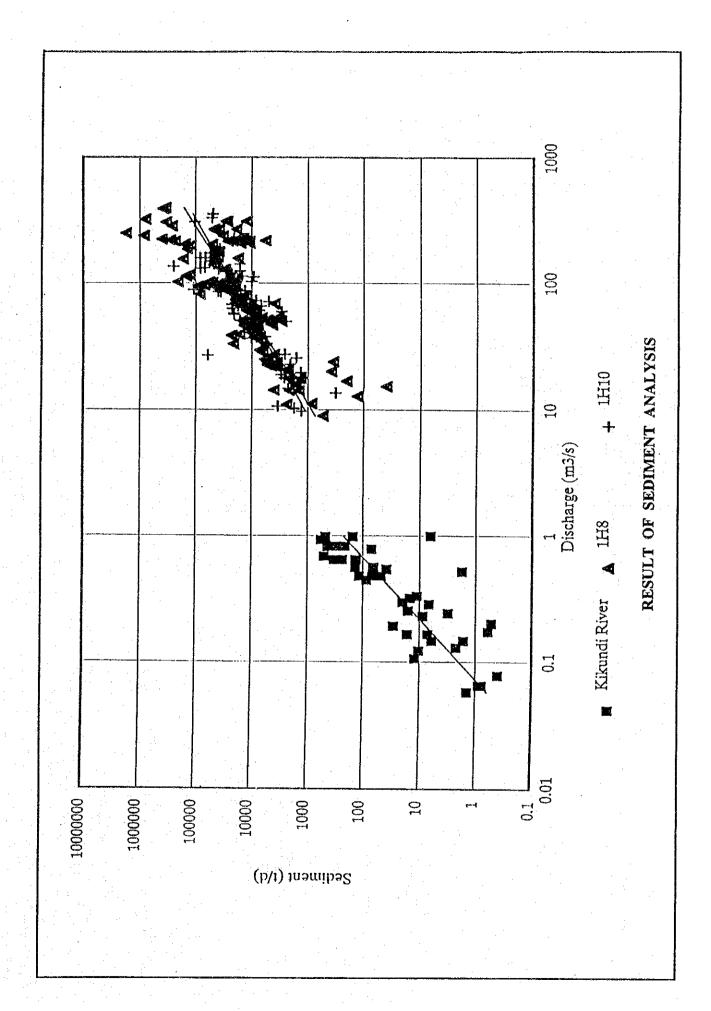
METEO-HYDROLOGICAL DATA

7. SEDIMENT DATA

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		ation SA-t/d	564	377	238	229	722 E	4 113	2, 599	4, 648	3, 194	4, 492	1,803	3, 753	4, 589	1,034	2, 190	2, 627	1.217	2, 703	2.824	1.399	1.646	1.527		1,258	1, 703	1,091	1,558	1,563	2, 318	ကျ	2, 796				-									
		Sdimentation	270	201	133	133	301	487	356	392	158	201	81	164	201	9	120	144	48	102	107	72	85	79	31	88	83	82	88	88	328	308	374			1		1						ندسا		
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		Discharge (m3/s)	24	21	20.	20.	65	95	84	137	233	258	264	264	264	210	210	210	306	308	308	223	223	223	213	213.	213	202	202	202.	82	73	85	.												
10 / 01	- 1	Stage (B)	88	1.56		1 52		4.04	3, 76	5.06	6. 28	89.9	6. 65	6.65	6.65	6.56	6.55	6.55	6.95	6.96	5, 36	6.44	6.44		6.32				6.06	6.06		3.82														
Ī	ŀ	Mpling	36	98	98	98	7.5	98	38	88	98	98	98	86	88	- 86	88	98	98	98	98	98	98	98	98	98	98	98	38	88	38	88	88			1										
	k	of Sam	2	9		8	P	4	ď	4	4	7	Ŧ	4	4	Þ	4	4	þ	7	7	4	7	4	4	þ	Ť	Þ	Þ	4	Þ	2	22													
	А	Date	28		5	_	2	L		6				13	13	14	14	14	17	17	11	21	21	21	22	22	22	23	23	23	2.9	2	S													
	<u> </u>	၌	5	36	93	2,5	9	97	88	66	100	=	102	103	104	105	106	107	108	103	-	=	112	113	114	115	116	117	118	113	120	121	122													
	Ţ	(SA-t/d)	239	539	082	143	-	046	, 837	, 228	080	802	431	774	, 539	, 243	535	056	. 648	. 318	5, 742	. 985	02	4	3, 802	3,948	2, 458	. 520				2, 262	.867	880	203	5/5	817	668	946		2,139	410	563	525	603	361
	- 1	ساتة	J٠	238	427 21	171	+	862 7.	-	H	Н		155 38,		-		Η-	Η-	╌	-	١	578 4	14	۳		289		230 1	Ŀ	290	Ц	_	290	250	147	347	144	148	4	291 4		175	288	257	281	177
	ŀ		2		2,	54	-		1,			1,	ij	7	1.	1,		I,	L	L	L	L	74			.]												57					Ц	23		_
		Discharge (m3/s)	77.	74.8	100.	174	133	94.	151.	182.	195.	300.	385. 1	391.	280. (210.	200.0	93.	91.0	96.	100.0	100.0	16.7	15.1	174.6	158. 1	105.3	76.5	154. 1	199, 78	94. 2	87. 2	74.5	50.8	50. U	45.		52.5	23.0	176.9	32. 9	27.0	29. 4	23. 5	24.8	23.5
(6)	3	Stage U	3.27	3.11	-1.00	00	-1	-1.00	-1.00	-1.00	-1.00	2.01		-1.00	6.71	5. 77	5, 56	3.63	3.63	3.74	3.94	3.82	1.48	1. 42	5.24	5.02	3.96	3. 32	5.14	5.64	1.00	3.68	3.29	7. 7.	2. 44	2. 40	-1	2.61	.,				2.04	1.92	1.80	1.70
1 100	▝┞		<u> </u>	Ш		73	L	L	Ы	Ц	74	74	Ц		74	74	74	74	74	74	74	74	74	74	75	75	197	18	16	1.6	1.6	76	2.2	٥	81	Ω S	70		<u>8</u>	12	88	98	86	98	98	86 1
		ot Sampling		3	6	→ ≪	4	4	4	4	.5	23	2	ß	co	ιc	5	S	S.	Ġ	9	9	8	8	2	2	7	þ	Þ	2		S	2	<u>م</u>	7	7	3	-	9	4	7	2	2	2	2	2
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	1	<u>့်</u>	1	47	48	.50 20 20 20 20 20 20 20 20 20 20 20 20 20	21	25	23	54	22	28	57	28	29	9	61	62	63	64	65	99	67	88	83	20	7.1	75	73	7.	22	16		Σ .	5 0	≅:	700	72 6	2	84	82	98	83	88	83	1 00
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		scharge (m3/s)	17.56	11.04	38 20	33, 05 14, 15	28.27	10.84	36, 51	8.83	22, 10	215.36	218, 48	233.76	243, 95	64. 54	60.35	57, 32	52.08	50, 56	43.10	22, 46	14.07	15.82	14.02	126.29	317.04	101.34	20.00	23, 76	67.76	53.64	29. T p	40.47	111.70	67 74	67.63	53.34	13.	60. 22	58. 31	47, 58	46.29	40.56	37.10	92.06
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Column 1965 Column 196		dimenta	820	40	390	150	8	1.60	, 730	440	730	739	200	541			510	780	7.7	930	480	130	140	160	1,810	1,050	40	230	1, 340	236	4, 310	5, 610	2, 390	2, 480		1,340	1,380	1, 630	1, 150			1:					
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The Companies The Companie	<u>د</u>	Dischar (⊞3/s	0.5	0.5	0.3	0.2	0.2	Θ.	0.	o O	0.5	0.7	-	0	6	9.	0	0.7	_											13	- -	0						- 1	_1			6	9.	0	0	-4	
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The control of the	1 1	Sal		11	11	11	11	11	11	11	11	11	12	12	12	12	12	12	1	1	2	2	2	2	2	7	7	~			3	62	ניז	5	3	"	65	٣	က	က	3	3 }	3	3	65	6	~3
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Harring Harr		Sdiner (mg/1)		134	164	151	380	1,451	367	388	215	187	231	603	733	374	229	234	27	180	370	540	250	410	610	426	490	220	360			490	540	120	230	230	430	260	130	190	230	230	320	270	250		e-,
10 10 10 10 10 10 10 10		charge m3/s)	Ή.	نما	67.52	122, 56					51, 30	18.92	184.80	130.61	129, 10	156, 43	185, 33	38.49	13.48	37, 53	50.63	91.30	124, 59	62.65	156.17	57.64	157.02	99.00	170.84	147. 79	133, 55	84. 24	84.94	85. 62	38, 95	36.41			r.			44.71			48.71		
Care of Sampling Stage Discharge Sdimentation No. Date of Sampling Case Discharge Sdimentation No. Date of Sampling Case Discharge Sdimentation No. Date of Sampling Case Discharge Case Case Discharge	(2)											4.46	4.49						1.14	1.92						2.55	4.17	3.17	1											1.88	. I	2.20	1.98		1 .1		-
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The cof Sampling Stage Discharge			1,5		<u></u>	2		23	18	92	94	75	<u> </u>	22	9	93	26	32	59	7	9.7	11	47			7.4	88	18	30	32	24	88	50	75	65	65	84	2	22	90	27	- - -	20	63	21	18	14
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Date of Sampling Stage Discrete		charge	"!	26.96	17.91	19.63	9.62	14.66	25.55	27. 41	58.78	52. 67	103.78	118.50	98.89	42.86	32.12	86. 20	123, 60	226.39	327.02	352, 24	112, 13	101.94	139 46	50.45	55. 22	10, 18	59.28	53.77	49.65	92, 52	98.25	65.80	139, 32	131.11	127.58	305.09	44, 12	43, 55	17.81	22, 89	18.39	110.72	70.79	17.78	
Date of Sampling Date of Sampling Date of Sampling Samplin	(1) (1)	ł	=	1.81	1. 49	1.41	-1. 00	_	Ŀ	L	30	16	0.7	17	88	95	83	9	34	- 58	96	8	28	-	78	59	21	00	20	17	04	92	87	40	58	20	48	76	02	2.00	1.33	1.61	1.40			1. 24	1. 24
Date of April Date of Apri	141		30	21.	7.1	71	71	72	72	72	72	72	72	72	72	72	72	72	72	Ļ	ļ.	L	ļ.,	ļ.,	-	ļ.,	ļ	L		Ц		Ц	-	_			L	ļ.,	ļ	_	-	73	73	74	74	74	7.
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SUMMARY OF ESTIMATED SEDIMENTATION (t/d)

