PART III

HOMA BAY DISTRICT

CHAPTER 1 SALIENT FEATURES

This chapter presents specific features for Homa Bay District in terms of spatial alignment, administrative setting, topography, present land uses, natural conditions, socio-economic conditions inclusive of demography with major development indicators, and major sectors in the last sub-chapters. The major sector further elaborates the situation of Homa Bay District by agriculture, livestock, fisheries, infrastructure, health, and education.

1.1 Spatial Alignment

Homa Bay District is one of the twelve Districts in Nyanza Province. The District lies between latitude 0°27' south and 0°52' south, and between longitudes 34°12' east and 34°40' east. It borders Rachuonyo District to the north and Migori District to the south while it also borders Suba District to the west and Kisii District to the east. The District has a small shoreline of approximately 16.2 km to the north where it touches Lake Victoria. The District covers an area of 1,160 km^2 including 29.5km^2 of lake water surface. The lakeshore lowland lies in the northern area of the District while upland plateau stretches with a generally undulating surface in the western and eastern area.

The District is divided into six administrative divisions, namely Rangwe, Asego, Riana, Ndhiwa, Kobama and Nyarongi Divisions. The largest town in the District is Homa Bay Municipality in Asego Division, which is the seat of the District headquarters. The Municipality has a population of 56,297 people, which accounts for 20% of the total population in the District, according to 1999 census. Other centres include Ndhiwa, Mirogi, Rangwe, Rodi Kopany etc; most of which are located along C18 road.

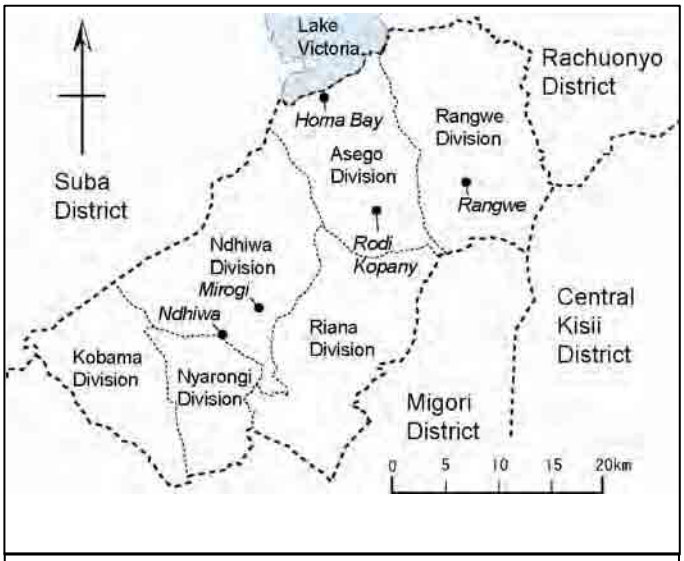


Figure 1.1.1 Administrative Boundary of Homa Bay District

In general, Homa Bay District doesn't have rich road network. Moreover, the traffic on the A1, an international trunk road running almost parallel to the district borders with Migori and Central Kisii Districts, rarely turns off to the District. Therefore, the District tends to be isolated from other Districts. One of the reasons is that C20, a primary road which connects Homa Bay Town with A1 road, is not well maintained; the opportunities of benefiting from the traffic on A1 are at present quite limited.

In addition to C20, important primary roads are C18 and C19, which connect large towns in the region. C18, the longest primary road in the District, runs from northeast to southwest cutting the

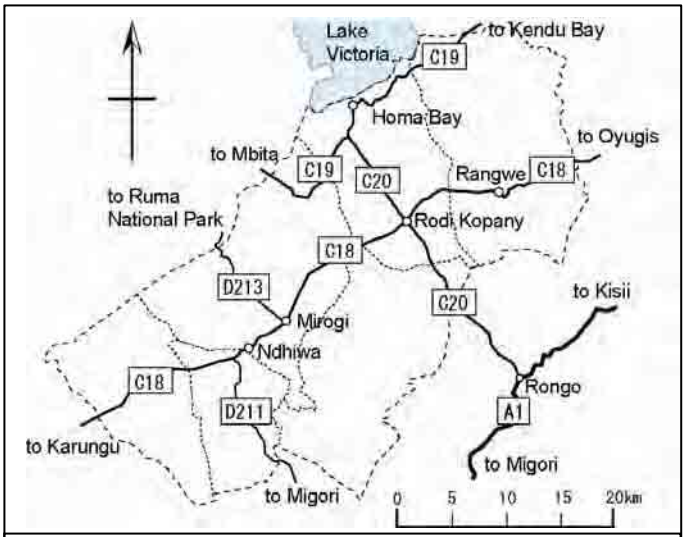


Figure 1.1.2 Transportation Network in Homa Bay District

district in half. It passes through all the divisions and connects important centres such as Rangwe, Rodi Kopany, Migori, Ndhiwa, etc.

The lakeshore road, which connects Kendu Bay in Rachuonyo District and Mbita in Suba District through Homa Bay Town, is C19. The condition of the road is terribly poor and makes the opportunity of trade less. However, road rehabilitation by using fuel levy has already improved the reach of C19 between Katito in Nyando District and Kendu Bay as of March 2007. This improvement is planned to cover all the roads between its starting point of Katito in Nyando District and Mbita. Though the improvement between Kendu Bay and Homa Bay has not yet started, it is duly necessary to improve the transportation. Aside from them, there are some other roads that connect market centers and residential areas, however, most of which are not well maintained and frequently become impassible during rainy seasons.

1.2 Topography, Land Use and Climate

1.2.1 Topography

Geographically, the District is located in Lake Victoria Lowlands and Floodplains Region. Northern and southern areas extend at comparatively low altitude about 1,200m above sea level. The north is characterized by the rolling hills along the Lake Victoria shoreline while the south is by lowland area which spreads along Kuja River and is called Otange Plain. In the west, altitude gradually rises toward the border with Suba District and meet with Kanyamwa Escarpment that goes down to Ruma National Park in Olambwe Valley. Another highland area is southern and eastern parts of Rangwe Division, which lies on western side of Kisii Hills. The lowest altitude in the District is the same as the water surface of Lake Victoria, which is 1,134m, while the highest is 1,759m at the top of Kanyamwa Escarpment.

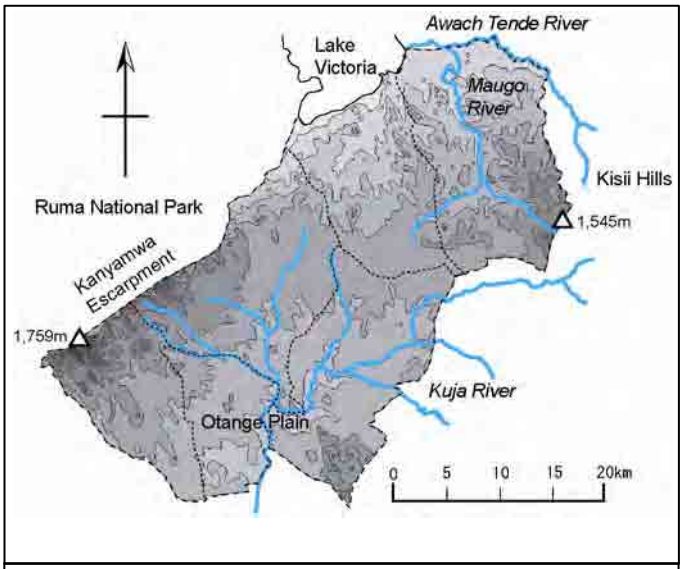


Figure 1.2.1 Topography and Rivers in Homa Bay District

The largest river in the District is Kuja River and its tributaries, which cover the southern half of the District. The river originates at highland areas of Kisii Hills, runs through Homa Bay District and drains into Karung Bay in Migori District. The second largest river is Awach Tende River, which covers northern half of the District together with its tributaries. The headwaters of the river originate at the northwestern side of Kisii Hills, and then the river starts flowing toward Homa Bay of Winam Gulf through the border with Rachuonyo District. Another important river is Maugo River, a tributary of Awach Tende River. In addition, the District is endowed with rich wetland resources although the size of which are generally smaller than that in Nyando District. According to the inventory by NEMA, 27 natural wetlands are recognized in the District; some of which are located in inland areas while others are along the lakeshores.

1.2.2 Land Use

In the District, most areas are used as pasture or farm just same as in Nyando District. According to the Ministry of Livestock and Fisheries Development (2005), it is estimated that the total arable land is 977km^2, which accounts for 86% of the total land, and 47% of which is currently under utilization.

Maize covers the largest area of the farmland, followed by Beans, Sorghum, Groundnuts, etc. Most crops are not for cash but for subsistence although agriculture prevails in the District.

For Livestock production, it is more popular in Asego, Nyarongi and Riana Divisions than in other three Divisions. Riana Division has the largest cattle population and milk production while Asego Division has the largest sheep and goat population. For the density, however, Nyarongi Division has the densest cattle population and milk production, which is 418/km^2 and 14,183litre/km^2 each as of 2005. In Riana Division, population of poultry and pig are also the largest, especially, the pig population accounts for 64% of the total in the District. Most honeys are produced in Ndhiwa, which accounts for 40% of total production in the District, followed by Asego division accounting for 22%. In Rangwe, livestock production is not so popular as in other Divisions though the division produces variety of cash crops such as pineapple, sweet potato, groundnuts, rice, etc.

There are seven irrigation schemes in the District, four of which are in Rangwe Division and three are in Asego Division. The largest scheme is the Maugo Irrigation Scheme in Rangwe Division. For the fishing beaches, Homa Bay District has only six fishing beaches; five are in Asego Division and one is in Rangwe Division. The largest beach is Ngegu in Rangwe, followed by Lela and Koginga in Asego Division.

1.2.3 Climate

In Homa Bay District, the climate is nearly same as that of Nyando District. There are two rainy seasons; long rainy season from March to June and short rainy season from October to February. The mean annual rainfall ranges from 900 mm in lowland areas of the lakeshore to 1,600 mm in highland areas. Figure 1.2.2 shows the monthly average rainfall at Homa Bay Agriculture Training Centre together with average daily maximum and minimum temperatures by month (1990-2004 for rainfall and 1990-2001 & 2004-2005 for temperature). The average annual rainfall at the centre is 1,156 mm. In peak months of the rainy seasons, it experiences more than 100 mm rainfall every month.

In the District, temperature differs according to the elevation. The annual maximum temperature is between 30^{o}C and 35^{o}C in the lowlands while it becomes between 25^{o}C and 30^{o}C in the uplands. The annual minimum temperature tends to change as well as the maximum; it is between 15^{o}C and 20^{o}C in the lowlands and between 10^{o}C and 15^{o}C in the highlands. Figure 1.2.2 indicates that February is the hottest month with maximum of 31.6^{o}C and minimum of 21.4^{o}C while July is the coolest with 28.1^{o}C and 18.8^{o}C. It also explains that the monthly change of the temperature is much smaller, which is only about 3^{o}C, than the daily changes, which is 9.7^{o}C on average.

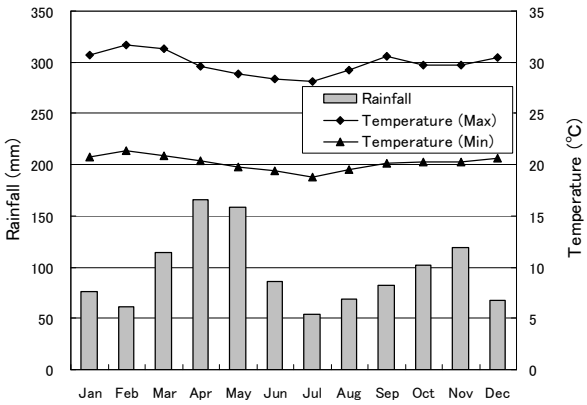


Figure 1.2.2 Rainfall and Temperature at Homa Bay

1.3 Socio-economy in Homa Bay District

1.3.1 Demography and Development Indicators

The Kenya 1999 Population and Housing Census found out a total population of 288,540 residing in Homa Bay District which has a total area of 1,160.4 km^2. Based on the 1999 census, Analytical Report Volume VII made population projections taking into account past trend of mortality and fertility plus the effect of HIV/AIDS. Table 1.3.1 summarizes the projected populations with the populations and densities by division: as of year 2007 it is estimated that there are 342,356 people. Figure 1.3.1 depicts the population density by division, showing the highest density in Asego Division

where Homa Bay Town is located, and Rangwe Division has the 2nd population density. Kobama and Nyarongi Divisions, which are located in southern rim of the district, show the lowest density.

Table 1.3.1 Population Projections by Year in Homa Bay District

	Census Year	Onset of the Present DP	Onset of this Study	Completion of this Study
Year	**1999**	**2002**	**2005**	**2007**
Population: inter-census growth ratio: 2.7 % ('89-'99)				
Rangwe	79,263	86,564	91,223	94,046
Asego	76,778	83,850	88,363	91,098
Riana	47,968	52,386	55,206	56,915
Ndhiwa	43,231	47,213	49,754	51,294
Kobama	24,245	26,478	27,903	28,767
Nyarongi	17,055	18,626	19,628	20,236
District	288,540	315,116	332,079	342,356
Population Density				
Rangwe	297	324	341	352
Asego	417	455	480	495
Riana	205	224	236	244
Ndhiwa	182	199	210	216
Kobama	172	188	198	205
Nyarongi	175	191	201	208
District	249	272	286	295

Source: 1999 Census and Analytical Report Vol.VII

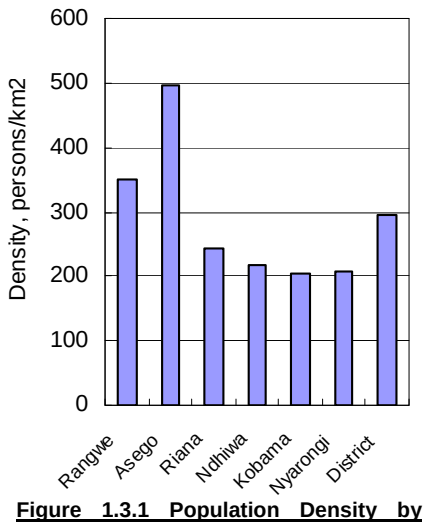


Figure 1.3.1 Population Density by Division in 2007

The 1999 census indicated that 11.5 percent of the total population of Homa Bay District live in urban areas while the rest in rural areas. Urban population specified in the census survey means those who reside in the municipality council areas: that is only Homa Bay Municipality.

Table 1.3.2 shows employment population in the district, and Figure 1.3.2 depicts the employed people by category. The employed people accounted for 49.0% of the total. They are classified into three categories of working for pay (6%), working in family businesses (7%), and working in family farms (36%). The percentage of people working for pay of 6 percent is rather small (in Nyando, it is 12 percent) since no major industry is in the district, while those working in family farms becomes higher reaching 36% (in Nyando, it is 23 percent). People working for pay and people working in family businesses were rather concentrated in the ages of 20 to 39. People working in family farms, on the other hand, accounted for 69.3% of the total employment of the ages of 20 to 39 and held a ratio of 78.8% of the total employment of the ages of 40 to over 60.

Table 1.3.2 Employed Population in Homa Bay District, 1999 Census

Age	Worked for pay	In family business	In family farms	Unemployed persons	Economically inactive	Not stated	Total
5-9	52	86	837	188	36,855	2,905	40,923
10-14	207	164	1,417	96	41,235	542	43,661
15-19	970	1,438	9,804	947	22,487	334	35,980
20-24	2,106	2,821	13,702	1,483	4,132	292	24,536
25-29	2,268	2,557	10,366	749	1,347	182	17,469
30-34	2,273	2,230	8,935	373	769	155	14,735
35-39	1,997	1,818	7,831	227	626	119	12,618
40-44	1,689	1,221	6,847	120	444	85	10,406
45-49	1,141	945	6,074	68	376	87	8,691
50-54	841	714	5,220	72	370	90	7,307
55-59	300	426	3,893	52	351	43	5,065
60+	662	998	11,269	174	2,248	189	15,540
Totals	14,454	15,418	86,195	4,549	111,240	5,023	236,931
%	6	7	36	2	47	2	100

Source: 1999 Census Report

Table 1.3.3 summarizes the development indicators in Homa Bay District. The population growth rates for the period 1989 – 1999 for Nyando is 2.7 percent, which is higher than that of Nyanza Province but slightly lower than the national average, which are 2.3 percent and 2.9 percent. High population growth rate naturally implies high birth rate as well as high fertility rate per woman. Crude birth rate per 1000 population is 50.8 and total fertility rate per woman is 6.1, which are higher than those of Nyanza and national. As per migration, net migration for Homa Bay is negative; -7.9 percent for male and – 4.3 percent for female, showing out-migration to other districts. This is because there is no major industry in Homa Bay and many people are going out looking for jobs, employment, etc.

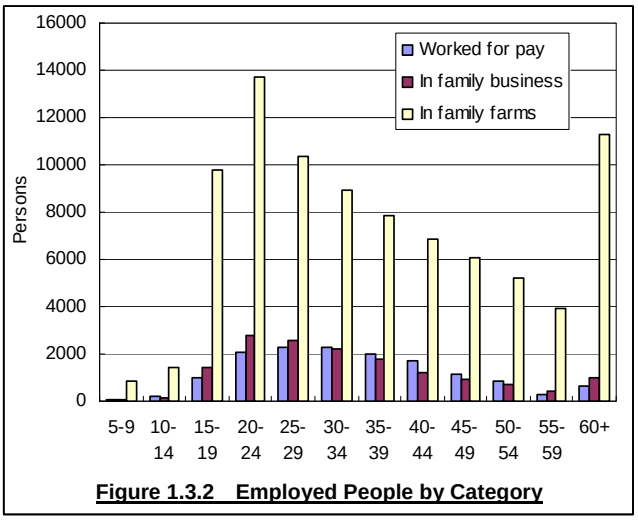


Figure 1.3.2 Employed People by Category

Table 1.3.3 Development Indicators compared to Nyanza and National

Index	Homa Bay District	Nyanza Province	National
Population Growth, %	2.7	2.3	2.9
Crude Birth Rate per 1000 Population	50.8	45.8	41.3
Total Fertility Rate per Woman	6.1	5.5	5.0
Migration (-: out, +: in)	-7.9 (M), -4.3 (F)	-5.5 (M), -3.4)	-
Infant Mortality per 1000 lice births	149.2 (193%)	111.6	77.3
Under-five Mortality per 1000 live births	254 (219%)	192	116
Crude Death Rate per 1000 pop.	25.1 (215%)	19.0	11.7
Life Expectancy at Birth, yr	Male: 35.9 (-16.9) Female: 40.7 (-19.7)	Male: 41.7 Female: 48.0	Male: 52.8 Female: 60.4

Source: 1999 Census; Note: Percentage in parentheses is the magnitude against the national level.

Nyanza Province is well known for its high infant and under-five mortality rate, which is mainly due to high prevalence of malaria, unhygienic water, etc. The above table shows exceptionally high mortality rate as compared to the national level; infant mortality in Homa Bay is higher by 93% compared to the national level and under-five mortality rates for the districts is also more than double that of the national average.

The under-five mortality is 254 which implies about one in every 4 children of Homa Bay children cannot see their five-year birthday. Affected by these high infant and under-five mortalities, crude death rates for the district also become very high, showing more than two-fold death rates against the national level. Life expectancy is no exception either. Male life expectancy at birth according to the 1999 census is already below 40 years old, 35.9 years only, as against the national average of 52.8. Women live longer than men with expectancy of 40.7 years old which, though, is still very low compared to the national average of 60.4. The life expectancy was actually reduced by about 10 years during the last 2

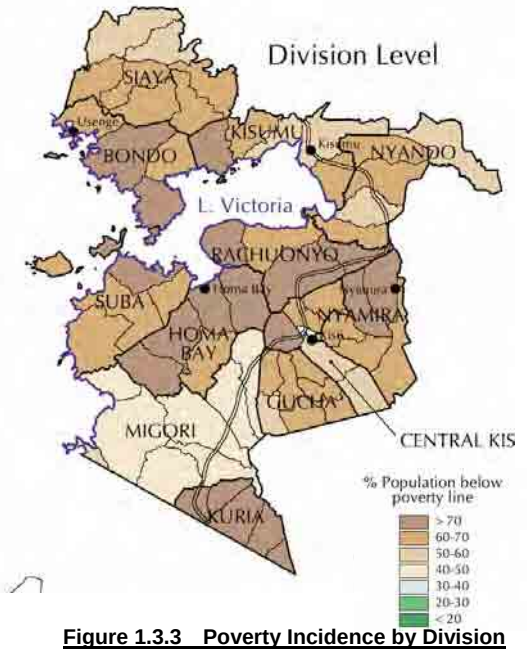


Figure 1.3.3 Poverty Incidence by Division

censuses period due to HIV/AIDS.

Central Bureau of Statistics issued the poverty assessment result; titled "Geographic Dimension of Well-Being in Kenya, Who and Where are the Poor?" in 2003, showing the poverty indexes in lower cadre than district level. The result shows the poverty dimension by district, division and also by location level. Figure 1.3.3 shows the poverty incidence in Homa Bay District by division. The figure shows all the divisions except Riana high poverty incidence reaching over 70 percent, while the incidence of Riana falls in between 60 to 70 percent (the latest poverty survey, KIHBS-2005/06, shows overall district poverty ratio of 45%, however no data at division level is available).

