Forecast Budget for Marígat Youth Polytechnic, Year 2000 (Revised on 18 November 2000)

Forecast of Income and Income Sources	4	Forecast of Expenditure	
Item	Amount (Kshs)	ltem	Amount (Kshs)
School fees, 25 students @ 5,600 per course	130,850	130,850 Staff salaries	79,230
Income from sales of farming	0	0 Training materials	3,993
Income from furniture sales	009	600 Cost for farming	0
Income from garment sales		Stationery	7,485
Fund taising from the community ("harambees")	0	0 Transport	5,450
Sponsorship from friends (skopring community)	40,300	40,300 Entertainment (Management board meetings and study tours (breakdown will be made by the project manager))	7,071
Production and Services	19,885	19,885 Development / maintenance	25,745
Income from Carpentry Production Unit	01	0 Bills (water, electricity, telephone & postal)	9,565
		Material for production	0
		Wages for production	10,958
		Others	0
Total	191,635	Others	149,497

### Self-introduction at Chemolongion Workshop (3 October 2000)

Name	Age	Sex	Village	Farm	Major Crops		ore Dro			er Dro		Water	Fuel
			·····	(a)	Maize, Cowpeas, Millet, Ground Nuts,	Cattle	Sheep	Goats	Cattle	Sheer	Goats	Source	wood
John Chepyegon	28	м	Mairo	2	Kunde , Beans and Jahi	12	11	40	6	2	19	1km	⊧ >1kn
Jackson Kiptimbai	28	м	Chemorongion Chemorongion	3	Maize, Millet, Sorghum, Groundnuts	6	0	12	0	0	20	2km	i >1kn
Samuel Kandie	27	М	(Arusin)	2	Maize, Beans, Millet, Sorghum	7	0	23	3	0	16	0.4km	i <îkn
Wilson Changwany	45	м	Kabirwok	2	Maize, Millet, Beans C/Peas, G/Nuts, Terapy Beans,	36	30	60	4	4	28	2km / 6km	l 1km
Thomas Kipteweret	32	М	Kabirwok	3	Green Grams	15	13	45	7	7	25	4km	5km
Joel Kipwoni	24	М	Sisiwe Chemorongion		Maize, Millet, Sorghum , G/Nuts	4	0	10	2	0	10	1km	>1km
Samson Chesut	24	М	/ Chepgerechi Chemorongion	2	Maize, Millet	10	0	20	3	0	7	l 3km	1 km
Wilson Chesut	31	М	/ Sisiwet		Maize, Millet, Green Grams, P/Peas	62	30	125	17	6	30	4km / 8km	1km
Richard Kiptibai	55	М	Chemorongion Chemorongion		Maize, Cow Peas, G/Nuts, Sorghum, F. Millet	57	24	35	22	16	18	1.5km	2km
Richard Kibet Chebo	25	М	/ Chepkoyo Chemorongion		Maize, Beans, Millet	16	8	52	4	2	24	1km	>tkm
Marie Koitumet	18	F	/ Chepgerechi Chemorongion	2	Maize, Beans, G/Nuts, Sorghum, Millet	5	8	6	3	3	4	2km	>1km
Sote Kipkwony	40	F	/ Sisiwet	2	Maize, G/Nuts, Sorghum, Millet	10	3	12	1	2	2	tkm	1 km
Kabon Rotich	28	F	Chemorongion / Sisiwet	1	Maize, Beans, Millet, Sorghum	3	7	6	2	4	3	1km	1.5km
Sote Kandie	38	F	Chemorongion / Kipkowet	1	Maize, Beans, Millet, Sorghum, G/Nuts, P/Peas	4	0	20	2	0	8	1km	2km
Kiptoo Kibowen	58	F	Chemorongion / Chepkowei	2	Maize, Sorghum, Millet, Beans	30	0	15	12	0	4	2km	1km
Stephen Chirchir	30	M	Chemorongion / Chemomu		Maize, Millet, Beans	16	6	30	9	4	38	1km / 3km	<0.5km
Margaret Kipchabas	20	F	Chemorongion	1	Maize, C/Peas, Groundnuts, Millet, Beans, Sorghum	6	4	23	4	3	20	1km	1km
Veronica Kandie	17	F	Chemorongion / Ewalel	- 1	Maize, G/Nuts, Sorghum, Millet, Beans	5	0	1	1	0	7	1km	2km
David Chirchir	22	М	Chemorongion		Maize, Millet, Beans, P/Peas, Sorghum, G/Grams	6	10	40	1	3	17	5km	<ikm< td=""></ikm<>
Toroitich Martin	58	м	Kabirwok	4	Maize, Beans, C/Peas, F/Millet, Sorghum	2	12	53	2	15	5	3km	1km
Samson Koech	39	м	Chemorongion		Maize, G/Grams, Beans, Millet, Sorghum, P/Peas	12	0	68	4	0	53	5km	<1km
William Chesut	20	M	Chemorongion / Sisiwet	2	Maize, Millet, Beans, G/Nuts, P/Peas	20	8	18	10	5	15	1km	1km
Ruth Kandie	24	F	Chemorongion	3	Maize, Beans, Millet, P/Peas, G/Nuts	5	0	50	8	0	30	3km	2km
Joseph S. Kiptoo	40	м	Embosos	2	Maize, Millet, Beans, Sorghum	20	22	48	8	16	40	2km	1 km
Kipsoi arap Rotich	41	м	Chemorongion	2	Maize, Beans	11	8	30	2	3	5	1km	<1km
Magdaline Chesut	25	F	Chemorongion	2	Maize, Beans, Millet	10	0	20	8	0	17	5km / 1.5km	<1km
Christine Kipkwony	23	F	Chemorongion / Sisiwet	5	Maize, Beans, Millet, C/Peas	20	5	10	5	3	7	5km	0.5km
Magdaline Kandie	21	F	Chemorongion / Chemamul	1	Maize, Beans, Millet	0	0	15	0	0	15		<0.5km
Magdaline Chesut	25	F	Chemorongion / Chemamul	2	Maize, Beans, Millet	10	21	20	3	2	8	5km / 2km	0.5km
Elizabeth Kipwony	17	F	Sisiwe		Maize, Beans, C/Peas, Millet, Sorghum	10	0	12	7	0	6	5km	2km
Magdaline Sonkol	38	F	Chemamui		Maize, Beans, C/Peas, Millet, G/grams	12	10	20	2	3	8	4km	2km 1km
Jane Cheptoo	25	F	Kabirwok		Maize, Beans	50	5	30	7	5	30	4km 3km	2km
Salina Bowen	22	F	Chemorongion		Maize, Millet, Sorghum	6	6	30	3	3	5	1km / 6km	
Kabon Chesut	32	F	Chemorongion / Sisiwet		Millet, Sorghum, Maize	40	25	50	25	25	30	Dam 1.5km	0.5km
Tarkok Kipkon	30		Chemorongion		Millet, Sorghum, Maize	30	40	20	20	20	10		0.5km
Tarkok Chesut	30		Sisiwe		Millet, Sorghum, Maize	25	6	40	10			Dam 2km	0.5km
John Kipraisi	48		Kabirwok		Maize, Sorgnam, Maize Maize, Millet, Beans, G/Nuts, P/Peas, Sorghum, G/Grams	30	70	150		4	20	Dam 4km	0.5km
Ezekiel Keitany	19		Chepinyiny		Maize, Beans, Sorghum, G/Nuts, Millet	40	9	40	20 10	15 5	80 20	River 1km Dam /	1km
Average				2.25	Average			<u> +v [</u>	6.76	<u> </u>	201	River 1.5km	0.5km

Average 17,45 Mortality Rate 61.24%

### Self-Introduction at Chemorongion Workshop (1 November 2000)

Name	Age	Sex	Major Income Sources	Total Farm Size	Farm Size in Chepengereh	Major Crops Planted
				(Acres)	(Acres)	Į
Samson Koech	36	M.	Goats 38, Cattle 7			Sorghum, F./Millet, Maize, Beans
Wilson Changwony	48	M.	Livestock, Farm	2.0		F./Millet, Maize, Beans, Sorghum
Maria Kimosop	30	F.	Livestock, Crop production	5,0		Maize, Sorghum, Beans
mana ranocop			Livestock, Crops, Bee-	0,0		Maize, Sorgham, Beans
Kipsoi Lotis	39	М.	keeping	2.0	Ì	Maize, Beans, F./Millet
Magdaline Kiplagat	<u> </u>			2.0		Maize, Dealis, 1./ Whiel
(wife)	29	F.	Livestock	35	2.5 (owner)	Maize, F./Millet, Beans
Francis Kipkitai	- "	1.	Livestoon	0.0	2.3 (Owner)	Maize, F.7 Millet, Deans
(Husband)	30	М.				
Muhindi Rutto	53	Μ.	Livestock, Crop production	2.0		Maize, Sorghum, F./Millet
Susan Changwamy	30	F.	Livestock, Crop production	2.0		Maize, Sorghum, F./ Millet
Elijah Kandie	30	М.	Livestock, Farming	1.0		Maize, Beans, F./Millet
Sokome Kibowen	48	F.	Goats 30, Cattle 8	2.5	·····	Maize, F./Millet, Cow peas, Green grams
		• •		2.0		Maize, F./Millet, Green Grams, Sorghum,
John Chepyegon	39	M.	Livestock, Crop production	1.0		Groundnuts, P./Peas
Sote Seurei	32	F.	Livestock, Grop production	1.5		Maize, F./Millet
			Livestock keeping,	1.0		Walze, F./ Willet
Samuel Kandie	27	м	Subsistant farming	10	0.5 from Edward (A)	Maize, Beans, F./Millet, Sorghum
Margaret Kandie	20		Livestock, Crop production	1.5		Maize, Dearts, 1.7 Minet, Sorghum Maize, F./Millet, Beans, Sorghum
Lina Lobusi	21		Livestock keeping	1.0		Maize, Cow Peas, Beans
Grace Kiptui	30		Livestock, Crop farming	2,0		Maize, Cow Feas, Beans
Sote Kipsoi	37	F.	Goats 10, Cattle 3	2.0		Maize, Millet, Sorghum
			Livestock keeping, Crop			maize, Miller, Sorghullt
Christine Sorgoz	16	F.	production	3.0		Maize, Beans, Millet
onnocino oongoz		<u></u>	Livestock keeping, Crop	0.0	0.5 from Jacob	Maize, Beans, Green Grams, Sorghum,
Joel Kipkwony	24	М.	production	10	Kasifet (2.5)	F./Millet.
Pauline Kandie	26		Livestock, Crop production	2.0	143/101 (2.07	Maize, Beans, Finger Millet
			Livestock keeping, Crop			waize, beans, i nger winet
Joseph Kiptek	20	М.	production	1.0		Maize, Beans
			Livestock keeping (Goats,			maize, Douris
Ruth Kandie	27		Cattle), Crop production	2.0		Millet, Maize, Beans
			Goats, Sheep, Cattle,	2.0		Maize, F./Millet, Maharagwe, C./Peas,
Wilson Chesut	38	М.	Chicken		1 from Samson (2)	
Jacob Kasitet	25		Goats 20, Cattle 6	2.5	2.5 (owner)	Maize, Millet, Beans
				2.0		Groundnuts, Maíze, F./Millet, Sorghum,
Kimunyan Kiptbai	55	М.	Livestock, Crop production	4,0		Beans
James Chepchieng	22		Livestock, Crop production	0.8		Maize, Beans, Millet
	· · · · · · · · · · · · · · · · · · ·		Livestock, Farming, Crop			maizo, Bouris, milioc
Helen Kimereng	20		production	1.0		Maize, Beans, F./Millet
Tarkok Yesirimwo	40		Livestock, Grop production	1.0		Maize, F./Millet, Sorghum
John Moimdi	21		Livestock, Crop production	2,0		Maize, Beans, Sorghum
Arusei Kiptiekoi	30		Livestock, Crop production	2.0		Maize, Beans, Sorghum
David Chirchir	22		Livestock, Crop production		1(owner)	Maize, Beans, Sorghum
						Maize, Beans, Millet, Green Grams.
John Kandagor	32	М.	Livestock, Crop production	2.0	1	Sorghum
			Livestock keeping, Crop			
Kiploman Juluis	25	М.	production	4.0		Maize, Beans, Millet
Talai Kairo	55		Livestock, Crop production	2.0		Millet, Maize, Beans, Groundnuts
Joseph S. Kiptoo	40		Livestock, Crop production	1.0		Maize, Beans, Millet
Veronica Kandie	16		Livestock, Crop production	1.0		F./Millet, Maize, Beans.
Christine Chepkwon	25	F.	Livestock, Crop production	1.0		F./Millet, Maize, Beans.