(1) 1H8

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YEAR	ITEM	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
1958	MEAN	-10	-10	~10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
	MAX.	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	11500	11500
1959	MIN.	-10	-10	~10	-10 8390	-10	-10	-10	-10	-10	-10	-10	1259	1259
1998	MEAN MAX.	2389 5106	5617 16250	8421 19475	24521	20966 40312	2660 4456	1355 2127	1261 4017	1192 1935	860 1955	878 2387	1599 3739	4639 40312
	MIN.	1322	2235	2456	2587	4713	1574	894	675	630	618	603	763	603
1960	MEAN	7516	4321	13375	91378	51488	7710	3554	1653	886	605	836	275	15252
1000	MAX.	28796	20317	29114	171288	137013	10548	5365	2274	1110	1039	2353	402	171288
	MIN.	417	1419	1557	24665	9338	5479	2068	1110	675	421	421	210	210
1961	MEAN	277	11988	10703	8772	37274	4469	7022	3754	1827	9862	168422	83857	28974
	MAX.	740	29008	17700	33211	55541	8169	17157	8666	2274	46981	252487	126619	252487
	MIN.	158	809	4192	3056	8844	2925	2847	1777	1574	2252	70524	54442	158
1962	MEAN	127917	19872	52770	46485	52706	8930	3835	3764	3407	1622	2096	4638	27531
	MAX.	257416	34258	97179	93688	91385	15445	6111	6961	5253	2319	5033	9713	257416
1000	MIN.	40833	11728	21798	18254	16250	5328	2599	2274	1875	1290	1168	1453	1168
1963	MEAN	15573	10108	22592	129499	54391	8588	5231	2393	1243	700	46584	68104	30408
	MAX.	31177	12725	65344	274099	144994	12220	10237	3709	1574	907	242732	233915	274099
1004	MIN.	6699	7737	6527	66044	13048	6131	2977	1513	907	551	505	12126	505
1964	MEAN MAX.	34621	8311 12983	27587	141877	32287	8688	3592	2158	1442	2207	1207	718	21955
	MIN.	68801 13178	4801	80164 7726	222083 71258	73671 12534	12629 5069	4889 2822	2709 1677	2375	8024	2387	965	222083
1965	MEAN	3877	2467	2457	45062	15932	9032	2102	1199	1081 1142	821 2173	691 7005	584 10159	584 8524
	MAX.	12983	6720	9285	101305	66220	27804	2964	1526	3401	5537	15158	16102	101305
	MIN.	1081	827	1053	6895	5969	3083	1526	933	712	876	2068	5234	712
1966	MEAN	10397	14607	14288	81827	27181	8671	4292	2130	1554	1415	2660	2233	14165
	MAX.	22974	21709	45360	141650	47338	13892	7761	2951	3124	4507	5272	4017	141650
	MIN.	4678	6917	5365	42321	12629	5701	2690	1544	1168	866	1278	1298	866
1967	MEAN	902	3214	3180	29206	72283	31820	7399	6247	9983	5662	16810	94892	23650
	MAX.	1730	6785	8729	106092	104288	69071	13741	12757	18981	12502	40442	215864	215864
	MIN.	584	574	1530	1457	28586	7856	5069	4192	4112	3359	5272	29381	574
1968	MEAN	37006	8221	39455	207485	79488	34459	8248	3735	2275	1430	12492	31756	38728
	MAX.	122795	13977	133735	296360	193860	66705	14735	5809	2809	1860	53396	84873	296360
1000	MIN.	10662	5422	8024	-10	28115	12376	5253	2822	1739	1153	1102	5197	1102
1969	MEAN MAX.	3032 4943	5732 21224	10057	28505	77579	7792	3413	2367	1840	1551	2906	2793	12374
	MIN.	2032	1739	41030 2285	63228 7761	139656	12854	6688	3205	3003	3597	8157	4889	139656
1970	MEAN	6295	24276	25377	38144	11083 12847	4456 4001	2258 2192	1826	1255 2079	1053	907	1651	907
1310	MAX.	14560	36565	47661	51076	38837	5919	2841	1364 1702	5197	1331 2032	806 1088	5770 17080	10250
	MIN.	1574	13674	10125	18981	6213	2847	1716	1164	1157	1032	589	574	51076 574
1971	MEAN	6596	5256	2914	38083	30021	6384	4227	2454	1518	1307	1077	1679	8450
	MAX.	15546	8438	8561	90538	92503	11105	6900	3441	1811	2242	1654	4389	92503
	MIN.	2772	2963	1795	9895	12246	4641	3185	1763	1194	970	822	763	763
1972	MEAN	7076	1995	4729	50630	94638	24735	3794	1808	2401	3302	7432	8941	17669
	MAX.	17230	2798	12681	121498	121983	85009	5290	2623	6259	7363	15168	16364	121983
	MIN.	1718	1498	1830	9429	59577	5509	2672	1276	1288	1349	2647	3542	1276
1973	MEAN	22975	12925	15996	48710	102152	9562	4103	3137	1679	1282	2708	3550	19153
	MAX.	51977	22823	44585	80595	201350	15452	5822	5432	2549	2666	10801	8626	201350
1024	HIN.	5041	6228	5922	11993	16069	6043	2994	2549	1217	792	609	2378	609
1974	MEAN	2176	2358	1621	18917	88815	11359	4734	2104	1399	1304	945	644	11474
	MAX.	3911 1182	7304 970	6863	53532	297068	24157	6756	2835	1960	3783	1324	992	297668
1975	MEAN	2356	787	636 6979	5110 40347	19330	5607	2941	1462	1015	782	653	522	522
1979	MAX.	5607	1365	19668	78329	37803 56691	12642 55288	3992	1819	1533	1642	981	3011	9514
	MIN.	492	449	449	4417	16938	5736	5899 2450	2411 1338	2985	3783	1338	9540	78329
1976		3573	5129	12264	27615	36119	7735	3512	1795	1120	2010	763 999	842 1126	8599
	MAX.	11642	12094	33436	51688	71914	12711	5355	2392	1811	4040	1700	1893	71914
	MIN.	1715	1462	2856	11992	10121	5639	2469	1284	926	1133	707	653	653
1977	MEAN	4779	4516	7 358	13551	21103	6152	2027	1332	3371	2260	6301	17111	7514
	MAX.	12607	8397	19600	42938	59298	16568	2668	1943	17125	4472	18468	52421	59298
1070	MIN.	1284	1779	2709	6756	5899	2772	1519	1015	782	1258	1519	4641	782
1978	MEAN	-10	6249	19248	66059	23728	5985	-10	-10	814	565	10882	76745	-10
-	MAX. MIN.	69855	11892	86252	88651	69564	9021	4066	1563	1096	915	68839	186352	186352
1979	MIN. MEAN	24933	3988	3300	34475	9365	3885	2689	1120	636	429	422	39439	422
1212	MAX.	-10	-10	55465 109618	186873	105868	35131	7936	3701	2777	1911	2531	-10	-10
}	MIN.	-10	-10 -10	18207	450763 95960	367964 37605	62383	11593	4843	4931	3585	8852	-10	450763
1980	MEAN	4217	9105	6398	14690	35689	11792 6608	4727 2925	2730 1960	1593 1312	1096	1061	-10 15006	1061
	MAX.	8195	20216	10536	30170	61299	13186	3733	2411		1061	5099	15006	8667
	MIN.	2608	4199	3684	4585	13401	3783	2242	1654	1731 970	1061 653	17187 792	39027	61299
1981	MEAN	5012	5924	4558	26229	-10	8429	3475	2169	1970	1329	1587	2608 6029	- 653 -10
	MAX.	8076	10536	19533	51810	-10	14676	4556	2730	2920	2941	2489	12763	51810
[MIN.	3007	3347	1779	6439	-10	4843	2508	1843	1271	782	1061	970	782
	MEAN	1904	625	914	5875	9793	1855	1818	-10	-10	-10	11644	10215	-10
	MAX.	5186	937	1620	12861	22583	3150	4201	-10	-10	-10	22387	16987	22583
	MIN.	788	473	453	697	3014	1374	1006	-10	-10	-10	1186	4384	453
	MEAN	32923	5499	8020	28351	61192	28541	6254	4666	2536	1846	1496	2920	15436
	MAX.	92851	7699	21822	40037	70918	69045	9153	8492	6876	4443	1968	33314	92851
	MIN.	8110	4103	3135	9939	32624	8237	4131	2861	1603	1243	1243	700	700
	MEAN	16486	6601	5255	17355	227717	87630	5075	-10	-10	-10	60085	16840	-10
	MAX.	47406	13373	11269	54204	320743	330261	6467	-10	-10		162933		330261
	MIN.	2687	3913	1986	7221	78384	7378	3423	<u>-10 </u>	<u>-10 </u>	1089	6358	8449	1089

SUMMARY OF ESTIMATED SEDIMENTATION (t/d)

(1) 1H8

YEAR	ITEM	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
1985	MEAN	21263	5673	5306	60769	71571	5873	3445	1671	1197	1065	3961	7273	15814
	MAX.	43335	12758	10864	118920	149281	10226	5528	2243	1881	1747	9986	15702	149281
	MIN.	6322	2021	1986	10082	10964	3678	2149	1311	871	778	1243	2224	778
1986	MEAN	4305	-10	4617	54953	19631	-10	-10	-10	-10	-10	-10	-10	-10
j	MAX.	11179	5813	15927	130185	61397	64776	-10	-10	-10	-10	-10	~10	130185
	MIN.	2060	1715	1350	15201	8444	8444	-10	-10	-10	-10	-10	-10	1350
1987	MEAN	-10	3766	-10	-10	-10	-10	1868	1490	829	1165	1254	2283	-10
1.	MAX.	26329	6102	7545	8161	46858	11783	2343	2443	1096	2060	2477	4444	46858
	MIN.	6769	1941	1941	3497	17836	2960	1532	1117	608	579	667	1292	579
1988	MEAN	1463	1999	2965	17122	5047	-10	-10	-10	-10	-10	-10	-10	~10
	MAX.	2121	3456	13425	32762	12406	-10	-10	-10	-10	~10.	-10	-10	32762
	MIN.	1036	1016	1181	10759	2632	-10	-10	-10	-10	-10	-10	-10	1016
1989	MEAN	31599	5719	2940	23933	39033	-10	-10	~10	-10	-10	-10	-10	-10
	MAX.	55201	21609	6280	67624	72936	41000	-10	-10	-10	-10	-10	6738	72936
	MIN.	9329	2615	1941	5180	21230	8302	-10	~10	-10	-10	-10	3017	1941
1990	MEAN	-10	-10	-10	88951	-10	1233	-10	-10	-10	-10	-10	-10	-10
	MAX.	35957	14395	146863	219721	-10	2650	-10	-10	-10	-10	42134	8091	219721
	HIN.	3624	3094	23296	29439	-10	566	-10	-10	-10	-10	667	3017	566
1991	MEAN	3054	4344	1820	-10	16565	5094	2246	1496	959	943	-10	-10	-10
·	MAX.	6161	10188	3539	-10	32599	11435	2941	2215	1138	2685	-10	-10	32599
	MIN.	1883	1826	1258	-10	12679	3056	1715	1096	857	675	-10	-10	675
1992	MEAN	2206	1850	-10	-10	42075	-10	2537	1376	959	681	4395	11021	-10
1 1	MAX.	4690	2904	-10		82192	-10	3414	1743	1138	958	17222	20856	82192
	MIN.	1036	977	-10	-10	11264	-10	1854	1138	830	525	499	4791	499
1993	MEAN	15198	15463	16890	62922	-10	-10	-10	-10	-10	-10	-10	-10	-10
- 1 J	MAX.	20609	26761	23429	281324	-10	-10	10	-10	-10	-10	-10	-10	281324
	MIN.	10594	9482	11179	11608	-10	-10	-10	-10	-10	-10	-10	-10	9482
TOTAL	MEAN	14135	7017	13016	54643	51719	13854	4016	2409	1976	1887	13313	17543	16294
AVERAGE	MEAN MAX.	32114	13880	33571	114899	108316	34691	6456	3870	3869	5000	34334	42328	36111
	MEAN MIN.	4738	3535	4383	21576	17391	5081	2629	1702	1202	1008	3703	6825	6148
	DATA No.	31	32	32	32	31	29	29	27	28	28	29	28	22
	AB. MAX.	257416	36565	133735	450763	367964	330261	17157	12757	18981	46981	252487	233915	450763
	AB. MIN.	158	449	449	697	2632	566	894	675	608	421	421	210	158

SUMMARY OF ESTIMATED SEDIMENTATION (t/d)

(2) 1H10

	THIU			*****			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		Ann	005	1100	NCA	LANGULA
YEAR	ITEM	JAN. -10	FEB. -10	MAR. -10	APR. -10	MAY -10	JUN. -10	JUL. -10	AUG. -10	SEP. 1655	OCT. 1836	NOV. 3399	DEC. 2240	ANNUAL -10
1966	MEAN MAX.	-10 -10	-10 -10	-10	-10	-10	-10	-10	1438	5440	8684	16266	3879	16266
	MIN.	-10	-10	-10	-10	-10	-10	-10	1259	998	842	1221	1312	842
1967	MEAN	964	4988	3709	17730	34155	16132	6831	5310	9472 22561	4841 14927	24431 142137	73550 218796	16939 218796
-	MAX. MIN.	1393 692	11333 916	12676 1826	38023 1731	76658 13160	51314 5364	19538 3730	18639 2854	4307	3014	4890	17720	692
1968	MEAN	21138	8499	42632	-10	33427	19949	6158	-10	2284	1578	8962	11815	-10
	MAX.	36548	17582	125590	93652	105676	42966	9621	4254	3633	3162	34331	40575	125590
1969	MIN. MEAN	8504 2856	5425 3674	6732 12595	82607 15930	17951 51445	9156 6686	4374 3270	2720 2909	1646 2234	1214 2288	1233 4413	3693 3556	1214 9390
1202	MAX.	5303	10411	42759	42759	143658	12853	7283	5502	4057	9032	19311	8365	143658
	MIN.	2026	1818	3338	6628	8033	3974	2256	1975	1623	1312	1214	1941	1214
1970	MEAN	12582	25911	21939	28866	9244	3293	1829	1183	2586	1407 3627	894 1359	8951 40425	9770
i '	MAX.	60295 2069	53230 12625	51257 7211	55187 12904	16917 4861	4677 2443	2381 1520	1505 1033	9968 1074	965	652	711	60295 852
1971	MEAN	2408	249	-10	37290	14067	4922	3942	2019	1415	1513	1186	2262	-10
	MAX.	10959	414	269	100884	27255	7208	9018	3304	2170	4322	2112	13678	100884
1972	MIN. MEAN	154 7542	145 2303	112 6295	713 52791	7723 53874	3342 10057	2736 3731	1462 2106	1138 3228	966 4751	861 8223	762 9070	13704
1312	MAX.	24122	3534	23522	119471	106295	23881	5865	4063	11148	12498	19251	14649	119471
	MIN.	2041	1521	1862	6078	22697	4636	2636	1497	1462	1680	2804	5205	1462
1973	MEAN	19427	15401	11635	50166	74811	7424	3779	-10	1533	1236	3284 15104	3925 12745	-10 244875
	MAX. MIN.	66012 7478	42867 5709	27125 5555	141640 12172	244875 11033	12996 5059	7878 2736	-10 -10	2041 1138	2872 762	13104 586	1835	586
1974	MEAN	2812	2146	2775	27954	65612	8763	4556	2332	1356	1568	879	824	9896
	MAX.	9888	7631	13420	110094	275465	18210	8850	3418	1916	6799	1630	1199	275465
1975	MIN. MEAN	1179 3013	912 797	627	5156 20307	13765 27826	5205 7897	2942 4086	1462 1897	1079 2291	861 2390	671 1460	546 4312	546 6912
1313	MAX.	10768	1757	14740	38832	54046	15567	6742	2636	5657	7387	2244	15849	54046
	MIN.	546	508	508	9840	10433	4868	2636	1497	1394	1138	1138	1138	508
1976	MEAN MAX.	4793 25597	7128 16038	18279 42697	23308 43462	19752 43079	-10 -10	-10 -10	-10 -10	-10 -10	2674 6857	1435 1757	1815 4987	-10 43462
	MIN.	1862	2428	3979	10140	7090	-10	-10	-10	-10	1158	1079	966	986
1977	MEAN	5562	45,99	6247	17667	11592	4801	2278	1647	4817	2147	6807	20330	7349
	MAX.	27060	12663	14027	58419	25597	9888	3211	3495	28040	3495	20271	96455	96455
1978	MIN. MEAN	1327 -10	1783 5686	2907 16724	6105 30592	5107 12772	2787 5141	1606 2691	1199 1676	861 1080	1497 952	3267 17947	6460 39852	861 -10
1310	MAX.	-10	9052	57609	47858	25472	7267	3732	2274	1262	1428	97277	94825	97277
	MIN.	-10	4106	3267	17803	7508	3773	2013	1262	810	586	810	16229	586
1979	MEAN MAX.	16427 26228	42723 102009	66116 170228	207013 362140	216162	-10 -10	-10 -10	3290 4106	3033 5403	2578 6405	3875 14560	5150 13765	-10 362140
	MIN.	11536	16614	12870	54728	167003	-10	-10	2703	1680	1416	1327	1462	1327
1980	MEAN	6416	11281	-10	-10	-10	6033	2900	2296	1612	1224	4944	27985	-10
	MAX.	26101 2804	31739 4590	-10 -10	-10 -10	-10	11693	3732	4106	2200	4636	29379	101445	101445
1981	MIN. MEAN	9296	7367	6207	25193	-10 13700	3613 7166	2320 3356	1731 2380	1199 2315	810 2140	1394 1773	2539 7459	810 7343
1001	MAX.	17302	15242	19516	58318	20655	15567	4983	4108	5254	5205	3692	18261	58318
4000	MIN.	4590	3418	2229	5555	6186	4170	2305	1835	1360	1138	1022	1327	1022
1982	MEAN Max.	5345 17202	1832 2412	2623 5156	10190 17601	15783 47497	4189 5971	2335 3380	3261 8004	-10 -10	-10 -10	~10 -10	13591 29788	-10 47497
	MIN.	2170	1262	685	3230	4775	3193	1757	1916	-10	-10	-10	6240	685
1983	MEAN	26461	5132	3492	14084	26084	8965	-10	-10	2964	-10	-10	-10	-10
	MAX.	83865 7387	8004 3732	4682 2320	37330	35559 14203	13939	-10 -10	-10	13939	-10	-10	-10	83865
1984	MIN. MEAN	3861	3174	3229	3120 -10	-10	5453 -10	3791	-10 2782	1916 1833	-10 3045	-10 23149	-10 15833	1916 -10
	MAX.	5606	3495	7208	104855	106295	-10	7031	3457	2703	12011	68888	29515	106295
1005	MIN.	3156	2736	1971	44668	43977	-10	3156	2084	1251	586	5709	5156	586
1985	MEAN MAX.	-10 43805	-10 5156	-10 5156	-10 60266	-10 32167	-10 -10	4083 5328	2297 3030	1149 1606	1124 5011	2518 4868	-10 24364	-10 60266
	MIN.	7941	4455	3084	22814	20655	-10	3156	1630	693	489	1757	2170	489
1986	MEAN	-10	-10	-10	-10	-10	-10	3103	-10	-10	-10	-10	-10	-10
1	MAX. MIN.	26101 3855	5453 3855	6295 4021	78680 5813	32167 4613	22119 3613	3979 2259	3692 1835	3267 1521	3084 1462	30338 2259	35256 20435	78680 1462
1987	MEAN	-10	3866	-10	4366	-10	4240	-10	2492	2123	2724	-10	-10	-10Z
	MAX.	37096	4455	5453	5657	31456	5453	3156	2838	2444	4278	5059	5059	37096
1988	MIN. Mean	3732 3715	3323 3937	4063 8514	2977 -10	4636 -10	3267 -10	2475 3283	2170 2435	1862 3448	1835	1862	2539	1835
1300	MAX.	5580	6131	26355	26996	25723	23641	4751	3773	4775	-10 -10	3814 6973	3530 5403	-10 26996
	MIN.	2350	2170	3267	20326	3156	3230	2636	1889	2736	-10	2170	2350	1889
1989	MEAN	3668	3346	-10	-10	-10	-10	-10	-10	~10	-10	5319	-10	- 10
	MAX. MIN.	5378 2736	4545 2444	-10 -10	-10 -10	-10 -10	29925 20490	26101 2736	-10 -10	-10 -10	-10 -10	26101 1809	-10 -10	29925
1990	MEAN	3891	-10	~10	-10	-10	-10	-10	-10	2632	2998	-10	-10 -10	1809 -10
1	MAX.	5107	7267	98932	171375	32598	-10	-10	3855	4868	5059	-10	5971	171375
1991	MIN. MEAN	2027 ~10	3613 -10	4322 -10	23881 -10	21099 -10	-10	-10 -10	2320	1889	1889	-10	1474	1474
1991	MAX.	-10	-10	-10	-10	4728	-10 -10	-10 -10	-10 3534	2371 4106	2630 4728	-10 7090	-10 -10	-10 7090
	MIN.	-10	-10	-10	-10	_1809	-10	-10	2507	2027	1783	7030	-10	700
TOTAL	MEAN	8137	7818	14155	36532	30826	7854	3672	2485	2607	2266	6452	13502	11359
AVERAGE	MEAN MAX. MEAN MIN,	23516 3332	17359 3723	38739 3597	79855 9917	83247 10302	16216 4394	6516 2599	4603 1777	6600 1552	6306	26376	40242	29131
	DATA No.	200	210	170	160	150	160	180	170	220	1235 210	1781 200	4084 190	4024 80
	AB. MAX.	83865	102009	170228	362140	275465	51314	19538	18639	28040	14927	142137	218796	362140
	AB, MIN.	154	145	508	713	4775	2443	1520	1033	693	489	586	546	145