1.3.2 Major Economic Activities

The major economic activities come from the primary industry sector; mainly agriculture sector in this district. Markets of the district are dominated by the primary products including maize, sorghum, finger millet, cassava, sugarcane, rice, vegetables, fruits, livestock, and fish. There are also a few processed products like jaggery, sweet potato bread, peanuts butter, and processed fish also marketed in the district. Almost all the processed products are in fact processed from the primary products. For livestock, disease outbreaks are an impediment to access to markets when there is declaration of quarantine particularly for foot and mouth disease. There is also lack of holding grounds thus limiting livestock access to markets.

Homa Bay District purchases some cereals, vegetables, and fruits from the neighbouring districts such as Kisii, Kericho, and Nandi. The district also purchases some fish from the neighbouring districts of Migori, Rachuonyo and Suba. Sugar imported from the COMESA region is distributed in the district market due to its cheaper prices. Homa Bay District has a fish processing factory in Asego division. The factory produces various fishery products of Nile perch such as frozen fillets, fresh chilled fillets, frozen skins, and frozen bladders for export to various destinations. The frozen fillets and skins are mainly exported to Israel, the chilled fresh fillets to Europe, and the bladders to Hong-Kong.

Primary commodities such as cereals, vegetables, fruits, livestock and fish are sold in the domestic markets for generating income and ensuring food security. The activity is also important as a source of employment to the local communities. The creation of employment through the domestic market is an important strategy to reduce poverty. Some of the commodities such as fish, vegetables and fruits are highly perishable. This leads to high post-harvest wastage due to lack of cold chain handling and storage facilities. There are 11 major domestic markets in Homa Bay District. There are two in Ndhiwa, five in Rangwe, one in Kobama/Nyarongi and three in Asego. The markets are under the management of the local authorities. Most of the markets lack basic requirements for marketing agricultural commodities with regard to product quality and safety assurance.

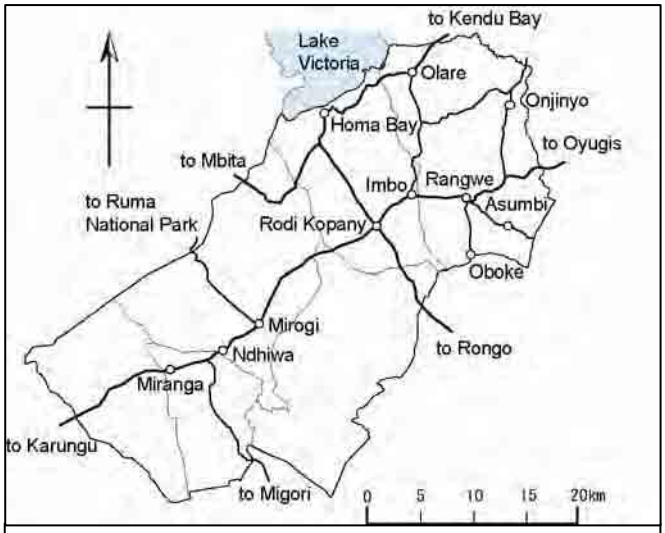


Figure 1.3.4 Location of the Market in Homa Bay District

There are rural centers, in addition to Homa Bay Municipality, where people gather, sell, buy, and exchange goods. Economic activities such as tailoring, carpentry, commerce, small trading are taking place in the rural centers. Figures 1.3.5 shows the category of the shops operating in Homa

Bay Municipality while Figure 1.3.6 shows the shops operating in other four major rural centers of Rodi-kopany, Ndhiwa, Rangwe and Asumbi. As shown in the figures, retail together with kiosk, described as smaller retail shop, surpass the others. Other shops many in number are: restaurant, tailor (both in shop and on veranda), shoe repair, hardware, bicycle repair, textile/cloth, carpentry, metal work, and barbers. Of these, tailor, hardware, carpentry, and metal works are subjects of youth polytechnic institute. In fact, those local industries have absorbed graduates from respective youth polytechnics.

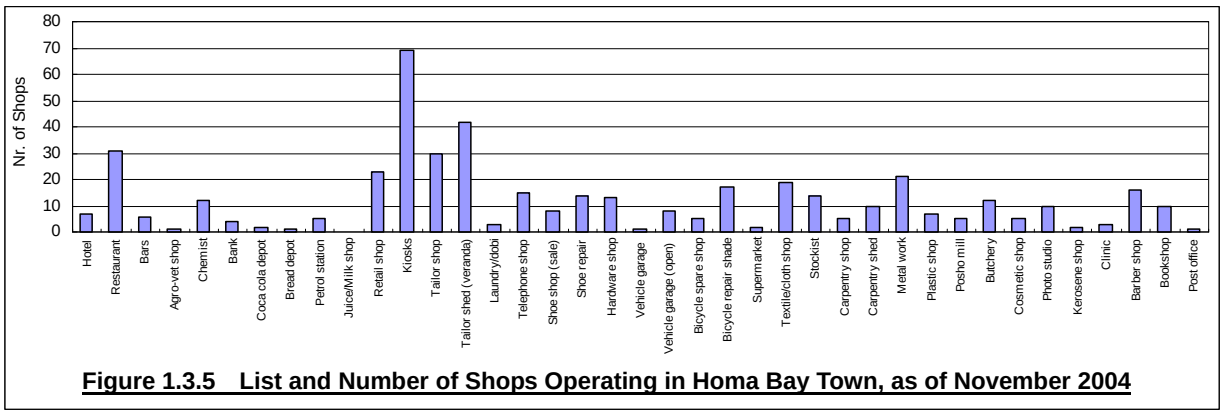


Figure 1.3.5 List and Number of Shops Operating in Homa Bay Town, as of November 2004

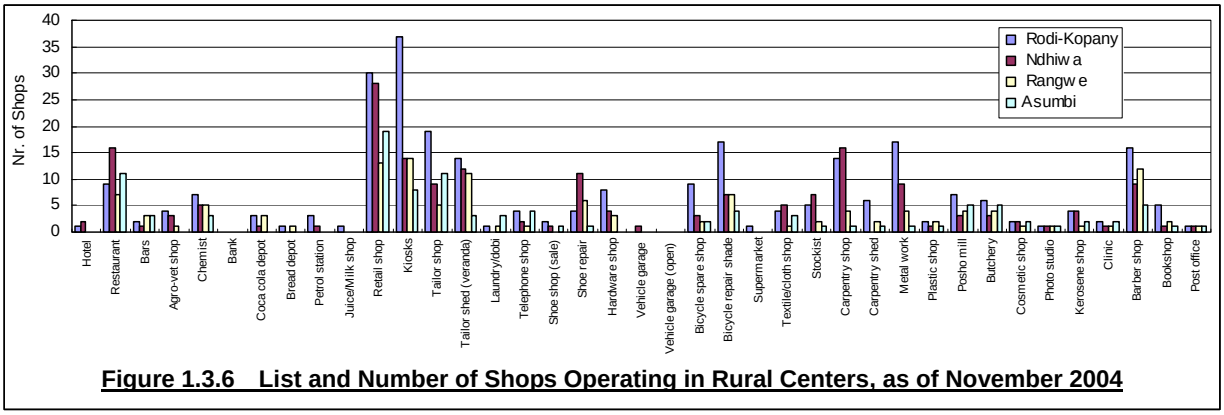


Figure 1.3.6 List and Number of Shops Operating in Rural Centers, as of November 2004

1.4 Major Sectors

This sub-chapter presents the situation of major sectors such as agriculture and livestock, fisheries, infrastructure, health, and education. This sector analysis is meant to capture the current situation and trends in Homa Bay District, which leads us to identify constraints and their causes, possible solutions to the identified constraints, past development efforts and identified opportunities. The approach to identify these issues is composed of: 1) desk review of available documents such as annual reports of sectors concerned, district development plans among others, 2) field visits and physical observation, and 3) discussions with and interviews to the officers and people concerned. There were in some cases difficulties in getting some of the data due to poor information management, which may be the limitation to articulating this sub-chapter.

1.4.1 Agriculture and Livestock

1) Agriculture

Homa Bay District has a varied ecology that allows growing of a very large number of crops, for which about 30 different crops are grown. The important ones are: maize, tomato, cassava, pineapples, beans, sweet potatoes, sugarcane, groundnuts, sorghum, paw paws, bananas, kales, onion, cotton, cowpeas and tobacco. Other crops grown at a much smaller scale are: local vegetables, cabbage, citrus, finger millet, green grams, simsim, soya beans, arrow roots, tea, coffee and sunflower.

Figure 1.4.1 shows the trend in hectarage for major food crops, and Table 1.4.1 shows the estimated areas under the respective crops including food crops. The areas for the crops varied from year to year as farmers put different acreages depending primarily on rainfall, and also availability of oxen for ploughing or affordability of tractors and seed availability, and may be due to poor recording of the data[1]. The crop which occupies the largest area is maize, the staple food of Kenyans, followed by beans which in most cases is intercropped with maize and sorghum, and by sorghum/ groundnut to lesser extent.

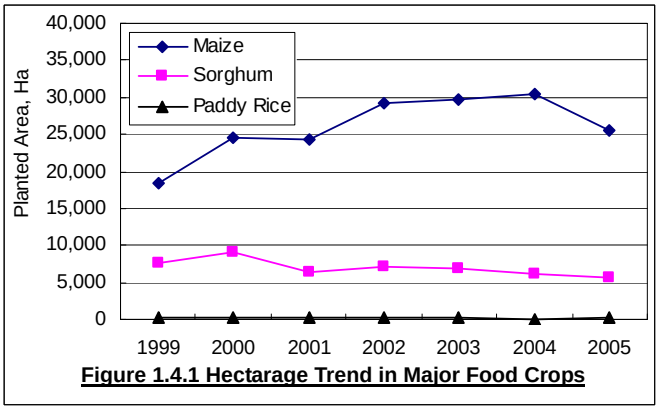


Figure 1.4.1 Hectarage Trend in Major Food Crops

Pineapple is becoming a popular cash crop in the district (see Figure 1.4.2). As of 2005, it is said that there are about 600 ha of pineapple fields, planted mostly in LM3 zone in Rangwe Division. The variety here is Smooth Cayene, which has more juice. According to the divisional officer, pineapple can yield as high as 40 ton per acre. Pineapple can yield 3 times during the economical life cycle: 1st at 15 – 18 months later from the planting, 2nd at 6

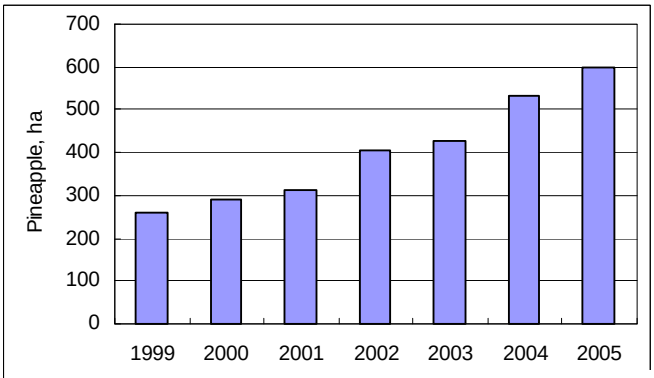


Figure 1.4.2 Hectarage Trend in Pineapple

[1] For example only the extra acreage of perennial crops achieved in the year were included instead of, including also the area planted in the previous years. Some of the errors were removed by the inclusion of earlier acreages by the consultants. In addition, all the data is estimated without using proper sampling procedures. This gave data that the officers could not be sure of.

months later from the 1st harvest, and 3rd at 3 months later from the 2nd harvest. If a farmer uses crown, it takes about 18 months until the 1st harvest but more uniform growing, and if he/she uses suckers, it takes shorter period to harvest such as 15 months but not much uniform. Pineapple has little diseases, pest, so easy to manage for the farmers. According to the interview to a farmer, the pineapple was brought from Mombassa back in 1985, and has been extended soley from farmer to farmer extension to date.

Table 1.4.1 Trends in Main Crops grown and Estimated Area under Each Crop 1998-2005, Ha

Crop	1999	2000	2001	2002	2003	2004	2005	Remarks
Maize	18,525	24,651	24,317	29,200	28,910	30,484	25,449	
Sorghum	7,516	9,116	6,345	7,081	6,873	6,043	5,722	
Paddy Rice	218	230	300	200	293	68	295	
Beans	8,438	10,775	12,460	15,622	18,355	17,851	13,062	
Green grams	785	405	255	1,037	841	576	549	
Cow Peas	486	468	263	282	938	972	NA	
Soya Beans	27	4	10	33	58	57	29	
Sweet Potatoes	1,364	1,400	1,793	3,278	2,441	2,342	2,655	
Cassava	1,461	2,218	1,706	2,966	2,703	1,589	1,455	
Arrow Roots	36	17	46	92	123	160	187	
Groundnuts	4,304	5,006	4,725	4,915	4,092	5,872	6,330	
Simsim	3	8	6	16	9	9	5	
Tobacco	341	102	561	940	211	314	496	
Cotton	223	40	1,080	330	1,377	972	674	
Sugarcane	1,995	2,152	2,205	2,229	2,013	2,401	2,599	
Kales	406	410	415	460	510	671	576	
Tomatoes	238	268	300	350	420	426	399	
Onions	73	74	79	76	81	80	68	
Cabbage	65	41	44	45	47	2	17	
Pineapple	261	289	313	403	425	534	599	
Bananas	248	276	374	472	481	574	714	
Mangoes	38	47	55	92	102	105	110	
Pawpaw	NA	NA	NA	88	100	106	110	
Citrus	18	21	22	29	27	27	28	
Local Vegetables	29	43	49	-	-	150	18	

Source: Annual Reports, District Agriculture Office, Homa Bay District, 1999 - 2006

Figure 1.4.3 shows average cereal production composed of maize, sorghum, and rice per household, and the production of cereals plus sweet potatoes and cassava (for detail, see Table 1.4.2). As shown, the cereal production in Homa Bay District is about 500 – 700 Kg per household per annum. Though specific data with regard to cereal consumption per HH is not available, it can be said that a better-off family consumes over 1,000Kg per annum, while poor family may survive with only 500 Kg. General practice may be that a family who produces less than 750 – 800 Kg per annum has to supplement the cereals by either buying or eating other food crops. The figure also shows the total production including sweet potatoes and cassava in addition to the first four major cereals. The total production inclusive of sweet potatoes and cassava is now over 1,100 Kg to reaching over 1,500 Kg in a good harvest year. The figure tells us that Homa Bay District may be narrowly producing self-sufficient cereals, and supplemented by sweet potatoes and cassava, hence the total food crop production could be enough to sustain the population.

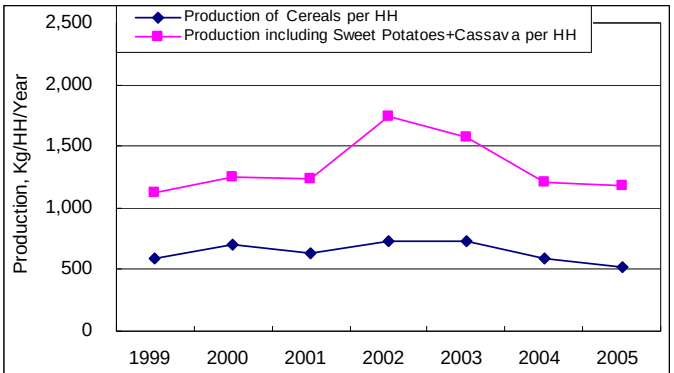


Figure 1.4.3 Average Food Production per HH per Year

Table 1.4.2 Trends in Main Crops Grown and Estimated Production under Each Crop 1999-2004

	Crop	Unit	1998	1999	2000	2002	2003	2004	2005
Staple Food	Maize	Ton	30,011	37,716	37,205	44,676	44,858	39,782	32,229
	Sorghum	Ton	9,470	11,486	7,424	8,922	9,324	5,105	7,086
	Paddy Rice	Ton	305	345	450	300	440	101	443
	Finger Millet	Ton	96	48	43	63	197	124	142
	Total	Ton	39,882	49,595	45,121	53,961	54,818	45,112	39,899
	Production / Head	Kg	138	164	146	171	171	138	120
	Production / HH	Kg	595	704	628	737	735	595	517
	Sweet Potatoes	Ton	20,460	21,000	26,895	49,170	36,615	35,130	39,825
	Cassava	Ton	14,610	17,744	17,060	24,460	25,750	11,160	11,820
	Total+SP &	Ton	74,952	88,339	89,076	127,591	117,183	91,402	91,544
	Production / Head	Kg	260	291	288	405	365	280	276
	Production / HH	Kg	1,118	1,253	1,240	1,743	1,572	1,205	1,186
Vegetable	Kales	Ton	6,090	6,150	6,226	6,090	7,650	10,065	4,608
	Tomatoes	Ton	3,570	4,020	4,500	5,250	6,300	8,520	3,990
	Onions	Ton	1,095	1,480	1,580	1,520	1,620	1,600	680
	Cabbage	Ton	1,300	820	880	900	-	-	-
	Local Vegetables	Ton	29	43	49	NA	78	59	18
	Total	Ton	12,084	12,513	13,235	13,760	15,648	20,244	9,296?
	Production / Head	Kg	42	41	43	44	49	62	28
	Production / HH	Kg	180	178	184	188	210	267	120?
	Population	Persons	288,540	303,323	309,261	315,116	320,876	326,534	332,079
	Nr. of HHs	Nr.	67,040	70,475	71,854	73,215	74,553	75,868	77,156

Source: Annual Reports, District Agriculture Office, Homa Bay District, 1998 - 2006

Above table shows production of vegetables as well, which total production per household is summarized in Figure 1.4.4 (data in 2005 is excluded as it seems not accurate). Kale and tomatoes are the major vegetables, and local vegetables such as amaranthus (ododo), spider weed, osuga, etc. are rarely grown in this district though there is a possibility that the statistics have not captured well. Vegetable production per household per annum has been increasing since 2001. National average production of all the vegetables per household per annum is recorded at 270 Kg as at year 2004[2]. Since vegetables are perishable, not much volume can be traded across the district borders. Therefore, most of the Homa Bay people may be said they once used to consume less volume of vegetables than the national average, but by now the consumption is almost equal to the national average.

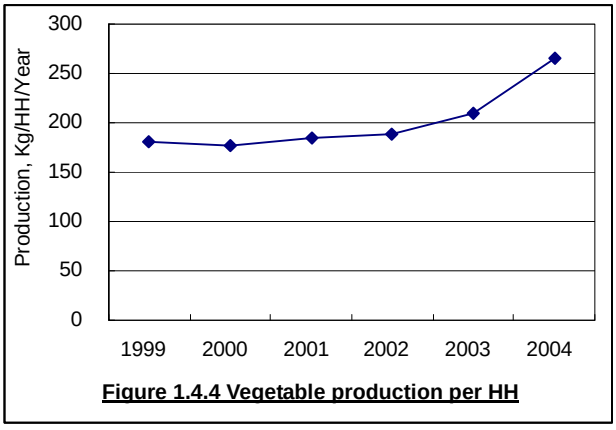


Figure 1.4.4 Vegetable production per HH

Figure 1.4.5 shows yield per hectare by major cereals. All the three crops' yields are very low, quite lower than their potential yields. However, the yield of rice may have been underestimated since it is under irrigation and by observation it may reach over 3 ton per hectare. With irrigation and proper management, the rice yield can easily go up over 5 ton/ha as had been seen in NIB Ahero Pilot Irrigation Scheme. Maize and sorghum

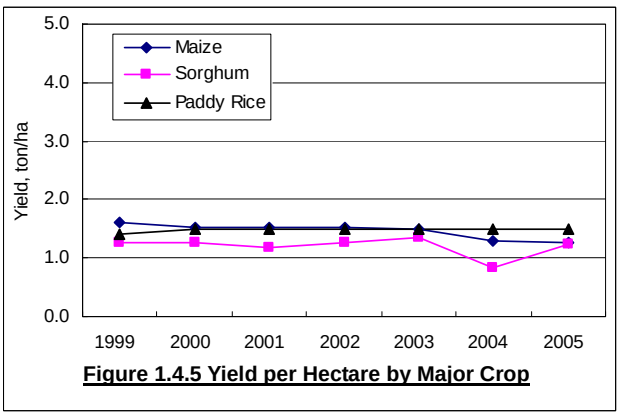


Figure 1.4.5 Yield per Hectare by Major Crop

[2] FAOSTAT, http://faostat.fao.org/

are mostly grown under rain-fed condition, so that most of the farmers do not want to invest much in hybrid seeds and chemical fertilizers. Thus the yield has remained low. Another reason for the low yield of maize is that as it happens, the same staple food is also used as cash crop and is sold to generate cash for school fees and health care. In those areas near towns or major roads they sell their maize when green, eat some when green and at the time of harvest the yield reaching the granaries becomes much lower.

Concerning crop pests and diseases, all crops are attacked by disease and pests at one time or another. Some of these diseases and pests cause very significant drops in yields. There are however some that merit attention and these appear in Table 1.4.3. All these are manageable with good crop husbandry practices. In horticulture, the list of pests and diseases shown in the same table indicates that disease and pest management is a problem as most poor farmers, finding that they cannot afford, apply inadequate amounts of chemicals. It is, however, significant that no devastating pests e.g. army worms have attacked crops in Homa Bay in recent years.