Average: 31.3 17, M: 20

Average: 1,9

### Plan of Action of Chemorongion (1 November 2000)

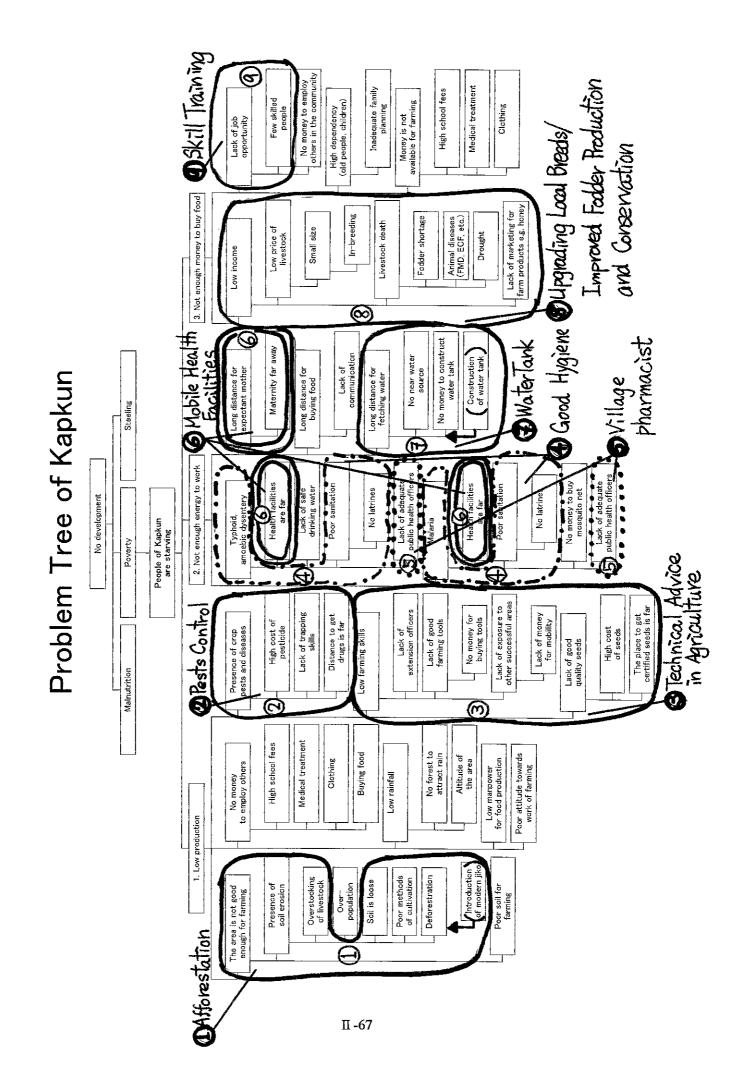
Activities	Expected Results	Indicators	Schedule	Main Actor(s) (Responsible Percon(s))	Actors	Important Assumptions
1.0 Preparation Work						
1-1Mceting			3 October 2000	JICA Team, MOALD Staff	Chemorongion Community	
1-2 Election of committee			15 October 2000	Village headman	Chemorongion Community, 30 Farmers	
2.0 Site Selection & layout						
2-1 Selecting Cultivation Süe			15 October 2000	Village headman	Chemorongion Community, 30 Farmers	
2-2 Survey of catchement area			Between 13 - 20 November Surveyor, JICA Team 2000	Surveyor, JICA Team	Farmers	
2-3 Measuring size of cultivated land			18 November 2000	Surveyor, JICA Team	1 <sup>7</sup> armers	
2-4 Land (Shamba) clearing			From 24 November 2000	Committee	Farmers, other village members	
3.0 Layout of Facilities						
3-1 Laying of run-off harvesting & Conservation Structures						
3-2 Farms Fencing				*		
3-3 Hand tools acquisition						
4.0 Construction of Canals [Run-off Harvesting & Conservation Structures]	ervation Structures]					
4-1 Digging of diversion ditch and terraces						

### Self-introduction at Kapkun Workshop (4 October 2000)

Name	Age	Sex	Village	Income Source	Farmiano Acreage	Major Crops Grown	Livest Cattlo	Shoop	fore Dr Costs		Lives Outle	Sheep	fter Dro Gosts		Water S	Source	Fueiwood
Daniel Towett	33	м	Kapkun	Livestock, Honey, Crops	4	Maize, Groundnuts, C/Peas, Millet, Sorghum	38	12	45		25	12	25		Mangar River	3km	0.5km
Villiam Chelal	36	м	Kapkun	Employment, Farmer, Business	2	Maize, Millet, G/Nuts	15	0	60	10	7	0	30	8	River / Pan	4km / 1km	Close
Aary Barakwa	25	F	Kapkun	Livestock, Farming		Maize, Millet, Beans	20	20	50		8	10	40		River / Pan	9km / 5km	Close
Samuel Lakiptak	27	M	Етиоп	Livestock, Honey, Farming		Millet, Maize, G/Grams	11	16	15		11	9	15		River / Pan	0km / 1.5km	0.5m
Susan Rotich	27	F.	Emuon	Livestock, Farming		Millet, Miaze, G/Nuts	21	21	25		9	15	10		River Kilon		
			i i		0.0						3		9			1.5km	1km
Richard Yegon	35 50	M	Kapkun	Livestock, Farming	4	G/Nuts. C/Peas, Millet	4	0	16			0			Mangar River	4km	0,5km
Symon Chelagat	56	M	Kapngetun	Livestock, Farming	0	Millet, Maize, Sorghum	12	40	60		8	6	40		River Sabor / Dam		1km
Slaina Kangogo	27	F	Kamarir	Livestock, Farming		Millet, G/Nuts, Maize	25	25	20		15	18	10		River	0.5km	0.5km
Kimengich Rotich	55	М	Kapkun	Farming	0.5		11	0	25		3	0	15		River / Pan	4km / 0.5km	Close
Michael Komen	26	м	Barsebet	Livestock, Farming	4	Maize, Millet, Beans Maize, Millet, Sorghum,	0	12	16	10	0	8	12	6	Mangar River / Par	3km / 2km	0.5km
Solomon K. Taroiticl	42	м	Emuon	Livestock, Farming	3	G/Nuts	20	52	10		5	26	2		River	3km	1km
Harun Cheptoo	22	М	Emuon	Livestock, Farming	2	Maize, Beans, Millet	10	10	22		7	4	15		Dam / River	6km / 12km	0.5km
Sokome Kangogo	36	F	Kapkun	Livestock. Farming	2	Maize, Millet, Beans	10	22	20		5	14	10		Pan / River	6km / 10km	3km
Yegon Chepkirwok	62	М	Kapkun	Livestock, Farming	1.5	Maize, Millet, G/Grams	38	6	40		4	0	24		Mangar River	2km	lkm
Lotono Chepkonga	56	м	Barsebet	Livestock, Farming	0,5	Millet, Sorghum	0	0	33		0	0	4		Mangar River	6km	0.5km
Sote Cherop	65	F	Kapkun	Livestock, Farming	0.25	Millet, Maize, Sorghum	8	0	30		1	0	10		Mangar River / Dam	4km / 1.5km	0.5km
Sote Kiptosoe	65	F	Kapkun	Livestock, Farming	1	Millet, Sorghum, C/Peas	0	0	16		9	0			Mangar River	5km	0.5km
Sote Sokoti	50	F	Kapkun	Livestock, Farming	1	Maize, Millet, Sorghum	20	0	30		2	0	15		Manager / Clan	4km / 0.5km	1km
Salina Cherogony	28	F	Emuon	Farming, Livestock	1	Millet, Sorghum, Peas	25	10	150		10	6	80		River / Dam	6km ∕3km	
Wilson Kiplagat	25	м	Kapkun	Farming		Maize, Millet, Beans	5	10	12		4	6	8		Mangar River	6km	2km
Sokoti Chelagat	60	м	Kapkun	Farming, Livestock	2	Maize, Millet, Beans	18	0	200		4	0	120		Mangar River / Par		0.3km
David Lochomoi	30	м	Kapkun	Farming, Livestock	3	Maize, Beans, Millet	12	2	42		6	0	20				100m
		F				Millet, Maize, Sorghum,			-12						River / Pan	6km ∕1km	
Tarkok Kimengich Pima Everlyne	50		Kapkun	Farming, Livestock	0.5	G/Nuts	7	25		_	3	10	0		Mangar River / Par	1	Close
Chelagat	32	F	Emuon	Employment, Business		Maize, Millet, Beans	8	0	10	5	0	0	0	0	Chepkibech Dam	5km	
riori Chelal	50	м	Kapkun	Farming, Livestock		Millet, C/Peas, G/Nuts	12	26	100		6	4	50		Mangar River	4km	0.5km
Jane Kipkiror	29	F	Emuon	Employed, Farmer	3	Maize, Millet. G/Nuts	15	0	27	8	4	0	7	0	Sabor River	4km	1km
Salina Chepuret	22	F	Kapkun	Farming	3	Maize, G/Nuts	3	4	12		2	0	10		River / Pan	3km / 0.5km	0.3km
Sote Lapkiptok	60	F	Kapkentun	Farming, Livestock Farming, Livestock,	1.5	Millet, Maize, Sorghum	5	0	10		4	0	7		River	3km	0.5km
Joseph Chebor	30	м	Kapkun	Honey Livestock Sales,	3	Maize, G/Nuts, Sorghum Maize, Beans, F. Millet,	20	15	40		14	8	20		Mangar River / Dar	5km / 0.5km	1km
David Kokoyo	40	м	Koikoi	Farming, Business	5	Cassava, G/Nuts									River	2km	0.5km
Micah Chebor	22	м	Barsebet	Farming, Livestock	3	Maize, F. Millet	37	0	30		16	0	20		Mangar River / Dar	5km ∕ 3km	0.5km
Joseph Kiyai	38	м	Kapkun	Employment, Farming	10	Maize, Millet	4	1	12						Mangar River	4km	1km
David Kigen	22	м	Kapkun	Livestock	3	Maize, Millet, Beans	15	0	25		5	0	20		Mangar River	6km	3km
Sote Tengecha	40	F	Emuon	Livestock		Millet, Maize, G/Nuts	19	9	28		4	12	5		River	6km	1 km
Sote Chirchir	50	F	Kapkun	Farming		Maize, Beans, G/Nuts, Millet	30	0	27		6	0	20		River / Pan	5km / 2km	1 km
Josphine Komen	23	F	Barsebet	Farming, Livestock	z	Maize, Beans, Millet, Sorghum	10	15	30		5	9	20		Dam / River	1km / 3km	0.5km
Tarkok Laktano	45	F	Emuon	Farming		Millet, Maize, Beans	20	10	20		2	2	₹.		River / Pan	5km / 3km	1km
William Cherop	30	M	Kapkun	Farming, Livestock		Maize, C/Peas	9	0	30		3	0	20		Dam / River	2km / 5km	0.5km
Musa Yegon	19	M	Kapkun	Farming, Livestock		Maize, C/Peas	13	Ū.	60		3	ů 0	20		Dam / River	1km / 6km	0.5km
Tarkok Chepsergo			Barsebet	Farming, Livestock		Maize, F. Millet, Beans	,0	10	12		0	4	6				
	43								130						Mangar River / Par	3km / 2km	0.5km
Charles Yegon		M	Kapkun	Farming, Livestock		Mazie. C/Peas	17	0	1		2	0	50	1	River / Dam	4km / 1km	0.5km
Judy Kiprop	28	F	Kapkun	Employment, Farming Bee-keeping, Honey		Maize, Millet	4	T	12		-				Mangar River	6km	2km
Wilson Chesang	35	M	Emuon	Sales		Maize, Sorghum, G/Nuts	0	D	10		0	0	4		Sabor River / Pan	4km / 2km	0.5km
Sote Chepsergon	25	F	Kapkun	Livestock		Maize, Millet, Beans	24	7	30	Ì	4	4	13		Kabiswa / Perikerra	2km / 5km	2km
Jacob Rotich	20	M	Kapkun	Farming, Livestock	3	Maize, Beans, Millet	5	0	10		3	0	6		Dam / Mangar Rive	4km / 7km	2km
Peris Kibet	22	F	Kapkun	Farming	2.5	Maize, Millet, G/Nuts	2	0	27		1	0	23		River / Dam	3km / 0.5km	0.5km
Sote Chelal	47	F	Kapkun	Farming, Livestock	2	Millet, Maize, Sorghum Millet, Maize, G/Nuts,	30	30	100		6	4	60		Mangar River / Par	2.5km / 1.5km	
Sote Kimwetich	55	F	Kapngetuny	Farming, Livestock	4	G/Grams, C/Peas	10	9	20		4	0	10		Sabor River / Pan	4km ∕1km	1km
Paulina Cheptoo	24	F	Kapkun	Farming, Employment	3	Maize, Vegetables	0	0	0	4					Perkerra River	2km	1km
David Chemjor	23	М	Kapkun	Farming, Livestock	2	Millet, Beans, Maize	49	6	30		27	T	5		Pan / Mangar River	4km / 8km	
Christine Kiptero	38	F	Emuon	Livestock, Farming, Employment	1	Maize, Beans, Millet	6	0	15		3	o	9		Mangar River	6km	1km
Margaret Kiprop	25	F	Kapkun	Livestock, Farming	0.5	Maize, Millet, Sorghum	25	10	30		10	4	12		River	4km	0.5km
Sote Koimei	42	F	Kapkun	Farming, Livestock	1.5	Mazie, Beans, Millet	6	6	30		1	0	10		Mangar River / Dar	3km / 1km	0.5km
Wilson Chemjor	39	м		Livestock, Business		Maize, Millet	11	0	15		2	0	9		Dam / River	6km / 10km	0.5km
Dorcas Tomno	25	E	Emuon	Employment, Farming		Maize, G/Nuts, Millet	3	0	10	3	-	-	•		Chepkirbsch	4km	2km
and the second se	_	M:27. F		Average		Average	19.76	202	34.80		5.54	3.92	10.51				

### Stakeholder Analysis at Kapkun (4 October 2000)

Group	Activities	Problems	Leaders	Membership
Amka Twende Soil & Water	- Water harvesting for crop production	- Selection of suitable crops in the field	Michael Komen, Chairman	17
Conservation	<ul> <li>Soil conservation and terracing</li> <li>Mobilization of firms</li> </ul>	<ul> <li>Lack of handtools for soil conservation</li> <li>Lack of skills</li> </ul>		
	- Bee-keeping	<ul> <li>Lack of funds</li> <li>Crop pests /</li> </ul>		
		<ul> <li>Lack of exposure</li> <li>Lack of skills on</li> </ul>		
		draught harnessing – Need training		
Sobetab Gaa	<ul> <li>Merry go round to buy home utencil [money collection]</li> <li>Cudboard</li> <li>Sufrias</li> <li>Plates</li> </ul>	<ul> <li>Low Income</li> <li>lack of training on</li> <li>right skills</li> <li>Lack of exposure</li> <li>[Touring other groups]</li> </ul>	Hellen Cherviyot Chairlady	19
Tech Gaa	- Bowels etc. - Building Semi-	– Low Income	William Kiplagat	30
	permanent houses for members (residental living - Fund raising 60/= @ member @month 10/=@ member @month for lunch	<ul> <li>Lack of/ poor participation by in contributing funds</li> </ul>	Chairman	
Kapkun Women Group	<ul> <li>Land preparation and crop planting</li> </ul>	<ul> <li>Lack of farm tools &amp;</li> <li>fencing material [thorn</li> <li>trees nearby cleared</li> <li>Lack of exposure on</li> <li>modern farming</li> </ul>	Margaret Kiprop Chairlady	20
Koset Gor	<ul> <li>Contribution of money to buy a plot &amp; build a Posho mill.</li> </ul>	<ul> <li>Shortage of Capital</li> <li>lack of right skills</li> </ul>	Samson Barakwa Chairman	19
Kapiswa Youth Group	– Bee-keeping – Livestock keeping	<ul> <li>Lack of enough</li> <li>capital to purchase</li> <li>Lack of tools to be</li> <li>used in Bee-keeping</li> </ul>	Richard Chebon Chairman	90
Sor Gaa Women group	Merry go round [Household goods]	<ul> <li>Low Income</li> <li>Lack of exposure</li> <li>[Tours]</li> </ul>	Peninah Tengecha Chairlady	15
Kapkun self Help Water Project	<ul> <li>Mobilization of people to collect money</li> <li>Soliciting for funds.</li> <li>Ballast</li> <li>Water collection</li> </ul>	<ul> <li>Lack of training on right skills</li> <li>lack of enough capital</li> <li>lack of exposure on other successful projects</li> </ul>	Juma Lapkipitak Chairman	200



