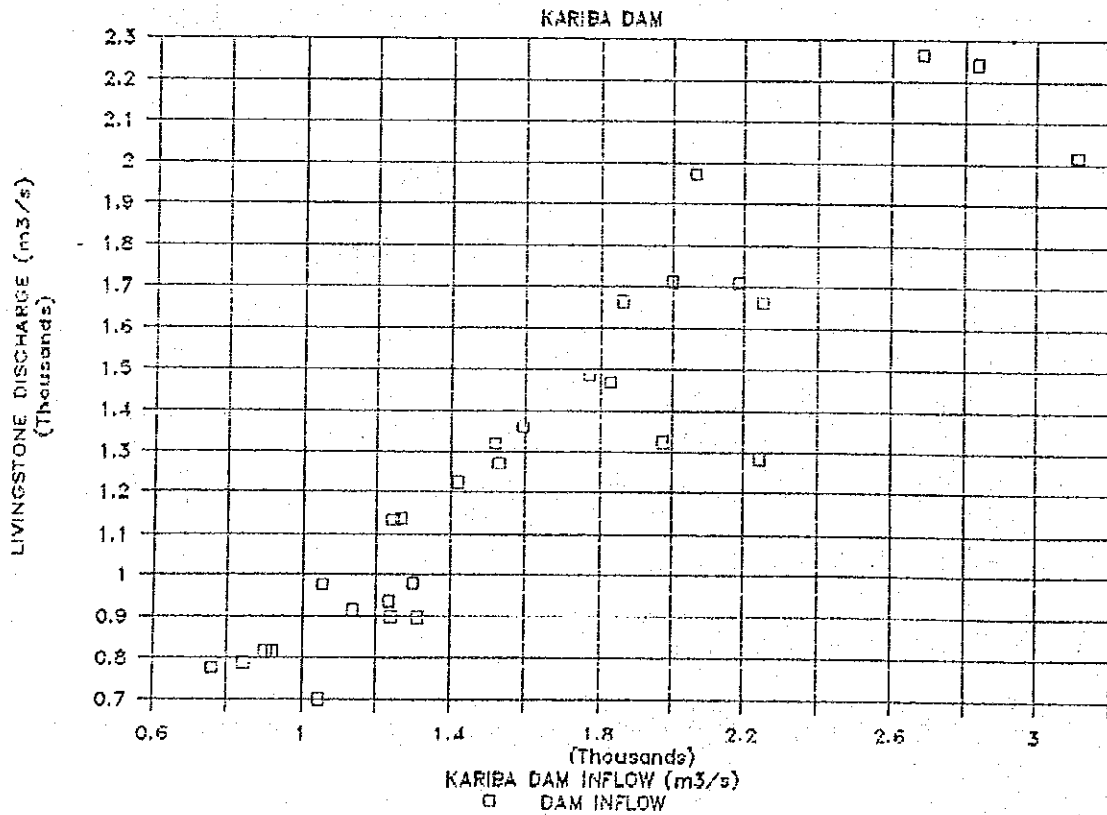
KARIBA DAM



DAM INFLOW -- LIVINGSTONE DISCHARGE



DAM INFLOW -- LIVINGSTONE DISCHARGE



[RESERVOIR OPERATION]

PERIOD: 1962/63 ~ 1990/91 (29 Years)

DAM : KARIBA

YEAR	W/Level H(m)	Volume V(mcm)	R.Area A(Km2)	Change/V dV(m3/s)	Inflow Qi(m3/s)	A.Evap. E(m3/s)	Outflow Qo(m3/s)	Turbi. (m3/s)	Spill. (m3/s)	LIVING Ql(m3/s)	Qi-Ql (m3/s)
1961/62	479.97	20896	4785								
1962/63	487.44	58220	5491	1184	2835	269	1382	410	973	2242	593
L1963/64	482.38	32754	5008	-805	1420	282	1943	483	1460	1225	195
1964/65	484.78	44755	5234	381	1245	272	592	497	95	1134	111
1965/66	483.18	36736	5083	-254	1594	274	1574	517	1057	1359	235
1966/67	483.70	39335	5132	82	1267	282	903	570	333	1138	129
L1967/68	484.74	44554	5230	165	2064	290	1609	633	976	1973	91
1968/69	484.31	42392	5189	-69	2684	265	2488	686	1802	2267	417
1969/70	483.99	40787	5159	-51	1998	290	1759	699	1080	1711	287
1970/71	483.85	40086	5146	-22	1529	274	1277	735	542	1271	258
L1971/72	484.34	42543	5192	78	1301	267	957	696	260	981	320
1972/73	482.73	34494	5040	-255	759	298	716	716	0	776	-17
1973/74	486.11	51468	5362	538	2241	253	1450	701	749	1284	957
1974/75	485.12	46467	5267	-159	2250	269	2139	711	1428	1661	589
L1975/76	485.93	50557	5344	129	2183	258	1795	743	1052	1708	475
1976/77	486.53	53596	5402	96	1518	269	1152	833	319	1320	198
1977/78	485.92	50507	5343	-98	3111	257	2952	884	2068	2017	1094
1978/79	485.82	50001	5334	-16	1863	296	1584	914	670	1663	200
L1979/80	485.91	50456	5342	14	1772	285	1473	994	479	1486	286
1980/81	485.99	50861	5350	13	1973	303	1657	1010	647	1325	648
1981/82	483.13	36487	5078	-456	844	331	969	969	0	791	53
1982/83	480.36	22799	4821	-434	902	305	1031	1031	0	816	86
L1983/84	478.12	11984	4617	-342	919	294	967	967	0	816	103
1984/85	478.50	13797	4652	57	1312	282	972	972	0	898	414
1985/86	479.04	16390	4700	82	1240	247	911	911	0	899	341
1986/87	478.62	14371	4662	-64	1053	278	839	839	0	977	76
L1987/88	480.03	21188	4790	216	1233	262	755	755	0	936	297
1988/89	483.29	37285	5093	510	1828	260	1057	1057	0	1468	360
1989/90	480.66	25248	4867	-382	970	296	1055	1055	0	701	269
1990/91	480.10	21529	4797	-118	1066	277	906	906	0	917	149
MEAN(m3/s)				0.69	1620	279	1340	789	551	1302	318
TOTAL(mcm/year)				22	51088	8799	42258	24882	17376	41060	10028
PERCENTAGE(%)				0.04	100.0	17.22	82.72	48.70	34.01	80.37	19.63

W/Level H(m)	Volume V(mcm)	R.Area A(Km2)	Change/V dV(m3/s)	Inflow Qi(m3/s)	A.Evap. E(m3/s)	Outflow Qo(m3/s)	Turbi. (m3/s)	Spill. (m3/s)	LIVING Ql(m3/s)	Qi-Ql (m3/s)
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[RESERVOIR OPERATION] (1) DAM: KARIBA Year:1962/63

62/63 W/Level Volume R.Area Change/V Inflow A.Evap. Outflow Turbi. Spill. A.Evap. Turbi. Spill. Month H(m) V(mcm) A(Km2) dV(m3/s) Qi(m3/s) E(m3/s) Qo(m3/s) (m3/s) (mcm) (mcm) (mcm)