Table 1.4.3 Crop Pests and Diseases in Homa Bay District

Crop	Pests	Diseases
Maize	Striga	
Sorghum	Striga	
Cabbages	Aphids, diamond backmoth	Black and dry rots
Tomatoes	Aphids, bollworms, thrips	Blight and bacterial wilt
Onion	Thrips	Purple blotch
Mangoes	Weevils	Powdery mildew
Banana	Weevils	Panama disease
Citrus	Aphids	Greening, septorial leaf spot
Cassava		Cassava Mosaic Virus

Source: Annual Report, Agriculture Department, Homa Bay District 2004

There are very few crop processors in Homa Bay. But this has not always been the case. There was a coffee factory that stopped operations due to leadership and management wrangles. The management is said to have borrowed money using factory assets and the members in annoyance stopped supporting the factory. Later, the coffee farmers in response to delayed payments progressively uprooted the crops. Sugarcane expansion and marketing was significantly targeted to SONY in Migori District. It is said that SONY is expanding its areas and this may assist in more sugarcane processing to sugar. Aside from selling sugarcane to SONY, there are sugarcane farmers who engage in jaggery (see above photo). Also, KIRDI and a local NGO brought in chippers to process sweet potatoes into flour in Rangwe, Ndhiwa and Riana Divisions. Later the Catholic Diocese of Homa Bay supported groups to acquire chippers. It also helps them in marketing the products in Nairobi. These chippers however process only a small proportion of the crops.

Jaggeries produced by local farmers

In Homa Bay District, land preparation for cereals and other crops, takes about 30% of the total production costs and is therefore expensive. The operators charge highly because the soils are heavy. Ploughing by tractor costs Ksh 2000-3000 per acre while ploughing by oxen costs about Kshs 1500. The tractors used are mainly from within the district and there is a shortage. Ox-ploughs and oxen are normally owned by ordinary farmers who charge according to how long the workers and oxen take to complete the work. The charges are considered fair but oxen ploughs are sometimes not available. Another main reason for the high charges is the heaviness of the clay soil. The work is usually so hard that as many as four strong oxen or six ordinary ones are needed for land preparation.

2) Livestock

As is common with many other Kenyan districts, no livestock censuses have been done in the last 30

years in Homa Bay District. Thus the data in this section is based on estimations by field officers. Homa Bay District is inhabited by agriculturists who keep many types of livestock. The district has a typical livestock mix of species found in all Kenyan medium potential districts. This mix includes cattle, sheep, goats, pigs, poultry, bees and donkeys. There are also some unusual types of birds such as quails and guinea fowls but these are few. Table 1.4.4 shows populations by livestock, and Figure 1.4.6 shows the populations of only major livestock such as local cattle, sheep and goats.

As shown in Figure 1.4.6, the population of the local cattle has increased slightly but the sheep and goats have remained not much unchanged in number. As of 2005, the numbers of local cattle, sheep and goats are estimated at around 318,000, 158,000, and 113,000 respectively. Number of households as at 2005 is estimated at 77,156, therefore on average one family nowadays keeps about four local cattle each in number. As for population growth ratio, the cattle has increased by 17% (from 271,100 to 317,510) from 1999 to 2005, while those of the sheep and the goat have not. The human population has increased during the same period by 15% (from 288,540 to 332,079), which means cattle population growth has slightly surpassed the human population growth.

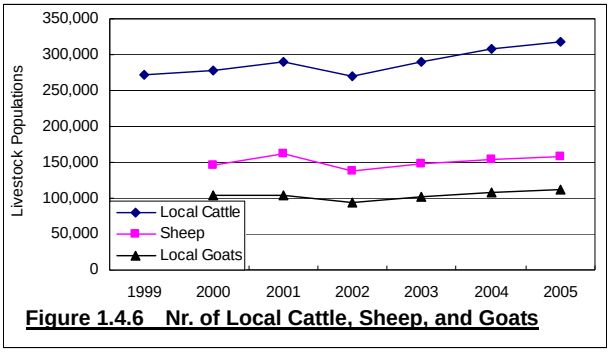


Figure 1.4.6 Nr. of Local Cattle, Sheep, and Goats

Table 1.4.4 Population Trends in Livestock from 1998 to 2005

Type	1999	2000	2001	2002	2003	2004	2005
Local Cattle	271,100	278,000	290,740	271,000	289,560	308,740	317,510
Graded Cattle	394	470	557	717	879	538	606
Crosses	84	227	468	660	865	882	935
Sheep	NA	145,218	162,510	137,100	147,170	153,040	158,380
Local Goats	NA	104,095	103,182	93,900	101,740	108,330	112,750
Improved Goats	NA	NA	NA	NA	5	7	112
Pigs	NA	NA	2,510	12,305	23,609	26,075	27,540
Local Chicken	NA	391,220	404,731	399,150	393,490	440,610	527,620
Commercial Layer	NA	13,484	20,640	22,390	23,816	6,541	10,304
Broilers	NA	1,000	1,500	3,000	1,000	500	300

Source: Annual Reports, District Livestock Office, Homa Bay District, 1999 - 2006

Table 1.4.5 shows livestock population by division as of 2005. Figure 1.4.7 picks up major livestock populations from the table, and divides them by number of households in each division. The table and figure shows that Nyarongi Division has the biggest number of livestock per household: about 9 local cattle, 4 sheep and 3 goats per household. As compared with Nyando District, it is well shown that the Homa Bay people keep more number of cattle by referring that on average a typical household in Nyando and Lower Nyakach Divisions where many cattle can be found owns about 2 local cattle only and in other three divisions only about 1.5 cattle per household are owned. As per exotic and cross cattle, though the number is still low, Rangwe and Asego Divisions have been up-taking followed by Ndhiwa Division. It is noted that in Riana Division there are many pigs than other divisions.

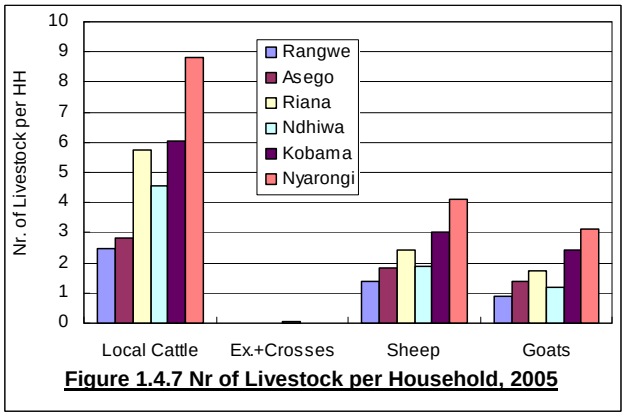


Figure 1.4.7 Nr of Livestock per Household, 2005

Table 1.4.5 Livestock Population by Division as of 2005

Division	Zebu	Crosses	Exotic/Grade	Local sheep	Local goats	Improved goats	Pigs	Local chicken	Layers
Rangwe	51,460	250	496	28,810	18,290	38	1,700	155,200	1300
Asego	57,100	320	476	36,700	27,960	42	2,730	70,800	7500
Riana	76,630	70	120	32,570	22,900	14	17,720	133,900	200
Ndhiwa	53,860	210	314	22,360	14,040	4	5,030	54,600	500
Kobama	37,680	43	49	18,860	15,250	6	190	51,820	700
Nyarongi	40,780	42	68	19,080	14,310	8	170	61,300	104
Total	317,510	935	1,523	158,380	112,750	112	27,540	527,620	10,304

Source: Annual Reports, District Livestock Office, Homa Bay District, 2006

Livestock are also sold for slaughter in order to get meat. Table 1.4.6 shows the meats in tonnage for consumption as of 2004. Beef meat surpasses the others such as sheep and goat. Dividing the total tonnage by the district population, one may see average consumption of meat per head per annum. The annual consumption has been around 2 Kg (in Nyando, it is about 5Kg). This consumption is very loew not enough in terms of protein intake, hence supplemented by beans and fish.

Table 1.4.6 Meat Production per Head in Homa Bay District, 2004

Type	2001	2002	2003	2004
Beef, ton	640	644	498	409
Sheep, ton	16	13	3	3
Goats, ton	26	30	16	19
Portly, ton		-	-	197
Pig, ton	6.2	82.0	47.3	29.8
Total, ton	687	769	564	658
Population	309,261	315,116	320,876	326,534
Consumption per Head	2.2kg	2.4kg	1.8kg	2.0kg

Source: Annual Reports, District Livestock Office, Homa Bay, 2004

It should be noted that the local zebu is quite resistant to tick borne diseases while it is slightly trypanotolerant. There being no dips, some communities organized themselves and established spray race crushes through which they controlled both tick borne diseases and Trypanosomiasis. The control of Trypanosomiasis is major activity in the district because of Ruma National Park where is a host of tsetse flies. Two methods i.e. trapping the vectors and spraying against the vectors are used. As many as 12,000 cattle, 1,000 sheep, 800 goats, 100 donkeys were sprayed using different chemicals in 2004 (reported by District Livestock Office). 23 bi-conical tsetse traps were used to control the disease in Maugo, Rangwe, Nyodero and Kajulu in 2004.

1.4.2 Fisheries

The District has a shoreline of sixteen Kilometres long in the shores of Lake Victoria. The fish produced in the District are from two sources; namely, capture and culture fisheries. Capture fisheries is an important economic activity in two (2) divisions in the District, Asego and Rangwe Divisions. The fish are landed at the various fish landing sites. The main landing sites in the District are five accounting for about 2% (see Figures 1.4.8) of the 304 landing sites in Lake Victoria (Kenyan jurisdiction). The landing sites are Kananga, Koginga, Lela, Kuoyo/Ombogo and Ngegu beaches.

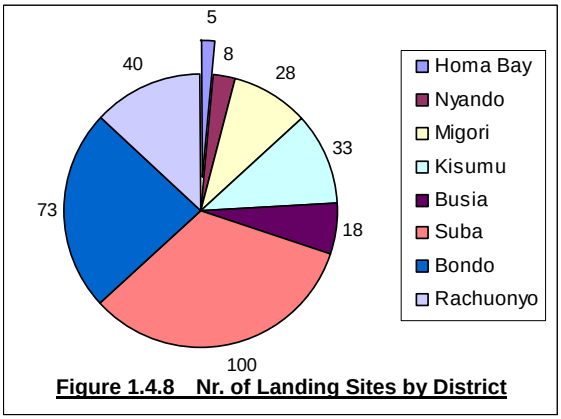


Figure 1.4.8 Nr. of Landing Sites by District

Available data from frame surveys indicate clearly the increasing fishing pressure as demonstrated by the fact that the number of fishermen rose from 568 in the year 2000 (Frame Survey 2000) to 749 in 2002 (Frame Survey 2002) representing an increase of about 32% percent in Homa Bay District. The number of boats in the same period, however, decreased from 181 in 2000 to 142 in 2002 representing

a decrease of about 22%. The preliminary report of frame 2004, however, indicates that the number of fishing boats are on the increase once again to 169, an increase of about 19%. Out of the 169, 92 crafts accounting for about 54% were using sails and only 4 crafts accounting for about 2.4% were using engine for propulsion. This is an indication that currently more than 50% of the boats in Homa Bay District have the capacity to operate in the open waters of the lake, away from the gazetted fish breeding and nursery grounds, which is a positive development towards sustainable management of the fishery[3].

1) Fish Catch

Fish production in Homa Bay District from Lake Victoria is presented in Table 1.4.7. As shown in the table, major fish catch comes from tree species of *Lates niloticus* (Nile perch), *Rastrineobola argentea* (Omena), and *Oreochromis niloticus* (Nile tilapia), which trends are depicted in Figure 1.4.9. Table 1.4.7 also shows the fish catch per population of Homa Bay, which ranges from as low as 0.5 to 3 Kg. Though not all the fish catch may be consumed by Homa Bay population, the figure except for the recent years is quite similar to those of meat consumption which is around 2 kg per annum.

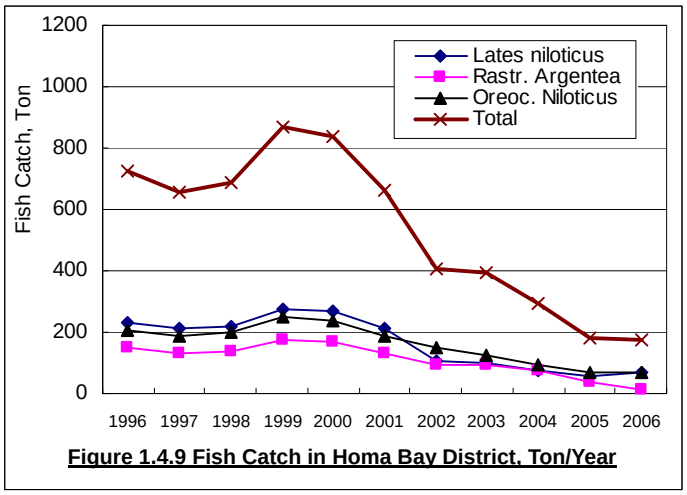


Figure 1.4.9 Fish Catch in Homa Bay District, Ton/Year

The table and the figure indicate a great concern, which is a general declining trend in production. The decline started in year 1999. As per long-term trend in Lake Victoria, the catch started remarkably increasing since early 1980s with the thrive of Nile perch and once reached its peak in 1990 as shown in Figure 1.4.10. Then, the catch had remained in between 150,000 and 200,000 tons per annum up until year 2000. But after the year 2000, it has been on sharp declining trend although there is recovering trend since year 2004 in the Lake Victoria but this recovering trend has not yet taken place in Homa Bay district.

Table 1.4.7 Trend of Fish Catch by Species in Homa Bay District, Metric Ton

Species	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Lates niloticus	231	210	221	278	268	211	107	102	77	54	66
Rastr. Argentea	147	134	140	177	170	134	91	96	72	37	13
Oreoc. Niloticus	207	188	198	249	240	189	147	124	93	66	67
Clarias gariepinus	45	41	43	54	52	41	22	17	13	7	10
Protopterus aethio.	56	51	53	67	65	51	24	20	15	9	7
Haplochromis spp.	35	32	33	42	41	32	10	27	20	5	6
Mormyrus kan.	1	1	1	1	1	1	0	0	0	0	0
Bagrus spp.	1	1	1	1	1	1	0	0	0	0	0
Barbus spp.	0	0	0	0	0	0	0	0	0	0	0
Schilbe	0	0	0	0	0	0	0	0	0	0	0
Synodontis	0	0	0	0	0	0	0	0	0	0	0
Labeo spp.	0	0	0	0	0	0	0	0	0	0	0
Alestes	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	5	5	4	2	3
Total, ton	723	658	690	869	838	660	406	391	294	180	172
Population			299,930	288,540	303,323	309,261	315,116	320,876	326,534	332,079	337,214
Production/Head, kg			2.3	3.0	2.8	2.1	1.3	1.2	0.9	0.5	0.5

Source: Fisheries Management Component Frame Survey Data 2000, 2002 and 2004, 2006

[3] The records for the 2002 Frame Survey showed that 142 fishing crafts operated in Homa Bay, and 52 (37%) using sails and 1 (0.7%) using engine.

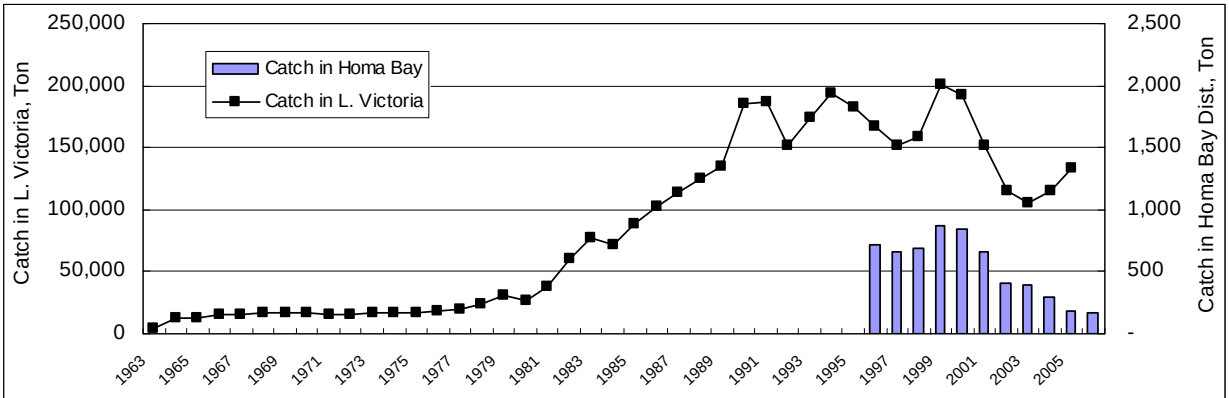


Figure 1.4.10 Long Term Trend of Fish Catch in L. Victoria compared to Fish Catch in Homa Bay District

The decline is a great concern. The reasons of the decline are believed that; 1) invasion by water hyacinth, 2) recession of the Lake water, and 3) strict monitoring and control in beach, etc. Lake water level has been dropping since year 1998 to date with some fluctuations. The water level has dropped by nearly about 2 meters since 1998[4], badly affecting the fish breeding beds. Also, introduction of strict monitoring, control and surveillance (MCS) in the regular field operations has provided the necessary motivation to the field fisheries personnel and awareness to the general public on the important initiatives on fisheries conservation and management measures. The decline could be partly due to the strict enforcement of the regulations, which came into effect in 2001.

2) Income Generated from Fisheries

The income from fishing forms the bulk of income in the district. The trend of the value of fish landings is given in Figure 1.4.11 with the prevalent average fish price in the respective year. The trend of the value of fish landing has declined since 2001 due to the sharp declining of the fish catch. When the fish catch peaked in 2000, the total income from the fish was about Ksh 40 million, while the income in 2004 is already less than half of the peak. Though the fish price has increased up until year 2002, the hike has not covered the declining of the income.

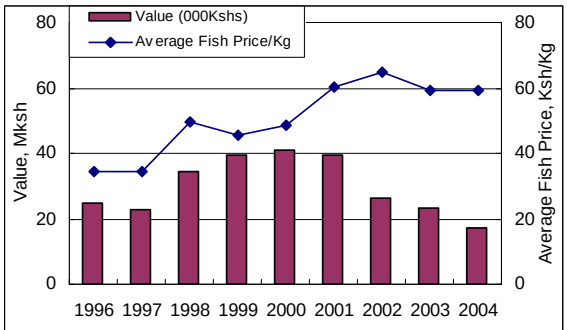


Figure 1.4.11 Income and Fish Price

Considering the income data from fishing provided in Table 1.4.8, the average income of fishers in Homa Bay District is about Ksh 20 million only in the recent years. There were 749 fishermen in 2002 (Frame Survey 2002), and this translates the Ksh 26,280,000 income in 2002 to Ksh 35,000 fisher/year. With the number of boats which is 169 in 2004, the income of Ksh 17,354,000 in 2004 is translated to Ksh 103,000 boat/year. This income however does not necessarily go to a fisherman because the fishing is practiced by a group of around four, some of whom are not registered with the Fishery Department. The profit is firstly divided between the boat owner and the fishermen on half-half basis, and the half is further divided amongst the member fishermen.

Table 1.4.8 Value of Fish Landings in Homa Bay District in 1998 – 2004

Years of Business	1996	1997	1998	1999	2000	2001	2002	2003	2004
Value (000Kshs)	24,943	22,674	34,233	39,293	40,788	39,610	26,280	23,138	17,354
Average Fish Price/Kg	34.5	34.5	49.5	45.5	48.7	60.0	64.7	59.2	59.2

Source: Homa Bay District Fisheries Office, Kenya

[4] The Study on Integrated Flood Management for Nyando River Basis, Progress Report, Nov. 2006, JICA

3) Fish Processing and Marketing

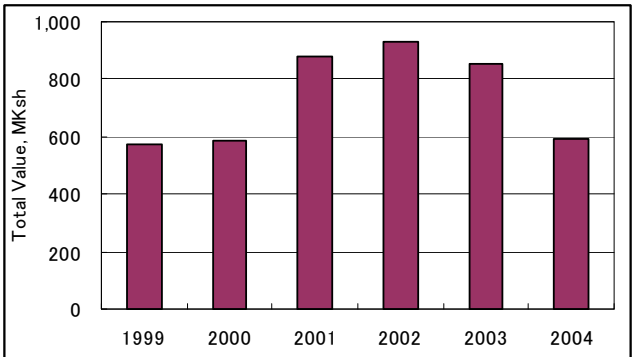


Figure 1.4.12 Total Value for the Fish Export Processing

Fish processing is a major activity in Homa Bay District especially for export. There are also small scale traditional sun drying of Omena and deep frying of tilapia and mgongo wazi (fried skeletons of Nile Perch) for local consumption. The data for fish exports from Homa Bay District is presented in Table 1.4.9. They process Nile perch only, which comes from Migori and Suba Districts. Destination for the export is Israel for fillet and frozen skins, Hong-Kong for bladders, and Europe for chilled fillets. The value once peaked at Ksh 930 million in 2002, however since then it has been in a sharp decline as is the case of fish catch.