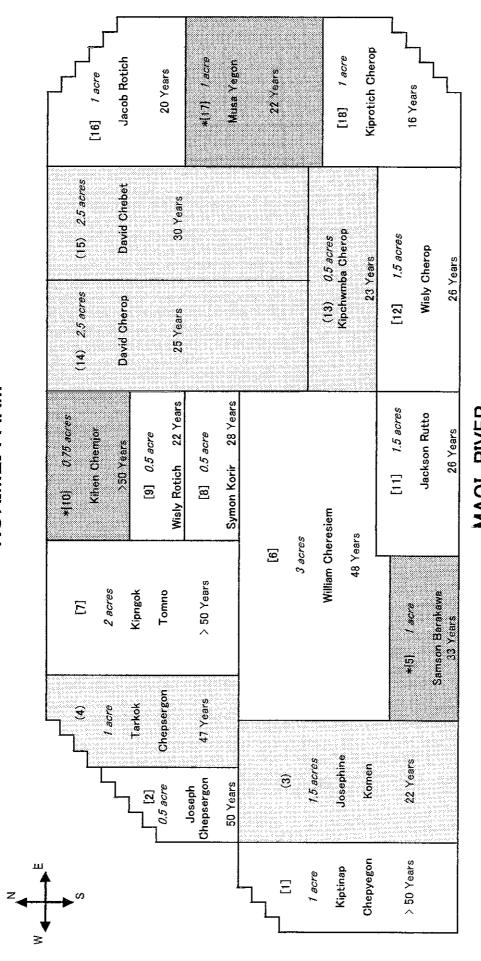
## Priority Approaches of Kapkun, Sabor (5 October 2000)

9. Skill Training Approach		
8. Upgrading Local Breeds / Improved Fodder Production and Conservation	0	
7. Water Tank Approach	0	
6. Mobile Health Facilities Approach		•
5. Village Pharmacist Approach		-
4. Good Hygiene Approach	0	•
3. Technical Advice in Agriculture Approach	0	•
1. Afforestation 2. Pests Control Approach Approach		
1. Afforestation Approach	0	•
Type of Approach	Male Choice	Female Choice

### PDM of Kapkun (26 October 2000)

Narrative Summarv	<i>Overall Goal:</i> People of Kapkun have enough food	Project Purpose:	High production for everybody at Kapkun	Verification Period:	- Up to September 2001	<ul> <li>People of Kapkun will harvest high yields</li> </ul>	Results / Outputs;	1. Improved farming	2. Improved soil fertility	3. Improved afforestation	<ol><li>Improved soil water holding capacity [improved water retention in the soil]</li></ol>	ivities:	Activities will be discussed later	
	<i>Overall</i> People	Project	High pro	Verifica	- Up to	- People	Results	l. Impro	2. Ìmpro	3. Impro	4. Impro water re	Activities:	Activitie	

KORIMEI FARM



### MAOI RIVER

\*[ ] : Committee

( ): Members

### Self Introduction - Kapkun (13th November, 2000)

1 (11)	Name	Sex	Age	Village	Time to the field (min.)
1	William Chelal	М	36	Kapkun	30
2	Michael Komen	М	27	Barsibet	8
3	Susan Rotich	F	30	Emwon	20
4	Margaret Chebon	F	22	Barsibet	15
5	Joseph Yator	М	35	Komarir	60
6	Joseph Kiai	М	38	Kapkun	30
7	Susan Barakwa	F	20	Barsibet	30
8	David Cherop	М	22	Barsibet	20
9	Targok Kimoi	F	44	Barsibet	6
10	Josephine Komen	F	23	Barsibet	10
11	Sote Chirchir	F	40	Barsibet	30
12	Wesley Rotich	М	22	Kapchumo	55
13	Wesley Cherop	М	24	Barsibet	3
14	Musa Yegon	Μ	19	Kapkun	30
15	Mary Barakwa	F	30	Barsibet	30
16	Samson Mitei	М	21	Kapchumo	55
17	Joseph Chirchir	М	24	Kapkun	40
18	Richard Yegon	М	30	Kapkun	30
19	Daniel Mitei	М	23	Kapchumo	55
20	Korir Chepkeitany	М	60	Barsibet	6
21	Richard Chelagat	М	55	Kimoigut	120
22	Sote Koimet	F	42	Kapkun	25
Ave.	N	1:14, F:8	31		32.2

### Members of the group must be cooperative Important assumptions Enough rain during planting season Selection of farmers for use in getting their output as a sample for the area Measuring yields obtained by individual fanners at Measuring output obtained from the group farm Means of Verification (MOV) Enough food for everybody in Kapkun from farming by the year 2003 (Increase from 12% to 80% in 3 years). Increase in output per acre from 5 to 10 sacks by September, 2001 Objectively Verifiable Indicators (OVI) Increase in output per acre from 5 sacks to 15 sacks Verification purpose (up to September 2001) People of Kapkun will harvest high yields Project purpose High production for everybody at Kapkun 4. Improved soil water holding capacity [ improved water retention in the soil ] Narrative Summary People of Kapkun have enough food Activities will be discussed later 3. Improved afforestation 2. Improved soil fertility . Improved farming **Results/Outputs** Overall goal Activities

### PDM of Kapkun (26th October, 2000)

Kapkun	2000)
at	ě
Action	Vovemb
٩	E.
Plan	<u>13</u>

Activities	Expected Results / Indicators	Schedule	Main Actor(s) (Responsible Person(s))	Actors	Important Assumptions
1. Preparation of work [J-1 Meeting	Identification of problems and their 6th - 8th October 2000 solutions	éth - 8th October 2000	JICA, Ministry of Agriculture	'Amka Twende' Farmers Group, Community	Enough tools
1-2 Elections for the Committee	Show farmers right direction / 9	24th September 2000	Village Elders	22 Members	Hardcore sand available
1-3 Selecting a l'arming site	commute memoers Good site for rain harvesting	19th October 2000	JICA, Ministry of Agriculture, Administration leader	Farmers (9)	Cooperation among members
<ol> <li>Site facilities</li> <li>Survey of field</li> </ol>	Exuct aoreage revealed	7th - 10th. November 2000	Farmer, Agriculture Officer, JICA	Committee	
2-2 Clearing the land	Easy ploughing	1st Week of December 2000	Continittee	Farmers	
2-3 Fencing of land	Destruction of crops by animals	2nd Week of December 2000			÷
2-4 Building of canals	Itarvest of rain water	1st and 2nd Week of January, 2001	JICA, GOK, Committee	Fatmers (Group)	
3. Land preparation 3-1 Ploughing	Pine soil	Late January and early February 2001	Farmers group		Lack of farm tools / lack of good quality seeds
4. Crop husbandry 4-1 Planting	Proper germination	Aprii 2001	Farmers group, GOK, JICA		
4-2 Weeding	Weed control	May / June 2001			
4-3 Caring for the crops	Crops growing in a good way	From April to August 2001			
5. Harvesting and treatment 5-1 Harvesting	To get food	August to September 2001			
5-2 Transporting harvest home	Safety of crops	August / September 2001			
5-3 Storage	Good preservation				
5-4 Threshing	Proper grinding	From October & November 2001			
5-5 Weighing	To know the quantity of output				

### Self-introduction of Upper Mukutani (16 October 2000)

Name	Age	Sex	Ethnic Group	Occupation	Village	Farm	Major Crops	Cattle	Before Sheep	Drought Goets	Chick.	Cattle		Drought Gosts	Chief	Water	Fuel-
Stanban I I al 111	4.5			Deter	Kabbett 7	(a) 2	Maize, Beans, Millet,			Goats	Unick.	Gattle	Sheep	Goats	Chick	Source Nosungeta	
Stephen LLekateiya	45	м	I	Patorlist	Kabikoki II	2	Sorghum, C/Peas, G/Grams	10	10	70	:	8	6	50		1km Mukutani R	
Lorangiro Meriyit	28 35	M	1	Formar	Chemoigut	3	Maize, Beans Maize, Beans Millat Sarahum	20 10	7 10	32 30		3	1	4		1	Forest 300 m
Ng'orianyany Adung'o		M		Farmer	Narabala	1	Maize, Beans, Millet, Sorghum Maize, Beans, Millet,	10		{			7	12	ļ	River 8km	
John Souru	28	M	1	Farmer	Lenaorok	2	Vegetables Maize, Millet, Sorghum,	3	0	24		0	Û	9	ł	River 0.5km	Forest Ikn
Leasan Lechuta	50	M	I	_	Kabikoki	2	Beans, Vegetables Maize, Beans, C/Peas,	51	8	150		19	1	67		Nosoita 1km	ĺ
Douglas LKarante	45	м	1	Farmer	Lenaorok	3	G/Grams, Vegetables, Millet	30	20	100		15	8	65		Ipirisat 2km Nosoito R	
Josphen Lechuta	30	F			Kabikoki	2	Maize, Millet, Beans	30	8	100		20	1	60		1km	ļ.
Ezra Sambu	23	M	Т	Athlete	Kabikoki	0	Maize, Beans, Millet	1	14	10		0	10	10	İ	River 1km Tank near	1
Simion Kipterer	24	M	T	Evangelist	Chemoigut	0	- Vegetables, Maize, Millet,	13	0	12		8	0	6		home 40 m. Mukutani R.	Forest 1km
Johnson Lekuroito	40	м			Laitapak	2	Sorghum, Beans	50	20	100		18	10	50		1km Nosungeta	
Nahguta Lenaso	35	F	I	_	Kabikoki	5	Maize, Sorghum, Beans	40	8	60		4	7	30		lipirisat 4km Nosungeta	1
Lotireg Domonyna	28	M	I	Farmer	Karau	3	Maize, Beans, Millet	15	0	12		10	0	12		2km	Forest 6km
Moses Lekiremu	40	м	I	Driver	Lodiani	2	Maize, Beans, Millet	10	10	50	15	3	6	30	2	Muk. R. 1km	Forest 5km
Naoroi Letapi	30	F	Ĩ	Farmer Aloe-	Kabikoki	5	Maize, Sorghum, Beans	60	80	200		15	60	100		Muk. R. 4km Chesikin R.	Forest 1.5km
Chebokake Lodomo	26	F	1	Extraction	Chesikin	0	_	20	5	30		5	D	4		0.5km	>0.5km
Meriyit Lomonya	68	М	I	Aloe-	Ngarua	2	Beans, Maize	30	0	0		10	0	5	l	Cheptangarm ent 4km	200m
Chepteker Lubonyan	26	F	τ	,	Mukutani	1	Maize Maize, Beans, Millet,	40	0	60		10	O	30		Mukutani R. <0.5km	1km
Lina Moses	27	F			Lodiani	1	Sorghum, Vegetables	8	8	30		3	8	27		Mukutani R. <0.5km	i km
Nontauwa Lekateiya	35	м	1	Farmer	Kabikokî II	2	Maize, Beans, C/Peas, Millet, Sorghum	12	15	75		8	7	50		Nosungeta 1km	Nosungoia 1km
Maria Leparkitore	40	F	I	Farmer	Laitapak	1	Maize, Beans, Millet	50	30	100		0	6	15		Mukutani R. 300 m.	Leoruko Skm
Kobilo Kiteo	50	F	1		Muktani	1	Maize, Beans, Millet, Sorghum	5	0	10		1	0	6		Mukutani R <0.25km	1 km
Nangamu Nkshu	34	F			Laitapa	2	Maize, Millet	8	4	10		5	2	9		Mukutani 1.5km	Lipivisati 2km
Hannah Kirati	32	F	1		Kabikoki	1	Maize, Beans, Millet, Sorghum, Vegetables	15	20	20		6	10	50		60 m.	1km
Joshai Olesiamboi	25	м	1	Farmer	Kabikoki	3	Maize, Beans, Millet, Sorghum	19	4	25		4	8	80		River 100 m.	lkm
Nasic Ardo	50	м	1	Pastrolist	Ngarua	1	Maize, Beans	80	5	30		7	1	4		R. Mukutani 3km	1km
Ruth Jackson Letapi	28	F	1		Lodorok	2	Maize, Millet, C/Peas	20	10	50		5	6	35		2km	1km
John Kinyokis	27	м	I	Farmer	Kabikoki	1	Maize, Beans	6	6	20		2	Ð	8		1km River	Bush 6km
Raral	20	F	1		Narapala	1	Maíze, Beans	30	29	50		15	19	40		1km	200 m.
Joel Lenariset	31	м	I	Farmer	Lorukon	3	Maize, Beans, Millet, Sorghum	8	0	35		3	0	20		0.5 km	liciula lkm
Olechurai Satima Jones	28	м	1	Farmer	Lelerai	2	Maize, Beans	15	10	64		10	6	48		River	Bush 1km
Tom Lemusaua	31	м	I	Farmer	Lorukon	5	Maize, Beans, Millet, Sorghum	10	10	30		8	5	20		Muriti İkm	Lenakura
Symon Losiwa	32	м	1		Lontiani	3	Maize, Beans, Millet, Sorghum	34	20	140		21	5	105		Muk. River 200 m.	1km
Grace Katiya	45	F	I		Kabikoki	1	Maize, Millet	15	3	20		3	1	9		0.5km	0.5km
Mases Lekuraita	22	м	1	Farmer	Nayangare	1	Maize, Beans, Millet	0	3	10		0	1	4		River 1km	3km
Samwel Lenyorongo	40	М	ı		Laitapak	3	Maize, Beans, Vegetables, Millet	30	18	180	20	14	18	100	11	Mukutani River	4km
Napunyu	35	F	1		Kabikoki II	3	Maize, Millet, Beans	20	0	15		2	0	5		Nosungeta 2km	Noit 2km
	= 4			F	1 .1		Maize, Sorghum, Beans, Millet, C/peas, Vegetables,	24	÷	70		00	20				
Lewamban Lekichep	54	м		Farmer	Lelerai	3	Onion, Bananas Maize, Beans, Millet, C/peas,	34	24	70	ĺ	26	30	39		River 100 m.	Forest 1km
Kanyaman Lemeigurar	57	м	I	Farmer	Lelerai Mukutani	1	Onion, Bananas	8	8	45		5	10	27		River 150m.	Forest 1km
Cheplege Lokoruakou	22	F	1		Centre	1	Maize	40	6	30		4	0	7		River 2km R. Mukutani	200m.
Cheparasa Lokiringi	20	F	1		Sosion	0	Maize	10	0	20		2	0	0		100m. R. Mukutani	100m.
Mary Etinga	20	F	l I		Sosion	0	-	30	10	50		5	2	0		100m. R. Mukutani	100m.
Chepakatulo Angura	48	F	I		Nangarua	0	Maize	10	0	50		4	0	2		200m.	200m.
Nguipe Losunyuny	68	м	1		Narapala	5	Maize, Beans Maize, Beans, Millet,	40	10	30		5	0	2		Cheptangarm ent 3km	200m.
Dickson Olendagonop	22	М	ſ	Farmer	Lelerai	2	Vegetables	16	10	27		3	6	. 11	.	R. Mukutani 0.5km	Forest lkm
Rumbawa Loswa	20	F	1		Lontiani	1	Maize, Beans, Millet	15	0	10		10	0	5		River 1km	2km
Evaline Lotome	25	F	I		Loitapak	2	Maize, Beans					0	10	30		River 2km	Forest 4km
Cheplintany Lekachu	53	F	Т	:	Londorok	3	Maize, Beans	19	15	10		4	4	3	ļ	R, Mukutani 1km	2km
Kamakany Kitilit	68	м	т		Longurau	1	Maize, Millet	200	30	50		40	5	20		ltuwa 4km	100m
David Leparkulnya	25	м	1		Lontiani	1	Maize, Beans	15	5	10		10	3	5		fkm	1 km
Pauline Lokiring		F	I		Sosion	0	Maize, Vegetables, Beans					3	0	0	ĺ	River Zkm R. Ilpirisat	3km
Jackson Lesimmrui	20	м	1	Farmer	Lelerai	1	Maize, Beans	30	10	50		5	5	30		ikm	25an
Salina Kamama 🛛 🛔	1	F	1		Sosion	2	Maize, Vegetables, Beans					0	0	2	i	River 2km	5km