DATA BOOK

III. DATA ON FLOOD DAMAGE

III. DATA ON FLOOD DAMAGE

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1.	SUMM.	ARY OF FLOOD SURVEY	
	1.1	List of Flood Survey Interview Location	III - I
	1.2	Summary of Flood Survey	III - 2
2	FIELD	INTERVIEW SHEETS	III - 7

DATA ON FLOOD DAMAGE

1. SUMMARY OF FLOOD SURVEY

<u>List of Flood Survey Interview Location</u>

No.	Banks	Location	Date	Page
1	R	Nunge Salt Works	Apr.20,'93	
2	R	Serengete, near Kivukoni ferry BIDP	Apr.22,'93	
3	R	Bagamoyo Irrigation Development JICA Farm	Apr.22,'93	
4	R	Kivkoni Ferry Terminal	Apr.22,'93	
5	R	Matimbwe, low land	Apr.30,'93	i
6	R	Matimbwe, elevated area	Apr.30,'93	•
7	R	Kongwa NUWA Lower Ruvu Intake farm	Apr.30,'93	
8	R	Kongwa NUWA Lower Ruvu Intake	Apr.30,'93	
9.	R	Chasimba	Apr.30,'93	
10	R	Mbwara (Malandizi, village representative)	May 10,'83	
11	R	Mbwara	May 10,'83	
12	L	Kwalaza/Darjani	May 19,'83	
13	R	NUWA Upper Ruvu Intake	May 19,'83	
14	R	Kwalaza Agriculture Secondary School	May 19,'83	
15	R	Ruvu Railway station	Apr.28,'93	
16	R	Mafisi near Elementary School	May 19,'93	•
17	R	Mwanamsekwa(Mafisi gauging station)	May 19,'93	
18	R	Kimara Masale (Mafisi, Old Morogoro Rd.)	Oct.26,'93	
19	L	Mikadini (Makurunge) Salt Works	Oct.25,'93	**
20	L	Makurunge 1	Apr.23,'93	
21	L	Makurunge 2	Apr.23,'93	
22	L	MIgude, village at the end of road from Kitonga	Oct.22,'93	
23	L	Kitonga	Apr.21,'93	
24	L	Nji Mbili, (Mbwawa) Kitonga - Msumbiji	Oct.22,'93	
25	L	NAFCO Ruvu Rice Farm	Apr.21,'93	-
26	L	Kwala (R/W junction)	Apr.28,'93	
27	L	Kwala - NAFCO Ruvu Rice Farm	Apr.28,'93	
28	L	Kwala (Lake Wongomori)	Oct.26,'93	
29	L	Nwembengozi, Dutumi	Oct.26,'93	
30	L	Utari Bridge (Ngerengere R.)	May 13,'93	•

THE STUDY OF WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN

SUMMARY OF FLOOD SURVEY (1/5)

Sr.No.	1		2		3		4		5		9	
	1 R	_	2 R		3 R		4 R		5 R		6 R	
Name of Interviewed	Nunge Salt Works	Works	Ali Abdallah		BIDP (Tsutsui, JICA)	sui,JICA)	Kivkoni Ferry	erry	Rajabu Ramadhani	adhani	Ramadhani A	L. Pori
Date of Interview	Apr.20,'93		Apr. 22, 1993	93	Apr. 22, 1993	93	Apr. 20, 1993	193	Apr.30,'93		Apr.30,'93	
Location Village Name	Ras Nunge, Bagamoyo	Bagamoyo	Serengete (B	(Bagamoyo)	Kikongoni (Bagamoyo)	Bagamoyo)	Kikongoni (Bagamoyo)	Bagamoyo)	Matimbwe (Low land)	Low land)	Matimbwe (Upland)	Upland)
Coordinate					6-28-42S	38-50-10E	6-28-50S	38-49-56E				
Main Activity of Interviewed	Salt producer	cer	Farmer		Experimental Farms	d Farms	Ferry Operation	ation	Farmer		Farmer	
Biggest Flood perceives			1979 Apr/May	ſay	1990 Apr.		1979 Apr/May, 1991	fay, 1991	1979+1993Apr/May	Apr/May	1961/Apr.1993	993
	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration
Inundation Paddy	,	1	10.1	1.01	0.50	I month	,	,	1-2m	1 month	2.00	9
Depth(m)/ Maize	*	•		1.0.1		ı	-	ı	•		•	•
Duration(days) Vegetables	-				*		•	1			•	1
	w/o flood	poot /m	w/o flood	m/ flood	w/o flood	poot /w	pooli o/w	m/ flood	w/o flood	pcotj /m	poot o/w	poot //w
Cultivation Paddy	-	-	1.01	1.01	8.00	8.00	-	ı	0.81	0.81	0.61	0.61
Area (ha) Maize	-	-		1.01	•		1	1,	•	0.81	1.01	1.62
Vegetables	ı				0.20	-	•	•	0.81	•		
Yield (t/ha) Paddy	-	•		00.0	3.76	00'0		,	1.20	2.23	2.41	0.00
without or Maize	-	_	3.70	4.26		•		ı		3.34	1.85	3.34
with Flood Vegetables	-	•					•			:		
	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit
Flood Damage Paddy			883		7,788		0		189		165	
or Benefit Maize	-	-		12,297		0		0		58,737		19,565
(in Tsh.) Vegetables		_										
Shelter/H.Holds	_	-	90009				0		18,000		15,000	
Total Damage/Benefits		0		-5,313		7,788		0		-39,949		-3,974
Production increase by Flood	1		10 - 15 %	70					10 - 15 %	%	10 - 15 %	20
Blocked Duration by Floods			09	60 days	30	30 days	end Apri - mid. June	nid. June	99		09	days
Prices Increase during Flood			15 %		1		*		15 %		15%	
	* no influence of Ruvu	e of Ruvu	* 50 peasants around		* established in 1988	in 1988	* inundation 1979-1.95	1979-1.95	* 300 peasants around	ts around	* 50 peasants around	around
Remarks	flood (out of Ruvu	٠	in flood plain(40ha)	Oha)	* irrigation by pump	dund f	* inundation 1991-1.17	1991-1.17			in flood plain(40ha)	n(40ha)
	catchment	,	* tractor tillage	: .	(Q = 800 lit/min.)	/min.)	* inundation 1993-0.7	1993-0.7			* tractor tillage	80
e de la constante de la companya de la constante de la constan	A THE RESEARCH TO SECURITION OF THE PARTY AND ADDRESS OF THE PARTY ANDR	CONTRACTOR DESCRIPTION OF THE PERSONS AND THE	I Sn. 22, 240		* tuture extend 1000a	ng 1000na	r Manual operation	eranon		THE RESIDENCE OF THE PARTY OF T	1 Sn.22,24U/na	na

Remarks:

1. I acres = 0.4047 ha, 1 bag = 75 kg, 1 bag/acres = 0.1853 ton/ha
2. Paddy cost up to transplanting; seed Tsh 760/ha, Tools Tsh.213/ha, and labor 65 man-day/ha
3. Rice Tsh.30,000/ton, Maize Tsh.30,000/ton

THE STUDY OF WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN

SUMMARY OF FLOOD SURVEY (2/5)

Sr.No.		7		×		ō		101		-		12	
				8 R		9 8	2	10 R	2	11		12.8	~
Name of Interviewed		Ronifasi Kavombo	T	NIWA Lower Russ Intal	r Ruvu Intal	Mayanon		K I Matambo	oqe	Muca Manldi	1 7	Abdallah Chanzi	yangi
Date of Interview		Apr.30.93	Γ	Apr 30.93	2	Apr. 30, 1993	33	May 10, 1993	93	May 10, 1993	993	May 19, 1993	33
Location Village	Village Name	Kongwa, NU	Kongwa, NUWA L. Ruv	Kongwa, B.	Bagamoyo	Chasimba, Bagamoyo	Sagamoyo	Mbwawa (malandizi)	nalandizi)	Mbwawa		Kwalaza (Daraiani)	raiani)
Coordinate	inate												
Main Activity of Interviewed	viewed	Farmer/NU	Farmer/NUWA Worker Water Sup	Water Supply	ply Intake	Farmer		Farmer & officer	ficer	farmer		farmer	
Biggest Flood perceives	es	1979+1993.Apr/May	Apr/May	1979/Apr.1	.1993	1979+1993Apr/May	Apr/May	1979+1993Apr/May	Apr/May	Apr. 79 & Apr/May'93	or/May'93	April 1986	
		Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration
Inundation Paddy		1-2m	I month	•	ı	1-2m	1 month	1-2m	1.5 months			1-2m	> 1 month
Depth(m)/ Maize		1			•	1							
Duration(days) Vegetables	ables	1	1	1		ļ	-						
		booff o/w	w/ flood	w/o flood	pootj /w	w/o flood	w/ flood	w/o flood	w/ flood	w/o flood	m/ flood	poog o/w	w/ flood
Cultivation Paddy		10.1	101		-			1.01	1.01	0.61	0.61	1.62	1.62
Area (ha) Maize		-	0.71	•	1	•	t		1.01		0.61		1.62
Vegetables	aples	-	okura	1	ı		t,						
Yield (t/ha) Paddy		2.78	2.23		-			4.6	0	4.63	Ō	4.63	0.46
without or Maize		-	1.04	•			1.		1.02		1.02	,	-
with Flood Vegetables	ables			-	,	•						okura/tomato	mato
		Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit
Flood Damage Paddy		985		0		0		686	1	594		1,577	
::	,		15,978		0		0		22,398		13,527		0
(in Tsh.) Vegetables	ables												
Shelter	Shelter/H.Holds	15,000		0				15,000		0		0	
Total Damage/Benefits	S		7		0		0		-6,414		-12,933		1,577
Production increase by Flood	Flood	20 %	%	•		15 %	%	10 %	%	10 %	%	20 %	%
Blocked Duration by Floods	-Toods	0 day	day	0	0 day	0	0 day	45	45 days	45	45 days	0	0 day
Prices Increase during Flood	Flood	10-15	2%			15 - 50	26	15 %	%	15 %	26	%0	2/2
		* peasant and NUWA	NUWA	* intake weir submerged	submerged			* 675 peasants around	ts around			* 375 peasants around	s around
Remarks		lower Ruvu worker	worker	by flood, pu	pump st.			* population 1,441	1,441		₩ ?~~ ₽ ?	* avg. 1.62 ha	
			,	submerged 65 cm by flood in 1979	5 cm by							* left bank upstream	Stream
1				177 TH DOOLY			ACCOUNTAGE OF THE PARTY OF THE					MULUEUR MU.DINES	C.Dilligo