Table 1.4.9 Data on Fish Processing in Homa Bay for Export

Frozen Nile Perch Fillets				Frozen Nile Perch Bladders			
Year	Qty-(Kg)	Value-(in Ksh)	Destination	Year	Qty-(Kg)	Value-(in Ksh)	Destination
1999	3,526,2270	526,645,168	Israel	1999	168,710	45,379,937	Hong-Kong
2000	4,162,2950	544,681,396	Israel	2000	135,402	41,491,589	Hong-Kong
2001	4,136,9550	778,593,488	Israel	2001	140,040	43,857,552	Hong-Kong
2002	3,650,1690	842,877,932	Israel	2002	214,044	67,220,203	Hong-Kong
2003	3,824,3530	804,296,339	Israel	2003	100,200	30,001,200	Hong-Kong
2004	2,211,8460	454,107,695	Israel	2004	126,216	39,216,408	Hong-Kong
2005(31 July)	1,795,1040	475,730,462	Israel	31.7.2005	75,000	25,592,625	Hong-Kong
Totals	23,306,950	4,426,932,482		Totals	959,612	292,759,514	
Fresh Chilled Nile Perch Fillets				Frozen Nile Perch Skins			
Year	Qty-(Kg)	Value-(In Ksh)	Destination	Year	Qty-(Kg)	Value-(In Ksh)	Destination
1999	None	None	None	1999	None	None	Israel
2000	None	None	None	2000	None	None	Israel
2001	None	None	None	2001	356,277	54,644,671	Israel
2002	None	None	None	2002	590,373	19,512,225	Israel
2003	None	None	None	2003	676,398	17,841,008	Israel
2004	331,698	83,270,246	Europe	2004	468,288	12,660,947	Israel
2005(31 July)	80,820	26,102,244	Europe	31.7.2005	128,640	3,949,248	Israel
Totals	412,518	109,372,490		Totals	2,219,976	108,608,098	

Source: Data extracted from Factory Records 1999-2004

1.4.3 Infrastructure

This section describes infrastructure situation in the district, composed of 1) water supply and sanitation, 2) irrigation schemes, 3) road network, 4) power supply and telephones.

1) Water Supply and Sanitation

The government has initiated water sector reforms through an Act of Parliament (Water Act 2002). The implementation of the reforms is in progress and the various institutional arrangements have been established. The Ministry of Water and Irrigation (MWI) is now in charge for policy regulation, sector coordination and financing. The water provision services has been vested on the water service boards, and Homa Bay District falls under the Lake Victoria South Water Service Board (LVWSB). The board is in the process of identifying water undertakers to run the various water schemes in the district. Any strategies for water provision in the district will be developed in close consultation with and support of the LVWSB to ensure development of self sustaining projects with appropriate pricing

and rationalized financial management.

The accessibility to safe water in the district is estimated at 36 % as of 2004 while the average national rural area coverage is estimated at around 32%. The water accessibility in the district has been declining in terms of quality and quantity due to diminishing investments to maintain and expand existing facilities as well as to invest in new water supplies. The water technologies employed in the district to tap water include; piped water schemes, equipped boreholes, protected wells, protected springs, roof catchments, dams and pans.

Gazetted water supply schemes are three in the district such as Homa Bay water supply, Ndhiwa water supply and Kochia water supply. Kochia water supply is not functional as of now. The combined output of these sources is 6,000m^3. The LVWSB runs the two functional gazetted water schemes with a daily water production of 3,650 m^3/day. The Kochia water scheme stalled in 1990 after being operational for a period of 5 years. These water schemes are stretched beyond the design capacity and need augmentation and improved management in order to enhance coverage, cover costs while providing the service and raise finances for future expansion.

Table 1.4.10 Gazetted Water Supply in Homa Bay District

Scheme	Division	Water source	Treatment type	Production capacity M^3	Service Area Km^2	Population served	Remarks
Homa Bay	Asego	L. Victoria	Full treatment	3,000	10	15,000	Functional Managed by the LVSWSB
Ndhiwa	Ndhiwa	Borehole	Simple chlorination	200	5	2,500	Functional Managed by the LVSWSB
Kochia	Rangwe	L. Victoria	Simple chlorination	450	10	500	Under rehabilitation Managed by the LVSWSB

Source: District Water Office, 2005

As per boreholes, over 70 boreholes have been drilled in the district to supply water for domestic use. The first confined aquifer is struck at around 30m, followed by a second aquifer, at 60-70m and the third aquifer at 120-200m depths. From the records available, around 40 boreholes are currently operational, meaning that 30 boreholes are out of commission. The combined output of the 40 wells/ boreholes is 2,424 m^3/day. Most of the breakdowns can be attributed to high running costs of the motorized pumping systems. In areas where they are functional, they command a large service area.

For shallow wells (hand dug or machine drilled), over 300 wells have been developed by a number of agencies, notably the Dutch funded, RDWSP, AMREF, PLAN Kenya, CARE Kenya, C-MAD, and World Vision. The shallow wells are generally between 20m and 30m deep and in many cases are equipped with Afridev and SWN hand pumps. With the exception of PLAN Kenya and faith led institutions, all the other organizations have phased out of the district. Results of the water quality analyses carried out by the ministry and RWSDP in 1985 indicated 40% contamination of the ground water wells sampled. The wells are mostly contaminated with faecal coliforms and require regular chlorination to eliminate the contamination.

The records available in the District Water Office indicate that there are around 50 springs in the district. Some of the strings are not adequately protected and have contaminated water. They should be protected with an impounding wall with a rock fill extending to the spring outlet and an outlet protruding out of the wall. There are pans and dams in the district as well. The few pans in the district have limited capacity and dry up after prolonged use. The Agricultural Mechanization unit of the Ministry of Agriculture has constructed most of the pans and dams in the district. The water stored behind dams and pans is used for both domestic and livestock use. It is said almost all the pans and dams have contaminated water due to their open nature.

The increased safe water access in the district has been achieved through the support of many

organizations. The MWI has been the key player in the development and running of the water institutions in the district. The main bilateral programme in the district was the Netherlands funded rural water supply and sanitation programme (RDWSSP). 45 boreholes were constructed in the district through the RDWSSP support. Project activities implemented included hand-dug wells, machine drilled well and boreholes, protection of springs and sanitation activities. Project activities were implemented in all the divisions of the district between 1983 and 2001.

With regard to payment for the water services, NGOs usually put in place strategies to support the O&M of the individual projects before handing them over to the communities. Part of this strategy involves setting in place a tariff system to meet the cost of O &M. The water charges are usually set at Ksh 1/00-2/00 per 20 litres. People staying in the urban and peri-urban areas usually pay for water. The piped water connections are charged according to the rates set by the Ministry of Water and Irrigation. Most connections are charged at flat rate fee of Ksh 200 per month. Analysis of the operating costs and revenue generated from the Homa Bay W/S indicates that the revenue generated falls short of the costs of the operation and maintenance. The tariff base is not adequate to meet the operation and maintenance costs.

2) Irrigation Schemes

Irrigation development in Homa Bay District started with simple bucket irrigation practices along the shores of lake by the local farmers in the early 1940s. Homa Bay District has an irrigation potential of about 3,000 ha. However, the area currently under irrigation development is only 285 ha. The biggest scheme in the district is the Maugo irrigation scheme with an irrigable potential area of 280 ha. The Maugo irrigation scheme was started with the support of a Japanese volunteer working in the area in the earlier 1980's. The entire irrigation infrastructure at Maugo scheme was once destroyed by the El Nino rains in 1997/1998. Through EEC support, the intake and two branch canals were rehabilitated. This enabled 54 hectares to be put under irrigation. The rest of the scheme is yet to be rehabilitated.

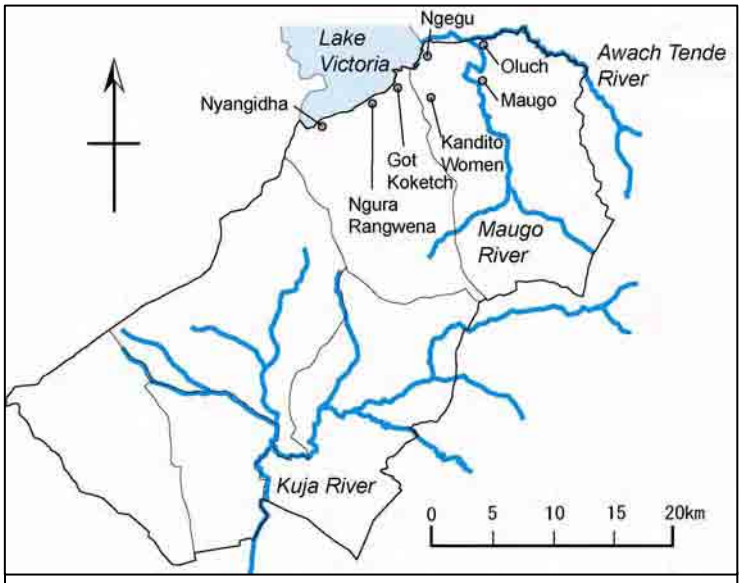


Figure 1.4.13 Location Map of Irrigation Scheme in Homa Bay

Table 1.4.11 Irrigation Schemes in Homa Bay District

Division	Scheme Name	Water Source	Potential area, ha	Irrigation, ha	No. of farmers	Remarks
Asego	Nyagidha	L. Victoria	515	10	60	
Asego	Got Koketch	L. Victoria	100	20	50	
Asego	Ngura Rangwera	River Rangwera	450	60	150	
Rangwe	Maugo Rice	Maugo river	280	100	600	40 % operational
Rangwe	Ngegu	L. Victoria	450	80	200	only one motorised pump
Rangwe	Kandito Women	L Victoria	250	None	None	Under investigation
Rangwe	Oluch	River wach tende	1,100	15	40	Details with LBDA
Total			3,145	285	1,100	

Source: District Irrigation Office, 2005

3) Road Network

The district has a total road network of only 623.8Km, which can be classified as indicated in the Table 1.4.12. The road network in the district is mostly used for domestic freight and passenger movement and constitutes a major link to other parts of the country. The district is linked by road to the neighbouring districts of Suba, Migori, Rachuonyo and Kisii Districts.

Table 1.4.12 Road Network in Homa Bay District

Surface Type	Length km
Bitumen	58.1 (9%)
Gravel	178.7 (29%)
Earth	387.0 (62%)
Total	623.8 (100%)

Source: GoK/ SIDA Roads 2000 Report

The road network is very poor and many parts are not accessible particularly during the rainy season. Over 60% of the roads network in the district is classified as earth roads. This has negatively impacted on the delivery of goods and services in the district especially the marketing of fish and fish products.

The Rongo-Homa Bay road (C20) is tarmacked but is in poor operating conditions. This is the main exit route for processed fish and commercial products. It is the main route for the processed produce from Kisii as well. Kendu-Homa Bay-Mbita (C19) is a gravel road, which is also a major fish link and passenger hub. The Karungu-Rod Kopany- Oyugis (C18) road is partly tarmacked and partly graveled. It is the main route for livestock and fresh produce. Most of the gravel / earth roads are only motorable during the dry period. During the rainy season, the roads are impassable. Vehicle movements to the hinterlands are suspended. Most of these roads need upgrading to all weather roads. The district has also several beach roads with a maximum length of 3 Km. The beach roads provide access to the landing bays and are used by lorries with cold storage for transportation of fish.

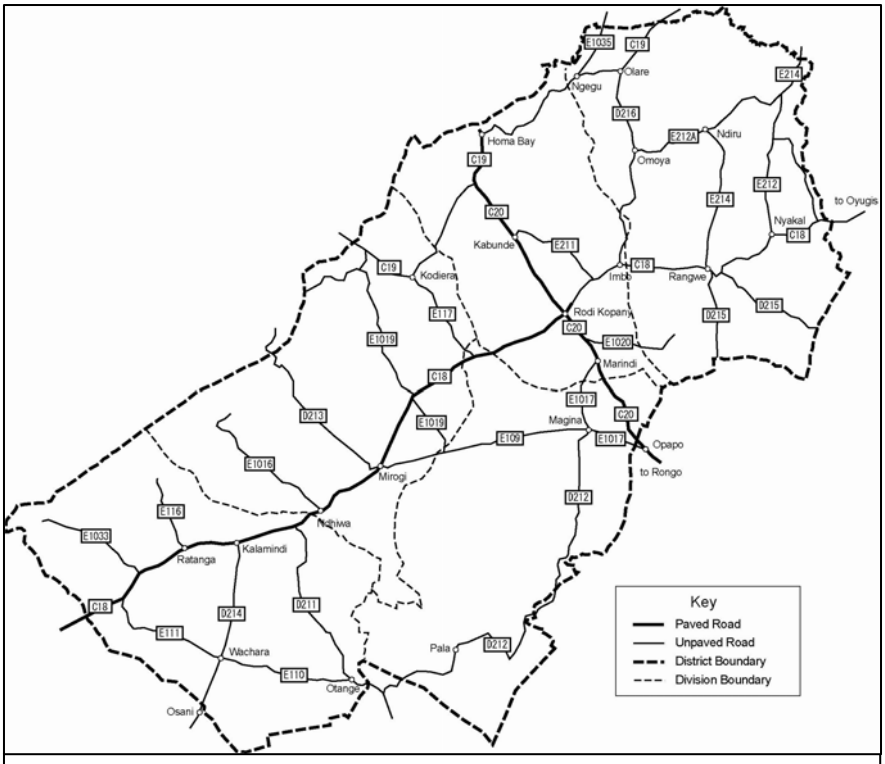


Figure 1.4.14 Road Network in Homa Bay District

With respect to road maintenance, the District Roads Committee (DRC) is responsible for the maintenance of roads classes D, E, Special and unclassified (Rural and Urban) within the district. The committee receives road maintenance funds from the fuel levy fund, which is the main source of funding in the district for road maintenance. The fuel levy fund has two sources of revenue including all monies accruing from fuel levy and transit toll on heavy goods vehicles. The district has received amounts of Ksh 15 million, 20 million, 25 million and 27 million for the last four years from 2002/03 to 2005/06 respectively. However,

Classification of Road:
A: International trunk roads
B: National trunk roads
C: Primary roads
D: Secondary roads
E: Minor roads
F: Special Purpose Roads
RAR: Rural access roads
URA: Unclassified rural access roads
URP: Unclassified rural primary roads
S: Sugar Roads
G: Government Roads

this allocation has not been well maintaining the roads in the district.

4) Power Supply and Telephones

The district has inadequate power supply and very few town centres are connected to the electricity grid. The power supply to the district is connected from Chemosit step up transformers in Nandi Hills. The power supply lines are overloaded and Homa Bay District experiences long and frequent breakdowns. The rural areas of the district have no power supply. There are few cottage industries in many urban areas of the District due to lack of electricity though we can find out manual based cottage industries a lot. Public and private institutions depend on diesel-powered equipment, which is very expensive.

Telephone services coverage in the district is low. There are only 500 telephone connections within Homa Bay, Mbita, Kendu Bay, Kadel and Asumbi. The district has about 50 coin boxes, but some are not operational due to lack of spare parts. Mobile phone services have picked up well in the district. Both SafariCom and Celtel offer telephone services within the district. The number of people served by mobile phones is much higher than those served by the landlines because of the flexibility and convenience of using mobile telephony.

1.4.4 Health

This section gives an overview of the current status of the health sector in Homa District. The table gives a summary of health indicators in the district. The infant mortality rate is 149 per 1,000 live births while under-five mortality rate is 254/1,000. Life expectancy is 36 years for male and 41 years for female and this has been affected by the relatively high HIV/AIDS prevalence rate, which is around 22% for pregnant women as of 2006. These health indicators show the poor status of health in the district.

Table 1.4.13 Health Indicators

Crude Birth rate	50.8/1,000
Crude Death rate	25.1/1,000
Infant mortality rate	149.2/1,000
Under five mortality rate	254/1,000
Population growth rate	2.7%
Fertility rate	6.1
HIV/AIDS prevalence	22 % (preg. W.)*
Life expectancy	36 (M), 41 (F)
Access to clean water	36%
Immunization Coverage	50%

Source: District Health Plan & 1999 Census, *2006

Table 1.4.14 Distribution of Health Facilities in Homa Bay District

Division	Facilities	GoK	Mission/NGO	Private	Total
Asego	Hospital	1	0	0	1
	Health Centre	0	1	0	1
	Dispensaries	2	1	5	8
Rangwe	Hospital	0	0	0	0
	Health Centre	3	1	0	4
	Dispensaries	0	2	4	6
Ndhiwa	Hospital	0	0	0	0
	S/D/Hospital	1	0	0	1
	Health Centre	0	1	2	3
	Dispensaries	2	0	2	4
Riana	Hospital	0	0	0	0
	Health Centre	2	0	0	2
	Dispensaries	2	0	0	2
Nyarongi	Hospital	0	0	0	0
	Health Centre	1	0	0	1
	Dispensaries	0	0	2	2
Total		14	6	15	35

Source: District Health Plan

Homa Bay District has a total of 35 health facilities; 14 GOK, six Mission/NGO and 15 Private. The district has one fully-fledged hospital, 11 health centres and 10 dispensaries. The distribution of these facilities is uneven for example Nyarongi Division has three facilities and Riana Division four. Asego and Rangwe are much better in that they have ten facilities in each division. Out of 35 facilities twenty-two are dispensaries and twelve are health centres. The district is only served by one hospital and a sub-district hospital. Total number of hospital beds is 440 in all health care facilities in the district and majority are within the government health facilities and the rest are in mission and private health facilities. This number is inadequate compared to the population that

these facilities serve.

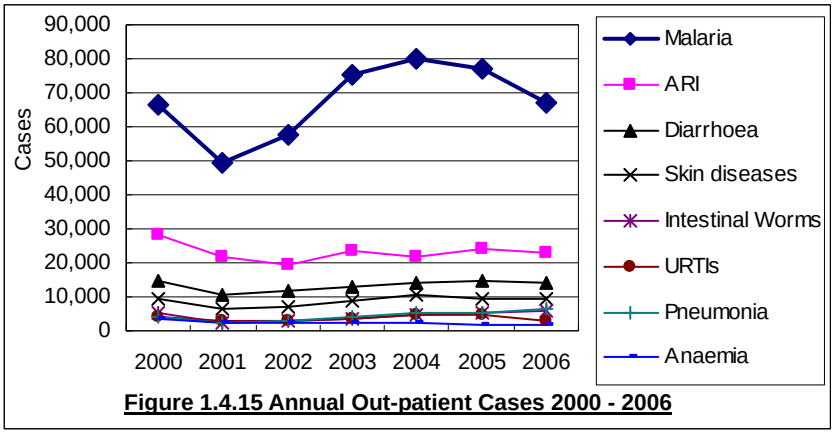


Figure 1.4.15 Annual Out-patient Cases 2000 - 2006

Malaria is endemic in the area and is the main cause of morbidity and mortality in the district as shown in Figure 1.4.15 for the morbidity and in Table 1.4.15 for the mortality. Although for recent years malaria cases seem to decline, it had increased by almost 62% between 2001 and 2004. In fact, this steady increase in malaria cases was not confined to Nyanza province only but it was country wide. The increase can be attributed to several reasons. For example, malaria drugs are now free to the patients at government health facilities, and hence people suffering from malaria tend to appear. The other reason is increased cases of drug resistance; mosquitoes have changed their behaviour and are now found in high altitude where they could not survive before. The other factors may be; banning of the use of DDT in 1997 because of its negative effect on the environment, few public technicians after the public service reforms, etc. However, MOH recently started malaria campaign by disseminating insecticide treated net, etc, which may be the contributing factor to the recent declining trend.

Table 1.4.15 Top Ten causes of Mortality 2000 – 2006 in Homa Bay District

Disease	2001	2002	2003	2004	2005	2006	Remarks
Malaria	212	317	356	342	255	297	
Anaemia	65	174	258	178	127	113	
Gastro Enteritis	-	101	142	195	147	120	
Volume Depletion	41	71	132	103	NA	NA	
Pneumonia	109	64	177	169	152	82	
Tuberculosis	41	63	102	118	90	121	
Meningitis	15	54	81	70	37	140	
AIDS	33	44	113	144	238	136	
Typhoid	13	28	-	27	30	12	
Acute Respiratory Infections	16	22	24	-	-	-	

Source: DHIS file 2004, 2005, 2006

HIV/AIDS is one of the major health problems in this district. It is now estimated that about 22 percent in pregnant women is HIV positive as of 2006 (it was 34% in 2002), and it causes a lot of infectious diseases. Several interventions have been put in place to address the HIV/AIDS pandemic. These interventions have prevention, care and support components and they include Voluntary Counseling and Testing (VCT), Prevention of Mother to Child Transmissions (PMTCT), patient support center that provides Antiretroviral Therapy, Home Based Care and awareness creation and prevention. The government through the National AIDS Control Council has also channeled funds through the Constituency AIDS committee to support community initiatives that address HIV prevention and care to mitigate the effects of the epidemic in the community.

Other major diseases prevalent among adults include HIV/AIDS opportunistic infections, tuberculosis, waterborne diseases, and skin diseases while main illnesses affecting the under fives are malaria, measles, pneumonia, diarrhoea, skin disease and malnutrition. The main causes of mortality and morbidity in the district are attributed to health conditions that are preventable either through immunization, observing basic hygiene or through environmental manipulation.

There are a number of health promotion activities in the district and these activities are carried out by both the MOH and other players in the sector. All health facilities visited indicated that they were involved in health promotion activities. The themes of the health promotion activities as indicated in the table are in line with the prevailing health problems in the district with an emphasis on HIV/AIDS. The players seem to address more emphasis on HIV/AIDS and then also malaria in the district.

Table 1.4.16 Health Promotion Activities and Partners in Health Service Provision

Activity	Sponsor
Immunization through mobile clinics	KEPI, UNICEF, WHO, IFAD
Malaria control campaign	Global Fund, UNICEF, IFAD, AMREF,
Environmental sanitation	CARE, PSI, Plan Kenya
HIV/AIDS awareness, prevention and care	MILDMAY International, Liverpool University, NARESA, AMREF, Plan Kenya, MSF France, WOFAK, NCWK, ACORN, ADRA, CDC
Calendar Health Days issuing of free drugs	MOH
Antenatal care services	NARESA, FCI
Nutrition campaign	UNICEF, CRS, AMREF, IFAD
Family Planning	GTZ, FCI
IMCI and Child survival	CRS
Community Based rehabilitation program	ADRA
Community Public Health Education	GOK

Source: District Health and Information Records

1.4.5 Education

The district is divided into seven educational divisions and 15 educational zones. There are 342 early childhood development (ECD) centers, a total of 338 public and privately owned primary schools (312 public and 26 private), 54 secondary schools (46 public and 8 private) and 4 tertiary institutions as of 2006. Early childhood development (ECD) takes place between birth and age six, the official age of entry into primary school. Primary school course is 8 years long, followed by 4 years of secondary school and 4 years of basic university degree course. Progression from primary to secondary school and from secondary to university is through selection on the basis of performance in the national examinations for the KCPE and KCSE.