### Self-introduction of Upper Mukutani (16 October 2000)

Name	Age	Sex	Ethnic Group	Occupation	Village	Farm (a)	Major Crops	Cattle	Sheep	Drought Goats	Chick.	Gattle	Sheep	Goats	Ghick	Water Source	Fuel- wood
Fariko	60	F	т		Kabokoki		Maize, F. Millet	20	10	20		3	6	5		0.5km	
James Lecher	56	м	τ	Farmer	Lontiani	3	Maize, Beans, Sorghum, Millet, Vegetables	20	20	40		3	5	15		River 2km	
Peter Lechutia	22	м	1	Administrator			Maize, Beans, Millet	50	70	170		20	10	8			1
Jacob Ole Sikamoi	52	M	·													River 3km	
Samson Lekumbe	26	M	1	Counsior	Loitapak Lorukon	2	Maize, Millet, Beans Maize, Beans	30 19	10 6	60		4	8	40		River 3km	
John Lenaeku	52	M	1		Lounguran	3	Maize, Beans Maize, Beans	30	5	31 50		9 20	4	22 30		1km	
Cheboro Namuk		м	1		Sosion	1	Maize, Beans	10	13	20		1	7	10		River 2km 1km	
Reiana Nvakiram	20	F	1		Sesion	1	Maize, Millet					3	0	6			Buch
Emilly Kuroita	25	F	I		Loitapak	ł	Maize, Millet									River 2km	Bush
-							maize, miller					10	0	0		River	Bush
Nosile Kanyaman	35	м	I		Lelerai	1						1	4	5		River 2km R. Mukutani	Bush
Yakanyana Nasil	25		Р	Pastrolist	Ngarua	0		30	5	15		4	3	2		Zkm R. Mukutani	
Louwakori Terter	28	м	Р	Farmer	Narapala	2	Maize	25	10	40		10	2	30	:	10km	
Locholi Among Alic	25	М	Р	Farmer	Chemoigut	0	Maize	40	7	35		4	1	10		R. Mukutani 3km	Forest
Kawuoko Lotudongolo	20	м	Р	Farmer	Chemoigut	1	Maize, Millet, Vegetables	10	57	40		8	45	30		R. Mukutani 4km	Forest
Lonyarigepeta Napere	20	м	Р	Farmer	Sosion	1	Maize	60	40	100		40	30	70		R. Mukutani 5km	Forest
Christine Makilap	22	F			Muktani Center	2	Maize	O	2	C	ł	0	2	0		R. Mukutani 100m	Forest
Cheman Limakomoo	22	F	Р	Farmer	Karau	2	Maize	3	4	10	ĺ	2	2	5		R. Mukutani 1km	Forest
Cheplege Isaek	23	F	Р		Sosion	?		_				-	-	Ĭ		Mukutani	Toreat
Cheposeten Kipsirien	22	F	Р	Farmer / Pastrolist	Chemoigut	2	Maize, Beans	30	0	40	ĺ	3	0	5		R. Mukutani 5km	
Cheman Mpenyo	22	F	Р	Pastrolist	Sosion	0		3	0	2		2	0	-		R. Mukutani	
Chepochonvir Tilit	-	F	P	Farmer /										2		0.5km R. Mukutani	
Teriki Kondokoi	52 25	F	P	Pastrolist	Chemoigut Cheokatach		Maize, Beans	55 20	40	40		5	20	30		0.5km	
Chepteleel Kwanga	30	F	P		Chepkatach Londian	ł	Maize Maize	20 16	0 5	30 15	}	3	0 2	20		Iokinati 1km	2
Choman Lotuwn	22	F	P	Pastrolist		0	maize				Ì		- 1	6		1km R. Mukutani,	0
Jane Chepusi	20	F	P	Pastrolist	Ngarua Nangarua		Maíze	10 0	0 4	30 15		7	0	8		R. Nosugeta	
	20		l '		i vangar be		INGIZE	Ŭ	-1	13		Ů	2	10		1km R. Mukutani	2
Ngolelem Loitakamas	68	м	Р	Farmer	Narapala	2	Maize, Beans, Millet	100	20	100	j	40	5	6		5km, Lerai sprins	
Petra Asengoria	68	м	Р	Normadic	Chemoigut	0		20	3	15	1	8	0	0	ļ	R. Mukutani	
Miriam Petoo	28	F	Р		Narapala	1	Maize, Beans	8	0	10		2	O	5		R. Mukutani Skm	0
Miriam Lecher	28	F	р		Londian	3	Maize, Beans, Millet, Sorghum, Vegetables	2	10	30	Ì	2	8	12	ļ	R. Mukutani 100m.	Forest
Benjamin Lecher Lem;	27	м	Р	Teacher	Londian	0	Tomatoes, Bananas, Beans, Vegetables	6	8	20		4	10	20		River Ö.5km	0.
Kiswaił Loswa	38	м	Р		Londian	1	Maize, Beans, Millet	4	8	15		0	2	4		River 13km	
Chepokitin Ngueler	40	F	Р	Farmer	Narapala	1	Maize, Beans, Vegetables	60	10	50		<b>f</b> 5	4	20		R. Mukutani 8km	Forest
Dhepochepkatur Limaren	29	F	р	Farmer	Narapala	1	Sorghum, Millet, Beans, Maize	10	0	15		3	D	8		R. Mukutani 5km	
okere Nyakiram	25	м	Р	Patorlist	Narapala	C		140	15	70						R. Mukutani	Forest
-					i		Maize, Vegetables, Millet,			1	Ì	15	5	27	İ	7km R. Mukutani	Forest
Tepanyang Ngolelem	19	м	1	Farmer	Narapala	1	Sorghum	10	3	30		4	1	10	Ì	5km Nosoito R	Forest
Nomperi Letauaei	28	F	1 -		Lontiani	2	κ.	10	6	40		4	0	15		lkm	20
Chapura Chesoo Chemuket Longurakor	50 45	F F	T I		Lontiani	0 0		20	10	40		6	5	20		R. Mukutani	20
	40				Sosion			50	0	30		3	0	3		R. Mukutani	20
Chepesup Kukat		м	Т		Rine	1	Maize	25	5	20	1	2	4	5		Nosineta 1km	
Chemurara Kinyotua	_	F	P		Narapala	1	Maize	30	5	50		3	2	5		R. Mukutani Cheptangarmet	20
Chaman Angolengura	25	F	I		Ngarua	1	Maize Maize, Beans, Vegetables,	15	10	20	}	10	4	5		3km R. Mukutani	
Cheman Woyakoda	53	F		Farmer	Chemoigut	1	Millet, Bananas	10	5	30		5	3	10		R. Mukutani 3km	
Chepusia Toleliokame	28	F	1	Pastrolist	Chemoigut	0		10	0	10		2	0	3		R. Mukutani R. Mukutani	:
Chepotoko Kitilit	54	F	т	Farmer	Narapala	0		40	20	50		5	2	30		4km	Forest
Akoriteba Kalobo	30		I		Karau	1		60	10	50		10	2	20		Karau Dami 1km	10
Chepotiwokes Paka	54	F		Farmer	Sesion	2	Maize, Bens, Millet	20	5	20		4	3	4		R. Mukutani Ikm	Forest
Dommo Tilit	33	м	r	Farmer	Chemoigut	1	Maize, Beans	31	7	43	1	4	4	11		R. Mukutani 7km	Forest
Donget Kaliamoi		м		Farmer	Narapala		Maize, Millet, Beans	20	0	10		4	0	0		R. Mukutani Lerai spring	10,000
-	40	F	1	Farmer	Chemoigut		Maize, Beans, Millet	20	4	20		3	1	5		R. Lekirati Ikm	Forest
Chemkei Ngorian										- V I		<b>u</b> (					

Average 34.9 M:50, F:57, Unknown:2 \* Note: T: Tuken (9), P: Pokot (24), I: Njemps (64), Unknown: (6)

1.39 Mortai

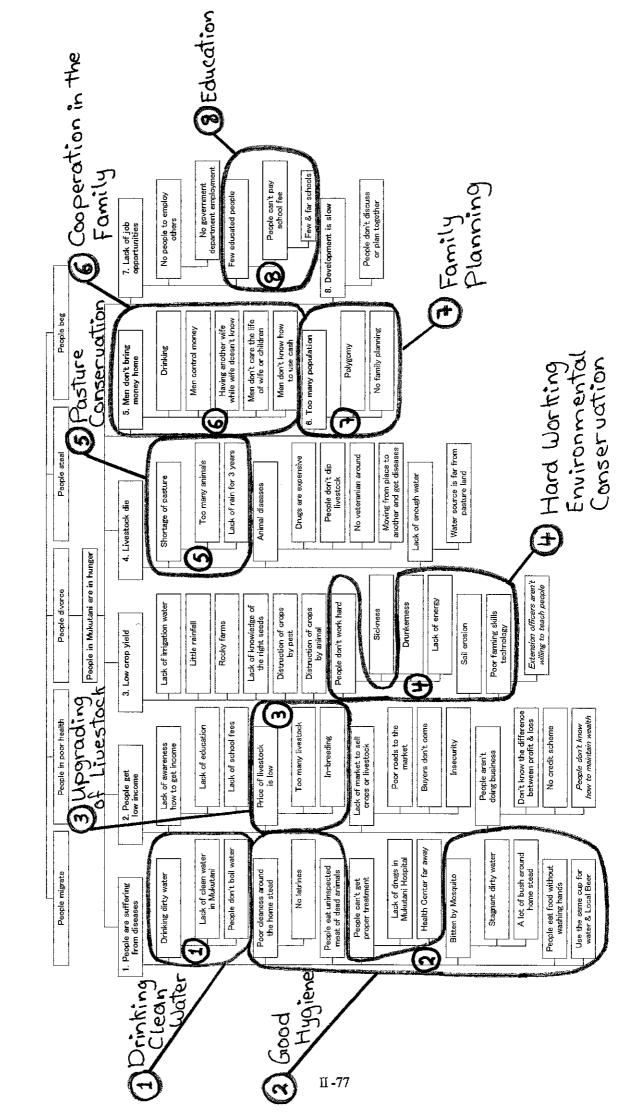
Average 25.97 Mortality Rate 73.08%

Youth Development Groups     NGOS       Youth Development Groups     Women in Development Sosion       Youth Group Kabikoki     Church F.G.C.K       Youth Group     Women in Development Sosion       Lenganyori Youth Group     NGOS World Vision       Youth Group Noltukaiobor     NGOS World Vision       Youth Group Noltukaiobor     World Food Programme       Naitoti Youth Group     Women in Development Lelerai       Indiati W. Group     Mukutai Women Group       Youth Group     Women in Development Lelerai       Youth Group     Women in Development Lelerai       Youth Group     Women in Development Lelerai       Maitoti Youth Group     Women in Development Lelerai       Naitoti Youth Group     Women in Development Tawo       Women in Development Tawo     Women in Development Lenet       Women in Development Letera     Women in Development Letera	NGOS	NGOS
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------	------

Stakeholder Analysis of Upper Mukutani (16 October 2000)

GOK Agency
Junior Animal Health Assistant
Ministry of Health
Ministry of Education
Leo Agriculture
Civil Servant Agriculture Livestock J. AHA. Chiefs Councilor

<b>Fraditional Association</b>	Those who helping during delivery, Ngaitoik T.B.A		School Committee
Traditional	Tradition Religious		DIP Committee
Irrigation Committees	Ilpirisati Water Project Committee	New Irrigation Committee, Noltukai	Murat Irrigation Scheme Committee



## **Problem Tree of Upper Mukutani**

## Priority Approaches of Upper Mukutani (18 October 2000)

							С	Eemale Choice
								Male Choice
8. Education Approach	7. Family Planning Approach	6. Cooperation in the Family Approach	5. Pasture Conservation Approach	4. Hard Working Environmental Conservation Approach	3. Upgrading of Livestock Approach	I. Drinking Clean Water Approach Approach		Type of Approach

□O: What people want most

■ . What people want and they can do

### MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

### The Participatory Approaches Expert JICA Study Team

### DIVISIONAL RD OFFICE, P.O BOX 90, Marigat 20/11/2000

### Brief Report on Project Cycle Management Workshops - Planning and Evaluation:

The workshops held on the old verification projects were used to evaluate midterm season while the other two workshops were held on the new additional sites, Kapkun and Chemorongion, to plan – Project Design Matrix and Plan of Action. Rugus and Mukutani (upper) workshops were postponed till further notice.