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(mcm)	(mcm)	(mcm)
SEP	479.97	20896	4785								
OCT	479.80	20069	4769	-309	440	357	392	392	0	956	1050
NOV	479.72	19680	4762	-150	538	288	400	400	0	746	1037
DEC	481.09	26378	4888	2501	3079	195	383	383	0	522	1026
JAN	481.53	28546	4929	809	3017	284	1924	433	1491	761	1160
FEB	483.06	36138	5071	3138	5785	255	2392	451	1941	617	1091
MAR	484.83	45006	5239	3311	6895	257	3327	410	2917	688	1098
APR	485.88	50304	5340	2044	6238	286	3908	404	3504	741	1047
MAY	486.54	53647	5403	1248	3808	246	2314	414	1900	659	1109
JUN	487.20	56999	5467	1293	1931	221	417	417	0	573	1081
JUL	487.48	58423	5495	532	1175	243	400	400	0	651	1071
AUG	487.51	58576	5498	57	721	252	412	412	0	675	1104
SEP	487.44	58220	5491	-137	609	342	404	404	0	886	1047
MEAN(m3/s)											
TOTAL(mcm)											
PERCENTAGE(%)											
1184 2835 269 1382 410 973											
37324 89394 8476 43594 12920 30673 8476 12920 30673											
41.8 100.0 9.5 48.8 14.5 34.3											

Year: 1963/64

DAM: KARIBA

[RESERVOIR OPERATION] (2)

63/64 W/Level	Volume	R.Area	Change/V	Inflow	A.Evap.	Outflow	Turbi.	Spill.	A.Evap.	Turbi.	Spill.
Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(mcm)	(mcm)	(mcm)
SEP	487.44	58220	5491								
OCT	486.28	52329	5378	-2199	716	355	2560	467	2093	951	1251
NOV	484.07	41188	5167	-4298	870	368	4800	494	4306	954	1280
DEC	482.50	33350	5019	-2926	1896	285	4537	479	4058	763	1283
JAN	480.97	25788	4877	-2823	1897	249	4471	498	3973	667	1334
FEB	480.43	23141	4827	-1057	2472	229	3300	509	2791	574	1231
MAR	480.93	25592	4873	915	2045	325	805	469	336	870	1256
APR	481.74	29584	4948	1540	2332	318	474	474	0	824	1229
MAY	482.45	33102	5014	1314	2028	246	468	468	0	659	1253
JUN	482.71	34395	5038	499	1210	230	481	481	0	596	1247
JUL	482.67	34196	5035	-74	651	230	495	495	0	616	1326
AUG	482.54	33549	5023	-241	481	234	488	488	0	627	1307
SEP	482.38	32754	5008	-307	486	316	477	477	0	819	1236
MEAN(m3/s)				-805	1420	282	1943	483	1450		
TOTAL(mcm)				-25465	44903	8920	61448	15278	46170	8920	15234
PERCENTAGE(%)				-56.7	100.0	19.9	136.8	34.0	102.8		

[RESERVOIR OPERATION J (3)

DAM: KARIBA

Year: 1964/65

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. (m3/s)	Spill. (m3/s)	A.Evap. (mcm)	Turbi. (mcm)	Spill. (mcm)
SEP	482.38	32754	5008									
OCT	482.16	31663	4987	-408	453	405	456	456	0	1085	1221	0
NOV	481.97	30722	4969	-363	456	344	475	475	0	892	1231	0
DEC	482.25	32109	4995	518	1266	281	467	467	0	753	1251	0
JAN	482.93	35490	5059	1262	1961	229	470	470	0	613	1259	0
FEB	482.86	35141	5053	-144	1457	277	1324	499	825	670	1207	1996
MAR	483.43	37985	5106	1062	1837	284	491	491	0	761	1315	0
APR	484.36	42643	5194	1797	2565	276	492	492	0	715	1275	0
MAY	484.91	45409	5247	1033	2146	229	884	515	369	613	1379	988
JUN	485.17	46719	5271	505	1209	187	517	517	0	485	1340	0
JUL	485.15	46618	5269	-38	687	200	525	516	9	536	1382	24
AUG	485.01	45913	5256	-263	506	236	533	533	0	632	1428	0
SEP	484.78	44755	5234	-447	403	316	534	534	0	819	1384	0
MEAN(m3/s)				381	1245	272	592	497	95			
TOTAL(mcm)				12000	39255	8573	18681	15673	3008	8573	15673	3008
PERCENTAGE(%)				30.6	100.0	21.8	47.6	39.9	7.7			

[RESERVOIR OPERATION J (4) DAM: KARIBA Year: 1965/66

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)
SEP	484.78	44755	5234						
OCT	484.54	43548	5211	-451	396	326	521	521	0
NOV	484.40	42844	5198	-271	668	447	492	492	0
DEC	482.93	35490	5059	-2746	757	326	3177	521	2656
JAN	481.51	28448	4927	-2629	1002	287	3344	554	2790
FEB	482.42	32953	5011	1862	2632	215	555	532	23
MAR	483.35	37585	5099	1729	2486	247	510	506	4
APR	485.26	47173	5280	3699	4407	248	460	460	0
MAY	485.32	47476	5286	113	2912	227	2572	531	2041
JUN	485.84	50102	5336	1013	1747	197	537	537	0
JUL	484.53	43498	5210	-2466	1130	214	3382	569	2813
AUG	483.60	38835	5122	-1741	633	232	2142	543	1599
SEP	483.18	36736	5083	-809	484	319	974	439	535
MEAN(m3/s)				-254	1594	274	1574	517	1057
TOTAL(mcm)				-8018	50258	8638	49638	16315	33323
PERCENTAGE(%)				-16.0	100.0	17.2	98.8	32.5	66.3

[RESERVOIR OPERATION] (5) DAM: KARIBA Year: 1966/67

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)	Turbi. Spill. (mcm)
SEP	483.18	36736	5083							
OCT	482.94	35540	5060	-447	425	388	484	484	0	1039 1296 0
NOV	482.73	34494	5040	-403	508	401	510	510	0	1039 1322 0
DEC	482.76	34643	5043	56	949	361	532	532	0	967 1425 0
JAN	482.89	35291	5055	242	1072	298	532	532	0	798 1425 0
FEB	483.05	36088	5070	330	1568	255	983	561	422	617 1357 1021
MAR	482.71	34395	5038	-632	1579	251	1960	577	1383	672 1545 3704
APR	482.65	34096	5033	-115	2059	269	1905	575	1330	697 1490 3447
MAY	483.34	37535	5098	1284	3021	253	1484	614	870	678 1645 2330
JUN	483.9	40336	5151	1081	1947	240	626	626	0	622 1623 0
JUL	484.07	41188	5167	318	1143	205	620	620	0	549 1661 0
AUG	483.93	40487	5153	-262	576	210	628	628	0	562 1682 0
SEP	483.70	39335	5132	-444	380	248	576	576	0	643 1493 0
MEAN(m3/s)				82	1267	282	903	570	333	- - -
TOTAL(mcm)				2598	39949	8884	28467	17964	10503	8884 17964 10503
PERCENTAGE(%)				6.5	100.0	22.2	71.3	45.0	26.3	- - -

[RESERVOIR OPERATION] (6) DAM: KARIBA Year: 1967/68

67/68 W/Level Volume R.Area Change/V. Inflow A.Evap. Turbi. Spill. A.Evap. Turbi. Spill.