1) Pre-Primary School

The Early Childhood Development centres are meant to provide secure physical and psychosocial setting for children and develop their knowledge, self-confidence and free expression and generally prepare them for entry into the primary school system. Early childhood education in Kenya is not included as part of the free primary education package, and parents have to pay fees for their children to attend these centres. Although the fee is minimal, raging from Ksh 60 to Ksh 100 per month, many of the parents were not sending their pre-primary school age children to these centres for instance in 1998, there were only 7,816 children enrolled in these centres.

However, things changed for the better in 2003 when free universal primary school education was declared by the Government. Many children were enrolled in the centres with the hope that they would stand a better chance of being enrolled in primary school. Table 1.4.17 and Figure 1.4.16 indicate that the enrolment once peaked at 15,913 children in 2003 but it started going down to 12,871 children registered in the centres in 2005, and then again went up to 16,004 children in 2006. Thus, the enrollment is

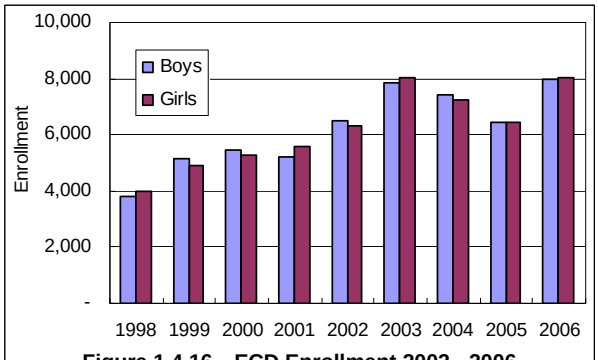


Figure 1.4.16 ECD Enrollment 2002 - 2006

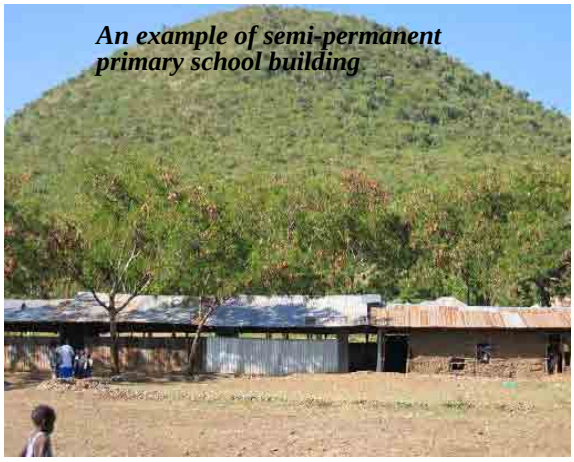
not stable, and this may be attributed to high poverty levels resulting in parents not being able to pay the minimal school fees they are required to pay. Some of parents therefore prefer to take their children straight to class one because of the free primary education. This in turn results in low/non payment of salaries to teachers as the teachers are paid from fees paid by the parents and entry into class one by pupils who are not adequately prepared for the primary school.

Table 1.4.17 Pre-Primary Data from 1998 - 2006

Year	Enrolment			Teachers Establishment						
				Trained[5]			Untrained[6]			Grand Total
	B	G	Total	M	F	Total	M	F	Total	
2006	7,967	8,037	**16,004**	5	177	182	14	228	242	**424**
2005	6451	6420	**12,871**	4	168	172	20	174	194	**366**
2004	7443	7222	**14,665**	3	139	142	14	257	271	**413**
2003	7862	8051	**15,913**	8	184	192	30	216	246	**438**
2002	6517	6341	**12,858**	14	146	160	17	211	228	**388**
2001	5197	5589	**10,786**	3	130	133	18	197	215	**348**
2000	5468	5257	**10,725**	5	113	118	11	185	196	**314**
1999	5155	4903	**10,058**	10	81	91	12	217	229	**320**
1998	3805	4011	**7,816**	15	41	56	15	39	54	**110**

Source: Education office Homa Bay District

2) Primary and Secondary School Settings



An example of semi-permanent primary school building

The public primary schools have steadily increased from a total of 307 schools in 1998 to 330 in 2005. However, the schools are characterized by poor school infrastructure. Due to the free universal primary education introduced in 2003 and the misconception that the government is supposed to provide all facilities in primary schools, community members in some cases do not participate effectively in the development of school infrastructure that includes fund raising for the construction of classrooms, toilets and provision of water for drinking and washing hands. Thus most of the public primary schools in the district are poorly equipped, many of the classrooms are semi permanent and in some cases children learn under trees e.g. at Roba primary school in Rangwe Division, two classes are held outside and there are only three permanent class rooms which were constructed using funds contributed by the Disaster Fund.

There are a total of 47 secondary schools in the district most of which are boarding with some of them being clan based while some are established on political grounds. The schools are located as follows: Ndhiwa Division 7, Nyarongi 6, Riana 8, Rangwe 8, Lower Nyokali 4, Upper Nyokali 6 and Asego 8. Many of these schools have inadequate facilities and structures such as classrooms, laboratories, water tanks, desks, teachers' houses etc. The boarding schools do not have adequate boarding facilities and have poor sanitation facilities. The low toilet coverage in schools is as a result of the high cost of construction of pit latrines, which is attributed to the black cotton soil found in the area. To build pit latrines on such soils, one needs re-enforcements, which then pushes up the cost of the construction, which community members complain they cannot afford. Many of the schools in the district now have water tanks for rainwater catchment. The water is for use by the students for drinking and washing hands.

[5] Trained teacher-people who have undergone a teacher-training course in a recognized teacher training college
[6] Untrained teacher-people who are employed as teachers but have not undergone any teacher-training course regardless of any other qualifications they may hold.

3) Primary Schools – Current Situation and Trends

The Government of Kenya is committed to providing free universal primary education and parents in Homa Bay District in turn make a deliberate effort to ensure that both girls and boys are enrolled in school. Since the inception of Free Primary Education (FPE) in 2003, the enrolment of pupils in primary school has increased dramatically (see Figure 1.4.17). The difference in enrolment between boys and girls is not so big, though the trend shows a slightly higher enrolment for boys.

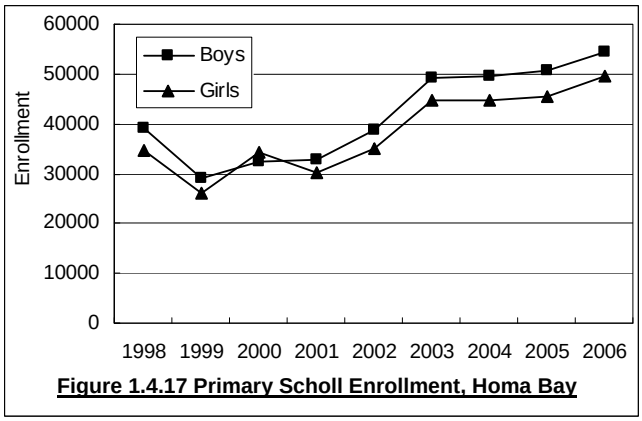


Figure 1.4.17 Primary Scholl Enrollment, Homa Bay

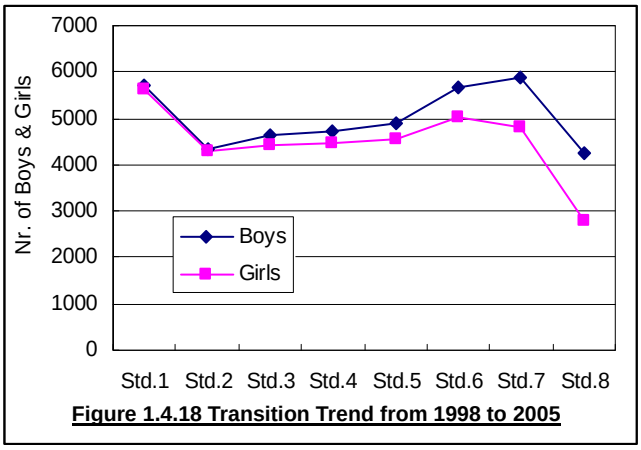


Figure 1.4.18 Transition Trend from 1998 to 2005

Table 1.4.17 indicates that during the last nine years, the highest enrolment rate was in the years after 2003 when universal free primary education was started. However, as years go by, both boys and girls start to drop out of school for instance in the year 2003, there were 8,694 boys and 8,374 girls enrolled in school in class one while in the same year, there were only 3,861 boys and 2,534 girls in class eight. Table 1.4.18 and Figure 1.4.18 indicates that of the 5,731 boys and 5,619 girls enrolled in school in class one in the year 1998, eight years later in 2005, only 4,257 boys and 2,800 girls reached class eight. That is 26 % drop out rate for boys and 50 % for girls.

Table 1.4.18 Public Primary Schools Enrolment Per Sex per Year for the Last 9 years

Years	Gender	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7	St 8	Total	G. Total
2006	B	8598	7476	7483	7112	6758	6387	6169	4375	54358	104,063
	G	8196	7229	7013	6844	6232	5834	5534	2823	49705	
2005	B	7872	7276	6826	6650	6172	5844	5933	4257	50830	96,211
	G	7622	6041	6446	6338	5817	5329	4988	2800	45381	
2004	B	8072	6695	6612	6372	5916	5688	5873	4226	49454	94,306
	G	7840	6773	6068	6124	5662	5081	4795	2509	44852	
2003	B	8694	7045	6847	5933	5842	5652	5462	3861	49336	93,945
	G	8374	6773	6622	5742	5152	5021	4391	2534	44609	
2002	B	5921	5407	5389	5391	4889	4421	4178	3292	38888	73,993
	G	5691	5298	5229	5099	4531	3837	3433	1987	35105	
2001	B	4804	4735	4639	4729	3932	3541	3592	2778	32750	62,852
	G	4803	4685	4440	4448	3703	3288	2961	1774	30102	
2000	B	4864	4335	4638	4739	3932	3541	3592	2778	32419	66,537
	G	4863	4685	4440	4448	3763	3288	3857	4774	34118	
1999	B	4444	4335	4445	4031	3620	3148	3102	1990	29115	55,209
	G	3872	4290	4177	3942	2727	2940	2560	1586	26094	
1998	B	5731	5354	5246	4163	4819	5875	3864	3900	38952	73,748
	G	5619	5250	5004	4408	3874	3290	2769	4582	34796	

Source: District Education Office

Above table and figure indicate that the transition rate from class seven to eight is very low. This is attributed to academically weak students being forced by their teachers, to repeat in class seven so as not to lower the mean score for the school/district in the national examinations. Pupils who are forced to repeat class seven may at times lose hope of furthering their education and drop out of school

altogether. Pupils who drop out of school join the casual labour market. They drop out to work in the fish industry, sugar cane plantations, brick making, do casual work and join the bicycle taxi (boda-boda) business.

The high drop out rate is attributed to high poverty levels and lack of interest in education by parents. Many of the children who drop out of school are orphaned children. In cases of orphans, the older children drop out of school to take care of their younger siblings. Another reason for the early school drop out rate for girls is early marriage and pregnancies. A study on poverty in Kenya (second report on poverty in Kenya 2000) revealed that among the poor households, Nairobi (38.1%) and South Nyanza (35.4%) had the highest number of females of school age who were out of school because of marriage. Among the non-poor households, Nyanza had the highest percentage (40%) of females who were out of school because of marriage.

Tables 1.4.19 and 1.4.20 are used to work out the gross and net enrolment ratios. Gross enrolment ratio for the year 2004 for boys is 154% and for girls it was 119 %. Table 1.4.19 indicate that almost half of the boys and girls in primary school are overage. The increased enrolment in the primary schools is due to free primary education. Net enrolment ratio is as follows: Boys-108% and Girls-70%. Table 1.4.19 and 1.4.20 show that the net enrolment for boys in primary schools is above the district projected school age child population while that one of the girls is lower than the projected school age child population (Note- There could be a slight difference in the ratios because the primary school age cohorts in the census report is between 5-14 years while the one for the Ministry of Education is between 6-13 years).

Table 1.4.19 Primary school Gross Enrolment for the year 2004

Type	Boys		Girls		Total
	6-13 years	Above 13 years	6-13 years	Above 13 years	
Public	33,707	14,707	25,231	18,274	91,919
Private	979	330	842	17	2,168
Total	34,686	15,037	26,073	18,291	94,087
Net enrollment	108%	-	70%	-	87%
Gross Enrollment	154%		119%		136%

Source: Provincial Education Office Kisumu

Table 1.4.20 Population Projections by Age Cohorts (2004)

Age	Boys	Girls	Total
5-9	20,254	24,087	44,341
10-14	12,009	13,072	25,081
Total	32,263	37,159	69,422

Source: Population census 1999

As per Kenyan Certificate for Primary Education (KCPE), before the year 2001, candidates sat for seven subjects so the total marks were 700, and from 2001 on wards, candidates sat for only five subjects, bringing the total marks to 500. With this in mind, Table 1.4.21 can show us that the mean score for the district had steadily improved till year 2004 and then has been at around the socre 250 marks.

Table 1.4.21 KCPE Performance-mean Score per Division

Zone/year	**1998**	**1999**	**2000**	**2001**	**2004**	**2005**	**2006**
Asego	332.46	331.64	352.01	248.56	257.95	NA by zone	NA by Zone
Ndhiwa	301.49	303.49	333.21	234.23	260.36		
Rangwe	311.33	326.53	349.65	248.56	256.91		
Nyarongi	310.24	328.40	344.22	228.36	248.12		
Riana	322.54	311.66	326.25	227.47	241.43		
Nyokal	NA	NA	376.43	227.87	248.86		
District Totals	1578.1	1601.7	2081.8	1415.1	1513.6		
Mean score	**315.6**	**320.2**	**346.8**	**235.8**	**251.7**	**250.3**	**249.4**
Provincial position		**NA**	**NA**	**NA**	**3**	**6**	**6**
Subjects	**7 subjects (700 marks)**			**5 subjects (500 marks)**			

Source: Education office Homa Bay, Note: Data for 2002 & 2003 are not available.

4) Secondary Schools – Current Situation and Trends

Secondary school enrolment has increased since the inception of the free primary education from a total of 7,342 in 2002 to 10,373 students in 2005. This translates to 41% increase. The increase in enrolment can also be attributed to the bursary fund that has been set up for needy students who are not able to pay their own school fees. Contributing to this is also the Constituency Development Fund (CDF) allocated by the government to each constituency. In Homa Bay District where the politicians are much concerned about the educational standards of the area, a percentage of the fund goes towards paying school fees for needy students. The high male increase in 2005 is due to the increased number of day secondary schools in the district. Parents prefer to enrol boys, as opposed to girls into day schools due to fears of insecurity for the girls if they have to walk to school every day.

Table 1.4.22 Secondary schools enrolment trend from 2002 to 2006

Sex/Year	2002	2003	2004	2005	2006
Boys	4,206	5,242	5,109	6,371	5,642
Girls	3,136	3,368	3,665	4,004	4,135
Total	7,342	8,610	8,774	10,375	9,777

Source: Education office Homa Bay District

High poverty level is blamed for the high school drop out rates. Table 1.4.23 indicates that in 2005, a total of 2,350 boys and 1,120 girls were enrolled in form one while in the same year there were 1,097 boys and 874 girls in form four. The table also indicates that in the same period (2002-2005) form one and two had the highest enrolment rates while students start dropping out in form three leading to form four having the lowest enrolment rates (see Figure 1.4.19).

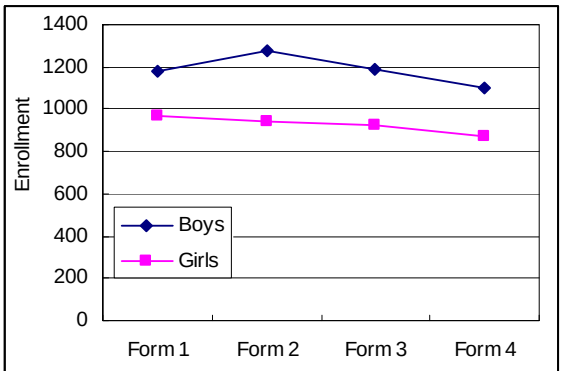


Figure 1.4.19 Transition Trend from 2002 to 2005

Table 1.4.23 Secondary Schools Enrolment per sex for the last 9 years

Years	Gender	Form 1	Form 2	Form 3	Form 4	Sub-total	Grand Total
2006	B	1,500	1,611	1,422	1,109	5,642	9,777
	G	1,124	1,175	1,024	812	4,135	
2005	B	2,350	1,645	1,279	1,097	6,371	10,475
	G	1,120	1,025	1,085	874	4,004	
2004	B	1,413	1,452	1,193	1,041	5,109	8,774
	G	1,090	911	924	740	3,665	
2003	B	1,258	1,276	1,119	1,589	4,585	7,954
	G	981	944	804	639	3,368	
2002	B	1,178	1,094	1,007	927	4,187	7,293
	G	969	793	768	606	3,106	
2001	B	1,109	1,114	943	863	4,029	6,904
	G	792	780	690	613	2,875	
2000	B	977	1,030	925	800	3,733	6,525
	G	758	773	677	582	2,792	
1999	B	877	896	837	700	3,310	5,912
	G	689	771	649	493	2,694	
1998	B	337	771	707	539	2,678	4,866
	G	734	73	426	390	2,188	

Source: Education office Homa Bay

CHAPTER 2 DEVELOPMENT CHALLENGES AND OPPORTUNITIES

This chapter summarizes constraints and opportunities identified through the participatory workshops as well as the field study. Development programs are formulated based on them. The chapter describes the issues in order of 1) participatory situation analysis, 2) major development challenges, 3) major development opportunities, 4) trend of fund & disbursement mechanism, and 5) major donor funded programmes and projects.

The major challenges in Homa Bay District include: high prevalence of HIA / AIDS, orphans and vulnerable children, high children's mortality rate, proposal method and CBOs organized by supply-driven, animal draft affected by tsetse flies, and unaffordable agriculture input. Whereas, the major opportunities are identified as: technical officers' deployment at divisional level, favorable rainfall pattern enabling two cropping seasons, potential to export food crops to neighbors, active CBOs and lead local persons, tree planting practices, and locally available resource persons.

2.1 Participatory Situation Analysis

2.1.1 Situation Analysis at District Level

1) Major Issues and Indices of Homa Bay District

In the two-day workshop at district level on 28-29 July 2005, the situation of Homa Bay District was analyzed by division. Major issues and indices identified by the participants, who are representatives of all the departments, divisions, NGOs and CBOs, are (1) Road network (***8*** votes), (2) HIV/AIDS and Orphans and Vulnerable Children (OVCs) (***7*** votes), (3) Health including immunization coverage, infant mortality rate and facilities (***6*** votes), (4) Water and sanitation (***6*** votes), (5) Food security (***5*** votes), (6) Education including literacy rate and classrooms (***4*** votes), (7) livestock (***3*** votes), (8) Poverty (***2*** votes), (9) Insecurity (***1*** vote), (10) Agro-forestry including multi-purpose trees for income / consumption (***1*** vote), (11) Access to credit (***1*** vote), and (12) Fisheries production (***1*** vote) as shown in Table 2.1.1. Subsequently, all the six divisions in the district were scored on a scale of 1 to 5 according to the indicators. Kobama and Nyarongi Divisions have more problems, but on the other hand Rangwe Division has less problems as you can see from the pattern of the Table.2.1.1.

Table 2.1.1 Scoring of Homa Bay District by Division

Areas	Rangwe Division	Asego Division	Riana Division	Ndhiwa Division	Kobama Division	Nyarongi Division
(1) Road network (8votes)	**4**	**5**	1	3	2	2
(2) HIV/AIDS and O.V.C.s (7 votes)	2	1	3	2	2	2
(3) Health including immunization coverage, infant mortality rate and facilities (6 votes)	**4**	**5**	3	**4**	2	1
(4) Water and sanitation (6 votes)	2	2	2	2	1	1
(5) Food security (5 votes)	3	1	**5**	3	2	2
(6) Education including literacy rate and classrooms (4 votes)	**4**	**5**	3	3	2	2
(7) Livestock (5 votes)	3	3	**4**	1	2	3
(8) Poverty (2 votes)	3	3	**4**	**4**	1	2
(9) Insecurity (1 vote)	3	3	**4**	**4**	**4**	3
(10) Agro-forestry including multi-purpose tress for income / consumption (1 vote)	3	1	3	**4**	2	2
(11) Access to credit (1 vote)	1	3	1	1	1	3
(12) Fisheries production (1 vote)	2	3	1	1	1	1

(1) Road network

Road network is best in Asego Division (***5***) and worst in Riana Division (***1***). Riana has problems of poor soil, major rivers, flush rainfall and a long distance from the district headquarters. The score of Kobama and Nyarongi Divisions is ***2***.

(2) HIV/AIDS and OVCs

The situation of HIV/AIDS is worst in Asego Division (***1***), then Rangwe, Ndhiwa, Kobama and Nyarongi Division (***2***) and Riana Division scores ***3***. The causes for Asego are social mobility, higher population, bordering of the lakeshore, financial flow and prostitution.