### 1. 1/11/2000 – Chemorongion

This workshop started late at around 12:15pm at Chemorongion Primary School. The participants were male 25, female 18 and total 43.

The following members attended

- (1) Takeuchi, Shimazu, Iizuka, Kimani (JICA Study Team)
- (2) Parsalach, Kerieny, Kemei, Maina (GOK)
- (3) Clara, Boskwony, Sagana, Kiptai (Enumerators)

The participants were asked to write down their particulars and indicate whether they come from the selected site and the average of each farmer. There were few people from the site but some farmers have been given land to cultivate as a group.

The average size of the farm is 1 acre and about eight farmers were noted. The divisional soil & water officer informed the farmers what is expected of them in construction work both in and outside the farm.

### 2. Sandai

A three day participatory evaluation workshop was held on 07/11/2000, 10/11/2000 and 11/11/2000 at Sandai Cathoric Church.

On the first day, the workshop started at 12:35pm with 32 participants but toward the middle the number had rose up to 64 (34 female + 30 male). Most of the GOK Staff and JICA Study Team were present.(Shimazu, Hata, Iizuka, Hasegawa, Hashiguchi, Nagamitsu, Kimani, Kimenye, Mburu, Mutsya, Labatt, Lagat, Oroko, Yatich, Parsalach and Maina) + Chief and Assistant Chief.

The participants were taken through the Project Design Matrix and thereafter they were divided into group work.

Each group was to discuss what they did as per the Plan of Action, what difficulties they encountered during the process, what they learned – possible way forward. Toward the end of the day group presentation was done by group secretary.

During day two and day three, the participants discussed the difficulties encountered, what was good and what they learned in the process of performing the duty. Some of them are:

Government officers did not clarify the 30% cost sharing in term of labour contribution, while the JICA Study Team did not involve them in procurement of materials and transport cost. But in the middle both team sat together and finalized the way forward.

On the third day, the team leader of JICA Study Team taught the participants about good management of the irrigation scheme in term of hardware and software. Proper management of the canals and well organized rotation of water to all farmers in the scheme.

### 3. Kapkun Workshop: 13/11/2000

This site is one of the additional rain-fed agriculture verification project on western side of Marigat Division (Tugen Hills). The participants were 51 people (male 24 + 27 female) and Shimazu, Iizuka + Maina.

The aim of this workshop was completion of Project design Matrix, objectively verifiable indicators, means of verification and important assumptions.

<u>Overall Goal:</u> People of Kapkun have enough food. <u>Project Purpose:</u> High production for everybody at Kapkun. <u>Verification Purpose up to September 2000:</u> People of Kapkun will harvest high yields. <u>Results / outputs:</u> 1. Improved farming, 2. Improved soil fertility, 3. Improved afforestation, 4. Improved soil water holding capacity.

The participants also did Plan of Action according to activities to be done and they came up with five subtitles: 1. Preparation, 2. Site facilities, 3. Land preparation, 4. Protection, 5. Harvesting & preservation.

### 4. Arabal: 14/11/2000

The workshop started at 11:55am with 32 participants (24 male + 8 female) but at the end we had 81 participants. <u>GOK:</u> Mutsya, Yatich, Parsalach, Kerieny, Kiptin and Maina, <u>JICA Study</u> <u>Team:</u> Takeuchi, Shimazu, Hasegawa, Nagamitsu, Hashiguchi, Azumi, Iizuka, Kimani and Hata, <u>Partpro:</u> Kimenye and Mburu.

The work covered review of PDM which has not changed, Plan of Action review with few modification and midterm evaluation.

The participants were asked what was good & why, problem encountered, possible solution and by whom. One of the evaluation is Partalo is well known through verification project (interlocation monitoring visits).

### 5. Kampi ya Samaki: 17-18/11/2000

The participants were 58 females plus the following. Shimazu, Namwonja, Ogawa, Takeuchi, Hata, Kimani, Hashiguchi, Loice and Maina.

We started with review of the Project Design Matrix and there was no changes made. This was followed by reviewing the Plan of Action of each Result (Output) but we managed to cover handicrafts (basket and bead works).

The basket activities had not seen reviewed during July/August period. Some difficulties encountered on these activities were: insecurity (how to get materials from Kapedo). The other item covered half was multipurpose building construction work. There was some changes on

the design of the building - by opening two doors to connect the three rooms honey, curio shop and restaurant.

Of 10% cost sharing per women group contribution has been going on well despite few cases. The construction has taken longer time than expected.

On the second day of workshop (18/11/2000), we continued with this item (building). Some activities were added.

- Wiring of the building for electricity installation
- Filing of the application forms for the electricity
- Payment of the deposit

Also honey processing was discussed and most of the activities have not been done. The other two activities will be done late on Saturday, 25/11/2000. Fish processing is promoted and Improved Jiko is introduced.

### 6. Marigat Youth Polytechnic: 18/11/2000

The participants in this workshop were instructors and management board members. They were 14 (3 female + 11 male). (Shimazu, Namwonja, Kimenye, Maina, Hata and Hashiguchi)

The Project Design Matrix has not changed. The short courses introduced sometimes are not well understood by the board members. The instructors said they do not have capacity to manage both regular and short courses – (shortage of staff). Payment of long term student is fairly good.

NB: The Rugus workshop wii be held later, maybe also Health Centre (Marigat).

J.K. Maina RD Marigat/Mukutani

ano Women Self-help Group	01)
Project Design Matrix (PDM) of Lake Baringo Munngano Women Self-help Grou	(Revised on 10 February 20

Overall Goal Phyli standard of living of poople in Kampi ya Samaki and its surrounding area		Narrative Summary		-	Objective Verifiable Indicators	Mean of Verification	Important Assumptions
rugu stattoard ot nyrig of people in Karn							
	annunorms su um ranno ay ide	g anca		-			
Project Purpose					9	Record of Mungano Women Group	There is peace and security
Wottren in Katupi ya Satnaki and its surrounding area (Lake Baringo Munngano Women Self-help Group) have enough income	routnding area (Lake Baringo Mt	unnsano Women Self-help			month, Undicator for snacks cannot be estimated.)		
Results/Outputs					<ol> <li>Building constructed and well</li> <li>maintained</li> </ol>	<ol> <li>Report on maintenance of Multi-No disease outbreaks numous building</li> </ol>	No disease outbreaks
ci	Handicrafts are promoted	3. Honey business is promoted	<ol><li>Pish processing is prontoted</li></ol>	5. Improved Jiko is introduced.	ulity bolts and baskets	ation of	There is no persistent drought in
perly							the area
					<ol> <li>Honey sell increase from 20% to 40% by end 2001</li> </ol>		Muungano group continue to work
				, <u> </u>	4. Fish customers increase from mesett 35% to 75%		
				· · · · · · · · · · · · · · · · · · ·	month	<ol><li>Report on operation and use of improved Jiko</li></ol>	
Activities	Belt making				studul		Clearance and transport procedures are not delawed
1.1 Group Meeting 2-1-1	2-1-1 Training handlerafts group	3-1 Honey group meeting	4-1 Fishing group meeting	5-1 Jiko group meeing	for multipurpose building	3. Five frying pans for fish frying	Training women groups does not
1.2 Application for plot 2-1-2	2-1-2 Handierafts group meeting	3-2 Training of honey bee-keepers	4-2 Training fishers	5-2 Training on new Jiko	(GOK) 2. Construction of multipurpose 4	4. Twenty bee hives	stop
1.3 Plot allotment 2-1-3	2-1-3 Search Handieraft facilities	3-3 Buying of honey materials	4-3 Permission from fisheries	5-3 Study tour		5. Other materials for hives	
************************************	•		department				
1.4 Workstrop Schunk to Women 24.1-4 group	2-1-4 Keinoving hair iroin skin	3-4 Buying of honey	4-4 Buy fishing materials	5-4 Jiko technician teachings		<ol><li>Refining materials twenty</li></ol>	
1.5 Map drawing 2-1-5	2-1-5 Coloring the leather	3-5 Seeping/measuring honey	4-5 Search for a worker	5-5 Make modern Jiko		7. Honcy jars, label 500	
1.6 Contradities Meeting 2-1-6	2+1-6 Preparing belt	3-6 Bottling of Roney	4-6 Making nets	5-6 Count number of firewood Traditional Vite			
1.7 Constructor 2-1-7	2-1-7 Scarch markets	3-7 Search of markets	4-7 Fishing in the lake	traduonat Jiko use 5-7 Use modern Jiko		<u>.</u>	
1.8 Collect construction tools 2-1-8	2-1-8 Selling the product	3-8 Learn benefits of honey	4-8 Removing nets	5-8 Learn to use modern Jiko			
1.9 Training committee and members	Rasket making	3-9 Management of honey by	4-9 Removing scales	5-9 Training on use of the two			
aws	f members		4-10 Try fish	5-10 Scient expert of making New			
1.11 Measurement of foundation 2-2-2 Chroup meeting	2 Choup meeting	~ ~	4-11 Scarch markets	5-11 Training on modern Jiko			
1.12 Excavation of Foundation 2-2-3	2-2-3 Search for reeds	4	4-12 Selling fish	5-12 Semittar on making modern			
2-2-4	2-2-4 Diying seeds			Jiko among members 5-13 Development on making Jiko		, , , , , , , , , , , , , , , , , , ,	
2-2-5	2-2-5 Soaking the reeds			to others			
2-2-6	2-2-6 Weaving			₩++- <b>\$</b> 1 m			
2-2-7	2-2-7 Selling the product						

# Necessary Intervention to Lake Baringo Munngano Women Self-help Group from Division / District (10th February 2001)

Training on trade, handicraft and cookery.

Home economics officer to come twice per month.

		Narrative Summa	Summary			Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall goal People of sandai are well mourished	sd							
Project purpose People of Sandai get enough food								
Verification Purpose in 18 months	nonths		1. Yield of water saved irrigation water	ition water		1. 10-15 bags per acre (if everything goes fine, 18-20 bags per acre)		
Sciected farmers get enough food			2. Price of gaats			2. From Ksh1,500 to 3,000 price increase		
Results/Outputs 1. Irrigation facilities arc improved	<ol> <li>Rotational irrigation is realized</li> </ol>	<ol> <li>On-farm irrigation is improved</li> </ol>	4. Goats become fatter	5. Animal health is improved	<ol> <li>Sandai Villagers learn from verification project</li> </ol>	1. 60% of the farmers get water	1. Yield of water increase	Drought conditions in Sandaí do not worsen
						<ol> <li>Less complaints from previous usage of water</li> </ol>	2. High yields of maize	No outbreak of notifiable diseases
						<ol> <li>Irrigation water is 75% less than before</li> </ol>	<ol> <li>Expected bag 22 to 30 per acre</li> </ol>	
						<ol> <li>Increase of goals weight from 15 to 25kg</li> <li>Reduction of licks from mesent 100% in 75%</li> </ol>		
Activities							Inputs	
1-1 Intake protection screen	2-1 Preparation of intigation time 3-1 Cleating the farms table	3-1 Clearing the farms	4. Goats become fatter	5-1 Give minerals	6-1 Community to visit selected 1. Division box with gate	1. Division box with gate	1. F <u>í</u> ve bucks	
1-2 Hixing of sprinkle gate	2-2 By laws must be followed	3-2 Digging on	Goat weight increases from 15 to 5-2 Deworming 25kg	5-2 Deworming	6-2 farms e.g. land leveling	2. Concrete liming at main canal	2. Two castrators	
1-3 The main canal to be slope	2-3 Management committee formed	3-3 Leveling	4-1 Zero Grazing (semi)	5-3 Vaccination	6-3 Improve or imgation canals	3. Other concrete structures	<ol><li>No Sickles and grinding stone</li></ol>	
1-4 Excavation of main canal	2-4 We want to know increase of $3-4$ Frencing the lattness every year	3 4 Fencing	4-2 Saving crop by-products	5-4 Castration	6-4 Water control and tirge table mixing	<ol> <li>Equipment for concrete roising</li> </ol>	4. No portable grass choppers	
1-5 Lining of main canal 0.5Km	2-5 Training of management committee	3-5 Rinsing will be done on 25- 30/4/2000	4-3 Chopping by-products	5.5 To trap Tsetsetly	6-5 Farmers will get enough		5. Five car notchers	Farmers continue maintaining main canal
	2-6 Water guard recruited	3-6 Buying seeds H G22 H513 Beans	4-4 Destocking	5-6 Frequent Dipping	6-6 Water for irrigation	1. Seeds	6. ľwo handy sprayers	
1-7 Fixing gales on division boxes 18	2-7 Tour for the farmers	3-7 Planting	4-5 Cross breeding	5-7 Contribution for accaricides		2. Fertilizers	7. Engine motor pump	
of division boxes	2-8 Training of farmers through lield days	3-8 Protecting the crops	4-6 Introduction of superior bucks	5-8 Fetching of water		3. Pesticides	8. No Tsetse fly treps	
1-9 Construction of cattle crossing		3-9 Crop Management	4-7 suitable for this area	5-9 Cicaring fcot bath for dip			9. Repair of the cattle dip	
1-10 Repair of Weir protection		(a) Sharing water	4-8 Castration of local bucks	5-10 Strong management committee				
1-11Checkdam construction		(b) Clearing reaping the canal	4-9 Improve feeding	5-11 Dip repair				
1-12 Cleaning of canals		(c) Watering	4-10 farm Sandai cross breeding association	<ul><li>(i) Cutting local poles</li><li>(ii) Buv nails</li></ul>				
		3-10 Weeding	4-11 By-laws be made by committee	(iii) Community participation				
		3-11 Harvest beans	4-12 Ensure health of bucks	(iv) Repairing of yard path				
		(a) Harvest Millet/sorghum	4-13 Ensure rotation of bucks	(v) Repairing of dip crushes				
		3-12 Trashing of marzc	4-14 Fee contribution for the bucks	(vi) Digging of soak pit				
		3-13 Apply Actelic dust	ar Marking	(vit) Buying of roof catchment cutters				
		3-14 Marketing						

Project Design Matrix (PDM) of Sandai (Revised on 9th February 2001)

## Necessary Intervention to Sandai from Division / District (9th February 2001)

Social Services Officer, Livestock / vetennary Officer, (Agricultural Officers)

to come twice per month.