Month H(m) V(mcm) A(Km2) dV(m3/s) Q1(m3/s) E(m3/s) Qo(m3/s) (m3/s) (m3/s) (mcm) (mcm)

SEP	483.70	39335	5132																	
OCT	483.43	37985	5106	-504	413	344	573	573	0	921	1535	0								
NOV	483.23	36986	5087	-385	562	363	584	584	0	941	1514	0								
DEC	483.20	36836	5084	-56	816	307	565	565	0	822	1513	0								
JAN	483.06	36138	5071	-261	1374	298	1337	586	751	798	1570	2011								
FEB	483.28	37235	5092	438	4618	291	3889	649	3240	729	1626	8118								
MAR	482.96	35639	5062	-596	4620	312	4904	703	4201	836	1883	11252								
APR	483.09	36287	5074	250	4891	284	4357	693	3664	736	1796	9497								
MAY	484.37	42694	5195	2392	3287	251	644	644	0	672	1725	0								
JUN	484.86	45157	5242	951	1847	226	670	670	0	586	1737	0								
JUL	485.01	45913	5256	282	1142	200	660	660	0	536	1768	0								
AUG	484.91	45409	5247	-188	754	264	678	678	0	707	1816	0								
SEP	484.74	44554	5230	-330	594	336	588	588	0	871	1524	0								
MEAN(m3/s)				165	2064	290	1609	633	976											
TOTAL(mcm)				5219	65259	9155	50885	20006	30879	9155	20006	30879								
PERCENTAGE(%)				8.0	100.0	14.0	78.0	30.7	47.3											

[RESERVOIR OPERATION] (7) DAM: KARIBA Year: 1968/69

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. Spill. (m3/s)	A.Evap. (mcm)	Turbi. Spill. (mcm)
SEP	484.74	44554	5230								
OCT	484.45	43096	5203	-544	498	421	621	621	0	1128	1663
NOV	484.25	42091	5184	-387	489	277	599	599	0	718	1553
DEC	483.84	40036	5145	-767	1227	270	1724	1724	614	723	1645
JAN	482.83	34992	5050	-1883	1799	198	3484	3484	682	2802	530
FEB	482.12	31465	4983	-1458	1888	257	3089	3089	708	2381	622
MAR	484.69	44302	5226	4793	7113	220	2100	2100	700	1400	589
APR	487.10	56490	5458	4702	7975	254	3019	3019	689	2330	658
MAY	487.66	59340	5512	1064	5089	242	3783	3783	711	3072	648
JUN	487.28	57405	5475	-746	2425	205	2966	2966	710	2256	531
JUL	486.45	53191	5395	-1574	1753	233	3094	3094	724	2370	624
AUG	485.23	47022	5277	-2303	1168	261	3210	3210	740	2470	699
SEP	484.31	42392	5189	-1786	737	339	2184	2184	737	1447	879
MEAN(m3/s)				-69	2684	265	2488	2488	686	1802	
TOTAL(mcm)				-2161	84642	8350	78454	78454	21637	56817	8350
PERCENTAGE(%)				-2.6	100.0	9.9	92.7	92.7	25.6	67.1	

[RESERVOIR OPERATION] (8) DAM: KARIBA Year: 1969/70

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	Q0(m3/s)	E(m3/s)	Inflow	Outflow	Turbi. Spill.	A.Evap.	Turbi. Spill.	(mcm)	(mcm)	(mcm)	(mcm)
SEP	484.31	42392	5189													
OCT	483.40	37835	5103	-1702	775	326	2151	743	1408	873	1990	3771				
NOV	482.48	33251	5017	-1768	683	379	2072	766	1306	982	1985	3385				
DEC	483.50	38335	5113	1898	2735	187	650	650	0	501	1741	0				
JAN	483.60	38835	5122	187	1988	312	1489	622	867	836	1666	2322				
FEB	483.28	37235	5092	-661	2712	321	3052	648	2404	777	1568	5816				
MAR	483.78	39735	5139	933	4645	350	3362	640	2722	937	1714	7291				
APR	484.07	41188	5167	561	4243	300	3382	708	2674	778	1835	6931				
MAY	484.24	42041	5183	318	2752	261	2173	733	1440	699	1963	3857				
JUN	484.49	43296	5206	484	1436	218	734	710	24	565	1840	62				
JUL	484.45	43096	5203	-75	349	218	706	706	0	584	1891	0				
AUG	484.25	42091	5184	-375	613	256	732	732	0	686	1961	0				
SEP	483.99	40787	5159	-503	581	356	728	728	0	923	1887	0				
MEAN(m3/s)				-51	1998	290	1759	699	1060							
TOTAL(mcm)				-1605	63011	9140	55476	22042	33435	9140	22042	33435				
PERCENTAGE(%)				-2.5	100.0	14.5	88.0	35.0	53.1							

[RESERVOIR OPERATION J (9)

DAM: KARIBA

Year: 1970/71

Month	W/Level	Volume	R.Area	Change/V	Inflow	A.Evap.	Outflow	Turbi. Spill.	A.Evap.	Turbi. Spill.
H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(m3/s)	(mcm)	(mcm)
SEP	483.99	40787	5159							
OCT	483.64	39035	5126	-654	491	403	742	742	0	1079 1987 0
NOV	483.52	38435	5115	-232	780	303	709	709	0	785 1838 0
DEC	483.38	37735	5101	-261	827	313	775	688	87	838 1843 233
JAN	484.22	41941	5181	1570	2741	213	958	661	297	570 1770 795
FEB	484.28	42242	5187	124	2580	255	2201	769	1432	617 1860 3464
MAR	483.79	39785	5140	-917	2655	310	3262	782	2480	830 2095 6642
APR	483.67	39185	5129	-232	3067	288	3011	767	2244	746 1988 5816
MAY	484.17	41690	5176	935	1950	237	778	727	51	635 1947 137
JUN	484.44	43045	5202	523	1453	196	734	734	0	508 1903 0
JUL	484.35	42593	5193	-169	775	200	744	744	0	536 1993 0
AUG	484.13	41489	5172	-412	572	238	746	746	0	637 1998 0
SEP	483.85	40086	5146	-541	545	328	758	758	0	850 1965 0
MEAN(m3/s)				-22	1529	274	1277	735	542	
TOTAL(mcm)				-701	48207	8633	40275	23186	17088	8633 23186 17088
PERCENTAGE(%)				-1.5	100.0	17.9	83.5	48.1	35.4	

Year: 1971/72

DAM: KARIBA

[RESERVOIR OPERATION J (10)

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Spill. (m3/s)	A.Evap. Turbi. Spill. (mcm)	
SEP	483.85	40086	5146							
OCT	483.44	38035	5107	-766	396	398	764	764	1056 2046 0	
NOV	483.26	37136	5090	-347	713	303	757	757	785 1962 0	
DEC	483.11	36387	5076	-279	754	281	752	752	753 2014 0	
JAN	483.76	39635	5137	1213	2183	244	726	726	654 1945 0	
FEB	484.15	41589	5174	780	3073	293	2000	710	1290 734 1779 3232	
MAR	483.52	38435	5115	-1178	1594	267	2505	638	1867 715 1709 5001	
APR	484.03	40988	5163	985	1825	229	611	611	0 594 1584 0	
MAY	484.57	43699	5214	1012	1840	234	594	594	0 627 1591 0	
JUN	484.89	45308	5245	621	1516	216	679	679	0 560 1760 0	
JUL	484.84	45057	5240	-94	793	203	684	684	0 544 1832 0	
AUG	484.61	43900	5218	-432	513	229	716	716	0 613 1918 0	
SEP	484.34	42543	5192	-523	512	311	724	724	0 806 1877 0	
MEAN(m3/s)				78	1301	267	957	696	260	
TOTAL(mcm)				2457	41156	8450	30249	22016	8233	8450 22016 8233
PERCENTAGE(%)				6.0	100.0	20.5	73.5	53.5	20.0	- - -

[RESERVOIR OPERATION] (11)

DAM: KARIBA

Year: 1972/73

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. Spill. (mcm)	A.Evap. (mcm)	Turbi. Spill. (mcm)
SEP	484.34	42543	5192								
OCT	483.98	40737	5158	-674	428	389	713	713	0	1042	1910
NOV	483.63	38985	5125	-676	447	392	731	731	0	1016	1895
DEC	483.29	37285	5093	-634	480	378	736	736	0	1012	1971
JAN	483.15	35587	5080	-261	802	330	733	733	0	884	1963
FEB	483.40	37835	5103	516	1392	256	620	620	0	619	1500
MAR	483.44	38035	5107	75	1007	304	628	628	0	814	1682
APR	483.55	38584	5117	212	1155	285	658	658	0	739	1706
MAY	483.78	39735	5139	430	1349	235	684	684	0	629	1832
JUN	483.72	39435	5133	-116	853	213	756	756	0	552	1960
JUL	483.40	37835	5103	-597	384	211	770	770	0	565	2062
AUG	483.05	36088	5070	-652	379	260	771	771	0	696	2065
SEP	482.73	34494	5040	-615	489	322	782	782	0	835	2027
MEAN(m3/s)				-255	759	298	716	716	0	-	-
TOTAL(mcm)				-8049	23928	9404	22572	22572	0	9404	22572
PERCENTAGE(%)				-33.6	100.0	39.3	94.3	94.3	0.0	-	-