Remarks:

 ^{1. 1} acres = 0.4047 ha, 1 bag = 75 kg, 1 bag/acres = 0.1853 ton/ha
 2. Paddy cost up to transplanting; seed Tsh 760/ha, Tools Tsh.213/ha, and labor 65 man-day/ha
 3. Rice Tsh.30,000/ton, Maize Tsh.30,000/ton

THE STUDY OF WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN

SUMMARY OF FLOOD SURVEY (3/5)

Sr.No.	13	14	15	16	17	18
	I 13 R		15 R	16 R	17 R	18 R
Name of Interviewed	NUWA Upper Ruvu	Agri. Sec.	Charles Matonya	Juma M. Digogo	Shabani Juma Mawine	Selemani Kinukire
Date of Interview	May 19, 1993	May 19, 1993	April 28, 1993	May 19, 1993	May 19, 1993	[- 1
Location Village Name	Kwalaza/Mlandezi	Kwalaza/Mlandezi	Ruvu Railway Station	Mafisi, near school	Mwanamsekwa (Mafisi)	1:
Coordinate				6-58-59 38-35-12	7-01-03 8-34-25	
Main Activity of Interviewed	Water supply intake	L 1	farmer	墁	farmer	farmer
Biggest Flood perceives	1971 Apr/1993 Apr/May		1989	Apr/May 1979	Apr/May 1979	Apr/May 1993
	Depth (m) Duration	n Depth (m) Duration	Depth (m) Duration	Depth (m) Duration	Depth (m) Duration	Depth (m) Duration
Inundation Paddy	-	- 0	1-2m > 7 days	-	L	╁_
Depth(m)/ Maize				H		╀
Duration(days) Vegetables		1				
	w/o flood w/ flood	W/o ft	m/o flood w/ flood	poot /w poot o/w	w/o flood w/ flood	pool /w pool o/w
Cultivation Paddy	-	4.86 4.86	2.83	ļ	-	_
Area (ha) Maize						
Vegetables		citrus	okura/maize			
Yield (t/ha) Paddy	-	4.86 4.86	3.71 0		1.02	3.71
without or Maize	•					
with Flood Vegetables	•					
	Damage Benefit	t Damage Benefit	Damage Benefit	Damage Benefit	Damage Benefit	Damage Benefit
nage	0]0	0	0	0	789
or Benefit Maize		0 0	0	0	0	_
(in Tsh.) Vegetables						
Shelter/H.Holds		0	0	3,000	4,500	0
Total Damage/Benefits		0 0	0	3,000		
Production increase by Flood	% 0	15 %	% 0	10 - 15 %	15 %	15 %
Blocked Duration by Floods	0 day	0 day	15 days	60 days	60 days	30 days
Prices Increase during Flood	%	% -	15 %	15 % %	20 %	20 %
	* no experience of	* school established		* 300 peasants around	* 180 peasants around	
Remarks	submerge of plant	1979 by Cuban assist				
		* experimental farm			:	
The second secon	The second secon	would migated				

Remarks:

1. l acres = 0.4047 ha, l bag = 75 kg, l bag/acres = 0.1853 ton/ha
 2. Paddy cost up to transplanting; seed Tsh 760/ha, Tools Tsh.213/ha, and labor 65 man-day/ha
 3. Rice Tsh.30,000/ton, Maize Tsh.30,000/ton

THE STUDY OF WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN

SUMMARY OF FLOOD SURVEY (4/5)

Name of Interviewed Mkadini Salt Works Date of Interview Oct. 25, 1993 Location Village Name Mkadini (Makurunge) Coordinate Akain Coordinate Abandant salt works Biggest Flood perceives Depth (m) Duration Inundation Paddy	2 Kiegezo April 23, e) Makuru farmer farmer 1990 Depth (m) > 3 m	1993 nge	21 L. Kiengez Mafumba Ape. 23, 1993		22 L Kanomba W Joseph		23 L Soidi Mlywambi	i,	24 1	
Mkadini Salt Oct. 25, 199; Mkadini (Ma d abandant salt Depth (m) w/o flood w/o flood	Kiegezo April 23, Makurun farmer 1990 Depth (m) > 3 m		Kiengez Mafum Ape. 23, 1993		Kanomba W Ioc	1	oid: Mlemon	14:		
Depth (m) Depth (m) W/o flood w/o flood Damage Damage Olds	April 23, Makurun farmer 1990 D Depth (m) > 3 m		Ape. 23, 1993		SALES AND THE PARTY OF THE PART	-	due iverwan	י ומי	Kichofi Rushil Ali	l Ali
d abandant salt Depth (m) w/o flood w/o flood Damage Damage Olds	<u> </u>		Mischingo		Oct. 27, 1993		Apr. 21, 1993	13	Oct. 27, 1993	13
d abandant salt Depth (m) w/o flood w/o flood Damage Olds	6	Duration	INTERNITING		Migude (Kitonga)		Kitonga		Njia Mbili,(Mbwawa)	(bwawa)
d abandant salt Depth (m) w/o flood w/o flood Damage Olds	6	Duration	6-28-42 S 38-49-12 E	19-12 E			6-37-26S	38-43-37E		6-28-42 S
Depth (m) w/o flood w/o flood Damage O		Duration	farmer		farmer		farmer		farmer	
w/o flood w/o flood Damage Odds		Duration	1990		Apr/May in 1992/93	/93	16/0661		Apr/May 19	1993
w/o flood w/o flood Damage O olds	- >3m		Depth (m) Du	Duration		Duration D	Depth (m)	Duration	Depth (m)	Duration
w/o flood w/o flood Damage Olds	•	>30days	1.2	month	<u> </u>	> 7 days	1.2	21 days	1<>2	>7
w/o flood				-			1.2	21 days		
w/o flood Damage Olds	1									
Damage 0	lood w/o flood	w/ flood	/w pool o/w	w/ flood	//w poolf o/w	w/flood v	w/o flood	w/ flood	w/o flood	w/ flood
Damage 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9.72	9.72	8.09	8.09	48.56	48.56	0.41	0.41	0.81	0.81
Damage 0		9.72		8.09			0.41	0.82		
Damage 0	.1									
Damage 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.70	5.56			2.78	3.71	1.48	O	1.48	1.85
Damage 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	_	2.78	2.78	3.71			0.74	96.0		
Damage 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			cabbage, okura, onion		pinaple, vegetable					
spio	Dan	Benefit	Damage B	Benefit	Damage Be	nefit	Damage	Benefit	Damage	Benefit
spio	9,462		7,876	-	50	· -	399		789	
splo	0	587,477		163,573		0		1,961		
splo		1								
	30,000						110,000			
	0	-548,014	t	-155,697		47,273		108,438		789
	30 %	%	3 %		20 %		% i	2/2	25 %	
The second secon	45	5 days	1 month	s	1.5 months	hs	2.1	2 months	2.1	2 months
Prices Increase during Flood - %	20	% O	no shop exist near by	r by	15 %		10 %	9/	20 %	2
* no activiti	ou		* ferry boat dose not		* 600 peasants around		* 60 peasants around	around	* comes down from	from
Remarks persons living			operate 15Apr-15May	*	cultivate by own		-		Mbwawa to cultivate	ultivate
					tractor, permanent				during rainy season	season

Remarks:

1. 1 acres = 0.4047 ha, 1 bag = 75 kg, 1 bag/acres = 0.1853 ton/ha
 2. Paddy cost up to transplanting; seed Tsh 760/ha, Tools Tsh.213/ha, and labor 65 man-day/ha
 3. Rice Tsh.30,000/ton, Maize Tsh.30,000/ton

THE STUDY OF WATER RESOURCES DEVELOPMENT IN THE RUVU RIVER BASIN

SUMMARY OF FLOOD SURVEY (5/5)

Sr.No.		25		26		27		28		29		30	
		25 L		26 L	,	7.L	L	28.1	T	29 I	7	Ngerengere Utari Bdg.	Itari Bdg.
Name of Interviewed	ewed	NAFCO RUVU RI	RICE FA	Ali Yahaya		Nasoro Ramdhani	dhani	Athuman Rajabu	ajabu	Salehe Shindilia	lilia	Ali Abdallah	
Date of Interview	'W	Apr. 21, 1993		Apr. 28, 1993	93	Apr. 28, 1993	93	Oct. 26, 1993)3	Oct. 26, 1993	13	May 13, 1993	3
Location	Village Name	Nguhi		Kwala		Kwala		Kwala		Nwembengozi, Dutumi	i, Dutumi	Nhgeze(Serengete B-Rutal	gete B-Rutz
	Coordinate	. :									1		
Main Activity of Interviewed	of Interviewed	national farm company	bany	Farmer		Farmer		Farmer		Farmer		Farmer	
Biggest Flood perceives	erceives	Apr/May 1979		1978/1979		6261/8261		Apr. 1993		Apr. 1993		Apr/May 1993	93
		Depth (m) Duration	_	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration	Depth (m)	Duration
Inundation	Paddy	00.00	0	<2	> 7 days	<2>		1-2	>7 days	1-2	2 months		
Depth(m)/	Maize	•										> 1.0	1 month
Duration(days) Vegetables	Vegetables	-											
		/M		w/o flood	w/ flood	poot o/m	w/ flood	poot o/w	poolJ /m	w/o flood	m/ flood	W/o flood	w/ flood
Cultivation	Paddy	725.00 7	725.00	3.71	5.56	18.0	0.81	0.81	0.81	0.81	0.81		
Area (ha)	Maize						0.81		0.81		0.81	10.1	10.1
	Vegetables	32.00	32.00										
<u> </u>	Paddy	725.00	725.00			3.24		3.76		3.7	4.45		
	Maize								0.37			3.71	0
with Flood	Vegetables	citrus, vegetables								tomato	:		tomato
		Damage Ben	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit	Damage	Benefit
Flood Damage Paddy	Paddy	705,788		5,413		682		789		682		0	
, ;=	Maize		0		0		0		6,516		30,000		0
(in Tsh.)	Vegetables												
	Shelter/H.Holds					10,000				8,000		5,000	
Total Damage/Benefits	Senefits	70	705,788		5,413		10,789		-5,727		-21,211		5,000
Production increase by Flood	ase by Flood	•		20 9	%	15 %	%	15 %	%	5	5 %	% OI	2/2
Blocked Duration by Floods	n by Floods	0 day			month		month	1	month	9	6 months	09	60 days
Prices Increase during Flood	luring Flood	•		40 %	2/2	50 - 10 %	%	20	20 %	% SI	%	20 %	2%
		* protected by flood		* 200 peasants around	s around	* 300 peasants around	ts around	* 200 peasants around	ts around	* 600 peasants around	ts around	* 300 peasants around	s around
Remarks		dike along the Ruvu	_	in flood plain(40ha)	1(40ba)			* pump for domestic	omestic	* tractor tillage Tsh.	ge Tsh.	* materials from	om.
		* Chinese assistance	ęs		:			water for Kwala /	wala /	19,800		Ngerengere/Chalinze	Chalinze
								Mwembongozi	gozi				

Remarks:

1. 1 acres = 0.4047 ha, 1 bag = 75 kg, 1 bag/acres = 0.1853 ton/ha
2. Paddy cost up to transplanting; seed Tsh 760/ha, Tools Tsh.213/ha, and labor 65 man-day/ha
3. Rice Tsh.30,000/ton, Maize Tsh.30,000/ton

DATA ON FLOOD DAMAGE

2. FIELD INTERVIEW SHEETS

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date	of Interview	Apr. 20 . 19	793	
Name	of Answerer	Nonge Shet	Factory	•
Name	of Village/District	Res. Nonge	Bagamoyo	
Loca	tion Longitude/Latitue	de		6
	3,	E#5#* PX****		=
A.	Annual Recurrent Flood As you are living in have little damage to you are farmers, you planting agro-produce flood.	a flood-pron the property are expect	e area, we presu or stocks. Rath ing better harve	er, if
a.	In that case, how muc	<u>h do you thi</u>	<u>nk you have bene</u>	fitted
	from the flood ?			
-		And the second second		
	Ans percer	nt more harve:	st than the ones w	ithout
	flood, on average	•		
b.	How many days during th	ne rainy seas	on are the roads	to the
	main roads, school, hos			
	average ?			
	Ans days of	on average.	· -	
			:	
Ċ.	How much the price of d	ailv necessit	ies like salt. oi	l etc.
	go up during the road !			
			·	
	Ans percer	nt higher tha	n usual.	
В.	Unexpected (Unprepared) Flood, e.a	. either Unusual	lv Bia
	Scale or Unseasonal Flo			- - - - -
a.	When did one take place	e ?		
	No. Year Month	Days	Q _{max} at 1H8	

No.	Year	Month	Days	Q_{max}	at 1H8	
1.	1979	Apr/May		2,901	m3/s	
2.	1984	May			m3/s	-
3.	1986	Apr.		515	m3/s	
4.	1989				•	
5.						

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and

exit of colchwent - so influence of absormal tide!

	WATER RESOURCES DEVELOPMENT STUDY IN THE RUVU RIVER BASIN
Dear	Residents. Ali Abdallah (peasant) of sevengete B. (Rutali Residents and Abdallah (peasant) of sevengete B. (Rutali geogn-nt pop 300
sub:	FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN Overeye over pot
A.	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
a.	In that case, how much do you think you have benefitted from the flood?
	Ans. 10-15 % percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?
·	Ans. 60 days on average. Transport by foot, bicycle & Book
c.	How much the price of daily necessities like salt, oil etc. go up during the road block by flood ?
	Ans. 15 % percent higher than usual.
	Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood,
a.	When did one take place? 1979 Aptillay
•	No. Year Month Days Q _{sat} at 1H8

No.	Year	Month Days	Q _{sax} at 1H8
1.	1962		1,040 m3/s
2.	1963		1,177 m3/s
З.	1964		934 m3/s
4.	1968	Apr	975 m3/s
5.	1974	May	513 m3/s
6.	1979	Apr/May	2,901 m3/s
7.	1984	Мау	604 m3/s
8.	1986	Apr.	515 m3/s

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields:
 Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

		Area		Inui (cm)			emibes)	itation :m)
1 tem	Туре	1n: (m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete			•			1 gr		
House	Block								
	Wooden V	3.14			V				
Household Articles (T.Shs)					15h.	60	00Z		
	Facilities								
Agricultural	Implements	•	hoes, Bush to millet, muize			nide	dec		
in T.Shs	Stocks			mi	ust,	mutz	9	*,	•
	Facilities							***	• . • .
Fishing *	Implements				. /	/			
in T.Shs	Stocks								

* including fish culture

normally no household loss, because when there are signs of floods poasant shift to higher safer points.