Note:

Community, Chief and Assistant Chief will meet on 26th February 2001 to arrange for cost-sharing money.

Partalo Rainfed	Chemolongion Rainfed	Buck Custodians	Dip Committee	Ramacha
Digging of terraces going on.	<u>January 2001</u> : Digging of terraces was slow due to food shortage.	<u>November 2001</u> : Deworming done.	Boma for goats was erected.	<u>9 Sept. 2000</u> : Ramacha people held a meeting for water.
Pigeon Peas were harvested.	February 2001: Digging of terraces going on.	Dipping twice a month.	Some worn out iron sheets were replaced.	<u>18 Sept. 2000</u> ; Ramacha people registered members for water project.
Farms were cleared.		5 kids were born.	Dipping was done twice a month.	<u>25 Sept. 2000</u> : The road to the proposed bore hole site was cleared,
Farms were digged.		17 goats are pregnant.	Dipping declined since November.	<u>October 2000</u> : JICA people came to surveyed the site.
		Weight of kids at birth are 2.5 to 3kg compared to 1.0 to 1.5kg of others.	Hand sprayers are at high demand.	<u>12 Oct. 2000</u> : Ramacha started collecting funds for the project. (Ksh3,500/HH)
			Few farmers use castorators during dry period.	<u>10 Dec. 2000</u> : Members paid cash of Ksh32,000 in total.
			Arabal Primary School used water pump nine times. (Ksh100×9)	<u>6 Jan. 2001:</u> The total in cash has increased to Ksh50,000.
				<u>7 Feb. 2001:</u> The total in cash has increased to Ksh57,000.

Our progress since November 2000 up to 16 February 2001 (Arabal Location)

### What We Can Expect by September 2001

8 sacks / acre of Maize.	18 sacks of Maize.	40 kids born in the next mating season.	Ksh10,000 will be accumulated,
3 sacks / acre of Pigeon Peas.	2 debes of Cow Peas, Ground Nuts and Finger Millet.	Amount of milk per goat increases from 1/3 litre to 1 litre.	
4	1 debe of Beans and Sorghum.		

### **Necessary intervention from Division**

Agricultural Extension Officer: once a week.	Tick Control Officer makes dip sampling and
Social Services Officer to conduct seminars on	takes to laboratory and convey back the results
importance of working together once a month.	after every dipping.

### Plan of Action at Rugus Workshop (Revised on 8th February 2001)

A -dialize	Currented Bosuits (Indicators	Production	Cohodela	Mour Cohedule	Main Actoris)	Antere	Important Assumptions	umptions
Selfulite		CAULOUT		New Schedule	(Resonable Pérson(s))	SIDISC	Internal.	Externa
-1 Meeting of all community	Election of 15 efficials	Good	5th April 2000		Contentutity, Part Chairman	JICA, Chief, GOK	Cooperation and unity	
1.2 Excavation of Pan	Pan is extuvated	Bulldozet was used for 4 days as the result of 4-day traial / hard experience	11th April 2000		Eldeen, Youth, Women, Chairman	Chief, JICA	Kcep time	
3 Meeting with Pan comultee	Moting with JICA Study Team held	Good	2thá May 2000		Rugus community , HCA	Elders, JICA, GOK	Cooperation with GOK, JICA.	
l 4 Digging pan with bulldozer	Pan collect enough water	Fair-I still little water	Second week of May		Rugus community , Pan committee	JICA, Conumulty, Water engineer,	Unity among all parties	
1-5 Leveling around the Pan	Make site level	Not yet	1st October 2000	15th February 2001	Rugus community , Pan committee JICA, Community, Water engineer,	JICA, Community, Water engineer,	Cooperation with water engineers	
1-6 Ferting the Part	Protecting part from people and automats	Gaod	22nd Mey to 22nd June 2000		Rugus community , Pau committee	Chief, Conunuity,	Continunity cooperate	
.7 Planting grass and trees around the Pan	Erosion of sold stooped	Notyet	When grass seed agailable	1st week of April 2001	Pan contuntitee	Forester, Community	Cooperation with water engineers	
1-8 Collecting stones	Ethough stories to construct animal frough	Good	After finishing gallary work		Par contrilitze	Community, GOK, JJCA	Cooperation with GOK, JICA	
-9 By laws ('Idekot')	Rules followed / Protact water	Good	5th July 2000		Village elders, Pan committee	Rugus commutaty, Neighboring villagers Villagers work together	Villagers work together	

Activities	Expected Results	Evaluation	Schedule	New Scheduls	Benonsihls Berner(s)	Actors	mportant As	rtant Assumptions
2-1 Leveling around the pan	Good Past	Not yet	2nd week of September 2000 April 2001		Edders, Youth, Part connentices	Pan committee, JLCA	All the four villagers cooperate Ants does not destroy fence	Ants does not destroy fence
2-2 Fencing round the Pan	Protect Pan from animuls	Good	3rd week of July 2000		Edders, Youth, Pan conumittee	Purt committee, JICA, GOK	Unity athong the villagars	There is no sovere drought
2.3 Planting grass and trees round the Pan	Create beter surrounding	Not yet	3rd week of August 2000	When rains start in May 2001 Women, Forester, Pan chtimmu		GOK, Chief	Good understanding mong the villagets	
2-4 Control soil erosion	Control excess sitting	Not yet	First week of August	February up to April 2001 Parchairman, Villegens, GOK		Chief. Pau committee	All the four villagers cooperate	
2-5 By laws to protoct Pan	Protect Pan from mimuse by animals Good	Good	lst week of October 2000	3	Pan chairman, Villagers, GOK	Village elder, Pun constructee	Follow laid down rules in part maintenance	

Activities	Expected Results / Indicators	Tvatration	Schorlide	New Schertile	Main Actor(a)		Important As	Important Assumptions
				ainnei lan wesi	<ol> <li>(Responsible Person(s))</li> </ol>	Actors	Internal	External
2.4 Committee formation	Phataming good site / 15 school officials Good exist		Elected last year		School connuitee	Parents Min. of education	School rules and regulations	
3-2 Site cleating -Excavation	Sile cleared and excavated	Not yet / after pan work completed Ist week of August 2000	lst week of August 2000		School committee, Mason Pupils	Water development, JICA	Cooperation among school community	
3-3 Sant collection	Encugh sand and gravel	Not yet because of transportation and distance	Ard week of August 2000		JICA, School committee,	Chief, School committee	Understanding antong paronts and teachers	
3-f Stone collection	Enough stones collected in time	Good / one ton collected	3rd week of July 2000		School contruittee	Chief, School cummittee, GOK		JICA and GOK continue to
<ol> <li>5-5 Buying inputs -Cament, Wires Tunber, Nails, Pipes</li> </ol>	Materials purchased	Good	1st week of August 2000		School conunittee	Chief, School committee, GOK	Cooperation and understanding botween teachers and parents	
3-6 Fetching water	Community forch water	Good	1st week of Angust 2000		Contravity	Water development, JICA	Understanding among parents and teavilers	
3-7 Cotterruction -Roof drainage	Tank completed	Good	2nd week of August 2000		Mason, Carpenter, Community	Chief, School committee	Cooperation and understanding.	
3-8 Ctaring		Goad	2nd week of August 2000		Community, Teachers. Pupils	Chief, School committee, GOK	Understanding among parents and teachers	
3-9 Muintenance	School commity maintain Water Iank	Not yet	Continuons after completion		Community, Teachers, Pupils	Chief, School committee, GOK	Cooperation and understanding Interest teachers and mercate	

4. FIRITSING OF INTOTICIATION FROM DUDIES TO DRIVENTE								
Activities	Expected Results / Indicators	Evaluation	Schedule	New Schedule	Main Actor(s) (Resnonsifile Person(s))	Actors	Important Assumptions	umptions
4-) Teach pupils about good environment	Pupils and Parents learn about entyronment	No / school closed	Two lessons per week		Terchers and pupils	Parents, Chief, Teacher, School	Pupils and teachers cooperate	
4-2 Teach pupils about pit latrines	Pupils and parents understand use of toilets	Lact experts / to use teachers	One Jesson per weak		Teachers and pupils	Parents, Chief. Teacher, School	Pupils and teachers cooperate	
4-3 Teach pupils how to maintain the pan	Pupils and paronts comprehend the use of run	Not yet / after completion of pan	3rd week of July 2000	April 2001	Teachers and pupils	Parents, Chief , Teacher, School	Pupils and teachers cooperate	
4-4 Teach pupils on waterborne diseases	Pupils and parents know about waterborne diseases	No fschool closed	One lesson per week		Teachers and pupils	Parents, Chief, Tcacher, School	Pupils thd teachers coopstate	
4-5 Teach pupils how to boil water	Pupils and parents boil water before drinking	No / school closed	One lasson per week		Teachers and pupils	Parents, Chief , Teacher, School	Pupils and teachers cooperate	
4-6 Teach pupils various methods of cooking Families use good cooking methods No / achool closed	Families use good cooking methods	No / school closed	Two lesson par week		Teachers and pupils	Parents, Chief, Teacher, School	Pupils and leachers cooperate	
4-7 Stress Home science leason in school	Pupils learn shout family health larsons	No / school closed	Two lesson per weck		Teachers and pupils	Parents, Chief . Teacher, School	Pupils and teachers coopstate	

## Verification Purposes of Rugus by September 2001 (Decided on 8th February 2001)

- 1. Clean drinking water available.
- 2. Save time and have good health for both people and animals.
- 3. We will be looking healthy.
- 4. We will have hard working committee.
  - 5. Many people will attend meetings.

## Necessary Intervention to Rugus from Division / District

Social Services Officer, Water Officer, (Health, Home Economics and Livestock Officers) to come once per month.

### Note:

Community, Chief and Assistant Chief will meet on 26th February 2001 to arrange for costsharing money.

### Workshop for Monitoring and Evaluation at Kapkuun (21 February, 2001)

Progress	Difficulties	Necessary Intervention	Indicators (OVI)
Workshops held in September and Oct. 2000.	Shortage of drinking water during construction works.	Material support for fencing. (GOK and NGOs)	10 - 15 bags per acre of maize.
Group registered in Oct. 2000.	Low or inconsistent farmer participation.	More technical advice from District and Division.	5 - 10 bags per acre of Sorghum.
Study tour to Partalo, Rugus and Arabal in Oct. 2000.	Food shortage.	Monitoring and evaluation by technical personnel. (District, Division and NGOs)	2 - 4 bags per acre of millet.
JICA provided hand tools in Nov. 2000.	Few jimbes, shovels and mattocks.		4 - 6 bags per acre of groundnuts.
Construction of conservation measure started in Nov. 2000.			er er e folken de alegen na ponden de gron
Excavation total 786m by Feb. 2001. (2 days - 148m in Nov. 2000, 5 days - 304m in Dec. 2000, 1 day - 65m in Jan. 2001 and 4 days - 269m in Feb. 2001)	One farmer in upper farm is uncooperative.		
JICA provided additional hand tools in Feb. 2001.			
People outside of the verification site request structure layout.			

	Villages in Upper Mukutani (13th February 2001)	tani	
Village Name	Number of Households	Participants (Female)	s (Female)
Direct Beneficiaries			
1. Kabikoki "A"	50	n	(1)
2. Kabikoki "B"	12	2	(3)
3. Lendorok	21	<del>ن</del> ى	(L)
4. Lontani	18	7	(4)
5. Laitapak	19	4	(5)
6. Centre	21	13	(9)
7. Ngarua	19	4	Ξ
8. Narapala	15	2	(1)
Subtotal	145	49	(22)
Indirect Beneficiaries			
9. Akule	10	4	E
10. Loingran		23	
11. Lorukon	13	8	
12. Lelerai	17	10	(Ξ)
13. Socion	28	- 9	(4)
Subtotal	79	24	(9)
Total	224	73	(28)

ô
Can
We
What

	(Upper Mukutani: 1	(Upper Mukutani: 13th February 2001)	
We cooperate with the donor. We contribute in cash.	We contribute in cash.	We clear the sites for pipeline.	We clear the sites seven days a week.
We will self goats etc. to maintain the pipeline.	We contribute 10%.	We clear and dig for the pipeline.	The community will work hard
We conserve the environment.		We dig the trench.	We dig the trench.
		We dig the trench.	We dig the trench.
		We clear the water source.	We fense the water source.

### **III. BASELINE SURVEY**

### **III.** Result of Baseline Survey

The baseline survey was conducted with two parts in accordance with each purpose. The first part (here in after called as general survey) is to grasp the background of people in the area especially their living standard was focused, since the overall goal of the Master Plan is the high standard of living in the Study Area. This survey was carried out by interviewing with a prepared questionnaire and also by self-introduction at the workshop. The sample for interview was selected basically from the participants of the workshops, who may be the beneficiaries of the projects, considering their age and sex.

The second part of the survey (here in after called as specific survey) is to identify the baseline of indicators that are to evaluate the verification projects within the verification period. This survey was carried out after the indicators were specified through the workshops and also the farmers who really implement the projects were selected. At the final stage of the verification study period, each verification project was evaluated based on this baseline survey, some of whose data were, however, could not apply for evaluation due to short period of the study. Also some new data to indicate the possibility of quantitative evaluation were added during the implementation of the verification projects. The results of the evaluation are attached in the end of this appendix.