[RESERVOIR OPERATION] (12) DAM: KARIBA Year: 1973/74

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	QI(m3/s)	E(m3/s)	QO(m3/s)	Outflow Turbi. (m3/s)	A.Evap. Turbi. (mcm)	Spill. (mcm)
SEP	482.73	34494	5040							
OCT	482.27	32208	4997	-853	324	384	793	793	0	1029 2124 0
NOV	481.95	30623	4968	-612	453	275	790	790	0	713 2048 0
DEC	482.80	34843	5047	1576	2581	216	789	789	0	579 2113 0
JAN	484.53	43498	5210	3231	4087	228	628	628	0	611 1682 0
FEB	486.61	54002	5410	4342	5247	230	675	675	0	556 1633 0
MAR	487.59	58983	5505	1860	5043	240	2943	718	2225	643 1923 5959
APR	487.15	56744	5462	-864	3057	268	3653	718	2935	695 1861 7608
MAY	486.20	51924	5370	-1800	2714	184	4330	668	3662	493 1789 9808
JUN	486.60	53951	5409	782	1675	203	690	591	99	526 1532 257
JUL	486.61	54002	5410	19	870	213	638	638	0	570 1709 0
AUG	486.41	52988	5391	-379	569	249	699	699	0	667 1872 0
SEP	486.11	51468	5362	-586	459	342	703	703	0	886 1822 0
MEAN(m3/s)				538	2241	253	1450	701	749	
TOTAL(mcm)				16974	70681	7967	45740	22108	23632	7967 22108 23632
PERCENTAGE(%)				24.0	100.0	11.3	64.7	31.3	33.4	

[RESERVOIR OPERATION] (13)

DAM: KARIBA

Year: 1974/75

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Inflow Qi(m3/s)	A.Evap. E(m3/s)	Outflow Qo(m3/s)	Turbi. Spill. (m3/s)	A.Evap. Turbi. Spill. (mcm)	
SEP	486.11	51468	5362							
OCT	485.74	49597	5326	-699	435	403	731	731	0 1079 1958 0	
NOV	485.53	48536	5306	-409	610	293	726	726	0 759 1882 0	
DEC	486.28	52329	5378	1416	2366	228	722	722	0 611 1934 0	
JAN	486.54	53647	5403	492	2324	282	1550	625	925 755 1674 2478	
FEB	485.51	48435	5304	-2155	4778	262	6671	742	5929 634 1795 14343	
MAR	484.30	42342	5188	-2275	4393	270	6398	744	5654 723 1993 15144	
APR	483.75	39585	5136	-1064	4976	247	5793	746	5047 640 1934 13082	
MAY	484.99	45812	5254	2325	3259	239	695	695	0 640 1861 0	
JUN	485.49	48334	5302	973	1885	210	702	702	0 544 1820 0	
JUL	485.55	48637	5308	113	1011	212	686	686	0 568 1837 0	
AUG	485.34	47577	5288	-396	571	257	710	710	0 688 1902 0	
SEP	485.12	46467	5267	-428	600	320	708	708	0 829 1835 0	
MEAN(m3/s)				-159	2250	269	2139	711	1428	
TOTAL(mcm)				-5001	70942	8472	67471	22424	45046	8472 22424 45046
PERCENTAGE(%)				-7.0	100.0	11.9	95.1	31.6	63.5	

[RESERVOIR OPERATION J (14)]

DAM: KARIBA

Year: 1975/76

Month	H(m)	V(mcm)	A(Km2)	Volume R.Area Change/V dV(m3/s)	Q1(m3/s)	Inflow A.Evap. E(m3/s)	Outflow Turbi. Spill. Qo(m3/s)	Turbi. Spill. A.Evap. Turbi. Spill. (mcm)	(mcm)	(mcm)	(mcm)
SEP	485.12	46467	5267								
OCT	484.75	44604	5231	-696	401	384	713	713	0	1029	1910
NOV	484.48	43246	5206	-524	598	412	710	710	0	1068	1840
DEC	484.48	43246	5206	0	946	250	696	696	0	670	1864
JAN	484.60	43849	5217	225	1187	267	695	695	0	715	1861
FEB	484.90	45359	5246	602	1636	239	795	702	93	599	1759
MAR	486.60	53951	5409	3208	4500	197	1095	654	441	528	1752
APR	487.42	58118	5489	1607	6342	205	4530	723	3807	531	1874
MAY	487.72	59645	5518	570	4467	204	3693	741	2952	546	1985
JUN	487.16	56795	5463	-1100	3032	208	3924	853	3071	539	2211
JUL	486.26	52228	5376	-1705	1625	205	3125	839	2286	549	2247
AUG	486.17	51772	5367	-170	886	238	818	818	0	637	2191
SEP	485.93	50557	5344	-469	595	291	773	773	0	754	2004
MEAN(m3/s)				129	2183	258	1795	743	1052	-	-
TOTAL(mcm)				4090	69025	8165	56769	23498	33271	8165	23498
PERCENTAGE(%)				5.9	100.0	11.8	82.2	34.0	48.2	-	-

[RESERVOIR OPERATION] (15)

DAM: KARIBA

Year: 1976/77

Month	H(m)	V(mcm)	A(Km2)	Q1(m3/s)	Q2(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. (mcm)	A.Evap. (mcm)	Spill. (mcm)	Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)
SEP	485.93	50557	5344										
OCT	485.61	48940	5314	-604	472	340	736	736	0	911	1971	0	0
NOV	485.32	47476	5286	-565	612	333	844	844	0	863	2188	0	0
DEC	485.08	46265	5263	-452	643	301	794	794	0	806	2127	0	0
JAN	484.98	45762	5253	-188	949	310	827	827	0	830	2215	0	0
FEB	485.47	48233	5300	1021	2033	242	770	770	0	585	1863	0	0
MAR	486.76	54763	5425	2438	3510	253	819	819	0	678	2194	0	0
APR	486.72	54560	5421	-78	2760	268	2570	827	1743	695	2144	4518	0
MAY	486.82	55068	5430	190	2787	246	2351	832	1519	659	2228	4068	0
JUN	487.13	56643	5460	608	2102	196	1298	772	526	508	2001	1363	0
JUL	487.16	56795	5463	57	1163	198	908	908	0	530	2432	0	0
AUG	486.85	55220	5433	-588	627	231	984	941	43	619	2520	115	0
SEP	486.53	53596	5402	-626	605	313	918	918	0	811	2379	0	0
MEAN(m3/s)				96	1518	269	1152	833	319				
TOTAL(mcm)				3039	47861	8495	36327	26262	10065	8495	26262	10065	
PERCENTAGE(%)				6.3	100.0	17.7	75.9	54.9	21.0				

Year: 1977/78

DAM: KARIBA

[RESERVOIR OPERATION] (16)