FORMAT - B

mud huts have the mud removed by

Cropp	Area	Depth	': Int	ındatio	on (day	7)	Buried in
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments
Paddy							
Cassava							
Beans							
Greens			-				
Pineapple							
Others							

maize 21/2 arres

V invidetion for more Than 21 days.

average yield: 20 bags fact. maire

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date	of Interview Apr. 22, 19/3
Name	of Answerer Bornoyo Krigation Devolopment Devoct (MIR. Sutsul
Name	of Interview of Answerer Sopration Development Project (Mr. Tsutru) of Village/District Sopration Development Project (Mr. Tsutru) tion Longitude/Latitude 100 100 100 100 100 100 100 100 100 10
Loca	
	operation from 1988, mini-project of sich from 1990
A.	Annual Recurrent Flood of Usual Scale
	As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if
	you are farmers, you are expecting better harvest by
	planting agro-produce on the new sediment brought by the
	flood.
a.	In that case, how much do you think you have benefitted
	from the flood ?
	Ans percent more harvest than the ones without
	flood, on average.
	Troot, on average.
b.	How many days during the rainy season are the roads to the
	main roads, school, hospital etc. blocked by the floods on
	average ?
	Ans days on average.
c.	How much the price of daily necessities like salt, oil etc.
	go up during the road block by flood?
	Ans percent higher than usual.
В.	Unexpected (Unprepared) Flood, e.g. either Unusually Big
	Scale or Unseasonal Flood.
	When did one water alone o
a.	When did one take place ?

No.	Year	Month	Days	Q_{max}	at 1H	8	Inundation
1.	1979	Apr/May		2,901	m3/s		
2.	1984	May			m3/s		
3.	1986	Apr.			m3/s		
4.	1 989 /9	90 Apr.					I 50 cm
5.	1992	April 141	7				I/00m

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

Mark Miles and Mark to the state of property and the state of the stat		Area			dation cm)	1996	Apr	Sedimen	itation :m)
I tem	Type	1n (m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete								:
House	Block								
	Wooden								
Household Ar	ticles (T.8	he)							
	Facilities								
Agricultural	Implements								
in T.Sha	Stocks						:		:
	Facilities								
Flahing * in T.Sha	Implements								
	Stocks								

* including fish culture

. Average yield without flood		ield/acreage 2.96 for/ha 3.76 tan/ka
Average Yield after flood	Today	5.8 (990)

FORMAT - B

	Area	Depth	In	undatic	n (da	y)	Burled	
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments	
Paddy	8.0	50						199
Cassava	7-7							
Beans					,			
Greens								
Pineapple								
Others, Vege/oblos.	0.2							

- projected by pump 800 /min =

- future extension 1,000 ha.

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Name	of Interview of Answerer of Village/District <u>Firkoni</u> (<u>Kikongoni</u>) Ferny Opondor tion Longitude/Latitude <u>6-28-508</u> / <u>38-49-66</u> E
A.	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
a.	In that case, how much do you think you have benefitted from the flood ?
	Ans. percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average? **Forty Operation suspended about 2 months
	Ans days on average. Letwan April - Jone because farry opened by manual trapid floor
c.	How much the price of daily necessities like salt, oil etc. go up during the road block by flood?
	Ans percent higher than usual.
В.	Unexpected (Unprepared) Flood, e.g. either Unusually Big

- - a. When did one take place ?

	No.	Year	Month	Days	Q _{max} at 1H8	Inundation from road
<u>.</u>	(1) 2.	1979 1984	Apr/May May			1,95 m
	3.	1986 1989	Apr.		515 m3/s	- 1.17
	(5)	1993	opr. /may		1992 —	_ 0.70

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

TSA.

Dear Residents	,
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SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview	Kpr. 30,		T , 7
Name of Answerer	Pensant (Rajabu Ramadhani	
Name of Village/District	Matimbwa/	Baganicyo District	70p 250)
Location Longitude/Alti	tude –	S / _	E

- Α. Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?

20% percent more harvest than the ones without Ans. flood, on average.

- b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on Ans. Mil. Triver banks for forming. Connected with almost days on average. all weather tread to Morogoro Highwa an earthroad however culverted."

 c. How much the price of daily necessities like salt, oil etc. average ?
- go up during the road block by flood ?

Ans. 20 - 50 % percent higher than usual.

- В. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place? 1979 + 1993 Apro/May.

No.	Year	Month	Days	Q _{RRI} at 1H8
1.	1979	Apr/May		2,901 m3/s
2.	1984	May		604 m3/s
3.	1986	Apr.		515 m3/s
4.	1989			
5.	1993	Apr		?

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

		Area in	Inundation Sedimentation (cm) (cm)								
Item	Type	(m2)	-49	50-99	100-199	200-299	300-	-49	50-		
	F-Concrete										
House	Block									1 71 15000	
	Wooden				V					est. at 130	
Household Ar	ticles (T.S)	18)	B	acket	(-5 of CO	oka'ng	read	1 319 md	ensits	est. at 7sh. 15,000 est. 15,000 = Tsh.	
	Facilities		-		·				1		
Agricultural	Implements		ho	es, 1	3.457 k	mite.	ete.			est at 3,000 Ts.	
in T.Shs	Stocks							· · · · · · · · · · · · · · · · · · ·			
	Facilities										
Fishing * in T.Shs	Implements		•								
	Stocks										

* including fish culture

Average yield without flood	Crop paddy	Yield/acreage 4 - 9 bags/acre
Average Yield after flood	paddy	9-15 bags Jacre.

FORMAT - B

Cuana	Crops	Area	Depth	Inundation (day) Buried				
CTOPS	acre (ha)	(cm)	1-2	3-4	5-6	7-	in Sediments	
Paddy	2.		-					For the long rain season Feb - July.
Cassava								Senson.
Beans	1				;			Afterflood crop.
Greens	1		-					May - August.
Pineapple	:							
Others								- -

Maiz (

totally 100 acress

WATER RESOURCES DEVELOPMENT STUDY
IN THE RUVU RIVER BASIN

Dear Residents,

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview
Name of Answerer
Name of Village/District

Apr. 30 93
Romadhani Ali Por

Location Longitude/Altitude 5/ E

A. Annual Recurrent Flood of Usual Scale
As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.

a. In that case, how much do you think you have benefitted from the flood?

Ans. percent more harvest than the ones without flood, on average.

b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. ____ days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. _____ percent higher than usual.

B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.

a. When did one take place ?

	1 1		pagest	and Simu	bu to	flood 1
No.	Year	Month	Days	Q	at 1H8	
1. 2. 3.	1979 1984 1986	Apr/May May Apr.	: :		m3/s m3/s m3/s	
<u>(5)</u> .	1989 1993	Apr.				

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- C. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

		Area in			Sedimentation (cm)				
I tem	Туре	(m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete	\	/			J gol	N		
House	Block	1	95		1 Duch				
	Wooden	\mathbf{W}_{c}	048		TOWN	111000			T-T-1
Household Ar	ticles (T. St	10,1		-	4		· ·	I	
Agricultural	Facilities								
	Implements								
	8tocks		7						
Fishing *	Facilities				· ·				
	Implements							· · · · · · · ·	
	Stocks								

including fish culture

Average 3	yield wi	thout f	lood	Pao	bly		1/acreage /3 Mags/ac 5 bags/ac	crope small drought
Average Y		dopen	do or			wing	Slowing ald	period
OMMAI - B	Area	4 ac		<i>nor</i>			1/2 acress	then year play to
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	Buried in Sediments	trouble a
Paddy	1,5 acre	2.71						d. 9,000/on
Cassava				1				~ अमा
Beans								
Greens								
Pineapple								
Others					,			



Dear Residents,

В.

	FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN
Name	of Interview of Answerer Of Village/District \[\frac{30 \interview}{\mathreal{Person}} \frac{\mathreal{Person}}{\mathreal{Person}} \frac{1993}{\mathreal{Vuma}} \frac{\mathreal{HR}}{\mathreal{Vuma}} \frac{\mathreal{Vuma}}{\mathreal{Vuma}} \frace
A.	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
а.	In that case, how much do you think you have benefitted from the flood? Ans. 2607. percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the

b.	How many day	ys during the rainy season are the roads to the
	main roads,	school, hospital etc. blocked by the floods on
	average ?	accessible throughout ducto NOWA.
	Ans. mil.	days on average.

- C. How much the price of daily necessities like salt, oil etc.

 go up during the road block by flood? Village business men

 Ans. 15 15 70 percent higher than usual.

 pay higher for dranspul

 to and shift the same

 to and consumers.

 Unexpected (Unprepared) Flood, e.g. either Unusually Big
- a. When did one take place? 1979 v 1997 Aprilloy.

Scale or Unseasonal Flood.

No.	Year	Month	Days	Qmax	at 1H8
1.	1979	Apr/May		2,901	m3/s
2.	1984	May		604	m3/s
3.	1986	Apr.	4	515	m3/s
4.	1989	-			•
5.	1993	Apr.	•		

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

Type Concrete ock oden	in (m2)	-49	50-99	100-199	200-299	300-	-49	50-	
ock oden					:				
ođen					t				
			ì						
									storey huts 78h1
les (T.5)	18)			:					Valued at
cilities									
plements									
ocks									
cilities									when these a signif that flood is comi
plements									signing that
ocks				· .			:		1/000 is comi
oc ci pl	cks lities ements	ks lities ements	ks lities ements	cks lities ements cks					

Crop Yield/acreage Average Yield after flood

FORMAT - B

	Area	Depth	In	undati	on (day	y)	Buried	
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments	
Paddy	2.5					/		no yield then
Cassava		·						
Beans 🗸								
Greens 🗸								·
Pineapple		:					1	
Others								

Maize Okrafl for short May-Augt rains.

of Sept - Dec. second short rains, before start of circle.

vely, to most Bagemayo willages and Baged pade III-18

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Name Name	of Interview Apr. 30,1915 of Answerer of Village/District Longwa, Basomoro tion Longitude/Latitude S/ E
	completed 1978,
	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
a.	In that case, how much do you think you have benefitted from the flood ?
	Ans percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the
	main roads, school, hospital etc. blocked by the floods on average ?
	Ans days on average.
C.	How much the price of daily necessities like salt, oil etc. go up during the road block by flood ?
	Ans percent higher than usual.
в.	Unexpected (Unprepared) Flood, e.g. either Unusually Big

Scale or Unseasonal Flood.

a. When did one take place ?

No.	Year	Month	Days	Q_{max}	at 1H8	at Inlake Pumping Sto
1. 2.	1979 1984	Apr/May May		2,901 604	m3/s m3/s	+ 650 above floor
3.	1986 1989	Apr.			m3/s	
4. 5.	1989	April 25				-0,80 m bolow floor

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields:
 Please fill in the attached FORMAT B. with ticks, words and
 figures.

* Intoke werr & intake structure was submanged by big flood * no influence of intake pump separation during plood

(3)

WATER RESOURCES DEVELOPMENT STUDY IN THE RUVU RIVER BASIN

Dear Residents,

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?

Ans. 13 7 percent more harvest than the ones without flood, on average.

- b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

 Because of Kongove Rd. Also wise the hoad

 Ans. mil. days on average. withinthe hing taking rainy starn, in any starn, in any starn,
 - c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. 15-50% percent higher than usual. Ine transport of true of the percent beauty only 4 wheel vehicles

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big are operational Scale or Unseasonal Flood.
 - a. When did one take place ? /779 + 1993 Afr/May

No.	Year	Month	Days	Q _{max}	at 1H8	.
1.	1979	Apr/May		2,901	m3/s	
2.	1984	May			m3/s	+ 1
3.	1986	Apr.			m3/s	1
4.	1989	 /1			, _	* .
5.	1993	Aps.		ı		

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.



FORMAT - A

		Area in		Inui (Sedimentation (cm)				
Item	Type	(m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete								
Rouse	Block								
	Wooden								
Household Art	ticles (T.S	16)							
	Facilities						:		
Agricultural	implements					:"			
in T.Shs	Stocks								
	Facilities								
Fishing *	Implements								
in T.Sha	Stocks								

* including fish culture

		• • • •		Crop	Yield/acreage		
average	Arera	WITRO	it flood				
. 1							
100	4	* *					
Average	Yield	after	flood		4-1-1-1		

FORMAT - B

	Area	Depth	Inı	ındati	Buried		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments
Paddy							
Cassava							
Beans							
Greens						·	
Pineapple		:				-	
Others							

D0.25	Pogido	n tra		•			
Dear	Reside	uts,					
					RIVER BASIN		
Date Name Name Loca	of Inte of Ansi of Vill tion 1	erview werer lage/Dis Longitud	Mr. Mr. strict M le/Altitud	May 19 K.J. May Ibwawa Be	gz fambo (Peasa (Mlandizt S /	nt+Village) E	secretary)
A.	As you have lyou ar	are li ittle d e farm	amage to ers, you	a flood-y the prop are exp	Scale prone area, werty or stock pecting bette ew sediment b	e presume s. Rather r harvest	by 7.675
a.	In that from the	t <u>case,</u> ne flood	how much	do you	think you ha	ve benefi	tted
	Ans. $\frac{1}{f}$	/0°/0 lood, or	percen average.	t more ha	rvest than th	e ones witl	hout
b.	How man	y days	during th	e rainy :	season are the	roads to	the
	main ro	ade er	hool boe	nital of	hincked by	the floods	2 00
	Ans/	1/12 mes	sants leav	e on hig ultivat n averag	ther land are 16th during 16th during 16th signs of 1 months like s	rainy seas	to The plains so n. When noted they
c.	How muc	h the p	rice of da	ily nece	ssities like s	shiff indestalt. oil e	riger sed good
	go up c	luring t	he road b	lock by	flood ?	e d by	places
	Ans.	15%	percen_	suppli t higher	flood? Sace cans than usual.	icycle f	rom 1 etc.
в.	Unexped	cted (Un	prepared)	Flood.	e.g. either rd ing to in sood in	Unusually	Bio
a.	When di	d one t	ake place		this yr. (19	93 Apr.)
		· · · · · · · · · · · · · · · · · · ·					
	No.	Year	Month	Days	Q _{max} at 1H	18 ————	
	1.	1979	Apr/May		2,901 m3/s		
	2.	1984	May	-	604 m3/s		
	3.	1986	Apr.		515 m3/s		
	4.	1989	.A				
	5.	1993	Apr.				Annual Control of the

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A, with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

		Area		Inui (Sedimentation (cm)				
Item	Type	in (m2)		-49 50-99 1	100-199	200-299	300-	-49	50
	F-Concrete								
House	Block								
	Wooden				V				
Household Ar	icles (T.8)	18)	3.	uk.	c+5,00	oking	4000	iny u	densil
	Facilities								
Agricultural	Implements		Lio	-(5,	bush	knif	ζ.		
in T.Shs	Stocks								
	Facilities								
Fishing *	Implements								
in T.Shs	Stocks	:·							

of wooders of grass that ched when caught unaware less of up to 75h./5,000, of utensils and but damage expected.