Also during the verification study, a survey for people's awareness was surveyed. In fact it is difficult to evaluate the change of people's thought or attitude with the implementation of the verification projects, but the results of the survey could contribute to study about the way of people's thinking. The results of this part are shown hereunder.

### 1. General Survey

### 1.1 Kampi ya Samaki

### 1.1.1 Sample of Survey

General survey was carried out with 30 sample households and self-introduction of 24 participants of the workshop. For the sample selection, adding to all the participants of the workshop, households in and around the township of Kampi ya Samaki were selected since the turnout of the workshop was few. The result was assessed with the result of the PRA and economic survey conducted in Marti village at phase I study in September 1999.

### 1.1.2 Background of the People in the Area

### 1) Family structure and education

Average household size is 6.3 persons per family. The distribution of household size is as follows;

No. of family member	No. of sample	%
0-5	13	43
6-10	14	47
10-15	3	10
15-	0	0
Sample total	30	100

80 % of the sample is single marriage. One husband and two wives in the sample have secondary school certificate and 13 husbands (43%) and 7 wives (23%) of the sample did not go to school.

### 2) Major income source

Major cash income source of the sample is Cattle sales and the structure of the income sources on average is as follows. Here the diversity of the income source is the widest in the verification project sites. Average sold price of cattle and goat/sheep were 9,300 Ksh/head and 940 Ksh/head respectively. These prices are the highest among the verification project areas.

Class (monthly income)	No. Households	%
~ 1,000 Ksh	11	46
1,000 ~ 3,000 Ksh	8	33
3,000 ~ 5,000 Ksh	2	8
5,000 ~	3	13

. . . . .

Source of Income	Estimate (Ksh/year)	%
Farming	0	0
Cattle sale	18,600	56
Goat/Sheep sale	5,100	15
Chicken	50	0
Honey	5,800	18
Fish sale	1,730	6
Others	1,690	5
Total	32,970	100
(monthly income)	2,750	

on Average Basis C to a strengt

People have diversity of income sources. In the survey, 56 % of the sample have more than 2 income sources and 23 % of the sample have three income sources. In this area, fish sale and business in the town are specific characteristics.

Income Source	No. of HH	%
1 income source	7	23
Animal sales	(5)	
Another source	(2)	
2 income sources	10	33
Animal sales + Honey	(3)	
Animal sales + Fish	(5)	
Animal sales + Others	(2)	
3 income sources	7	23
4 income sources	0	0
N. A.	6	21

Distribution of sample households by No of Income sources

3) Suffering from the drought in this year

During this drought in this year, people are losing a lot of animals. In the sample of 30 households, totally 259 cattle and 351 goats and sheep died during the drought in this year.

	Cattle	Goats/Sheep
Currently owned	287 (9.6)	1,395 (46.5)
Sold during last year	48 (1.6)	130 (4.3)
Died during drought	259 (8.6)	351 (11.7)
(%) of died	44 %	19 %

( ) = Average per Household

To survive this severe drought, people are taking actions such as relying on relief food from the government, catching fish, eating the meat of dead animals, and selling firewood.

### 1.2 Sandai

### 1.2.1 Sample of Survey

General survey was carried out with 30 sample households and self-introduction of 106 participants of the workshop. The sample interviewee was selected from the participants of the workshop considering their age and sex and also about one-third of the sample were selected from those who did not attend the workshop since they may also be the beneficiaries of the project. The result was assessed with result of the PRA and economic survey conducted at Kamech village at the Phase I study in September 1999. Specified survey for the irrigation project was carried out to seven households who will conduct water-saved agriculture and randomly selected 12 households who irrigate water from the canal in target. Also for the livestock improvement project, 5 households who will be responsible to feed bucks and randomly selected 15 households were surveyed.

### 1.2.2 Background of the People in the Area

1) Family structure and education

Average household size is 6.3 persons per family. The distribution of household size is as follows;

No. of family member	No. of sample	%
0-5	11	37
6-10	18	60
10-15	1	3
15-	0	0
Sample total	30	100

87 % of the sample is a single marriage. The educational level is relatively higher than other project areas as two husbands of the sample have diploma at collage and one husband and one wife have secondary school certificate and also one wife has degree at university. On the other hand 13 husbands (43%) did not go to school. Educational level of women is relatively high, as only 4 wives (13%) of the sample did not go to school.

2) Major income source

Major cash income source of the sample is Cattle sales and Crop sales since they have irrigation scheme. The structure of the income sources on average is as follows. As they did not sell many animals last year, their income level remained relatively lower. The average sold price of cattle and goat/sheep are 6,890 Ksh/head and 790 Ksh/head respectively.

Class (monthly income)	No. Households	%
~ 1,000 Ksh	6	22
1,000 ~ 3,000 Ksh	13	48
3,000 ~ 5,000 Ksh	2	8
5,000 ~	6	22

Distribution	of Sample I	Households	by	Income level

Income	Structure	on	Average Basis	

Source of Income	Estimate (Ksh/year)	%
Farming	13,170	39
Cattle sale	12,500	37
Goat/Sheep sale	3,760	11
Chicken	60	0
Honey	3,700	11
Others	960	2
Total	34,150	100
(monthly income)	2,850	

People have about same weight of importance on crop and animals. In the survey, 73 % of the sample have more than two income sources and 30 % of the sample have three income sources.

Income Source	No. of HH	%
1 income source	5	17
Crop production	(1)	
Animal sales	(3)	
Another source	(1)	
2 income sources	13	43
Crop + Animal sales	(8)	
Animal sales + Honey	(4)	
Others	(1)	
3 income sources	9	30
4 income sources	0	0
N. A.	3	10

Distribution of Sample Households by No of Income sources

3) Suffering from the drought in this year

The drought in this year is also affecting people but the number of the animals people lost are the fewest among the project areas. In the sample of 30 households, totally 41 cattle and 72 goats and sheep died during the drought in this year. The suffering from the drought in Sandai seems slighter than other areas. The by-product of crops and swamp preserved as grazing land here may have kept the animals alive.

	Cattle	Goats/Sheep
Currently owned	415 (13.8)	1,014 (33.8)
Sold during last year	49 (1.6)	129 (4.3)
Died during drought	41 (1.4)	72 (2.4)
(%) of died	8% <9%>	6% <7%>

% of animals died of drought in the 30 sample households

( ) = Average per Household

< > = % of died in case of the sold number illuminated

Also in the workshop the participants were asked to introduce the number of animals they have and the number of animals died of drought. The number of the participants was 106. The magnitude of the data shows same tendency with the result of the general survey, though the participants of the workshop reported that there was no goat and sheep died of drought. Anyway the participants reported significant existence of animal disease like ECF and FMD as well.

% of animals died of drought in the	participants of workshop
-------------------------------------	--------------------------

	Cattle	Goats/Sheep
Currently owned	1,041 (9.8)	2,622 (24.7)
Died during drought	114 (1.1)	0 (0.0)
(%) of died	10 %	0 %

( ) = Average per Household

To survive this severe drought, people are taking actions such as relying on relief food from the government, eating dry grass, and eating the meat of dead animals. Also some people are saying that they still have little maize in their store. For the cattle feeding they cut trees especially *Balanites aegyptica* to feed them.

# 1.3 Arabal

## 1.3.1 Sample of Survey

General survey was carried out with 30 sample households and self-introduction of 72 participants of the workshop. The sample interviewee was selected from the participants of the workshop considering their age and sex. The result was assessed with result of the PRA and economic survey conducted at Chemorongion village at the Phase I study in September 1999.

# 1.3.2 Background of the People in the Area

## 1) Family structure and education

Average household size is 7.2 persons per family. Here the polygamy is rather high rate as 39 % of the head have more than two wives. The distribution of household size is as follows;

No. of family member	No. of sample	%
0-5	11	35
6-10	15	48
10-15	4	13
15-	1	3
Sample total	31	100

In the sample one husband has diploma at collage and one wife has secondary school certificate in the sample. 10 husbands (32%) and 13 wives (42%) of the sample did not go to school.

## 2) Major income source

Major cash income source of the sample is Cattle sales and the structure of the income sources on average is as follows. The income level of the sample is relatively high due to the fact that the sample households sold a lot of animals. Hence the income from animal sales occupy 83 % of the total income. This data shows higher side of the income level in the area referring to the result of PRA in 1999. Average sold price of cattle and goat/sheep were 5,350 Ksh/head and 805 Ksh/head respectively. The average prices of animals are medium level among the project areas. So the number of sold animals is

significant for structuring income status of the sample households.

Class (monthly income)	No. Households	%
~ 1,000 Ksh	3	10
1,000 ~ 3,000 Ksh	11	35
3,000 ~ 5,000 Ksh	10	32
5,000 ~	7	23

Distribution of Sample Households by Income Level

Income Structure on Average Basis

Source of Income	Estimate (Ksh/year)	%
Farming	450	1
Cattle sale	26,230	61
Goat/Sheep sale	9,480	22
Milk	50	0
Chicken	30	0
Honey	6,810	16
Fish sale	0	0
Others	150	0
Total	43,200	100
(monthly income)	3,600	

No of the sample with more than two income sources is the most in the verification project sites. In the survey, 84 % of the sample have 2 income sources that are mainly animal sales and honey and 6 % of the sample have three income sources. In this area honey is considered to be an important income source.

Income Source	No. of HH	%
1 income source	3	10
Animal sales	(3)	
Another source	(0)	
2 income sources	26	84
Animal sales + Honey	(25)	
Animal sales + Others	(1)	
3 income sources	2	6
4 income sources	0	0

Distribution of Sample Households by No of Income Sources

3) Suffering from the drought in this year

During this drought in this year, people are losing a lot of animals. In the sample of 30 households, totally 235 cattle and 370 goats and sheep died during the drought in this year.

· · · · · · · · · · · · · · · · · · ·	Cattle	Goats/Sheep
Currently owned	752 (24.3)	1,665 (53.7)
Sold during last year	152 (4.9)	365 (11.8)
Died during drought	235 (7.6)	370 (11.9)
(%) of died	21% <24%>	15% <18%>

% of animals died of drought in the 31 sample households

( ) = Average per Household

< > = % of died in case of the sold number illuminated

Also in the workshop the participants were asked to introduce the number of animals they have and the number of animals died of drought. The number of the participants was 72. The magnitude of the data shows much lower rates in the result of the workshop. As it has mentioned above, the level of wealth of the 30 samples are in higher side. Also the data showed their suffering was also considerably high compared to the result of the workshop. The participants reported significant existence of animal disease like ECF, Tsetse fly and CCPP as well.

% of animals died of drought in the participants of workshop			
	Cattle	Goats/Sheep	
Currently owned	935 (13.0)	2,705 (37.6)	
Died during drought	101 (1.4)	134 (1.9)	
(%) of died	10 %	5 %	

% of animals died of drought in the participants of workshop

( ) = Average per Household

To survive this severe drought, people are taking actions such as relying on relief food from the government, buying food, eating the meat of dead animals, and eating leaves and wild fruits.

#### 1.4 Rugus

#### 1.4.1 Sample of Survey

General survey was carried out with 30 sample households and self-introduction of 77 participants of the workshop. The sample interviewee was selected from the participants of the workshop considering their age and sex. The result was assessed with result of the PRA and economic survey conducted at Noosukuro village at the Phase I study in September 1999. Specified survey for the project was carried out to 22 households who are using the targeted pan.

### 1.4.2 Background of the People in the Area

1) Family structure and education

Average household size is 5.8 persons per family. Although this average size is smaller than other areas, the tradition of polygamy is common in this area. Therefore as a household, the size may be small but as a family they are extended. The survey result shows that 47 % of the head of family has more than two wives. This ratio is remarkably high comparing to the other areas. The distribution of marriage status of the sample household size is as follows;

No. of Wife	No. of sample	%
Not married	0	0
1 wife	16	53
2 wives	6	20
3 wives	7	23
4 wives	1	3

No one of either husbands or wives in the sample did not complete secondary school and 15 husbands (50%) and 20 wives (67%) did not go to school. This number is the highest among the project sites.

### 2) Major income source

Major cash income source of the sample is Cattle sales and the structure of the income sources on average is as follows. Average sold price of cattle and goat/sheep were 4,380 ksh/head and 840 Ksh/head respectively. These prices are the lowest among the project areas.

Class (monthly income)	No. Households	%
~ 1,000 Ksh	8	28
1,000 ~ 3,000 Ksh	12	41
3,000 ~ 5,000 Ksh	5	17
5,000 ~	4	14

Distribution of Sample Households by Income Level

Source of Income	Estimate (Ksh/year)	%
Farming	170	1
Cattle sale	22,480	68
Goat/Sheep sale	8,040	24
Chicken	80	0
Honey	250	1
Fish sale	1,770	5
Others	470	1
Total	33,260	100
(monthly income)	2,770	

Income Structure on Average Basis

People here have little diversity of income sources. In the survey, 31 % of the sample have only one income source and those who have more than three income sources are only 6 %. In this area, people are more relying on animal sales.

Income Source	No. of HH	%
1 income source	9	31
Animal sales	(8)	
Another source (Fish)	(1)	
2 income sources	18	62
Animal sales + farm	(1)	
Animal sales + Honey	(1)	
Animal sales + Fish	(15)	
Animal sales + Others	(1)	
3 income sources	1	3
4 income sources	1	3
N. A.	1	3

Distribution of Sample Households by No of Income Sources

3) Suffering from the drought in this year

During this drought in this year, people are losing a lot of animals. In the sample of 30 households, totally 503 cattle and 323 goats and sheep died during the drought in this year.

	Cattle	Goats/Sheep
Currently owned	562 (18.7)	1,145 (38.2)
Sold during last year	149 (5.0)	277 (9.2)
Died during drought	503 (16.8)	323 (10.8)
(%) of died	41% <47%>	19% <22%>

% of animals died of drought in the 30 sample households

( ) = Average per Household

< > = % of died in case of the sold number illuminated

Also in the workshop the participants were asked to introduce the number of animals they have and the number of animals died of drought. The number of the participants was 77. The magnitude of the data shows lower rates in the result of the workshop. According to the data in the 30 sample survey their suffering was considerably high compared to the result of the workshop. The participants reported significant existence of animal disease like ECF, Tsetse fly and heart water as well.