(3) Health including immunization coverage, infant mortality rate and facilities

Health situation is worst in Nyarongi Division (***1***), then Kobama Division (***2***) and Riana Division (***3***). Asego is the best division with score ***5***. Nyarongi and Kobama have the problems of no or few facilities, poverty, low awareness about health issues.

(4) Water and sanitation

For water and sanitation, Kobama and Nyarongi Divisions score ***1***, and the other divisions score ***2***. Poor soil, distance from water source, poor water quality, negative attitude on sanitation and poverty are the causes for Kobama and Nyarongi.

(5) Food security

Food security is highest in Riana Division (***5***) and lowest in Asego Division (***1***). Riana has high soil fertility, high rainfall and poor success to markets, but on the other hand Asego has unreliable rainfall, inadequate land, high population density and poor agricultural practice.

(6) Education including literacy rate and classrooms

Education is a serious problem in Kobama and Nyarongi Divisions (***2***) because of poverty levels, competition with livestock production, remoteness of the areas, high dropout rate etc.

(7) Livestock

The score of livestock is lowest in Ndhiwa Division (***1***) and then Kobama Division (***2***) because of National Park/ Lambwe valley, poor knowledge of animal care, idle land, tsetse flies etc. Asego Division scores ***5***, and then Riana and Nyarongi Divisions score ***4***.

(8) Poverty

Poverty is most severe in Kobama Division (***1***) and then Nyarongi Division (***2***) caused by poor climate condition, poor infrastructure and high illiteracy rate. High mortality rate (HIV) is also a major cause in Nyarongi. Riana Division scores ***5*** and Ndhiwa Division scores ***4***.

(9) Insecurity

The score for insecurity is ***3*** for Rangwe, Asego, Ndhiwa and Nyarongi Divisions and ***4*** for Riana and Kobama Divisions.

(10) Agro-forestry

The situation of Agro-forestry is best in Ndhiwa Division (***4***) and worst in Asego Division (***1***) and then Kobama and Nyarongi Divisions (***2***).

(11) Access to credit

Access to credit is a serious problem in all the divisions (***1***) except Asego Division (***3***) because of lack of accessibility to financial institutions, high interest rates and general fear for loan etc.

(12) Fisheries production

Fisheries production scores ***3*** in Asego Division, ***2*** in Rangwe Division and ***1*** in other divisions since the others do not border on the lake.

2) Strengths, Opportunities and Future Images of the Divisions in Homa Bay District

Strengths, opportunities and future images of each and every division were also discussed in the

district level workshop.

(1) Rangwe Division

The strengths of Rangwe Division are accessible roads, availability of health facilities, strong agricultural base, available technical personnel etc. The opportunities are land for agricultural production, fisheries production, suitable soil for brick making, agro-forestry, horticulture etc. The future image is food security, healthy community, improved infrastructure, adequate clean water environment, strong economy, access to credit, improve security and reduced HIV/AIDS prevalence rate.

(2) Asego Division

The strengths of Asego Division are good road network, health facilities, lake, good educational institutions, access to livestock disease control facilities, credit facilities, fish production center etc. The opportunities are irrigation development, improved health status, improved investment, horticulture, improved milk products, agricultural land and safe water supply. The future image is HIV/AIDS free, malaria free, food secure, livestock disease free, well secured, afforested, and economically empowered division with all weather roads network and safe water supply.

(3) Riana Division

The strengths of Riana Division are fertile land, reliable rainfall, ample land for agriculture, human resource available, development structure available, and potential goodwill. The opportunities are markets, technical experts, value adding etc. The future image is economically endowed, healthy, educated, informed, secured, industrialized, environmentally friendly and food secured society, and a leader in food production in the district.

(4) Ndhiwa Division

Good agricultural soil, reliable rainfall, enough land, adequate labor, availability of market for livestock and farm products, major road, health facilities and electric power are the strengths of Ndhiwa Division. The opportunities are agro-forestry, bee keeping, fish farming, hides and skins, meat processing, light industry etc. The future image is honey exporting, food secure, healthy, and employment secure division with good market, clean and safe water, and improved infrastructure.

(5) Kobama Division

Good security, electricity, health facilities, animal population, land availability etc. are the strengths of Kobama Division. Opportunities are community expansion, job creation, health improvement, modern techniques etc. The future image is improved health, to increase milk and meat production, facility expansion, to improve accessibility, elite society etc.

(6) Nyarongi Division

The strengths of Nyarongi Division are low incidence of livestock diseases and availability of land. The opportunities are pasture improvement, extension services, breed upgrading, tsetse control, marketing strategy for milk production, road improvement and strategies for controlling HIV/AIDS. The future image is economically empowered community through livestock production, adult education improved, health status improved, extended extension coverage, better road network and tsetse free division.

3) Problem Analysis of Homa Bay District

Table 2.1.2 shows the results of problem analysis of district level workshop at Homa Bay District. Compared with other problem analyses especially at community levels, "2 Road networks are poor" as a direct cause is distinctive.

Table 2.1.2 Results of Problem analysis at Homa Bay District

Core Problem	Direct Causes	Other Major Causes
Livelihood of people in Homa Bay District is not secure.	1. Level of the **income** of the people is low.	(1) Unemployment is high in Homa Bay. (2) Agricultural production is low in Homa Bay. (3) People are using poor marketing strategy. (4) Income generating activities are limited. (5) People are in poor health status.
	2. **Road** networks are poor.	(1) Lifespan of roads is short. (2) Construction cost is very high. (3) No proper road maintenance.
	3. **Crop** production is low.	(1) Ignorance on crop husbandry. (2) Incidences of pests and diseases. (3) Poor quality seeds. (4) Low soil fertility.
	4. **Livestock** production is low.	(1) Poor quality of pastures. (2) Spread of pests and diseases. (3) Poor animal husbandry practice. (4) Long distance to water points / pasture. (5) Many livestock theft.
	5. People are in poor **health**.	(1) Presence of diseases. (2) No proper health care. (3) Malnutrition. (4) No safe water.

2.1.2 Situation Analysis at Divisional Level

Table 2.1.3 shows the summary of the results of problem analysis at the divisional level workshop done by divisional officers, representatives of NGOs and CBOs active in the divisions. The core problem was set as "life is not easy in XX division" so that it can cover all the problems and issues necessary for planning of comprehensive development programmes.

Low income is ranked number one in four out of six divisions namely Asego, Riana, Kobama and Nyarongi. **Hunger** was ranked number one in Rangwa Division, and **diseases** in Ndhiwa Division. In this workshop, direct causes were discussed in the plenary session and three direct causes (hunger, diseases and low income) were temporally selected. **Road** was added to the direct causes in the group work of Riana and Kobama Divisions.

If you look at the secondary causes, **food production** is number one in Rangwe, **income generating activities** are number one in Asego, **micro-finance** in Riana, **clean water** in Ndhiwa, **crop yield** in Kobama and **quality livestock** in Nyarongi.

Table 2.1.3 Results of Problem analysis at the Divisional Level Workshop

Core Problem	Direct Causes	Secondary Causes
Life is not easy in **Rangwe** Division.	**1. (50%)** People are in continuous **hunger**.	1-1=3-1 Inadequate food **production** by the people.
	2. (30%) High incidence of **diseases** among the people.	2-1 We cannot get proper **medical care**. 2-2 Villagers cannot access clean **water**. 2-3 High prevalence of **HIV/AIDS**. 2-4 High presence of diseases causing organisms. (**environment**) 2-5. Our **children** are getting sick.
	3. (20%) People get l**ow income.**	3-1=1-1 Inadequate food **production** by the people. 3-2 Many people are **unemployed**. 3-3 Poor **marketing** strategies of the people.
Life is not easy in **Asego** Division.	**1. (55%)** People get **low income.**	1-1 There are few i**ncome generating activities**. 1-2 We have low **livestock** production. 1-3 Low **fish** catch. 1-4 Low **cotton** production. 1-5 **Fish prices** are low.
	2. (25%) People are in continuous **hunger.**	2-1 Low crop **production**.
	3. (20%) High incidence of **diseases** among the people.	3-1 Our **immunity** has been weakened. 3-2 People cannot access clean **water**. 3-3 Our **environment** is contaminated. 3-4 We have high **mosquito** infestation. 3-5 We don't eat balanced **diet**. 3-6 Some rural people cannot access hospital **facilities**.
Life is not easy in **Riana** Division.	**1.** People get **low income.**	1-1 Farmers don't have access to **micro-finance** loaning scheme. 1-2 Farmers **can't sell** their farm produce profitably. 1-3 Farmers are not growing high **value** crops (horticulture). 1-4 People are not in gainful **employment**.
	2. High incidence of **diseases** among the people.	2-1 People can't access to clean **water**. 2-2 People don't have access to proper **health care**. 2-3 High incidence of **mosquitoes**.
	3. People are in continuous **hunger.**	3-1 Poor crop **yield**. 3-2 Farmers lack proper grain **storage** strategies.
	4. People live in constant **fear for life and wealth.**	4-1 A lot of **cattle thefts**. 4-2 **House breakings** are common in the division. 4-3 **Highway robberies** are quite frequent.
Life is not easy in **Ndhiwa** Division.	**1. (50%)** High incidence of **diseases** among the people.	1-1 (40%) People are scarcely accessible to clean **water** source. 1-2 (30%) People have little **sanitation** coverage (latrines, dish racks, rubbish pits). 1-3 (20%) People have few health **facilities**. 1-4 (10%) People are prone to **contraction** of diseases.
	2. (30%) People ge**t low income.**	2-1 (40%) People don't **produce** enough food to eat. 2-2 (30%) People don't practice **I.G.A.s**. 2-3 (20%) People get little opportunities for **employment**. 2-4 (10%) People **sell** their produces at low prices.
	3. (20%) People are in continuous **hunger.**	3-1 (50%) People can't get enough **production**. 3-2 (40%) People have many **dependents**. 3-3 (10%) People practice **mono-production** (which is affected by erratic rainfall pattern).
Life is not easy in **Kobama** Division.	**1. (40%)** People get **low income**.	1-1 (60%) We get low crop **yield**. 1-2 (40%) We get low **milk production**.
	2. (30%) High incidence of **diseases** among the people.	2-1 (30%) **HIV/AIDS** is affecting the community. 2-2 (25%) People do not have access to clean **water**. 2-3 (25%) People are exposed to poor **sanitary** conditions. 2-4 (15%) People do not have access to medical **facilities**. 2-5 (10%) We do not have good **immunization** coverage.
	3. (25%) People are in continuous **hunger**.	3-1 (40%) Our people need too much **food**. 3-2 (35%) We get low crop **yield**. 3-3 (25%) People **sell out** all the little produce.
	4. (10%) People do not have **roads**.	4-1 Our roads have not seen opened.
Life is not easy in **Nyarongi** Division.	**1. (50%)** People get **low income**.	1-1 We don't have quality **livestock**. 1-1 We don't have **cash crops**.
	2. (25%) People are in continuous **hunger**.	2-1 (40%) We get low **yield** of crops. 2-2 (35%) We cultivate small area of **land**. 2-3 (25%) We **sell** our crops immediately after harvesting them.
	3. (25%) High incidence of **diseases** among the people.	3-1 (60%) We don't have clean **water** to use. 3-2 (30%) We are not conversant on disease **prevention**. 3-3 (10%) We have high breeding ground for **mosquitoes**.

2.1.3 Situation Analysis at Community Level

Community level workshops in Homa Bay District were held from 14 September to 4 October 2005 at the six villages which represent all the six divisions in Homa Bay District. The Study Team spent two days for interviews prior to the participatory workshop. The summary of the results of problem analyses at the community level workshops done by the villagers is shown in Table 2.1.4. The core problem was set as “life of the farmers in XX village is difficult” so that it can cover all the problems and issues necessary for planning comprehensive development programmes.

As the priority direct causes, **income** was chosen number one in four out of six villages in Homa Bay District namely Ngegu Beach (Rangwe Division), Kogelo Kalanya Village (Asego Division), Murram Village (Riana Division) and Okok Village (Ndhiwa Division), while **diseases** were chosen number one in two villages in a remote area namely Oriang Village (Kobama Division) and Otange Village (Nyarongi Division). The decision was overwhelming in many cases. The second choice was **food** in four villages namely Kogelo Kalanya (Asego), Murram (Riana), Okok (Ndhiwa) and Otange (Nyarongi), **diseases** in one village which is Ngegu Beach (Rangwe), and **income** in one village which is Oriang (Kobama).

Number one secondary cause is **catch of fish** in Ngegu (Rangwe), **job opportunities** in Kogelo Kalanya (Asego), **sell of harvest** in Murram (Riana), **harvest** in Okok (Ndhiwa), **drinking water** in Oriang (Kobama) and **access to hospital** in Otange (Nyarongi).

Table 2.1.4 Results of Problem analysis at the Community Level Workshops

Core Problem	Direct Causes	Secondary Causes
Life is not easy in Ngegu Beach. (**Rangwe** Division) 16 September 2005	**1. (50%)** Our **income** is low.	1-1 Our catch of **fish** is low. 1-2 Our **harvest** is low. (tomatoes, vegetables, cotton, pineapples) 1-3 We don't have small **income generating activities**. 1-4 The price of our **fishes** is **cheap**.
	2. (30%) We have many **diseases**.	2-1 We don't have **clean water**. 2-2 We can't access **medical care** easily. 2-3 We have sexual immorality on the **beach**. 2-4 **Wife inheritance** spreads diseases.
	3. (20%) We are **hungry**.	3-1 Our food **crop harvest** is low. (sorghum, maize, cassava, beans, potatoes) 3-2 We have many **dependants**.
Life is not easy in Kogelo Kalanya Village. (**Asego** Division) 4 October 2005	**1. (50%)** Our **income** is low.	1-1 We have few **job opportunities**. 1-2 We have few **business activities**. 1-3 Our **harvest** is low. 1-4 We **sell** our cash crop **cheaply**. 1-5 Our **fish catch** is small.
	2. (30%) We have a lot of **famine.**	2-1 Our **harvest** is low. 2-2 We have many **dependants**. 2-3 We don't have enough **milk** from our cows. 2-4 Our **fish catch** is small.
	3. (20%) We have many **deaths**.	3-1 **HIV/AIDS** is rampant in our area. 3-2 We have many **diseases**.
Life is not easy in Murram Village. (**Riana** Division) 30 September 2005	**1. (70%)** Our **income** is low**.**	1-1 We can't **sell** our **harvest**. 1-2 We **sell** our **sugarcane** cheaply. 1-3 We don't do adequate **business**. (1-4) We sell our crops cheaply. (maize, potatoes etc.) (1-5) County council takes maize tax (CESS).
	2. (20%) We don't have enough **food.**	2-1 We don't have **farming tools**. 2-2 We don't have enough **farming skills**. 2-3 Our soil is not **fertile**. (2-4) We have small piece of land for farming. (2-5) We are lazy.
	3. (10%) We have many **diseases**. (e.g. Malaria, typhoid, T.B., pneumonia)	3-1 We are not able to get good **medical care**. 3-2 We don't take **nutritious food**. 3-3 **Mosquitoes** are rampant. (3-4) HIV/AIDS is rampant.
Life is not easy in Okok Village. (**Ndhiwa** Division) 27 September 2005	**1. (50%)** Our **income** is low.	1-1 We have little **harvest**. 1-2 We don't have **business**. 1-3 We have few **livestock**. 1-4 We **sell** our **crops** cheaply.
	2. (30%) We have little **food**.	2-1 We have little **harvest**. 2-2 We have little **milk** production.
	3. (20%) We are not **healthy**.	3-1 We have many **diseases**. (e.g. typhoid and malaria) 3-2 **HIV/AIDS** is rampant. 3-3 We don't have **nutritious food**.
Life is not easy in Oriang Village. (**Kobama** Division) 20 September 2005	**1. (50%, F:41, M:42)** We have many **diseases**.	1-1 Our **water** is not clean. 1-2 We can't get proper **medical care**. 1-3 There are many **mosquitoes**. 1-4 **HIV/AIDS** is killing us. 1-5 **Tsetse fly** is rampant.
	2. (30%, F:3, M:13) Our **income** is low.	2-1 We **sell** our **crops** cheaply. (maize, sorghum, beans, ground nuts) 2-2 We don't have productive **cattle**. 2-3 We can't have salary **employment**.
	3. (20%) We have low **harvest** of food crops.	3-1 We have a lot of **weeds**. (e.g. Striga) 3-2 Our **seeds** are not good. 3-3 Our **farming methods** are poor. 3-4 We have many food crop **diseases**. 3-5 **Rodents** spoil our root crops. (ground nuts, potatoes, cassava) (3-6) Farming land is small. (3-7) We can't plough enough land. (3-8) Wild animals destroy our crops.
Life is not easy in Otange Village. (**Nyarongi** Division) 23 September 2005	**1. (50%)** We suffer from many **diseases**.	1-1 We can't access **hospital** easily. 1-2 Our drinking **water** is not clean. 1-3 Our **diet** is not balanced.
	2. (30%) Our **harvest** is low.	2-1 Our soil is not **fertile**. 2-2 We don't have proper **seeds**. 2-3 **Drought** is rampant. 2-4 Crops and vegetables get **spoiled**. 2-5 We cultivate **small** pieces of **land**. 2-6 We **cultivate late**.
	3. (20%) Our **income** is low.	3-1 We don't have **business** in the village. 3-2 We **sell** our **products** cheaply. 3-3 Few are **employed** in the village. 3-4 Employed youth are **dying**.

2.2 Major Development Challenges

In addition to the constrains identified during the series of workshops aforementioned in the earlier sections, this sub-chapter discusses development challenges that have been identified by the Team from literature review, field observations, and interviews to concerned government officers and farmers. The challenges discussed below are: 1) High prevalence of HIV/AIDS, 2) Orphans and Vulnerable Children (OVCs), 3) High children's mortality rate, 4) Proposal method and CBOs organized by supply-driven, 5) Animal draft affected by tsetse flies, and 6) Unaffordable Agriculture Input. Though low level of recurrent and development budgets available at the district level are one of the challenges, this will be elaborated in the "2.4 Trends of Available Fund and Disbursement Mechanism".

2.2.1 High Prevalence of HIV/AIDS

HIV/AIDS was declared as a national disaster in November 1999. Since then the GOK has been putting much effort on combating the disease. The nationwide prevalence of Kenya reached the peak of the epidemic in 2000. The nation wide trend shows that there has been a continuous decline in prevalence in this decade. The current national prevalence in pregnant women as of year 2006 stands at 5.9 %.

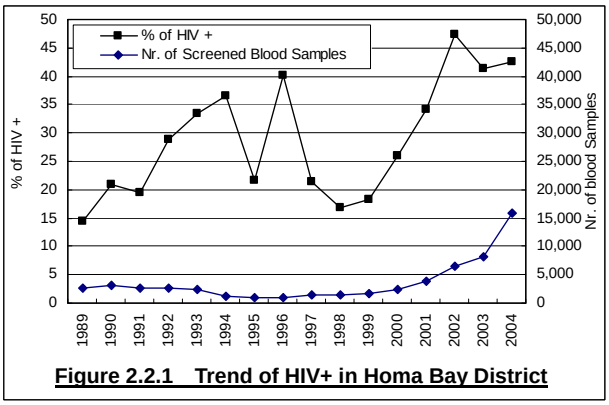


Figure 2.2.1 Trend of HIV+ in Homa Bay District

Turning to the HIV prevalence in Homa Bay District, it is a well-known fact that this Nyanza area's prevalence is higher than other parts of Kenya. Figure 2.2.1 shows HIV positive ratios for those whose blood has been screened for the test. The ratio once reached the peak in 1996, and dropped sharply and again has been increasing until 2002. However, the increase after 1998 does not necessarily mean the increase of HIV positive for Homa Bay population as a whole. The increase of the positive was due mainly to those who have visited VCTs. Those who visit VCT very often turned positive, which consequently increased the average rate of the HIV positive.

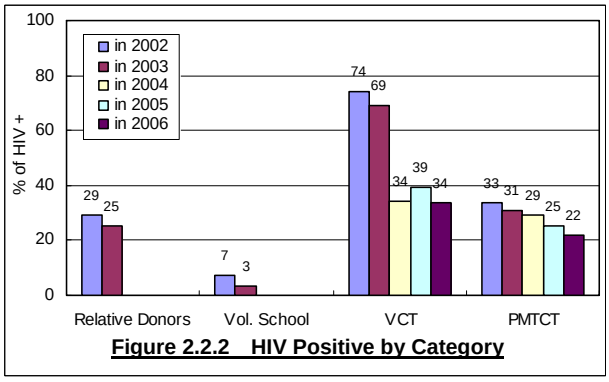


Figure 2.2.2 HIV Positive by Category

Figure 2.2.2 shows the HIV positive by group. As implied above, those who visited VCTs turned HIV positive very high; 76 % in 2002 and 69 % in 2003 though the rate dropped down from 2004 sharply mainly because not only widows but also common people are now very much encouraged to visit VCT. The HIV prevalence in PMTCT, prevention of mother to child transmission, stands at 33 % in 2002 and 22 % in 2006, which are still very much higher than the national average. This group, say pregnant women, is regarded as the generation economically active. The prevalent ratio in this economically active generation is now about 20%, say one out of every five is HIV positive. Though the prevalence trend is on a continuous decline, HIV increases the infectious diseases, affects economically active population, leaves orphans, etc.