Normally no loss

* including fish culture

Average yield without flood	Crop	Yield/acreage
sverage yield without 11004	odddy	25 bag/aire. (maize 56095/aire
	/	56a95/acce
Average Yield after flood		during short tains sept-
Like for this	yr. w.	hen floods Dec.
FORMAT - B ore big >	76 Frice	- yield expected.

0	Area	Depth	In	undatio	Buried in		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments
Paddy	242			·		V	·
Cassava							
Beans						·	
Greens							
Pineapple		:					
Others					·		

Dear Residents,

flood.

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview Name of Answerer Name of Village/District Mbwawa

Longitude/Altitude Location

A. Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the

a. In that case, how much do you think you have benefitted from the flood ?

Ans. / percent more harvest than the ones without flood, on average.

b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. Me merins days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

15.70. My percent higher than usual.

- В. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

1971. Aps.

No.	Year	Month	Days	Q _{max}	at 1H8	
1.	1979	Apr/May		2,901	m3/s	
2.	1984	May			a\Em	:
3.	1986	Apr.			m3/s	
4.	1989	-			•	
5.	1993	Ap8 1				

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

		Area		Inu (Sedimentation (cm)			
Item		in (m2)	-49	50-99	100-199	200-299	300~	-49	50-
	F-Concrete								
Rouse	Block								
	Wooden								
Household Ar	ticles (T.S	ns)						ر	
	Facilities								
Agricultural	Implements								
in T.Shs	Stocks								
	Facilities			*.					
Fishing *	Implements				•		· · · · · · ·		
in T.Shs	Stocks						•		

* including fish culture

Average yield without flood	Crop	Yield/acreage	
en en en familieren er en	WE Polly	28 bogsfaces.	
Average Yield after flood			
		mai2	5 bags laws.

FORMAT - B

Carra	Area	Depth	In	ındati	Buried in		
Crops	(ha)	(cm)	1-2	3-4	5-6	7	Sediments
Paddy						V	
Cassava					·		
Beans							·
Greens							
Pineapple						·	
Others							

ing 1/2 m.
investadion
for weeks.
no crop
ex greek col Thes.

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date	\mathbf{of}	Interview	May 19, 1993	:
Name	of	Answerer	Abdallah Chenzi	
Name	of	Village/District	tualaga (Daraphi) (oposit of NUV	(מינומן לי דיע
Locat	ioi	Longitude/Lati	tude S / E	

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?

Ans. 20% percent more harvest than the ones without flood, on average.

- c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. Wil * percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

No.	Year	Month	Days	Q_{max}	at 1H8
1.	1979	Apr/May		2,901	m3/s
2-	1984	May	*		m3/s
(\mathfrak{G})) 1986	Apr.			m3/s
4.	1989	-		4	•
5.					
				2	

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

around Here, 375 formers awage over more than 4 acre

III-26

FORMAT - A

	Area		Inundation (cm)					Sedimentation (cm)	
Item	Туре	1n (m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete								: :
House	Block								
	Wooden	4m2			V				
Household Art	ticles (T.8)	h s)							
	Facilities								
Agricultural	Implements								
in T.Shs	8tocks								•
	Facilities								
Fishing *	Implements					1	:		
in T.Shs	Stocks								

* including fish culture

no house hold I stock loss since peasant shift le higher points.

FORMAT - B

Area		Depth	Ini	undati	on (day	y)-,	Buried	
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments	
Paddy	4 acre							inundatio
Cassava								tovalmost
Beans						, <u> </u>		minth.
Greens								more It.
Pineapple								90%001
Others								crop spo
ra mai	ny I	Bed -	for	ton An	~elo.	es :	flooded	+spoiled by

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of	Interview	M	ey 19,198	5		
Name of	Answerer	NOW	A UPPOR	RUVU	latake	
Name of	Village/District	×u	1029			
Location	Longitude/Lati	tude		S /		E
	- · ·				-	
	• '					

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?

Ans. percent more harvest than the ones without flood, on average.

b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. ____ days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. ____ percent higher than usual.

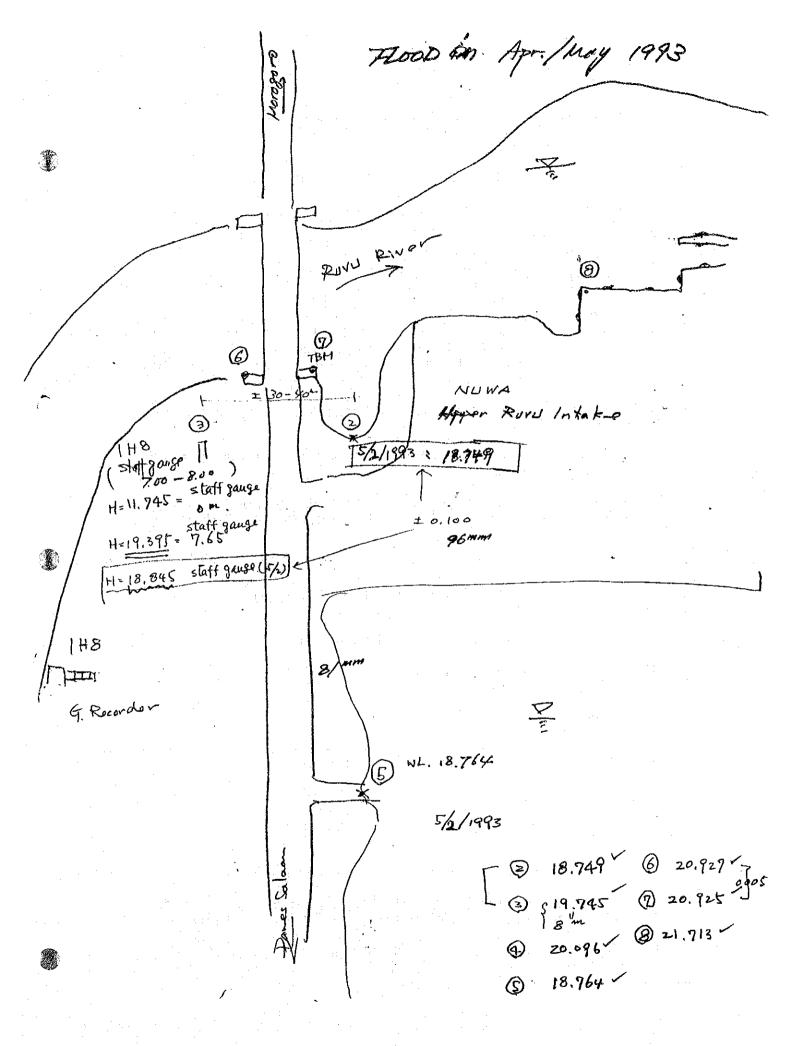
- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

No.	Year	Month	Days	Q_{max}	at 1H8	3
1.	1979	Apr/May		2,901	m3/s	
2.	1984	May			m3/s	÷
3.	1986	Apr.			m3/s	
4.	1989	-		- ;; -		
5.						

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A, with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields:
 Please fill in the attached FORMAT B. with ticks, words and figures.

* All intake / prefucation facilities were nower submorged by previous floods.

EL of intake side wall crost is 21.7 m which is higher than Bridge.



FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date	of Interview of Answerer of Village/District food moster of Yuri Agr. Sec. School of Village/District food moster of Yuri Agr. Sec. School tion Longitude/Latitude S Exp. form foo 50 acres but only 12 acres is cultivated borsoned medinery fromble (established under to acsistance of Oute) Annual Recurrent Flood of Usual Scale
Name	of Answerer Hadd master of Your Apr. Sec. School
Name	of Village/District Localo 19 / Mlanders
Loca	tion Longitude/Latitude S / E
į.	Exp. your Ros to acres but only 12 peros is cultivated borning
	mol read trouble Intelligent was to acceptance of
n '	Annual Recurrent Flood of Heural Scale
** •	As you are living in a flood-prone area, we presume you
	have little damage to the property or stocks. Rather, if
	you are farmers, you are expecting better harvest by
	planting agro-produce on the new sediment brought by the
	flood.
a.	In that case, how much do you think you have benefitted
	from the flood ?
	Ans. /5 percent more harvest than the ones without
	flood, on average.
b.	How many days during the rainy season are the roads to the
	main roads, school, hospital etc. blocked by the floods on
	average ?
	And Will days on avenage & foreston days The Morston
	Ans. Ni/ days on average. * locates dong the Mengron - Day read.
	- Day react.
c.	How much the price of daily necessities like salt, oil etc.
	go up during the road block by flood ?
	Ans. $N:/*$ percent higher than usual.
	Ans percent higher than usual.
_	
в.	Unexpected (Unprepared) Flood, e.g. either Unusually Big
	Scale or Unseasonal Flood.
a.	When did one take place ?

No.	Year	Month	Days	Q _{max} at 1H8
3. 4. 5.	1979 1984 1986 1989	Apr/May May Apr.		2,901 m3/s 604 m3/s 515 m3/s

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields:
 Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT -

		Area	Inundation (cm)					Gedimentation (cm)		
Item	Type	113 (m2)	-49	50-99	100-199	200-299	300-	-49	50-	
House	F-Concrete		.:						_	
	Block			14/						
	Nooden									
Household Ar	ticles (T.8	hs)								
	Facilities									
Agricultural	Implements									
in T.She	Stocks								•	
	Facilities								•	
Fishing •	Implements									
in T.She	Stocks									

The school started around 1979. and Since Then There is no record of heal damage from floods.

Howe ver in 1985 + 89

aren flooded with flood caused by from the

area around Dar not from Hor. as This

moloss LN Thisy, since torm on higher area. No irrigation tacilities, though

such faulities could suppliment train ded cultivation

* including fish culture

FORMAT - B

G	Area	Depth	Int	Inundation (day)			Burled		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments		
Paddy 🗸	12acr	۴.							
Cassava									
Beans									
Greens									
Pineapple									
Others									

citrus plants orange etc.

Dear	Residents,	
SUB:	FLOOD DAMAGE SURVEY IN THE RUVU I	RIVER BASIN
Date Name Name Loca	e of Interview e of Answerer e of Village/District Ruvu Antion Longitude/Altitude	3 (Mr. Charles Matenya) Pailway Stanoni (pep 500) S/E
A.	Annual Recurrent Flood of Usual S As you are living in a flood-pr have little damage to the proper you are farmers, you are expe planting agro-produce on the new flood.	one area, we presume you ty or stocks. Rather, if cting better harvest by
a.	In that case, how much do you t from the flood ?	hink you have benefitted
. ·	Ans. percent more har flood, on average.	vest than the ones without
b.	How many days during the rainy se main roads, school, hospital etc. average?	ason are the roads to the blocked by the floods on
	Ans. 15 days on average.	
c.	How much the price of daily necess go up during the road block by fl	ities like salt, oil etc.
	Ans. 15% percent higher t	han usual.
В.	Unexpected (Unprepared) Flood, e Scale or Unseasonal Flood.	_
a.	When did one take place? 1989	en de la companya de La companya de la co
	No. Year Month Days	Q _{max} at 1H8
	1. 1979 Apr/May 2. 1984 May 3. 1986 Apr	2,901 m3/s 604 m3/s 515 m3/s
	3. 1986 Apr.	717 M1/8

b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.

4.

5.

1989

c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

Item	Are		Inundation (cm)					Sedimentation (cm)	
	Туре	in (m2)	-49	50-99	100-199	200-299	300~	-49	50-
	F-Concrete								
House	Block								
	Wooden				V				
Household Ar	ticles (T.S)	18)		<u> </u>		<u> </u>			
3 - 1 - 2 1	Facilities				V		-,-,-,-,-,-,-,		
Agricultural	Implements								
in T.Shs	Stocks						·· · · · · · · · · · · · · · · · · · ·		
	Facilities							· · · · · · · · · · · · · · · · · · ·	
Fishing * in T.Shs	Implements								
	Stocks								

no less of city of	
CIA(216) (6.	
Because	
Storey hut	4
tshifting	
tshifting to sky value	′
points.	

* including fish culture

Average yield without flood	Crop	Yield/acreage
	paddy	20 bays lacre.
Average Yield after flood		***

FORMAT - B

Crops	Area	Depth	In	undati	Buried			
Clops	(ha)	(cm)	1-2	3-4	5-6	7	in Sediments	
Paddy	1							
Cassava		•						
Beans								
Greens								
Pineapple								
Others					,			

Okra, maize for short Rains.

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of	Interview	May 19,	1993		Local Government
Name of	Answerer	Juma 1	4. Digogo :	forms	Winds
Name of	Village/District	Mafisi	near elementar	1 salar	oficer
Location	n Longitude/Lati	tude/ 6-6	8-59 S / 38	-35-/2 E	toria de la compansión de La compansión de la compa

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood ?
 - Ans. /5 % percent more harvest than the ones without flood, on average.
- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

No.	Year	Month	Days	Q_{max}	at 1H8	
(D)	1979	Apr/May		2,901	m3/s	
<u> </u>	1984	May			m3/s	
3.	1986	Apr.			m3/s	
4.	1989				. •	
5.						