% of animals died of drought in the participants of workshop

	Cattle	Goats/Sheep
Currently owned	2,056 (26.7)	3,834 (49.8)
Died during drought	779 (10.8)	559 (7.8)
(%) of died	27 %	13 %

( ) = Average per Household

To survive this severe drought, people are taking actions such as relying on relief food from the government, catching fish, and eating the meat of dead animals.

## 2. Specific Survey

#### 2.1 Kampi ya Samaki

The project purpose of Kampi ya Samaki was defined as "Women in Kampi ya Samaki and its surrounding area have enough income" and the indicator was "The number of women receiving low income by 30 % by the year 2001." According to the definition, the current income status of the beneficial women was surveyed. As for the Jiko extension, present condition of fetching or buying firewood, cooking time were surveyed as the hypothesis by the Study Team was to reduce the women's burden of fetching firewood and allocate their time to income generating activities. For the baseline survey 17 beneficial women were surveyed. Also the result of Workshop is referred.

According to the survey, 7 women out of 17 buy firewood. The price was about 50 Ksh/bundle. For the women who do not buy the firewood, the frequency of fetching firewood is on average 13 days per month (3 days per week). The amount of firewood

for use per day also varies one by one. The average time to spend for fetching firewood is **3.1 hours/day in the wet season and 2.3 hours/day in the dry season**. The time to fetch firewood is short in the dry season since women can more easily find dead branches. With current three stone stove, it takes **30 minutes to boil a pan of water**. And all the 17 women boil water. Average cooking time is 25 minutes in the morning, 50 minutes in the lunchtime and 45 minutes at evening<sup>1</sup>. Totally two hours per day is spent for cooking.

As for the small scale-industry, the status of each woman varies in wide range. Also their sense of bookkeeping or notion of cost/benefit is not elaborate. Therefore to contact the same person at times will be taken as monitoring and evaluation. Honey sales have not really started. So here shows the outline of the fish frying and handy crafts.

### Fish frying (three women)

Sales per day:	20 pieces
Unit price:	10 Ksh
Cost of fish:	5 Ksh/pieces
Firewood:	2.5 Ksh
Working day:	20 days
Net Income:	1,000 Ksh/month

# Handy crafts (with 12 women)

Average Prices (Ksh/item)
50 ~ 200
20~400
$120 \sim 500$
20 ~ 50
700 ~ 800
100 ~ 500
100 ~ 300
$20 \sim 120$

Cost and price of Ilchamus traditional belts (result from the workshop)

120 Ksh
20 Ksh
250 ksh
<u>390 Ksh</u>
800 Ksh

<sup>&</sup>lt;sup>1</sup> This was calculated by the data collected from the particioants of the workshop. The data with more or less than average + one standard deviation was eliminated from the final calculation.

Production	1 or 2 items per week
Net Income	410 ~ 820 Ksh/week (1,640 ~ 3,280 Ksh/month)

The products are mainly sold to tourists and local people and sometimes to middlemen. The sold amount varies by woman. Average sold amount after eliminating exceptionally big or small numbers is 35 items per year. Their working days are three days per week and 4 hours per day on average. Since their gross income varies, each woman will be contacted for monitoring and evaluation.

#### 2.2 Sandai

#### 2.2.1 Participatory Irrigation management (and Water Saved agriculture)

The project results/outputs for Participatory Irrigation management (PIM) and water saved agriculture are "Irrigation facilities are improved", "Rotational irrigation is realized" and "On farm irrigation is realized" and the indicators were defined as "Less complaints from previous usage of water", "Irrigation water is 75 % less than before". Also as means of verification they defined the increase of water and high yields of maize. The baseline survey was conducted for 20 farmers including the seven selected farmers for leveling practice. The farmers include three farmers from upper part of canal, eight farmers from middle part of the canal, and nine farmers from lower part of the canal.

Yield of maize in recent five years on average is about 15 bags/acre. The yield difference between upper part and lower part does not show clear difference from the 20 sample farmers though it is presumed that the yield is depressed in the lower part of the canal.

It is clear that the conflicts occurs more frequently in the lower part of the canal The number of conflict for water management shows as follows;

Location	No. of conflict
Upper	2 times/season
Middle	$2 \sim 4$ times/season
Down	$2 \sim 8$ times/season

Following table shows the irrigation pattern at peak time by the location of farm along the canal.

	Upper	Middle	Down	
Peak month	March to June	March to June	March to July	
Times (days/month)	8days	4 to 8 days	4 to 10 days	
Times (hrs/time)	6 hours	2 to 7 hrs	1 to 14 hrs	

Irrigation Duration at peak month

The irrigation practice is simpler in upper part of the canal. As it is shown on the table , the more goes down along the canal, the more complicated to do irrigation and it is indicative that there is water shortage at the middle and lower part of the canal. Generally In the middle and down part, they take shorter days and shorter hours for irrigation than upper part. Some farmers practice shorter hours per day but more frequent days or with less frequent days and longer hours of irrigating. It is expected with PIM and water saved farming that water distribution would be more efficient and effective.

## 2.2.2 Livestock Improvement

The indicators for livestock improvement were defined as Increase of goat weight and reduction of ticks. The specific survey for livestock improvement was conducted with 20 farmers including the responsible persons for bucks. The present practice by the farmers in relation to the project activities and the present situation related to the indicators are as follows;

## 1) Present practices

#### **Castration**

19 farmers out of 20 are practicing castration both to cattle and goats. The method taken is, however, unhygienic open castration, which just excise the testicles of animals

#### Cross-breeding

6 farmers out of 20 practice the cross-breeding

## **Dipping**

All the 20 farmers practice dipping even though the distance to the dip is as far as 14 km for the furthest farmer. The frequency of dipping is twice per month in the most farmers.

## Use of hand sprayer

10 farmers out of 20 use hand sprayer. The frequency of the use is also twice per month in the most farmers.

## Feeding method

12 farmers out of 20 answered that they are practicing semi-zero grazing. However in the field observation, they cut the branches of trees and feed cattle with the leaves during drought season and they still call it semi-zero grazing although it is rather a emergency

relief for animals. Among them 7 farmers answered that they use by-product of crops for animal feeding.

### 2) Present situation

### Animal diseases

Kind of diseases are east coast fever, foot and mouth diseases, CCP, red water, nagana. The number of animals currently suffering from diseases among the 20 farmers is as follows;

<u>Animal</u>	<u>Cattle</u>	<u>Goats</u>	
No. of owned	273	630	
No. of disease	95	37	
Ratio (%)	35%	6%	

### Breeding goats

Breeding situation of goats at present is as follows;

Frequency of breed	1 time /year	1.5 times/year	2 times/year
No. of Households	13	1	6
(%)	65 %	5 %	30 %

No. of goats born in 1998FY:	189
Died soon after birth:	65
Mortality rate (%):	34%
Probability of twins:	10% (17 births /172 births)

Average weight of a kid at birth:	1.5 kg
Length for goat to be first breed:	12 months
Goat price from 1998 July to 1999 June:	Minimum: 500 Ksh
	Maximum: 1,500 ksh
Amount of Milk:	Cow $1 \sim 1.5$ liter/head
	Goat 0.5 mm liter/head

## 2.3 Arabal

## 2.3.1 Rain-fed agriculture

The project for rain-fed agriculture is being carried out in Partalo village with 6 households and a women group. The project purpose is to get enough food and the indicator is described as yield increase. The baseline survey was conducted with the selected households and the representative of the women group. Their income level varies

from 25 Ksh/month to 12,600 Ksh/month, while the average level is about 3,400 Ksh/month. Their main income source is livestock sale and the household with highest income owns 210 beehives, which makes difference from the others. All the same their income from crop was nil. The representative of the women group had little income since she does not have ownership of livestock. Her income only came from honey since the crop production failed. The first and second richest have both three wives. The drought in this year is affecting the selected farmers, as well. They lost their cattle from 5 five to 46 heads and lost goats/sheep four to 30 during drought.(Refer to Table )

Referring to the yield of maize in recent five years, they managed to harvest some amount for only two years on average. The average yield of maize of the selected households in recent five years is 4.3 bags (387 kg)/acre. However the baseline of the yield can even be considered nil.

Year	Household who harvested	Average Yield of Maize (bag/acre)
1995	1	0.5
1996	3	3
1997	6	14
1998	4	4
1999	0	0
Average	e	4.3

#### 2.3.2 Livestock Improvement

The indicators for livestock improvement were defined as "Increase of milk yield and prices". The baseline survey for livestock improvement was conducted with 17 farmers 13 of whom were randomly selected and four from responsible persons for bucks. The present practice by the farmers in relation to the project activities and the present situation related to the indicators are as follows;

#### 1) Present practices

#### **Castration**

All the17 farmers are practicing castration both to cattle and goats. The most of them, however, take the method of unhygienic open castration, which just excise the testicles of animals. Only one farmer uses a castrator.

### Cross-breeding

None of 17 farmers practice the cross-breeding

#### Dipping

All the 17 farmers practice dipping even though the distance to the dip is as far as 12 km for

the furthest farmer. The frequency of dipping is twice per month in the most farmers.

### Use of hand sprayer

Eight farmers out of 17 use hand sprayer. The frequency of the use is also once or twice per month or even less in the most farmers.

### Feeding method

11 farmers out of 17 answered that they are practicing semi-zero grazing. However as it has explained, they call the practices with cutting the branches of trees and feed cattle with the leaves during drought season semi-zero grazing. Among them only 1 farmers answered that they use by-product of crops for animal feeding.

#### 2) Present situation

#### Animal diseases

Kind of diseases are east coast fever, foot and mouth diseases, CCP, red water, nagana, conjunctivitis, photosentilization, bruzelosis, lumpskin, scabies etc. The number of animals currently suffering from diseases among the 18 farmers is as follows;

<u>Animal</u>	<u>Cattle</u>	<u>Goats</u>
No. of owned	134	577
No. of disease	17	26
Ratio (%)	13%	5%

Although the ratios of sick animals are better than that of Sandai, the number of died in the drought is more than Sandai

<u>Animal</u>	<u>Cattle</u>	<u>Goats</u>
currently owned	134	577
No. of died	101	127
Ratio (%)	43%	18%
Sandai (%)	(23%)	(18%)

Breeding goats

Breeding situation of goats at present is as follows;

Frequency of breed	1 time/year	2 times/year
No. of Households	9	8
(%)	53 %	47 %

No. of goats born in 1998FY:	362	
Died soon after birth:	130	
Mortality rate (%):	36%	
Probability of twins:	12% (38 births /325 birt	hs)
Average weight of a kid at birth:	2.0 kg	
Length for goat to be first breed:	9 to 12 months	
Goat price from 1998 July to 1999 J	ine: Minimum: 60	00 Ksh
	Maximum: 1	,600 ksh
Amount of Milk:	Cow 1 ~ 2	liter/head
	Goat 0.35 1	nm liter/head

#### 2.4 Rugus

As it is mentioned above, the project purpose at Rugus is to get "drinking water for both human and animals" and the objectively verifiable indicator was shown as "less diseases brought about by waterborne diseases". The general survey shows that though people in Rugus are suffering from malaria the most and there are few cases for waterborne diseases such as cholera, typhoid and diarrhea. In the specified survey, 21 people who use the Lekiricha pan, which is to be rehabilitated by the project, were surveyed from the other aspect.

Apart from the pan, people fetch water from Lake Baringo as a common water source. The survey result shows that treatment of drinking water differs from water sources. As the table below shows, people are more sensitive with the lake water. Also three women out of 21 use the pan in spite that the distance to the pan is further than the lake. The results indicate that people see the water from the pan cleaner and valuable.

<u>Treatment</u>	<u>Lekiricha Pan</u>	<u>L. Baringo</u>	
None	8	3	
Boil	13	18	
Put chlorine	0	4 (Those people also boil water)	I

To decrease the waterborne diseases, careful treatment of drinking water would be a measure. The survey, however, also reveals that to fetch water from the lake is much harder than to do from the pan as the time to go and fetch water is as long as three times of the time to do from the pan. Therefore the project seeking to make use of the pan would provide safer water expecting the impact to decrease waterborne diseases.

By this way of measure, the length of use of the pan will be taken as a means of verification. According to the results of the survey, the length of use of the Lekiricha pan in the recent five years is consistent with two months except for 1997 when there was much

rain due to El Nino phenomena. The length could be getting shorter taking into consideration the yearly silt into the pan. However the results of the survey does not clarify due to the fact that the unit of month in the question was rather wide. The baseline of indicator will be, anyway, identified as two months Also the number of patients or cases by waterborne diseases will be monitored.

<u>Year</u>	Average length of use of the pan
1995	2 (months)
1996	2
1997	4
1998	2
1999	2

### 2.5 Marigat Youth Polytechnic

With the verification project, it is expected that Marigat Youth Polytechnic will be well known by the people. As general survey, totally 334 people (about 30 in each location in the Study Area) were randomly selected for grasping the people's knowledge about Marigat Youth Polytechnic. The age and sex were considered in selecting the interviewee.

214 people out of 334 (60 percent of the total interviewee) knew about Marigat Youth Polytechnic. But those who knew about at least one course in Marigat Youth Polytechnic were 172 (51 percent). The nearer the place, the better known, and the younger, the better known were the general tendency. There was remarkable difference between men and women who knew about the Youth Polytechnic. 72 percent of the men knew about the polytechnic, whereas 53 percent of the women (Figures 2.1 to 2.3).

The courses people wish to learn are popular with tailoring (97 out of 334 samples), carpentry (75) and masonry (63). The other courses, which are not taught in the Youth Polytechnic but demanded by the people, are driving, computer, typing etc. Especially those who live in Marigat location are keen on learning computer.

Also the project purpose is identified with sales increase of "Jua Kali" artisan. Therefore the baseline survey was carried out to get the base of "Jua Kali" artisans. From the member's list of Marigat "Jua Kali" association which consists of 118 artisans, active artisans were selected by the chairman of the association and eventually 13 artisans were surveyed. The type of trade of the selected was three carpentry, five tailoring (they were female), three mechanic and welding and two shoe making. The age of selected varies from 25 to 44 and the average age of 13 selected was 31. Two out of 13 were graduates of Marigat Youth Polytechnic, namely one from carpentry and one from tailoring.