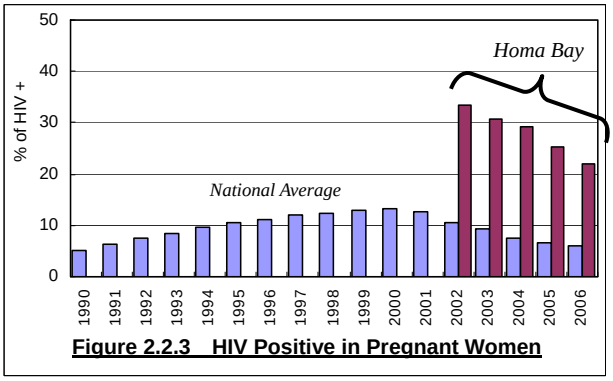


Figure 2.2.3 HIV Positive in Pregnant Women

2.2.2 Orphans and Vulnerable Children

HIV/AIDS has left a lot of orphans. Though exactly how many children have been left out as orphans is not known, alarming number in orphans is appearing. The Ministry of Education carried out a nation wide survey of how many orphans they have in their public schools in July 2005. Apart from this survey, Homa Bay also carried out another survey in late December 2004. Table 2.2.1 summarizes the orphans in public primary schools and Table 2.2.2 summarizes the orphans in public secondary schools based on the two surveys by division and category (data in July 2005 is available only at the district level); which can tell us that:

- In primary school, partial orphans who do not have one of the parents stand at 17 percent as of December 2004, and increased to 20 percent as of July 2005. Total orphans who do not have both parents stand at 8 percent as of December 2004, and this has increased to 10 percent in July 2005. The total orphans who do not have either or both parent were 25 percent and 30 percent in December 2004 and July in 2005 respectively. With respect to the increase of the orphans, 3 percent pupils, say 3 out of every 100 pupils, have lost one of the parents during the 7 months period from December to July, and 2 percent have lost the remaining parent and therefore become total orphan during the 7 months. By division, as shown in Figure 2.2.4, Riana Division shows the highest percentage of orphans followed by Rangwe. Riana has a trunk road going to Rongo which might have contributed in the increase of HIV/AIDS thereby leaving many orphans. The high ratio of Rangwe must come from beach areas.

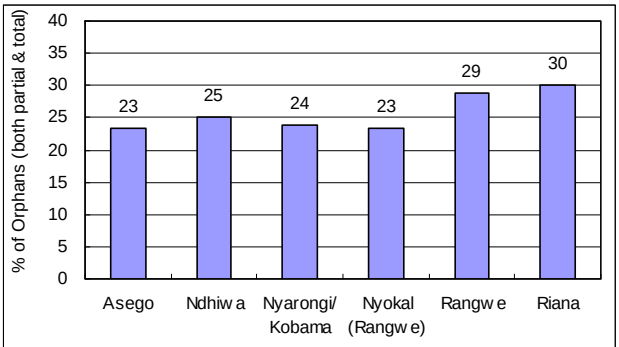


Figure 2.2.4 Ratio of Orphan by Division

- In secondary schools (see Table 2.2.2), the ratio of the orphans is quite high. As of July 2005, the percentages are 34 percent, 27 percent, and totaling to 61 percent for the partial orphan, total orphan and the total respectively. This high ratio does not represent the ratio of orphans whose ages fall in the secondary enrollment. This is probably because of bursary given to orphans. There are two bursaries administered under CDF and Constituency Bursary Fund. Though the amount given to an orphan does not cover all the expenses required in secondary, the bursary is now given to almost all the orphans who are in secondary schools (no bursary in primary because primary is under the free education system). This accordingly increases the rate of orphans in secondary schools. Ironically it may be said that without bursary arrangement there are still difficulties to send children to secondary which requires about Ksh 14,000.

Table 2.2.1 Number of Orphans in Primary Schools in Homa Bay District

Yr	Division	Enrollment	Partial Orphans		Total Orphans		Total	
			Number	%	Number	%	Number	%
As of Dec. 2004	Asego	24,129	3,933	16	1,731	7	5,664	23
	Ndhiwa	13,621	2,322	17	1,104	8	3,426	25
	Nyarongi/ Kobama	14,248	2,252	16	1,156	8	3,408	24
	Nyokal (Rangwe)	17,748	2,704	15	1,431	8	4,135	23
	Rangwe	12,654	2,289	18	1,363	11	3,652	29
	Riana	13,396	2,750	21	1,283	10	4,033	30
	District Total	**95,796**	**16,250**	**17**	**8,068**	**8**	**24,318**	**25**
As of July 2005		**95,796**	**18,719**	**20**	**9,729**	**10**	**28,448**	**30**
Increment, %		**-**	**3**		**2**		**4**	

Source: Education Office, Homa Bay District

Table 2.2.2 Number of Orphans in Secondary Schools in Homa Bay District

Yr	Division	Enrollment	Partial Orphans		Total Orphans		Total	
			Number	%	Number	%	Number	%
As of Dec. 2004	Asego	2,407	528	22	272	11	800	33
	Ndhiwa	1,031	443	43	162	16	605	59
	Nyarongi/Kobama	734	233	32	172	23	405	55
	Nyokal(Rangwe)	1,834	471	26	359	20	830	45
	Rangwe	1,591	500	31	399	25	899	57
	Riana	714	303	42	265	37	568	80
	District Total	**8,311**	**2,478**	**30**	**1,629**	**20**	**4,107**	**49**
As of July 2005		**8,311**	**2,821**	**34**	**2,264**	**27**	**5,085**	**61**
Increment, %		**-**	**4**		**8**		**12**	

Source: Education Office, Homa Bay District

Aside from the survey carried out by the Ministry of Education, the Team also conducted an inquiry about orphans at the registration of community level workshops in Homa Bay District, where HIV/AIDS is more pandemic. The Team asked the number of orphans in the household. The ratio of total orphans and partial orphans is shown in Figure 2.5.5, and that is 60.4% in Ngegu Beach a fishing village and 46.3% in Kogelo Kalanya a suburb of Homa Bay Town. The ratio of total orphans is 37.3% in Ngegu Beach and 33.9% in Kogelo Kalanya. Those areas which are located close to beaches and also township are in most cases reported to have higher existence of orphans as so is the results by the Team. This is a great development challenge.

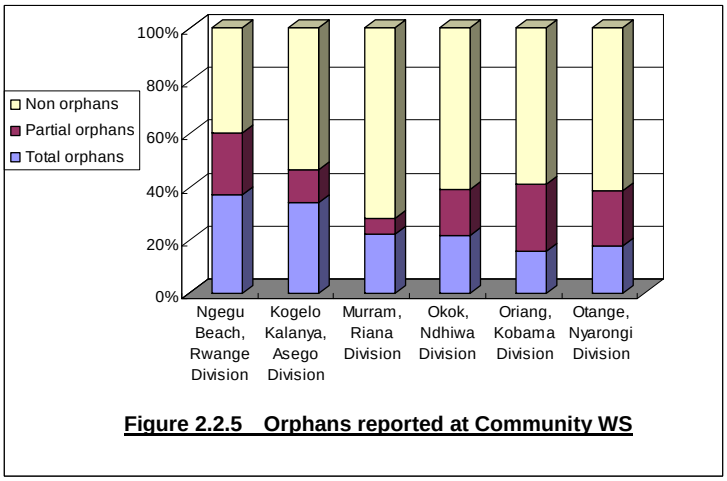


Figure 2.2.5 Orphans reported at Community WS

2.2.3 High Children's Mortality Rate

As described in Part I section 3.3, the infant and under-five mortality rates in Homa Bay District are much higher than the national average. Infant mortality and under-five mortality rates in Homa Bay District in 1999 are 149.2 and 254, which are higher by 93% and 119% than the national average respectively (see Figure 2.2.6). The data means that about one in every 4 children cannot see their five-year birthday.

The "Millennium Development Goals Status Report for Kenya 2005" identifies the cause of the deaths of infants in recent years as mainly from five diseases: acute respiratory infections, diarrhoea, measles, malaria, and malnutrition or combination of these conditions. Among these diseases, high occurrence of malaria and also its trend of sharply increasing in recent years (see Figure 2.2.7) might be further increasing the rate of the children's mortality. Also as one of the challenges, the report mentions that child health has been adversely affected by HIV/AIDS pandemic. This case could be more meaningful in the Study District as the HIV/AIDS prevalence in Homa Bay District is very high.

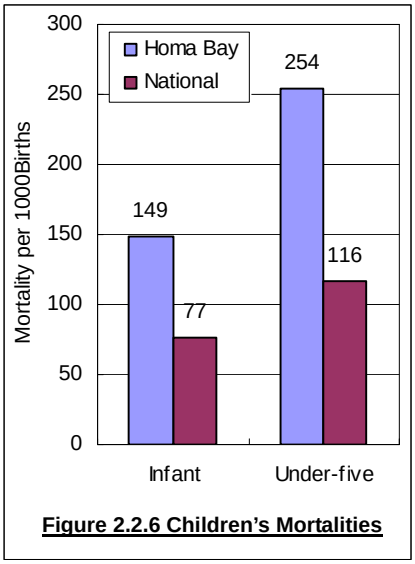


Figure 2.2.6 Children's Mortalities

High mortality rate of children would not, however, be solely the cause of prevalent diseases. Issue would be the situation of how parents can cope with the disease prone environment of the Study Area. As a simple logic, poverty incidence could be the backbone of the situation. High mortality rate of children may have influenced the intention of parents to have many children as a cheap measure to it, if cold-heartedly said, though there could be more reasons to have many children for the parents. However, to have many children gives heavy burden to mothers in terms of health and time loss from economical activities. These conditions might be the cause for the poor to prolong their poverty status.

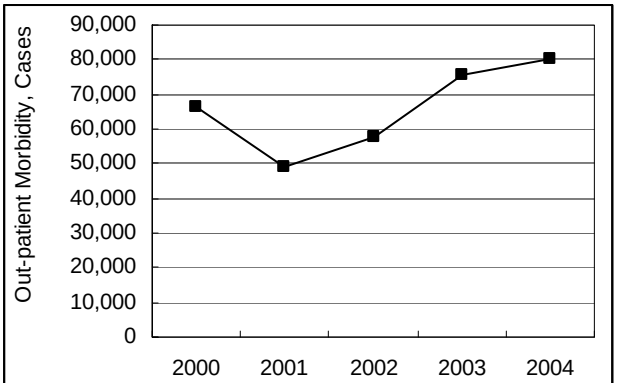


Figure 2.2.7 Malaria Morbidity, Out-patient

High children's mortality rate cannot be identified as only a lack of health intervention in the prevalent disease prone environment of the Study Area, but it is related to high prevalence of the poverty incidence. It has often been said that because parents are too poor to access medical care for their children and then take a measure to have more children over high incidence of their children's early deaths. But it is a kind of vicious circle, so that we should have in mind the fact that the high mortality rate of children would also be a cause of poverty. In this situation, parents could not stop having more children, that is, if cold-heartedly said, not stop pursuing quantity rather than pursuing quality of life. The more quantity the parents have, the less they can invest per child, and thus the poverty is inherited from the parent to the less invested children, making them very difficult to get out of the trap of the poverty vicious circle[1].

2.2.4 Proposal Method and CBOs organized by Supply-driven

In nowadays context, there are many donors who adopt proposal method in implementing community based projects. Under this arrangement, target communities are supposed to produce project proposals and submit them to the respective donors. Upon appraisal of the proposal, funds are disbursed to their accounts. In Homa Bay District, there are NGOs and also a National AIDS Control Council (NACC) supported programme which employ the proposal method, with the latter being the majority. NACC has a community initiative programme targeting vulnerables affected by HIV/AIDS, which is administered through Constituency AIDS Control Council (CACC). The programme disburses some fund to CBOs and NGOs with the maximum of Ksh 350,000 and Ksh 1.2 million per proposal respectively.

During the phase one stage from 2000 to 2005 of the NACC programme, about 1,170 projects in Nyanza Province, constituting 21 per cent of the total 5,635 projects nationally were supported. From a monetary perspective this was 16.3 percent of the US$ 30M disbursed. The CBOs and NGOs in Homa Bay District during the first phase of 2000 – 2005 have received funding from NACC to the tune of Ksh 23.3 million as shown below. The grant was meant to assist projects which support orphans and vulnerable children (OVC) and also promote income-generating activities for those CBOs and NGOs dealing with the vulnerables.

[1] The Elusive Quest for Growth, William Easterly

Table 2.2.3 Funds allocated to CBOs and NGOs in Homa Bay District by NACC as at First Phase 2000-2005

Constituency	Organization	Number of Projects	Projected Ksh millions	Total Financing First Phase 2000-2005, Ksh millions
Rangwe	CBOs	36	12.6	18.0
Ndhiwa		35	11.9	
Homa Bay District	NGOs	5	6.0	5.3
Total		76 (71 for CBOs)	30.5	23.3

Source: DDO & National AIDS Control Council Offices, as of July 2005

The disbursement mechanism for CBO project is; upon appraisal of the proposal 1st disbursement of a maximum of Ksh 200,000 is remitted to their bank account, which shall be spent within a quarter period with the accounting report being submitted to the NACC. After the accounting report has been accepted, the 2nd disbursement of maximum of Ksh 150,0000 is remitted. Problems are encountered with the accounting of the 1st disbursement by CBOs. As shown below; out of 71 CBO projects only 26 projects, which consist of about 35 percent, have been disbursed the 2nd payment. Other CBOs which are the majority were not able to receive the 2nd disbursement due to accounting problem.

CBOs: Of 71 projects, 25 (35%) received, 46 (65%) not received

NGOs: Of 5 projects, 5 (100%) received, 0 (0%) not received

The accounting problem may date back to the proposal preparation, because the fact is that many proposals were written by someone else who is not the member of the CBOs. Though it is difficult to estimate, it is reported by officers that at least more than two-thirds of the proposals have been written by others upon remuneration. It cannot be criticized taking into account the context of the communities whose vulnerables have a difficulty to write up an attractive proposal. Also, accounting may have failed not intentionally but because of mere difficulty of getting all the receipts ready for the accounting. For example, when a CBO orders uniforms for orphaned children they usually make the order to the members who are not necessarily in the business ready for issuing official receipt. What should be pointed out here is not the slack accounting but the proposal mechanism which can hardly meet the present context of the communities.

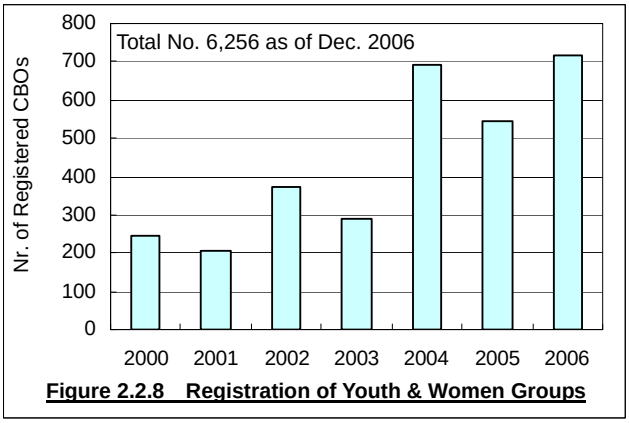
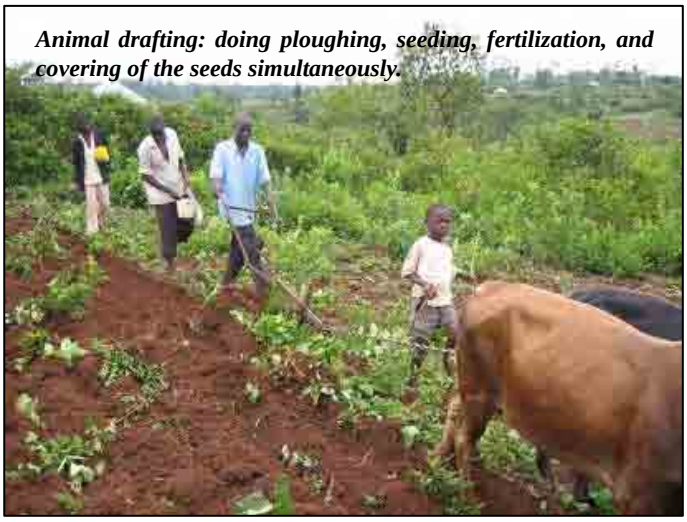


Figure 2.2.8 Registration of Youth & Women Groups

Another aspect is that proposal method is usually called demand driven, but is it really so? It may be said that because of the fund available, communities are motivated to move onto demand-driven which is in essence supply-driven. As of December 2006, there are as many as 6,256 CBOs registered in Homa Bay District, and the Figure 2.2.8 shows the trend of the registration of CBOs by year. In 2004 the number has increased dramatically as the proposal method became very familiar to most of the rural communities. From the administration side of the fund, proposal method may be one of the most effective ways of disbursing the huge fund. However, one may have in mind that proposal method does not entail technical expertise points of view which must be available from the supply side. Also there is a possibility that fund availed through proposal method may be reaching relatively elite class only in the rural communities because the poorest and vulnerable groups which are in need of such assistances in deed may not have enough capacity to prepare attractive proposal because even those who have so far accessed the fund have asked someone else to prepare the proposal in many cases.

2.2.5 Animal Draft affected by Tsetse Flies



Animal drafting: doing ploughing, seeding, fertilization, and covering of the seeds simultaneously.

Animal draft in Nyanza Province fits in the rural agriculture. Animal draft originates in Egypt in the African continent, and was introduced in northern parts of Nyanza Province by early 1940s. It is believed that the farmers in Homa Bay had also adopted the drafting by the time of late 1940s. The animal drafting seen in this area has very minimized manual cultivation involving not only ploughing, but also seeding and even weeding. Photo shows typical practice of using animal draft; one is commanding the oxen, after whom another is dropping the seeds, then one more is following to put chemical fertilizer, and the covering of the seeds is done while ploughing the next line by the soil turned up to the side where the seeds are already placed.

As elaborated, animal draft has been very well incorporated in the rural agriculture. However, the animal available has been decreasing because; 1) simply due to the population increase which in turn decreased the number available per farm family, and 2) frequent attack by tsetse flies. There is a national park down from the Ndhiwa and Kobama Divisions. These two divisions are mostly hit by tsetse flies, loosing many cattle during outbreaks. At the divisional analytical workshop held on 12 and 13 September 2004, the participants addressed the issue giving rank 1 to the both divisions. The rank was given in a range of 1 to 5 with 1 being most difficult in terms of livestock situation. Also during a series of community workshops, participants gave long-term trend in terms of livestock production. In all the six communities, the trend has got worse by time, finally arriving to 1. The tsetse fly is a development constraint especially in Kobama and Ndhiwa Divisions located near the national park.

Table 2.2.4 Rank and Trend in terms of Livestock Production by Division and Community

Category		Rangwe	Asego	Riana	Ndhiwa	Kobama	Nyarongi
Division	Rank	3	3	4	1	2	3
Community	Trend	4→3→2→1	NA	4→3→2→1	3→2→1→1	4→2→1→1	3→2→1→1

Source: Divisional Analytical Workshop and community workshop held in September/October in 2004

2.3 Major Development Opportunities

In addition to the opportunities identified during the series of workshops aforementioned in the earlier sections, this sub-chapter discusses development opportunities that have been identified by the Team from literature review, field observations, and interviews to the concerned government officers and the farmers. The opportunities discussed below are: 1) Technical Officers' Deployment at Divisional Level, 2) Favourable Rainfall Pattern enabling Two Cropping Seasons 3) Potential to Export Food Crops to Neighbours, 4) Active CBOs and Lead Local Persons, 5) Locally Available Resource Persons, and 6) Tree Planting Practices.

2.3.1 Technical Officers' Deployment at Divisional Level

The government had been increasing the number of civil servants until 1993, and thereafter started reducing the number though the onset differs by ministry and by government organization. This was in line with restructuring process which started back in 1980s. The Government has discharged

many staff especially in such sectors as agriculture and public health, where many field officers especially frontline staff have been greatly curtailed. In fact, almost all the officers the Team contacted have raised shortage of staff as one of critical development constraints as well as shortfall of the budget. As compared to early 1990s, it is a fact that the number of government staff has been curtailed but at the same time still one may see better staff allotment at the frontline in the district. In the district, as already mentioned there is very high population density, so that population coverage per government staff may be quite overburdened but in turn there may a possibility to have accessible coverage in terms of area.

Government departments which have field staff are; 1) Agriculture including Livestock and Veterinary, 2) Public health, 3) Fishery, 4) Water, 5) Forest and 6) Education. Agriculture has most allocated field staff as indicated in Table 2.3.1 below;

Table 2.3.1 Staff Allocation in Agriculture in Homa Bay District, Divisional Level

Division	Divisional HQs	Frt Ext. Worker	Total	Area Km^2	Area/staff, ha	HHs	HHs/staff	Remarks
Rangwe	3	4	7	267.3	3,820	20,884	2,980	
Asego	3	6	9	184.1	2,050	20,297	2,260	
Riana	3	2	5	233.6	4,670	13,312	2,660	
Ndhiwa	3	1	4	237.3	5,900	11,783	2,950	
Kobama	3	1	4	140.6	3,520	6,262	1,570	
Nyarongi	4	0	4	97.5	2,440	4,617	1,150	
Total at Division	19	14	33	1,160.4	3,520	77,156	2,340	
Livestock	7							
Veterinary	9							

Source: District Agriculture Office, as of August 2004, HHs are projection as of 2005 a/c 1999 Census

In Homa Bay, there are 33 agriculture staff at the divisional level including the front line extension workers. Dividing the division area by the respective staff number gives us the average coverage area per extension staff, ranging from 2,050 to 4,670 ha with the average of 3,520. The table above also shows the average numbers of households covered by one extension staff, ranging from 1,150 to almost 3,000 with a mean of 2,340 HHs (the households numbers are inclusive of non-farm families, namely whole the household numbers in the District projected as of 2005).