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. (m3/s)	Spill. (m3/s)	A.Evap. (mcm)	Turbi. (mcm)	Spill. (mcm)
SEP	486.53	53590	5402									
OCT	486.08	51316	5359	-851	486	434	903	903	0	1162	2419	0
NOV	485.65	49142	5317	-839	465	391	913	913	0	1013	2366	0
DEC	485.91	50456	5342	491	1631	204	936	936	0	546	2507	0
JAN	487.22	57100	5469	2481	4238	209	1548	884	664	560	2368	1778
FEB	487.05	56236	5453	-357	4767	258	4866	893	3973	624	2160	9611
MAR	487.37	57863	5484	608	6487	198	5681	831	4850	530	2226	12990
APR	487.78	59951	5524	805	6489	208	5476	843	4633	539	2185	12009
MAY	487.77	59900	5523	-19	5618	206	5431	850	4581	552	2277	12270
JUN	487.40	58016	5487	-727	3440	221	3946	850	3096	573	2203	8025
JUL	486.30	52430	5380	-2085	2067	215	3937	890	3047	576	2384	8161
AUG	486.16	51721	5366	-265	1020	241	1044	907	137	645	2429	367
SEP	485.92	50507	5343	-469	739	303	905	905	0	785	2346	0
MEAN(m3/s)				-98	3111	257	2952	884	2068			
TOTAL(mcm)				-3090	98099	8107	93081	27870	65212	8107	27870	65212
PERCENTAGE(%)				-3.1	100.0	8.3	94.9	28.4	56.5			

[RESERVOIR OPERATION J (17)]

DAM: KARIBA

Year: 1978/79

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Change/V	R.Area	Inflow	A.Evap.	Outflow	Turbi.	Spill.	A.Evap.	Turbi.	Spill.
							Q1(m3/s)	E(m3/s)	Qo(m3/s)	(m3/s)	(mcm)	(m3/s)	(mcm)	(mcm)
SEP	485.92	50507	5343											
OCT	485.59	48839	5312	-623	580	342	861	861	861	0	916	2306	0	
NOV	485.32	47476	5286	-526	733	376	883	883	883	0	975	2289	0	
DEC	485.89	50355	5340	1075	2206	297	834	834	834	0	795	2234	0	
JAN	485.97	50760	5348	151	1332	315	866	866	866	0	844	2319	0	
FEB	485.94	50608	5345	-63	1864	333	875	1594	875	719	806	2117	1739	
MAR	486.13	51569	5364	359	3011	236	916	2416	916	1500	632	2453	4018	
APR	486.84	55169	5432	1389	4078	298	881	2391	881	1510	772	2284	3914	
MAY	487.41	58067	5488	1082	3846	268	962	2496	962	1534	718	2577	4109	
JUN	487.10	56490	5458	-608	2164	238	997	2534	997	1537	617	2584	3984	
JUL	486.40	52937	5390	-1327	1193	243	1026	2277	1026	1251	651	2748	3351	
AUG	486.15	51671	5366	-473	730	259	944	944	944	0	694	2528	0	
SEP	485.82	50001	5334	-644	629	352	921	921	921	0	912	2387	0	
MEAN(m3/s)														
TOTAL(mcm)														
PERCENTAGE(%)														

[RESERVOIR OPERATION] (18) DAM: KARIBA Year: 1979/80

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)
SEP	485.82	50001	5334							
OCT	485.48	48283	5301	-641	599	344	896	896	0	921 2400 0
NOV	485.18	46770	5272	-584	670	326	928	928	0	845 2405 0
DEC	485.57	48738	5310	735	2152	245	1172	910	262	656 2437 702
JAN	484.54	43548	5211	-1938	1677	356	3259	991	2268	954 2654 6075
FEB	485.07	46215	5262	1065	2872	281	1526	1000	526	704 2506 1318
MAR	486.35	52684	5385	2415	3657	243	999	999	0	651 2676 0
APR	486.59	53901	5408	469	3090	244	2377	992	1385	632 2571 3590
MAY	486.61	54002	5410	38	2617	273	2306	1011	1295	731 2708 3469
JUN	486.85	55220	5433	470	1740	240	1030	1030	0	622 2670 0
JUL	486.64	54154	5413	-398	917	234	1081	1081	0	627 2895 0
AUG	486.28	52329	5378	-681	664	295	1050	1050	0	790 2812 0
SEP	485.91	50456	5342	-723	656	342	1037	1037	0	886 2688 0
MEAN(m3/s)			14	1772	285	1473	994	479		
TOTAL(mcm)			455	56051	9020	46575	31423	15153	9020	31423 15153
PERCENTAGE(%)			0.8	100.0	16.1	83.1	56.1	27.0		

[RESERVOIR OPERATION J (19) DAM: KARIBA Year: 1980/81

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	E(m3/s)	Qo(m3/s)	Outflow	Turbi. Spill. A.Evap.	Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)
SEP	485.91	50456	5342								
OCT	485.41	47930	5294	-943	474	387	1030	1030	0	1037	2759
NOV	485.04	46064	5259	-720	649	368	1001	1001	0	954	2595
DEC	484.88	45258	5244	-301	944	320	925	925	0	857	2478
JAN	485.26	47173	5280	715	1907	287	905	905	0	769	2424
FEB	487.50	58525	5497	4692	6072	237	1143	926	217	573	2240
MAR	487.03	56135	5451	-892	3347	302	3937	993	2944	809	2660
APR	487.19	56948	5466	314	3100	287	2499	969	1530	744	2512
MAY	487.42	58118	5489	437	3278	260	2581	1045	1536	696	2799
JUN	485.95	55728	5443	-922	1942	249	2615	1106	1509	645	2867
JUL	486.81	55017	5429	-265	1057	255	1067	1067	0	683	2858
AUG	486.43	53089	5393	-720	670	307	1083	1083	0	822	2901
SEP	485.99	50861	5350	-860	575	369	1066	1066	0	956	2763
MEAN(m3/s)											
TOTAL(mcm)											
PERCENTAGE(%)											
				13	1973	303	1657	1010	647		
				405	62205	9546	52255	31854	20401	9546	31854
				0.7	100.0	15.3	84.0	51.2	32.8		

Year: 1981/82

DAM: KARIBA

[RESERVOIR OPERATION] (20)

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (mcm)	Turbi. (mcm)	A.Evap. (mcm)	Spill. (mcm)
SEP	485.99	50861	5350								
OCT	485.46	48182	5299	-1000	443	412	1031	1031	0	1104	2761
NOV	485.07	46215	5262	-759	657	398	1018	1018	0	1032	2639
DEC	484.66	44151	5223	-771	622	380	1013	1013	0	1018	2713
JAN	484.43	42995	5201	-432	941	370	1003	1003	0	991	2686
FEB	484.36	42643	5194	-145	1159	335	969	969	0	810	2344
MAR	484.28	42242	5187	-150	1075	378	847	847	0	1012	2269
APR	484.32	42443	5190	77	1242	367	798	798	0	951	2068
MAY	484.48	43246	5206	300	1459	297	862	862	0	795	2309
JUN	484.41	42895	5199	-136	1033	234	935	935	0	607	2424
JUL	484.02	40938	5162	-731	546	227	1050	1050	0	608	2812
AUG	483.63	38985	5125	-729	547	260	1016	1016	0	696	2721
SEP	483.13	36487	5078	-964	429	314	1079	1079	0	814	2797
MEAN(m3/s)				-456	844	331	969	969	0		
TOTAL(mcm)				-14374	26508	10438	30544	30544	0	10438	30544
PERCENTAGE(%)				-54.0	100.0	39.2	114.8	114.8	0.0		

[RESERVOIR OPERATION] (21)