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

	·	Area		Inui (Sedime	ntation cm)			
Item	Туре	1n (m2)	-49	50-99	100-199	200-299	300-	-49	. 50-
	F-Concrete								
llouse	Block								
	Nooden /					V			
Household Ar	ticles (T.Si	ne)				·			
	Facilities		·						
Agricultural	Implements								
in T.Shs	Stocks							12. 44	
Fishing *	Facilities								
	Implements								
in T.8hs	Stocks								

* including fish culture

cost of hut (dungu)

shift from
small hats
when floods
are imminer
hence no loss
of house hold
Lete. other
Than small
damage to hat

FORMAT - B

	Area	Depth	Inv	indatio	Buried in		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments
Paddy //						/	· · · · · · · · · · · · · · · · · · ·
Cassava							
Beans		-					
Greens							
Pineapple							
Others			19. 14.				

mys to 30 day

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of	Interview	May 19.	1993	÷	
	Answerer	Shabani	JUMa.	MOWIN-	e
Name of	Village/District	MWangus	P KNA (" Molisi	·* •)
Location	Longitude/Lati	tude	1-03 S	1 38-	16-25 E
		total peasar			•

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?
 - Ans. _______ percent more harvest than the ones without flood, on average.
 - b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?
 - Ans. 60 % days on average.
 - c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?
 - Ans. 20 % percent higher than usual.
- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

No.	Year	Month	Days	Q_{max}	at 1H8	
(1) 2: 3: 4:	1979 1984 1986 1989	Apr/May May Apr.			m3/s m3/s m3/s	
5.						

- b. <u>Damage to the properties, movables and stocks: Please fill</u> in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields:
 Please fill in the attached FORMAT B. with ticks, words and figures.

•	Туре	Area		Inui (Sedimentation (cm)			
1tem		in (m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete								Š.
llouse	Block								
:	Nooden 🗸					V			
Household Ar	ticles (T.8	hs)							
	Facilities				: '			1 +	
Agricultural	Implements				/	/.			
in T.Shs	Stocks		• .						:
	Facilities				1				•
Fishing *	Implements								
in T.She	Stocks								

mormal cost for hout Thus soi

no loss to property. however The mud and grass huts have to get minsk mud + grass repair

Food crop for village use repair.

only since tronsport

-B to Mkt is far and at time inaccessible

0	Area	Depth	In	undati	Buried			
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments	
Paddy /	,					V		
Cassava								
Beans						***********		
Greens								
Pineapple					. : :			
Others								

yield 5-6 bagglacre of paddy.

Dear Residents.

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview

Name of Answerer

Name of Village/District Himara Misale

Location Longitude/Altitude

26th Oct. 1993

Kimara Misale

(Kimara misale)

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?
 - Ans. 15 co percent more harvest than the ones without flood, on average.
 - b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. a 746717 days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. $\frac{20/t}{20}$ percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

No.	Year	Month	Days	Q _{max}	at 1118	
1.	1979	Apr/May		2,901	m3/s	
2.	1984	May	*		m3/s	
3.	1986	Apr.			m3/s	
4.	1989	-	•		, _	
5.	1993	Apr.				

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A, with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

The former rulhvaled basies

FORMAT - A

		ania ni	Inundation (cm)						ntation cm)	
Item	Type	(m2)	~49	50-99	100-199	200-299	300-	-49	50-	
	F-Concrete									
House	Block									·
	Hooden				7					
Household Ar	ticles (T.S	hs)			B					
31141	Facilities									
Agricultural in T.8hs	implements	:					·	——————————————————————————————————————		
111 1.005	Stocke			:		**************************************	**************************************			house hold
M-1.1	Facilities								*********	while mound to
Fishing .	Implementa									radel liches
in T.She	Stocks						-	<u> </u>		2
* incl	uding fish	cul tu	10							point when
. Avera	ge yield :	w1th	: out f	lood	Cr	o p	Yie	ld/acre	age	so fer higher point when
			po	ddy	- MANA	MAN	200	ragsla	cre	to movable proper
Avera	ge Yield	afte	r flo	ođ	Pas	Ly.	2#6	ags for	cri.	TO THE WAY

FORMAT - B

Crops	Area	Depth	In	ndatio	Buried		
	(ha)		1-2	3-4	5-6	7-	in Sediments
Paddy	2acre					V	
Cassava							
Beans							
Greens							
Pineapple							
Others							

After the floods in July the fields were plented with other types of crops ag. muize to mators promotes porukins, sugar conf. hor vesting 6-8 bags of muize per acco.

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Name Name	of Interview of Answerer of Village/District Mkadini Jalt works tion Longitude/Latitude S/ E
	100 Longitude/Latitude S/ E
A.	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood. The property of the property of stocks and the property of stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
a.	In that case, how much do you think you have benefitted from the flood?
	Ans percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average ?
	Ans days on average.
c.	How much the price of daily necessities like salt, oil etc. go up during the road block by flood ?
	Ans percent higher than usual.
В.	Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
a.	When did one take place ?
	No. Year Month Days Qmax at 1H8
	1. 1979 Apr/May 2,901 m3/s 2. 1984 May 604 m3/s 3. 1986 Apr. 515 m3/s 4. 1989

b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.

5.

c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

SUB:	FLOOD DAMAGE					
Date	of Interview	•	23 Apr/	1993	$(M \times M)$	

Name of Answerer

Peasant (Mr. Ki e gezo)

Name of Village/District

Makurunge

(Peasant popilso)

Location

Longitude/Altitude

S / E

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. <u>In that case, how much do you think you have benefitted from the flood</u>?

Ans. $\frac{30\%6}{\text{flood, on average.}}$ percent more harvest than the ones without

b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. 45 days on average.

Dear Residents,

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. 50% percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place? 1990 (No crop this seasen)

	1.1		* ·	however	good maire
No.	Year	Month	Days	Q _{max} at 1H8	yeld during
1.	1979	Apr/May		2,901 m3/s	Shorted
2.	1984	May	and the second	604 m3/s	Some year
3.	1986	Apr.	•	515 m3/s	20 / 1/ 1/ 1/
4.	1989	=			
5.			-		

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

ype oncrete ck den es (T.Sh	in (m2)	-49	50-99	100-199	200-299	300-	-49	50-	hut estimate
ck den es (T.Shi	5)								at 76%, 30,0
den Es (T.Sha	5)								
es (T.Sh	5)	,							and the second second
	5)					V			When flood
111+1==								L	is big. eg 1
******			***						Jes Did I
lements									loss of hou
cke					· · ·	-			huld avoi
lities				/					
lements					····		`		by shifting
:ks					:	1			higher poi
fish cu	lture)							storeyhute
i le	ities inents s fish cu	ities ments s fish culture	ities ments s fish culture	ities ments	ities iments fish culture Cro	dities ments fish culture Crop	fish culture Crop Viele	fish culture Crop Yield/acres	fish culture Crop Yield/acreage

Yield/acreage paddy 0-20 Balling paddy 15-20 Bags/acre, (maize during (Feb-July) Paddy 30 Bags/acre. Short Rain 15 bags/acre. 15 bags/ac.

Average Yield after flood

Sept-Dec.

FORMAT - B

104-200

Crops	Area acre (ha)	Depth (cm)	In	undati	Buried		
			1-2	3-4	5-6	7-	in Sediments
Paddy	24			***************************************			
Cassava							
Beans							
Greens							
Pineapple							
Others							

maize OKra Cabbage Tomatores

Hivation done along the

FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

of Interview Apr. >3,1993 of Answerer Klenges Majumba
of Answerer Klenger Majumba
of Village/District Makelinge (near ferry Joom)
tion Longitude/Latitude <u>6-28-428</u> / 38-49-12 E
* forry slosed the operation is April - 15 May norma
Annual Recurrent Flood of Usual Scale
As you are living in a flood-prone area, we presume you
have little damage to the property or stocks. Rather, if
you are farmers, you are expecting better harvest by
planting agro-produce on the new sediment brought by the
flood to deltar is under an objection to the ramping to
Richar Dace
In that case, how much do you think you have benefitted
In that case, how much do you think you have benefitted from the flood?
Ans percent more harvest than the ones without
flood, on average.
How many days during the rainy season are the roads to the
main roads, school, hospital etc. blocked by the floods on
average ?
1' washed.
Ans. 30 days on average. (in 1990 flood)
How much the price of daily necessities like salt, oil etc.
go up during the road block by flood ?
Ans percent higher than usual.
Ans percent higher than usual.

Unexpected (Unprepared) Flood, e.g. either Unusually Big
Scale or Unseasonal Flood.
When did one take place 2
When did one take place ?
No. Year Month Days Q _{max} at 1H8
Z _{max} do 1110
1. 1979 Apr/May 2,901 m3/s
2. 1984 May 604 m3/s

b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.

515 m3/s

3.

1986

1989 1990 Apr.

c. Damage to the agricultural crops growing in the fields:
Please fill in the attached FORMAT B. with ticks, words and figures.

1990 flood

30 × 10 # = 300 98. #

FORMAT - A

		1	Inur (Sedimentation (cm)					
Item	Туре	in (m2)	-/19	50-99	100-199	200-299	300-	-49	50-
Ноизе	F-Concrete	. /	/						
	Block						<u>, </u>		
	Wooden	7		4	Hi	indu	alto	h	
Household Ar	ticles (T.S	ាទ)			1	VD-			
	Facilities					2			
Agricultural	Implements					NO	· .		: : :
in T.Shs	Stocks						· ·		
	Facilities							· .	
Fishing *	Implements								
in T.Shs	Stocks				-				

* including fish culture

10 acree average (former) 1 mouth Dame FORMAT - B Buried Area Depth Inundation (day) Crops in 5-6 7~ Sediments (ha) Paddy 🗸 Cassava Beans (/chile! Greens / Pineapple Others MIR 15- hys/acons

- Feb-July Hill Riegitable

- if paddykdamaged - maise June - Sep.

- Sep-at 2nd maise - Dec

The	[22L] /
to mer has develope	d 120 acres of larit and h
WATER RESOURCES DEVE IN THE RUVU RIV	ER BASIN Building or in upper part of the Sank withing tes
Dear Residents,	upper part of the
SUB: FLOOD DAMAGE SURVEY IN THE RUY	JURIVER BASIN by perso ral
Date of Interview 27/10/93.	
Name of Village/District Location Material Manuel Manuel Manuel Miguele Miguele	oseph. (Migude-Kitonga)
Location Longitude/LatitudeS/	E
A. Annual Recurrent Flood of Usual Scale	presume you have little demand 1 600
As you are living in a flood-prone area, we property or stocks. Rather, if you are farme	
planting agro-produce on the new sediment	brought by the flood.
a. In that case, how much do you think you ha	
Ans. 2 c / percent more harvest than t	he ones without flood, on average.
b. How many days during the rainy season ar hospital etc. blocked by the floods on average	te the roads to the main roads, school
Ans. 45 days on average.	
c. How much the price of daily necessities like	Salt, oil etc. go up during the road blook
<u>oy 1100</u> 0 :	and on size go up during the load block
Ans. 15% percent higher than usual.	
B. Unexpected (Unprepared) Flood, e.g. either Un	nusually Big Scale or Unseasonal Flood.
a. When did one take place?	
NI N	
	at 1H8
1. 1979 Apr/May 2,901 m3/s 2. 1984 May 604 m3/s	
3. 1986 Apr. 515 m3/s	

	3. 4. 5.	1986 1989 1972/	Apr. 193 Apr		515 m3/s		:		: .	
b.	Dama	ge to the		s. movabl	les and stocks:)	Please fill	in th	e attache	 :d FO R	MAT

	Туре	Area in (m2)		Inui (Sedimentation (cm)				
Item			-49	-49 50-99	100-199	200-299	300-	-49	50-
	F-Concrete								
House	Block				V				
	Wooden				V				
Household Ar	ticles (T.S	16)					•		
	Facilities								
Agricultural	Implements								
in T.Shs (Stocks								
74 - 1 4	Facilities						:		
Fishing *	Implements							:	1.1.
in T.Shs	Stocks		•						

Average Yield after flood

Crop Yield/acreage	Average Yield after flood	Rice/poddy 15 bags/acre
Average Yield after flood	20 bags/acre	
Crop Yield/acreage	Average Yield after flood	20 bags/acre
Crop Yield/acreage	Average Yield after flood	20 bags/acre
This area is susceptible to alkaling	Average Yield	Average Yield area

Crops	Area	Depth	Inu	ndatio	Buried in		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments
Paddy					:		
Cassava			;		٠,		
Beans							
Greens							
Pineapple							
Others							

in undation is for more than Adays.

at times no any harvest such as wash
This yes, flood 1993 Hay flood.

IN THE ROVU RIVER BASIN
Dear Residents,
SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN
Name of Answerer Name of Village/District Location Longitude/Altitude # about 60 Passants drounds Passants 1993 Passant
A. Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood. a. In that case, how much do you think you have benefitted from the flood?
Ans percent more harvest than the ones without flood, on average.
b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average? April - June also Oct - Jan. Ans
c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood? Ans
B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.

a. When did one take place ?

Month	Days	Q _{max}	at 1H8
Apr/May		2,901	m3/s
	:		m3/s
Apr.			m3/s
			•
		-	
	Apr/May May Apr.	May	Apr/May 2,901 May 604

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

- moze bower 4 dags ofeeld boddy & bags

FORMAT - A

		Area		Inui (ndation cm)				ntation cm)	
Item	Туре	in (m2)	-49	50-99	100-199	200-299	300-	-49	50-	
	F-Concrete								·	
Ĥouse	Block									· · · · · · · · · · · · · · · · · · ·
Å. ≥00,000.	Wooden/muo	.6M	2		V					washed aw
Household Ar	/			=13/-1	00,000)				
	Facilities		hoc	\overline{l}	5/					. "
Agricultural	Implements									
in T.Shs	Stocks			8	(and	hidey .	Teod	& t	پېځورمنځ	Vitor)
	Facilities					0	· · · · ·		7	
Fishing *	Implements									
in T.Shs	Stocks		· · · · · · · · · · · · · · · · · · ·					,		

including fish culture

FORMAT - B

Crops	Area	Depth	In	ındati	on (day	y)	Buried in	
Crobs	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments	
Paddy	lacere	1.2	1.1)		21064	1992	Washed away
Cassava						7		
Beans							(999	mir to / hot
Greens								
Pineapple					·			
Others	core	1.20						

Dear Residents,

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview Name of Answerer	27/10/93 Kichodi Rushid	Ali.		
Name of Village/District		Njia Hbili	_ Hbwawn	(Nizi)
Location Longitude/Latitu	de <u>S/</u>	E	• •	

A. Annual Recurrent Flood of Usual Scale

As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.