DAM: KARIBA

Year: 1982/83

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Sp111. A.Evap. Turbi. Sp111. (mcm)	Qo(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Sp111. A.Evap. Turbi. Sp111. (mcm)
SEP	483.13	36487	5078									
OCT	482.65	34096	5033	-893	489	353	1029	1029	0	945	2756	0
NOV	482.19	31812	4990	-881	501	365	1017	1017	0	946	2636	0
DEC	481.88	30276	4961	-573	746	361	958	958	0	967	2566	0
JAN	482.07	31217	4979	351	1720	339	1030	1030	0	908	2759	0
FEB	482.15	31613	4986	164	1539	356	1019	1019	0	861	2465	0
MAR	482.12	31465	4983	-56	1347	347	1056	1056	0	929	2828	0
APR	482.11	31415	4982	-19	1324	325	1018	1018	0	842	2639	0
MAY	482.07	31217	4979	-74	1202	250	1026	1026	0	670	2748	0
JUN	481.81	29930	4955	-497	813	209	1101	1101	0	542	2854	0
JUL	481.35	27659	4912	-848	414	211	1051	1051	0	565	2815	0
AUG	480.83	25101	4864	-955	332	243	1044	1044	0	651	2796	0
SEP	480.36	22799	4821	-888	442	309	1021	1021	0	801	2646	0
MEAN(m3/s)				-434	902	305	1031	1031	0	-	-	-
TOTAL(mcm)				-13688	28448	9628	32509	32509	0	9628	32509	0
PERCENTAGE(%)				-48.1	100.0	33.8	114.3	114.3	0.0	-	-	-

[RESERVOIR OPERATION] (22)

DAM: KARIBA

Year: 1983/84

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	Inflow E(m3/s)	Outflow Qo(m3/s)	Turbi. Spill. (m3/s)	A.Evap. Turbi. Spill. (mcm)	Turbi. Spill. (m3/s)	A.Evap. Turbi. Spill. (mcm)
SEP	480.36	22799	4821								
OCT	479.81	20117	4770	-1001	359	354	1006	1006	0	948	2694
NOV	479.27	17500	4721	-1010	399	382	1027	1027	0	990	2662
DEC	479.10	16679	4706	-306	948	297	957	957	0	795	2563
JAN	478.85	15475	4683	-449	806	363	892	892	0	972	2389
FEB	478.92	15812	4690	134	1301	307	860	860	0	769	2155
MAR	479.13	16824	4709	378	1497	290	829	829	0	777	2220
APR	479.62	19194	4753	915	2068	281	872	872	0	728	2260
MAY	479.63	20214	4772	381	1639	247	1011	1011	0	662	2708
JUN	479.65	19340	4756	-337	947	233	1051	1051	0	604	2724
JUL	479.20	17161	4715	-813	383	218	978	978	0	584	2619
AUG	478.70	14755	4670	-899	353	247	1005	1005	0	662	2592
SEP	478.12	11984	4617	-1069	355	306	1118	1118	0	793	2698
MEAN(m3/s)				-342	919	294	967	967	0		
TOTAL(mcm)				-10814	29056	9284	30585	30585	0	9284	30585
PERCENTAGE(%)				-37.2	100.0	32.0	105.3	105.3	0.0		

[RESERVOIR OPERATION] (23)

DAM: KARI8A

Year: 1984/85

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Q1(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. (m3/s)	A.Evap. Turbi. Spill. (mcm)	Spill. (mcm)
SEP	478.12	11984	4617							
OCT	477.47	8912	4559	-1147	383	378	1152	1152	0	1012 3086 0
NOV	476.92	6348	4510	-989	437	331	1095	1095	0	858 2838 0
DEC	476.73	5472	4493	-327	1013	300	1040	1040	0	804 2786 0
JAN	477.06	6997	4523	569	1827	270	988	988	0	723 2646 0
FEB	478.45	13558	4647	2712	3930	244	974	974	0	590 2356 0
MAR	478.61	14323	4662	286	1573	256	1031	1031	0	686 2761 0
APR	478.88	15619	4686	500	1613	260	853	853	0	674 2211 0
MAY	479.43	18273	4736	991	2038	233	814	814	0	624 2180 0
JUN	479.68	19486	4759	468	1581	256	857	857	0	664 2221 0
JUL	479.41	18177	4734	-489	710	267	932	932	0	715 2496 0
AUG	479.00	16197	4697	-739	455	285	909	909	0	763 2435 0
SEP	478.50	13797	4652	-926	394	304	1016	1016	0	788 2533 0
MEAN(m3/s)				57	1312	282	972	972	0	
TOTAL(mcm)				1812	41364	8901	30650	30650	0	8901 30650 0
PERCENTAGE(%)				4.4	100.0	21.5	74.1	74.1	0.0	

[RESERVOIR OPERATION] (24) DAM: KARIBA Year: 1985/86

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Ql(m3/s)	E(m3/s)	Qo(m3/s)	Outflow Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)
SEP	478.50	13797	4652						
OCT	477.96	11225	4603	-960	327	334	953	953	0
NOV	477.37	8444	4550	-1073	222	313	982	982	0
DEC	477.27	7976	4541	-175	1017	242	950	950	0
JAN	477.72	10089	4582	789	1944	238	917	917	0
FEB	478.05	11652	4611	646	1756	250	860	860	0
MAR	478.22	12460	4626	302	1427	243	882	882	0
APR	478.99	16149	4696	1423	2481	216	842	842	0
MAY	479.89	20506	4778	1627	2707	220	860	860	0
JUN	480.14	21724	4801	470	1550	212	868	868	0
JUL	479.89	20506	4778	-455	712	199	968	968	0
AUG	479.53	18758	4745	-653	480	227	906	906	0
SEP	479.04	16390	4700	-914	296	276	934	934	0
MEAN(m3/s)				82	1240	247	911	911	0
TOTAL(mcm)				2593	39112	7802	28717	28717	0
PERCENTAGE(%)				6.6	100.0	19.9	73.4	73.4	0.0

[RESERVOIR OPERATION] (25)

DAM: KARIBA

Year: 1986/87

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. Spill. (mcm)	A.Evap. Turbi. Spill. (mcm)
SEP	479.04	16390	4700							
OCT	478.67	14611	4667	-664	540	271	933	933	0	726 2499 0
NOV	478.29	12794	4633	-701	507	321	887	887	0	832 2299 0
DEC	478.40	13319	4643	196	1426	280	950	950	0	750 2544 0
JAN	478.30	12841	4634	-178	1066	268	976	976	0	718 2614 0
FEB	478.28	12746	4632	-39	1157	336	860	860	0	813 2081 0
MAR	478.47	13653	4649	339	1444	363	742	742	0	972 1987 0
APR	479.08	16582	4704	1130	2134	308	696	696	0	798 1804 0
MAY	479.53	18758	4745	812	1803	252	739	739	0	675 1979 0
JUN	479.57	18952	4749	75	1111	217	819	819	0	562 2123 0
JUL	479.29	17596	4723	-506	516	202	820	820	0	541 2196 0
AUG	478.95	15956	4692	-612	466	221	857	857	0	592 2295 0
SEP	478.62	14371	4662	-611	477	302	786	786	0	783 2037 0
MEAN(m3/s)				-64	1053	278	839	839	0	-
TOTAL(mcm)				-2018	33204	8762	26460	26460	0	8762 26460 0
PERCENTAGE(%)				-6.1	100.0	26.4	79.7	79.7	0.0	-

[RESERVOIR OPERATION J (26) DAM: KARIBA Year: 1987/88

87/88 Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. Spill. (mcm)	A.Evap. (mcm)	Turbi. Spill. (mcm)
SEP	478.62	14371	4662								
OCT	478.20	12365	4625	-749	374	352	771	771	0	943	2065
NOV	477.77	10325	4586	-787	406	402	791	791	0	1042	2050
DEC	477.82	10562	4590	88	1001	259	654	654	0	694	1752
JAN	477.89	10893	4597	124	1199	270	805	805	0	723	2156
FEB	478.33	12984	4636	835	2045	237	973	973	0	594	2438
MAR	479.28	17548	4722	1704	2739	222	813	813	0	595	2178
APR	479.76	19874	4766	898	1794	262	634	634	0	679	1643
MAY	480.46	23288	4830	1274	2196	220	702	702	0	589	1880
JUN	480.77	24806	4858	586	1465	200	679	679	0	518	1750
JUL	480.67	24316	4849	-183	759	183	759	759	0	490	2033
AUG	480.37	22847	4822	-548	434	229	753	753	0	613	2017
SEP	480.03	21188	4790	-640	405	306	739	739	0	793	1915
MEAN(m3/s)				216	1233	262	755	755	0		
TOTAL(mcm)				6817	38978	8273	23887	23887	0	8273	23887
PERCENTAGE(%)				17.5	100.0	21.2	61.3	61.3	0.0		

[RESERVOIR OPERATION] (27)

DAM: KARIBA

Year: 1988/89

Month	H(m)	V(mcm)	A(Km2)	dV(m3/s)	Qi(m3/s)	E(m3/s)	Qo(m3/s)	Outflow (m3/s)	Turbi. (mcm)	A.Evap. (mcm)	Turbi. Spill. (mcm)	A.Evap. Spill. (mcm)
SEP	480.03	21188	4790									
OCT	479.65	19340	4756	-690	429	335	784	784	0	897	2100	0
NOV	479.17	17017	4712	-896	306	373	829	829	0	967	2149	0
DEC	478.97	16052	4694	-360	749	277	832	832	0	742	2228	0
JAN	479.28	17548	4722	558	1592	209	825	825	0	560	2210	0
FEB	480.48	23385	4832	2413	3606	194	999	999	0	469	2417	0
MAR	482.11	31415	4982	2998	4149	256	895	895	0	686	2397	0
APR	483.03	35988	5068	1764	3182	257	1161	1161	0	666	3009	0
MAY	484.07	41188	5167	1941	3369	232	1196	1196	0	621	3203	0
JUN	484.51	43397	5208	852	2366	203	1311	1311	0	526	3398	0
JUL	484.34	42543	5192	-319	1220	208	1331	1331	0	557	3565	0
AUG	483.86	40136	5147	-899	652	258	1293	1293	0	691	3463	0
SEP	483.29	37285	5093	-1100	449	319	1230	1230	0	827	3188	0
MEAN(m3/s)				510	1828	260	1057	1057	0	-	-	-
TOTAL(mcm)				16097	57635	8209	33328	33328	0	8209	33328	0
PERCENTAGE(%)				27.9	100.0	14.2	57.8	57.8	0.0	-	-	-

[RESERVOIR OPERATION] (28) DAM: KARIBA Yea1989/90

89/90 Month	W/Level H(m)	R.Area V(mcm)	Change dV(Km2)	Inflow Qi(m3/s)	A.Evap. E(m3/s)	Outflow Qo(m3/s)	Turbi. (m3/s)	A.Evap. Turbi. (mcm)	Spill. (mcm)
SEP	483.29	37285	5093						
OCT	482.66	34146	5034	-1172	550	435	1288	1288	0
NOV	482.06	31167	4978	-1149	672	443	1378	1378	0
DEC	481.47	28250	4923	-1089	585	358	1316	1316	0
JAN	481.54	28596	4929	129	1517	220	1168	1168	0
FEB	482.26	32159	4996	1473	2668	129	1066	1066	0
MAR	482.07	31217	4979	-352	1069	331	1090	1090	0
APR	482.04	31068	4976	-57	1234	295	997	997	0
MAY	481.93	30524	4966	-203	1014	256	961	961	0
JUN	481.93	30524	4966	0	1025	193	832	832	0
JUL	481.68	29287	4942	-462	597	228	830	830	0
AUG	481.30	27412	4907	-700	430	283	847	847	0
SEP	480.86	25248	4867	-635	422	370	887	887	0
MEAN(m3/s)				-382	970	296	1055	1055	0
TOTAL(mcm)				-12037	30577	9336	33279	33279	0
PERCENTAGE(%)				-39.4	100.0	30.5	108.8	108.8	0.0

[RESERVOIR OPERATION] (29)

DAM: KARIBA

Yea 1990/91

90/91 Month	W/Level H(m)	R.Area V(mcm)	Change dV(Km2)	Inflow Qi(m3/s)	A.Evap. E(m3/s)	Outflow Qo(m3/s)	Turbi. Spill. (m3/s)	A.Evap. Turbi. Spill. (mcm)
SEP	480.86	25248	4867					
OCT	480.44	23190	4828	-768	514	462	821	821
NOV	479.97	20896	4785	-885	556	467	974	974
DEC	479.70	19583	4760	-490	618	300	808	808
JAN	479.70	19583	4760	0	1067	214	853	853
FEB	479.91	20604	4780	422	1398	117	859	859
MAR	480.60	23973	4843	1258	2403	267	878	878
APR	481.10	26428	4889	947	2151	268	936	936
MAY	481.40	27905	4917	552	1710	220	938	938
JUN	481.32	27511	4909	-152	1052	202	1002	1002
JUL	480.92	25543	4872	-735	474	205	1004	1004
AUG	480.51	23532	4834	-751	412	253	909	909
SEP	480.10	21529	4797	-773	462	340	896	896
MEAN(m3/s)				-118	1066	277	906	906
TOTAL(mcm)				-3719	33607	8742	28583	28583
PERCENTAGE(%)				-11.1	100.0	26.0	85.1	85.1

SUPPLEMENT - 4.5

ANNUAL & MONTHLY RIVER FLOW

<ANNUAL MEAN DISCHARGE>.....	4.5- 1
UPPER AREA (32 YEARS).....	4.5- 1
WHOLE AREA (12 YEARS).....	4.5- 5
<MONTHLY MEAN DISCHARGE>.....	4.5- 7
<ANNUAL FLOW PATTERN>.....	4.5-39
UPPER AREA (32 YEARS).....	4.5-39
WHOLE AREA (12 YEARS).....	4.5-41
<MONTHLY FLOW PATTERN>.....	4.5-42
UPPER AREA (32 YEARS).....	4.5-42
WHOLE AREA (12 YEARS).....	4.5-61

Annual Mean Discharge (32 Years : 1959/60 - 1990/91)

(1/4)