- a. In that case, how much do you think you have benefitted from the flood?

 Ans. 25°% percent more harvest than the ones without flood, on average.
- b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. 66. days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. 20 % percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
- a. When did one take place?

No.	Year	Month	Days	Q _{max} at 1H8			
1 1.	1979	Арг/Мау	2,90	01 m3/s		-	
		May	604	m3/s			
3.	1986	Арг.	515	m3/s			
4.	1989		•	•	i		
5.	199	3 AprilHa	9.			•	

b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.

1		Area						Sedimentation (cm)		
Item Type	Туре	1n (m2)	-49	50-99	100-199	200-299	300-	-49	50-	
	F-Concrete									
House	Block				~					
	Wooden				~					
Household Ar	ticles (T.Si	18)			**************************************			· 1		
*	Facilities									
Agricultural	Implements									
in T.Shs	Stocks						•			
	Facilities									
Fishing * '	Implements									
in T.Shs	Stocks					,		· · · · · · ·		

* including tien culture farmers know how to predict flooding and shift important items to safer (Crop Yield/acreage high pain

Average yield without flood

paddy 8 bags faces

Average Yield after flood

paddy 10 bays acre

FORMAT - B

Cross	Area	Depth	Int	ındatio	Buried		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments
Paddy					:		
Cassava			;				
Beans		·	1.7				
Greens				•			
Pineapple					:		
Others							

inundation of more than I metro
that being the case total (rop
destruction, otherwise little yield
de pending on degree of flooding
and the number of days it is on.

Dear	Residents,
suB:	FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN
Date Name Name Loca	of Interview of Answerer of Village/District NATEO RUN RICE FORM Co. Ltd. (Mr. Hpesha) of Village/District NGUN: (no Farmers exound) tion Longitude/Altitude S/ E
A.	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
a.	In that case, how much do you think you have benefitted from the flood? Ans percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average? Trotected by filed dyke along the History and almost no damage Ans days on average.
c.	How much the price of daily necessities like salt, oil etc. go up during the road block by flood ? Ans percent higher than usual.
В.	Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood. — Farm echablished 1974 & sharked
a.	When did one take place ?
	No. Year Month Days Q _{Rax} at 1H8 (1) (1979) Apr/May 2.901 m3/s k/loweko fiver
	2. 1984 May 604 m3/s dyke wos 3. 1986 Apr. 515 m3/s Fovertopped
	5

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

	Area		i :	Inu (Sedimentation (cm)				
Item	Туре	(m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete						<u> </u>		
Rouse	Block								
	Wooden								
Household Ar	ticles (T.S)	18)				·	<u> </u>	. 	
	Facilities								
Agricultural	Implements					. :			: :
in T.Shs	Stocks		-						
w	Facilities				······································				
Fishing * in T.Shs	Implements								
	Stocks						: :		

* including fish culture

Average yield without flood	Сгор	Yield/acreage
Average Yield after flood		

FORMAT - B

Crops	Area	Depth	In	undatio	Buried in Sediments		
Crops	(ha)	(cm)	1-2 3-4				5-6
Paddy	725						
Cassava			:	nogl			
Beans C. nuts	23		Jo 00				1111
Greens			N				
Pineapple							
Others Cirus	5				-		
Vezitable	4						

	IN THE RUVU RIVER BASIN
Dear	Residents,
	FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN
Date Name Name Loca	of Interview of Answerer of Village/District krwa(a Answerer) tion Longitude/Altitude S / E
A.	Annual Recurrent Flood of Usual Scale As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
a.	In that case, how much do you think you have benefitted from the flood ? Ans. $\frac{20^{\circ}/\circ}{\text{flood}}$ percent more harvest than the ones without flood, on average.
b.	How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average? Ans days on average.
c.	How much the price of daily necessities like salt, oil etc. go up during the road block by flood ? Ans percent higher than usual.
В.	Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
a.	When did one take place ?

No.	Year	Month	Days	Q _{sax}	at 1H8
1.	1979	Apr/May		2,901	m3/s
2.	1984	May		604	m3/s
3.	1986	Apr.		515	m3/s
4.	1989	-			• •
5.					

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

		Area in						Sedimentation (cm)	
Item	Туре	(m2)	-49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete								
House	Block							1	
	Wooden				1/				
Household Ar	ticles (T.S)	18)			21.6		<u> </u>	<u> </u>	L
Amed and Amed	Facilities) ·			: 1	
Agricultural in T.Shs	Implements		-		1:	,			
In 1.ons	Stocks		u		1.				
Fishing 4	Facilities			,	. 11				
Fishing *	Implements				.1	*** ***			
in T.Shs	Stocks							-	

make temperary
house (hut)
when flood
seems

* including fish culture

Average yield without flood	Crop Yie	eld/acreage
	Jakty. Z	0 2293/2660
Average Yield after flood	paddy 3	o lags/airs.

FORMAT - B

Crops	Area	Depth	In	undatio	Buried		
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments
Paddy	2					V	
Cassava							
Beans			. (•			
Greens		1,1	N		:		
Pineapple		()					
Others			~~~				<u> </u>

Dear :	Residents,	
SUB:	FLOOD DAMAGE SURVEY	IN THE RUVU RIVER BASIN
Date (of Interview	FAST 28/1993 14
Name (of Answerer	Project (Phi Nagona & machagai)
Name o	of Village/District	Kwala of Trop: year
Locat:	ion Longitude/Alti	itude S/ E

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. <u>In that case, how much do you think you have benefitted from the flood</u>?
 - Ans. $\frac{15^{\circ}/o}{\text{flood, on average.}}$ percent more harvest than the ones without
 - b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. 30 days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. 60 - 108 percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place ?

19	78	/:	- 7	
//	7 0	/ '	/	•

No.	Year	Month	Days	Q _{max}	at 1H8
1.	1979	Apr/May		2,901	m3/s
2.	1984	May			m3/s
3.	1986	Apr.			m3/s
4.	1989				
5.	٠.				

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

FORMAT - A

	1 1		Inundation rea (cm)					Sedimentation (cm)	
Item	Туре	(m2)	~49	50-99	100-199	200-299	300-	-49	50-
	F-Concrete								
House	Block								
	Wooden				V				
Household Ar	ticles (T.S)	18)	· · · · · · · · · · · · · · · · · · ·	**************************************	10,0	oco t	$\leq f_{i}$		
3 / 3	Facilities							·····	
Agricultural	Implements						- 1		
in T.Shs	Stocks								
	Facilities								
Fishing * Implements		· · · · · · · · · · · · · · · · · · ·							
in T.Shs	Stocks			70,111	· · · · · · · · · · · · · · · · · · ·				

Vucket, and, boots to Continue The

* including fish culture

Average yield without flood	Crop	Yield/acreage
	moddy	15-20 bagg/acre.
Average Yield after flood	**	

FORMAT - B

Crops	Area	Depth	Inundation (day)				t e
CTOPS	(ha)	(cm)	1-2	3-4	5-6	7-	in Sediments
Paddy	2					V	
Cassava					 		
Beans							
Greens							
Pineapple							
Others							

Mairelokra der school Rasin zeesome



Dear Residents,

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview

Name of Answerer

Name of Village/District

Location

Longitude/Altitude

Albuman Rajatu (Farmer)

Kwata

E

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood?
 - · Ans. V5 %/o percent more harvest than the ones without flood, on average.
 - b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. 3° days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood ?

Ans. 20% percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unseasonal Flood.
 - a. When did one take place?

No.	Year	Month	Days	Q _{par}	at 1118
1.	1979	Apr/May		2,901	m3/s
2.	1984	May		604	m3/s
3.	1986	Apr.	•	515	m3/s
4.	1989	- -			
5.	199	3 April.		-	

- b. Damage to the properties, movables and stocks; Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

Av farmer popo. 200.

FORMAT :- A

		Inundation Area (cm)						Sedimentation (cm)		
Item	Typo	1 (m2)	-49	50-99	100-199	200-299	300-	-49	50-	
House	F-Concrete									
	Block									
	Mooden				V			1		
Household Ar	ticles (T.8	ha)								
	Facilities									
Agricultural	Implementa									
in T.Shs	Stocks	•								
	Facilities	:								
Fishing * in T.Shs	Implements	- 11								
	Stocks								<u></u>	

. including fish culture

Average Yield without flood

20 bays are large.

Average Yield after flood

24 bays are

House hold

Articles are
proved shifted

to pafe higher

points when

flood is unhicipated.

(permanent village)

FORMAT - B

_	Area	Depth	In	ındati)	Buried in	
Crops	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments
Paddy	Zaires						
Cassava							The second second
Beans							
Greens				÷			
Pineapple							
Others		,					

mose than Flays

For this yr. the long hair ceop was damaged by floid, and the short hair crop dilist get a nough of it. That efore has vest of maize was on the average 2 bags of husked maize.

NB Pump at Mongomole operate for 8 hrs to serve Hwemberry



Dear Residents,

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview

Name of Answerer

Name of Village/District

Muembergozi Dutumi

Location Longitude/Altitude & E

- A. Annual Recurrent Flood of Usual Scale
 As you are living in a flood-prone area, we presume you have little damage to the property or stocks. Rather, if you are farmers, you are expecting better harvest by planting agro-produce on the new sediment brought by the flood.
 - a. In that case, how much do you think you have benefitted from the flood ?
 - Ans. $\frac{5\%}{\text{flood}}$ percent more harvest than the ones without
 - b. How many days during the rainy season are the roads to the main roads, school, hospital etc. blocked by the floods on average?

Ans. a month days on average.

c. How much the price of daily necessities like salt, oil etc. go up during the road block by flood?

Ans. 15°/o percent higher than usual.

- B. Unexpected (Unprepared) Flood, e.g. either Unusually Big . Scale or Unseasonal Flood.
 - a. When did one take place ?

No.	Year	Month	Days	Q _{ear}	at 1118
1.	1979	Apr/May		2,901	m3/s
2.	1984	May		604	m3/s
3.	1986	Apr.		515	m3/s
4.	1989				
5.	1993	A128.	: :	:	

- b. Damage to the properties, movables and stocks: Please fill in the attached FORMAT A. with ticks, words and figures.
- c. Damage to the agricultural crops growing in the fields: Please fill in the attached FORMAT B. with ticks, words and figures.

They cannot afford tractor service. It FORMAT - A ig Tsh. 8,000 f per acre.

		Arna		Inui (ndation cm }				ntation cm)	
Item	Type	(m2)	-49	50-99	100-199	200-299	300-	-49	50-	
	F-Concrete	}								
House	Block									:
•	Kooden				1					
Household Ar	ticles (T.S)	hs)		-		J.,	·	· · · · · · · · · · · · · · · · · · ·		
	Facilities									and the
Agricultural	Implements									me next cost
in T.She	Stocks		-							of property
	Facilities					·				Suring floo
Fishing *	Implements									Neas itis
in T.Sha	Stocks			······································		·				money to su
* incl	uding fish o	cul tur	6							no need lose of property during flow as it is moved to sur higher por

Average Yield without flood

Raddy 20 bays acre.

Average Yield after flood paddy 24 bays acre.

FORMAT - B

Crops	Area	Depth	Inundation (day)				Buried
Стора	(ha)	(cm)	1-2	3-4	5-6	7-	Sediments
Paddy	Sunes		-				
Cassava							
Beans							
Greens							
Pineapple						<u> </u>	
Others				<u> </u>		<u> </u>	

Jurns user planded to other costs:

maire - ten west 4 bags faller (short rains not enough)

on the platted with maire, the far mer

Total far mer population is about 600 @ Zacres by

111-60

Dear Residents.

SUB: FLOOD DAMAGE SURVEY IN THE RUVU RIVER BASIN

Date of Interview Name of Answerer	13/05/93 Als	: Abdallah.	(far marea	24
Name of Village/District	Nhgeze (Sevengete 1	3 - Rutali)	-
Location Longitude/Latitude	<u>s/</u> s	E		:

Annual Recurrent Flood of Usual Scale

As you are living in a flood-prone area, we presume you have little dam 1.0 to property or stocks. Rather, if you are farmers, you are expecting better I were planting agro-produce on the new sediment brought by the flood.

; . a. In that case, how much do you think you have benefitted from the flood?

percent more harvest than the ones without flood, en average

How many days during the rainy season are the roads to the main rouse. hospital etc. blocked by the floods on average?

Ans. 60 days on average. Supplies obtained from Chalinze By
How much the price of daily necessities like salt, oil etc. go up during the mainly by flood? c.

Ans. 2.% percent higher than usual.

- Unexpected (Unprepared) Flood, e.g. either Unusually Big Scale or Unreasonal Flood. В.
 - When did one take place?

No.	Year	Month	Days	Q _{max} at	1H8	-	
2.		Apr/May May Apr.	2,90 604 515 1	*		:	
4.	1989 1993	4		!	:		

Damage to the properties, movables and stocks: Please fill in the at A. with ticks, words and figures.

	1	Area		Inui (Sedimentation (cm)				
Item		ln (m2)	-49	50-99	100-199	200-299	300-	-49	50~
	F-Concrete					j.			
House	Block			1	~				
	Wooden			V	~	ŧ			
Household Ar	ticles (T.S)	15)						<u> </u>	
1	Facilities								
Agricultural	Implements			j		; ,			
in T.8hs	Stocks					: ·	:		
	Facilities			t		. '			
Fishing * in T.Shs	Implements							•	
	Stocks								

* including fish culture

FORMAT - B However some farmers were saying to 70 bags

Crops	Area	Depth	Int	ndatio	Buried		
Crops	(ha)	(cm)	1-2	3-4	5-6	7~	in Sediments
Paddy							
Cassava			1				
Beans							
Greens							<u> </u>
Pineapple			,			-	
Others (i		•	:	

inundation is more than 10 metre and if for a long time damage to 150 p is serious.

25p. to traditional farming huts. (staverage cost Tsh 500%.

Cultivation is manual that is why farmes have small spields 21/2 - 7 acres at most.

III-62

DATA BOOK

IV. DATA ON SOIL ANALYSIS

IV. DATA ON SOIL ANALYSIS

TABLE OF CONTENTS

1	SUM	MARY OF SOIL ANALYSIS
	1.1	Location Map of Pits and Auger Holes for Soil Survey IV - 1
	1.2	Analytical Data for the Soil Samples IV - 2
2	SOIL	PROFILE DESCRIPTION FORM