AREAS	BASINS	No.	ST.	POINT & STATION NAME	AREA(km ²)	59/60	60/61	61/62	62/63	63/64	64/65	65/66	66/67	67/68	68/69
UPPER ZAMBEZI	(1)			Cholose	73,512	620	747	908	943	483	559	512	554	1096	1006
"	"	(2)	1-150	St. Zambezi Pump House	87,275	736	886	1077	1119	574	663	608	658	1301	1195
"	"	(3)		Zambezi R. Portion	90,353	762	918	1115	1159	594	687	629	681	1347	1237
"	"	(4)	1-650	St. Kabompo Boma	42,740	185	221	277	282	222	196	211	181	231	451
"	"	(5)		Kabompo R. Portion	45,029	185	228	286	295	228	199	214	183	236	465
"	"	(6)		Dongwa R. Portion	20,568	0	58	79	120	53	32	32	19	42	127
"	"	(7)		Confluence	65,597	184	286	365	415	280	231	247	202	278	592
"	"	(8)	1-950	St. Matopa Pontoon	66,449	184	288	368	420	283	232	248	202	280	597
"	"	(9)		Kabompo R. Portion	72,347	184	305	391	454	298	241	257	208	292	634
"	"	(10)		Confluence	162,700	946	1223	1506	1613	892	928	886	889	1638	1871
"	"	(11)	2-030	St. LukuLu	206,531	748	849	1054	1087	798	777	764	751	1125	1113
"	"	(12)		Zambezi R. Portion	228,076	847	955	1141	1189	933	882	864	829	1165	1167
"	"	(13)	2-250	St. Kalabo	34,621	56	59	94	169	51	42	89	51	115	138
"	"	(14)		Luanginga R. Portion	41,233	87	92	120	200	92	74	120	75	128	154
"	"	(15)		Confluence	269,309	934	1046	1261	1390	1025	956	984	904	1293	1321
"	"	(16)	2-400	St. Senanga	278,298	975	1090	1297	1433	1081	1000	1025	937	1309	1343
"	KAFUE	(21)	4-050	St. Raglan Farm	4,999	22	31	67	55	27	20	21	28	25	63
"	"	(22)		Kafue R. Portion	7,730	32	49	100	85	49	40	35	124	48	100
"	"	(23)	4-120	St. Mwanbashi	869	5	6	13	11	5	5	5	5	7	11
"	"	(24)	4-130	St. Smith's Bridge	8,599	37	55	113	96	55	45	39	129	55	111
"	"	(25)	4-200	St. Mpatanato	11,655	55	79	163	147	78	64	56	67	66	156
"	"	(26)	4-280	St. Machiya Ferry	22,920	80	118	248	243	126	100	80	93	90	240
"	"	(27)		Kafue R. Portion	24,582	83	124	259	254	132	106	84	98	93	252
"	"	(28)		Luwishi R. Portion	8,866	20	29	61	60	31	30	20	23	17	65
"	"	(29)		Confluence	33,448	103	153	320	314	162	136	103	121	111	318
"	"	(30)	4-350	St. Chilenga	34,162	105	155	325	319	165	139	105	123	112	323
"	"	(31)	4-450	St. Lubungu	54,442	111	187	343	414	203	149	111	124	112	359
"	"	(32)	4-560	St. Chifunpa Pontoon	21,445	65	118	196	215	86	59	50	57	56	240
"	"	(33)		Lunga R. Portion	24,416	69	120	199	220	94	67	56	63	62	237
"	"	(34)		Confluence	78,858	180	308	542	634	297	216	167	187	174	596
"	"	(35)	4-669	St. Kafue Hook Bridge	95,053	203	319	556	663	343	261	202	223	204	580
LOWER ZAMBEZI	(17)			Livingstone	466,324										
"	"	(18)		In (Kariba Dam)	608,634										
"	"	(18E)		Evaporation	---										
"	"	(18S)		Storage	---										
"	"	(19)		Out (Kariba Dam)	---										
"	"	(20)		Zambezi R. Portion	612,724										
"	KAFUE	(36)		In (Itezhi-tezhi Dam)	105,672										
"	"	(36E)		Evaporation	---										
"	"	(36S)		Storage	---										
"	"	(37)		Out (Itezhi-tezhi Dam)	---										
"	"	(38)		In (Kafue Gorge Dam)	151,576										
"	"	(38E)		Evaporation	---										
"	"	(38S)		Storage	---										
"	"	(39)		Out (Kafue Gorge Dam)	---										
"	"	(40)		Kafue R. Portion	154,882										
"	ZAMBEZI	(41)		Confluence	767,606										
"	"	(42)		Zambezi R. Portion	786,686										
"	LUANGWA	(43)	5-940	St. Luangwa Bridge	143,781	301	427	1117	875	633	566	309	381	388	623
"	"	(44)		Luangwa R. Portion	150,586	316	447	1169	917	663	593	323	399	406	653
"	ZAMBEZI	(45)		Confluence	937,272										

Annual Mean Discharge (32 Years : 1959/60 - 1990/91)

(2/4)

AREAS	BASINS	No.	ST.	POINT & STATION NAME	AREA(km ²)	69/70	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79
UPPER ZAMBEZI	(1)			Cholosa	73,512	824	594	356	347	487	697	716	586	729	765
"	"	(2)	1-150	St. Zambezi Pump House	87,275	978	706	422	412	578	828	850	695	866	908
"	"	(3)		Zambezi R. Portion	90,353	1013	731	437	427	599	857	880	720	896	940
"	"	(4)	1-650	St. Kabompo Bona	42,740	325	267	157	115	122	200	231	243	306	363
"	"	(5)		Kabompo R. Portion	45,029	332	271	158	116	123	205	239	246	316	370
"	"	(6)		Dongwa R. Portion	20,568	60	43	9	4	15	44	69	26	91	64
"	"	(7)		Confluence	65,597	391	314	167	120	138	249	308	272	407	433
"	"	(8)	1-950	St. Watopa Pontoon	66,449	394	316	167	120	139	251	311	273	411	436
"	"	(9)		Kabompo R. Portion	72,347	411	328	170	121	143	264	331	280	437	454
"	"	(10)		Confluence	162,700	1424	1059	607	548	742	1121	1211	1000	1333	1394
"	"	(11)	2-030	St. Lukulu	206,531	977	822	613	553	683	956	965	869	994	1049
"	"	(12)		Zambezi R. Portion	228,076	1063	915	683	594	757	989	975	916	1025	1092
"	"	(13)	2-250	St. Kalabo	34,621	110	38	45	13	76	113	123	48	142	77
"	"	(14)		Luanginga R. Portion	41,233	137	66	67	25	99	123	126	62	152	90
"	"	(15)		Confluence	269,309	1200	981	750	619	856	1112	1101	978	1177	1182
"	"	(16)	2-400	St. Senanga	278,298	1236	1020	779	637	887	1125	1105	997	1190	1200
KAFUE	(21)	4-050		St. Raglan Farm	4,999	40	63	40	10	17	30	52	42	80	73
"	"	(22)		Kafue R. Portion	7,730	68	97	74	28	45	68	100	84	127	113
"	"	(23)	4-120	St. Mwambashi	869	7	10	8	3	5	10	13	8	15	13
"	"	(24)	4-130	St. Smith's Bridge	8,599	75	107	82	31	50	78	113	92	142	125
"	"	(25)	4-200	St. Mpatamato	11,655	88	134	88	35	73	100	135	103	178	165
"	"	(26)	4-280	St. Machiya Ferry	22,920	133	193	124	47	114	148	194	149	298	246
"	"	(27)		Kafue R. Portion	24,582	140	201	129	49	121	155	202	156	312	258
"	"	(28)		Luswishi R. Portion	8,866	37	41	29	10	38	39	43	39	78	67
"	"	(29)		Confluence	33,448	177	241	159	59	159	195	244	195	390	325
"	"	(30)	4-350	St. Chilenga	34,162	180	245	161	59	162	198	248	198	396	330
"	"	(31)	4-450	St. Lubungu	54,442	210	248	167	62	175	226	271	191	335	355
"	"	(32)	4-560	St. Chifumpa Pontoon	21,445	126	96	58	26	44	79	107	79	245	165
"	"	(33)		Lunga R. Portion	24,416	129	107	67	33	57	89	120	82	284	174
"	"	(34)		Confluence	78,958	339	354	235	94	232	315	392	273	619	530
"	"	(35)	4-669	St. Kafue Hook Bridge	95,053	353	411	289	128	303	369	465	288	832	581
LOWER ZAMBEZI	(17)			Livingstone	466,324										
"	"	(18)		In (Kariba Dam)	608,634										
"	"	(18E)		Evaporation	—										
"	"	(18S)		Storage	—										
"	"	(19)		Out (Kariba Dam)	—										
"	"	(20)		Zambezi R. Portion	612,724										
KAFUE	(36)			In (Itezhi-tezhi Dam)	105,672										
"	"	(36E)		Evaporation	—										
"	"	(36S)		Storage	—										
"	"	(37)		Out (Itezhi-tezhi Dam)	—										
"	"	(38)		In (Kafue Gorge Dam)	151,576										
"	"	(38E)		Evaporation	—										
"	"	(38S)		Storage	—										
"	"	(39)		Out (Kafue Gorge Dam)	—										
"	"	(40)		Kafue R. Portion	154,882										
ZAMBEZI	(41)			Confluence	767,606										
"	"	(42)		Zambezi R. Portion	786,686										
LUANGWA	(43)	5-940		St. Luangwa Bridge	143,781	470	773	357	323	861	501	831	500	1132	842
"	"	(44)		Luangwa R. Portion	150,586	492	810	374	339	902	525	871	523	1186	882
ZAMBEZI	(45)			Confluence	937,272										