Considering the number of households per extension worker, it is in fact impossible to extend their outreach down to all households. However, in terms of area coverage it is about 2,000 to 5,000 ha on average per extension worker, equivalent to an area of say 5 x 4 km or 7 x 7 km. This area coverage can be managed even by bicycle, which does not need petrol that is nowadays provided under development budget in many cases. Development budget is not however stable without donor support.

One may point out that 19 staff, who are more than the front line staff in number, are stationed at the divisional headquarters, so that they are far away from the frontline reach. What is countered by the Team is whether there is such a need for so many staff based at the divisional headquarters rather than at the location level. Subject matter specialists are stationed at the district level, so that divisional level staff should be more at the frontline level. Given the area per staff which is coverable by even bicycle, the agriculture extension staff can be said, even after many have been retrenched, that they still have great opportunity to reach out to the frontline, though staff reallocation from divisional headquarters to location level needs to be considered.

2.3.2 Favourable Rainfall Pattern enabling Two Cropping Seasons

Nyanza area is blessed with distinct two rainy seasons; long and short rainy seasons. Though some of the areas cannot have enough rainfall during short rainy season to support crops, for example lower

parts of Nyando District, Homa Bay can be said to have relatively stable rainfall even during the short rainy season as shown in Figure 2.3.1, making two croppings per year possible.

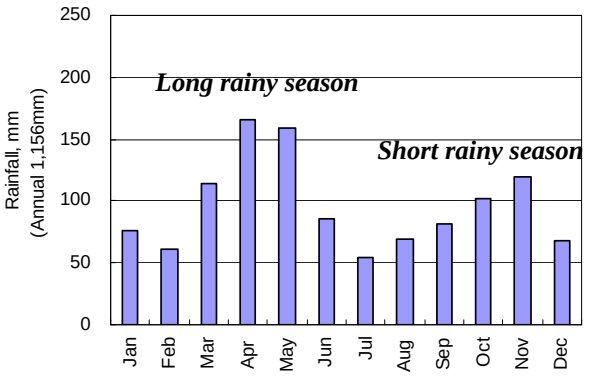


Figure 2.3.1 District Two Rainy Seasons at Homa Bay

Maize which is the staple food can be grown even during short rainy season. Also many vegetables are in fact grown during this period rather than during the long rainy season because during the short rainy season there are less pests and diseases to vegetables. The rainfall in the short rainy season may not be enough to fully support crops, sometimes resulting in very low yield. However, equipped with rain harvesting technique as shown in the photo, farmers can sustain the short rainy season's crops. The photo shows maize, banana, and onions on the forefront field supported by a small pan as emergency source of water. The rainfall which can enable two cropping seasons is one of the development opportunities in this Homa Bay District, which should be fully utilized to supplement food crops to the ones harvested from the long rainy season and also to promote horticulture such as vegetables.

2.3.3 Potential to Export Food Crops to Neighbours

Some neighbours to Homa Bay District are in staple food shortage; namely, Migori and Suba Districts. As well known, Migori District has SONY sugar company and is well dominated with sugarcane field. In fact, the SONY sugar company has a capacity of commanding as much as 14,000 ha sugarcane fields. Just like Nyando District, most of the farmers tend to opt to growing sugarcane rather than food crop from the view point of profitability. The growers cultivate sugarcane and sell to the company, then buy staple food with the money.

Suba District is very often in food deficit because the soil in the district is not suitable for agriculture. The surface soils in the district are so poor that can hardly assure good yield. In fact, the main economic activity in this district is fishery. As shown in Figure 2.3.2, out of the total 305 landing beaches under Kenyan lake, 100 beaches are located in the Suba District. There are many people dependent on fishery who are customers for food crops. Given this situation, if Homa Bay could produce more than enough food that the people consume within the district, they can export food crops to the neighboring districts of Migori and Suba.

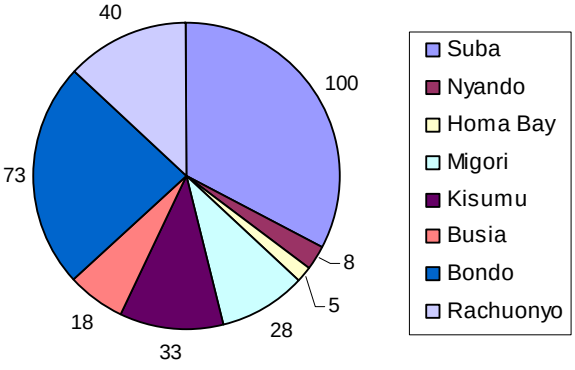


Figure 2.3.2 Fish Landing Site by District

The present food production in Homa Bay is not so low. As already discussed, the average

production of food crops of maize and sorghum per household is 500 – 700 Kg, which can narrowly support a family throughout the year. Adding sweet potatoes and cassava which can be a supplement to the food crops, the average production per household per year reaches over 1,100 Kg and in good years surpasses even 1,500 Kg. In a good year, there is already a surplus which can export to the neighbouring districts. With well established agriculture husbandry, there could be a great possibility to export even food crops such as maize to the neighbouring districts.

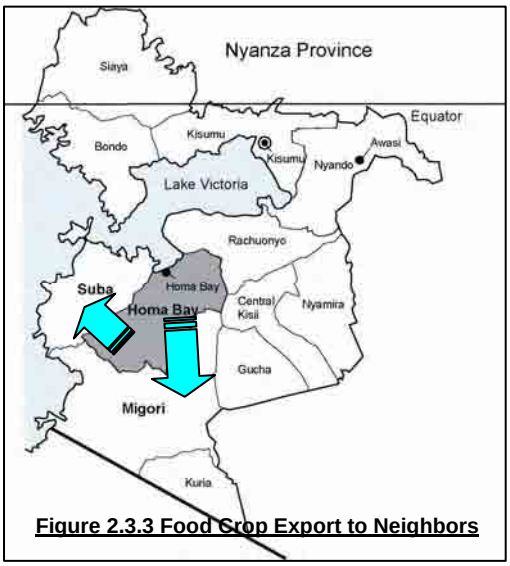


Figure 2.3.3 Food Crop Export to Neighbors

2.3.4 Active CBOs

There is a group operating bodaboda, bicycle taxi, in Nyarongi Division. They have received no assistance so far but have come up to a certain level at which all the 16 members got out of the hand-to-mouth life and now can make their livelihood better. Unemployment was prevalent in the area, and the members sat down together and talked and talked. Finally they came up with an idea of operating bodaboda. Each and every member has contributed some cash, and they invested all the money in buying two bicycles. With the two bicycles, they started their business that is bodaboda. They made use of the benefit in buying another bicycle; another bicycle after one another. Finally all the 16 members have got one bicycle each, all of which have been accrued from the benefit of the bodaboda. Though it has not been an easy challenge, they have developed themselves on their own. Human capacities can never be developed by just administering a training course but be built upon overcoming a hardship on their own commitment.

There is a widow group in Nyarongi Division. What motivated them to start the activities was many orphans who were unable to attend school. They started the group in order to improve their own life and the life of the orphans. They operate nursery school and cultivate vegetables, bee keeping, poultry keeping and broom making. Those who started were widows who had actually very low income. Everyone brought, despite the hardship of the life, one hen to the group. The hens laid eggs with which they could earn some profit, and step-by-step they have scaled up their activities. The orphans can now go to school just the same way as other children who have parents go, which really make all the members proud of what they have done. They are as afore-mentioned widows, who are now vocally against wife inheritance which is a Luo culture. They refuse the inheritance if it is just a tradition though it might provide safety net to widows. They now stand on their own with decision power of the life.

The above twlo stories are just a tip of the iceberg to know if one goes in a quest of human resources in this District. Human capital is the only unlimited and undried resource, which cannot be deprived if committed. The presence of active CBOs and lead local persons including above examples is really a strength in pursuing development of this District. If those stories, which may be defined as success story, could well be shared among the people of Homa Bay, the fellow people in the District could be encouraged to embark in the quest of development.

2.3.5 Tree Planting Practices

The District belongs to the Victoria Basin forest-savanna mosaic eco-region, which is noted for its high species diversity and endemism resulting from the mixture of habitat types. These include more than 310 tree species etc. However, the forest habitats in the eco-region have been mostly replaced by savanna, farmland and pasture; the percentage of forest cover in the district has been on serious

decline due to unsustainable utilization of the forest. However, small-scale forestation by farmers has been becoming common in the District.

In the District, people use trees for fuelwood, construction, etc. Together with charcoal, firewood is the major sources of energy for households. In the rural areas, most people plant trees in their own lands for home consumption or/and income generation. They plant most of them along borders of and within their homesteads, while few trees in other places such as cropland, grazing area, etc. In general, people usually use Eucalyptus for construction, Siala (Markhamia lutea) for firewood and Euphorbia for live fence. Although they are small scale, some individual farmers produce tree seedlings by themselves. In Rangwe Division, especially in the southern and eastern parts, forestation by farmers is the most popular in the District, followed by Riana Division. It is mostly because of the advantages in water availability and moderate temperature of the Division. In addition to individual farmers, the Government also plants trees for rehabilitation of degraded lands.

Tree Nursery of Forestry Department, Asego Division

In the District, Forestry Department has four tree nurseries, which are located in Rangwe, Asego, Ndhiwa and Nyarongi Divisions. In the year of 2004, they produced 248,000 seedlings in total, while private nurseries raised 130,000. Forest Department nurseries sell tree seedlings to individuals at 5 Ksh per seedling or more, while they distribute them to schools free. They also distribute seedlings free to individuals on the National Tree Planting Days, the first week of May. Some private companies like Stancom Tobacco (Kenya) Ltd and British American Tobacco (K) Ltd also have nurseries in Rangwe and Nyarongi Divisions respectively. They distribute seedlings to farmers free because a lot of firewood is needed when the farmers cure tobacco leaves. In addition to the nurseries mentioned above, NGOs, CBOs and individuals have nurseries as well. Their main purpose of the production is income generation, but some of them intend environmental conservation, too.

As mentioned above, most of the people in the District have been practicing small-scale forestation, and some organizations and individuals have been producing tree seedlings. This fact can be considered as one of the development opportunities, because it is rather easy to promote forestation when people are already familiar with it. The existence of the practice indicates that people know somewhat about the importance of the forest and benefit from it. Therefore, people will be able to accelerate tree planting activities if supported by the Government.

2.4 Trend of Available Fund and Disbursement Mechanism

Within the district, major funds available for development are categorized as: 1) government recurrent budget[1], 2) government development budget, 3) development funds assisted by donors, 4) Constituency Development Fund (CDF), 5) Local Authority Transfer Fund (LATF), among others. This sub-chapter refers to the past available funds, based on which future available budget is foreseen.

2.4.1 Government Recurrent Budget

Figure 2.4.1 shows the trend of recurrent budgets for the FYs 2002/03 - 2005/06. The department which has got the highest budget is Education, for which after the introduction of free primary education the department received Ksh 6.4 - 7.3 million for the last three fiscal years. Following the Education Department is the Agriculture of Ksh 5.2 million in fiscal year 2005/06, the District Water Office with an allocation raging from around Ksh 2 to 4 millions, and then the Public Works Office ranging from Ksh 0.7 million to Ksh 2.4 million though it is declining.

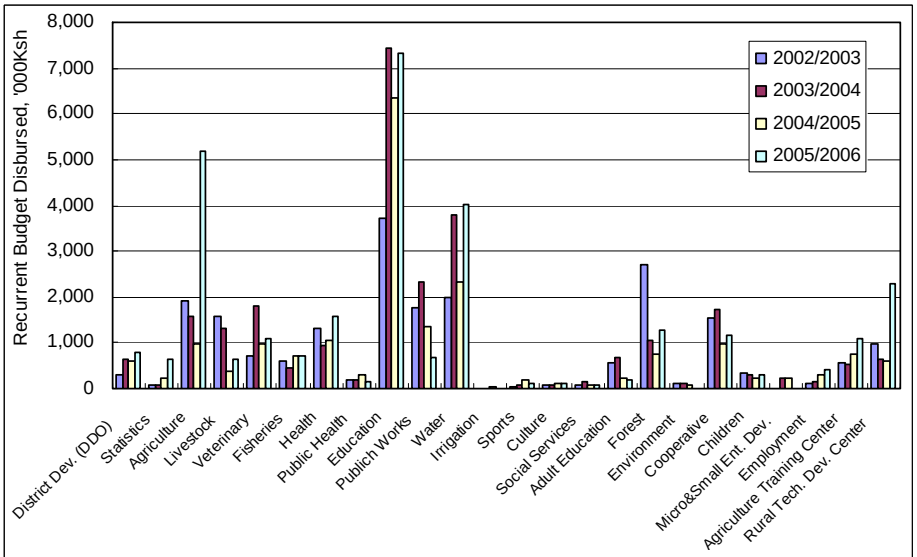


Figure 2.4.1 Trend of Recurrent Budget in Homa Bay District, '000Ksh

Apart from these departments, the other departments which have been receiving over Ksh 1.0 million per year are; Livestock (but not in the last two years), Veterinary (not in 2004/05), Health, Forest (not in 2004/05), and Cooperative. Irrigation had received no recurrent budgets in 2002/03 and 2003/04, but received a meager Ksh 35,000 in 2004/05. Very little recurrent has been allocated to the departments under the Ministry of Gender, Sports, Culture and Social Services. Except for Adult Education Department, other departments such as Sports, Culture, and Social Services under the ministry have been allocated less than Ksh 200,000 each.

To roughly assess the effectiveness or shortage of the available recurrent budget, Table 2.4.1 calculates the recurrent budget per technical officer in FY 2005/06. The table shows about Ksh 132,000 available per officer in the Department of Agriculture which looks better, and about Ksh 53,000 in Veterinary, about Ksh 73,000 in Livestock. Recurrent budget available per technical officer, including government nurses, in the Health sector is about Ksh 6,000 and the recurrent budget in Public Health sector is Ksh 13,000 per officer which is a little higher than the Health sector. Education which is allocated the biggest recurrent as a sector has also high per-technical staff allocation, which is about Ksh 180,000. Public Works and Water have been allocated about Ksh 29,000 and Ksh 155,000 respectively. Forest sector is given relatively high allocation per technical staff, reaching about Ksh 320,000. The departments under the Ministry of Gender, Sports, Culture and Social Services are given about Ksh 32,000 per officer.

[1] The recurrent budget referred to here does not include personnel enrollment (salaries and house allowances). It refers to Authorization to Incur Expenditures (AIEs) for services delivery and maintenance.

Table 2.4.1 Recurrent Budget Available in FY 2005/06 per Technical Officer in Homa Bay, Ksh

Department	Budget in FY05/06	Nr. of Tech. Staff	Budget/ Officer	Remarks
Agriculture: FY 05/06	5,175,314	39	132,700	
FY 04/05	973,142		24,952	
Veterinary	630,081	12	52,507	
Livestock	1,102,934	15	73,529	
Fisheries	704,136	10	70,414	
Health	1,569,792	247	6,355	
Public Health	158,000	12	13,167	
Education	7,307,847	41	178,240	
Public Works	689,631	24	28,735	
Water	4,032,200	26	155,085	
Irrigation	-	2	-	
Forest	1,266,090	4	316,523	
Environment	80,000 (04/05)	1	80,000	Including NEMA activity
Sports & others	499,769	16	31,236	Including Adult Ed'n.

Source: Concerned District Departments and JICA Study Team

In case of Agriculture, the recurrent in 2005/06 is better off as the Government allocated NALEP-GOK under this recurrent category, but the recurrent budget of FY 2004/05 was only about Ksh 25,000 per staff. The recurrent budget has to cover office operation and maintenance, including telephone charges and all utilities. It is said that about half of the recurrent may have to go to running of the office, and the rest can be spent on recurrent activities including expenditures on official travels. Taking this ratio into account, departments such as Veterinary and Livestock can allocate only Ksh 20,000 to 40,000 per technical officer per annum, which is not enough to discharge their duty. Other departments except Education and Forest also suffer from shortage of recurrent budget.

2.4.2 Development Budget for both Donor and GOK

Table 2.4.2 shows the development budgets actually disbursed to technical departments of Homa Bay District, which includes donor funded budgets. Donors provided funds to NALEP and Global Funds for health sector. GOK has also availed some development funds. The Government has disbursed Ksh 16.1 million and Ksh 13.4 million in FY 2003/04 & 2004/05 for the purpose of rehabilitating water supplies in rural centers. Public Works, as part of fuel levy, has been receiving some allocations which are supposed to be spent on road maintenance (in this sense, it may be categorized under recurrent). The amount received has been Ksh 15 million to Ksh 27 million with a trend of increasing. However, as one can see the amount availed for the road maintenance is not enough for good maintenance of the roads in the district.

Table 2.4.2 Development Budget Available in FY 2004/05 for Both Donor Assisted and GOK, Ksh

DEPARTMENT	2002/03	2003/04	2004/05	2005/06	Remarks
Donor					
Agriculture, NALEP	1,663,000	1,825,000	2,984,000	5,517,980	SIDA
Health, Global Funds	-	-	6,276,667		The amount was in 2004/05, and not spent therefore carried over to 2005/06.
GOK					
Veterinary	632,034	383,333	850,000	-	
Health	1,134,000	1,186,219	260,000	11,380,000*	* Renovation for rural health facilities
Public Health	70,000	140,000	140,000	0	Malaria control activities
Public Works	0	1,000,000	500,000	0	Kabande Airstrip
Public Works (Fuel Levy)	*14,800,000*	*20,000,000*	*24,746,816*	*26,657,256*	*Rd, bridge, maintenance of roads*
Water	800,000	16,100,000	13,360,000	4,669,600	Rehab. of water supplies, dams, bore-holes
Forest	500,000	0	500,000	644,000	Catchment conservation &demo plots
Fisheries	0	600,000	0	0	Fencing of beaches, const'n of water tanks & PL
Cooperative	453,684	0	0	0	
Environment	0	50,000	30,000	0	Ksh 80,000 for Dist. Env. Action Plan
Livestock Production	470,042	0	0	0	

Source: Concerned District Departments and JICA Study Team

2.4.3 Constituency Development Fund (CDF)

Each constituency receives an allocation every year based on 2.5% of ordinary revenues of Kenya raised. The CDF, which was established in 2003, is coordinated by the National Management Committee of the National Assembly as provided for in the CDF Act 2003. Each Constituency has a Constituency Development Committee (CDC), which is constituted and convened by the elected Member of Parliament and with a maximum of fifteen members. According to the Act the elected Member of Parliament for every constituency shall be the Chairperson of the CDC unless he/she opts out in which case the Committee shall elect one amongst themselves to be the Chairperson. The CDC is supposed to identify and prioritize projects for funding under CDF. These CDCs report to the District Projects Committee, which is coordinated by the District Development Officer (DDO).

The current CDF Act 2003 does not allow for funding of women groups or self help groups as individual groups since CDF projects must be community owned and have a wider community benefit. The Act also does not allow for funding of religious or political activities. In principal, each constituency is supposed to receive minimum of Ksh 20 million, and according to the level of poverty an additional allocation can be made upon efficiently spending of the previously disbursed amount. As shown in Table 2.4.3, the disbursement has been increasing by year, and the two constituencies in Homa Bay District have received a total of Ksh 252 million including the allocation of FY 2006/07 for the last 4 financial years.

Table 2.4.3 Disbursement of Constituency Development Funds (CDF) in Homa Bay District, Ksh

Constituency	FY 2003/2004	FY 2004/2005	FY 2005/2006	FY 2006/2007*	Total
Rangwe	6,000,000	29,911,496	38,685,218	53,591,252	128,187,966
Ndhiwa	6,000,000	28,829,539	37,285,793	51,652,607	123,767,939
Total	12,000,000	58,741,035	75,971,011	105,243,859	251,955,905
Nyanza Province	192,000,000	883,110,135	1,142,356,878	1,533,947,924	3,751,414,937
% of Nyanza P. Allocation	6.3	6.7	6.7	6.9	6.7

Source: District Development Office, Nyando District; Ministry of Planning and National Development, 2006.
Note: * Allocation (not yet disbursed)

The CDF funds in Homa Bay District have been largely allocated by CDCs to six main sectors with Education sector getting the biggest share and followed by Health sector. The Table 2.4.4 shows the number of projects as at end of FY 2004/05 supported by sector with the total spending per sector. As per project cost, the average ranged from about Ksh 1,436,000 to Ksh 2,049,000. It should be however noted that the actual number of projects funded could be more than 42, 25+17, if one considers the various schools receiving materials separately.

Table 2.4.4 Distribution of CDF Funds by Sector and Constituency up to End of FY 2004/05

Sector	Rangwe Constituency		Ndhiwa Constituency	
	No. of Projects	Funding (Ksh)	No. of Projects	Funding (Ksh)
Agriculture	0	0	0	0
Education	9	16,390,000	3	27,256,206
Health	7	4,950,000	9	4,600,000
Water	1	3,000,000	1	300,000
Roads & Bridges	3	4,874,378	0	0
Logistics	1	1,037,345	1	270,000
Bursary	1	1,926,440	1	500,000
Emergency	1	1,433,333	1	1,333,333
Others	2	1,300,000	1	570,000
Total	25	35,911,496	17	34,829,539
Budget per project		1,436,460		2,048,796

Source: District Development Office, Homa Bay District, 2005

2.4.4 Local Authority Transfer Fund (LATF)

The Local Authorities Transfer Fund (LATF) was enacted in 1999. Since enactment of the Fund to the end of FY 2004/05, a total of Ksh 17.1 billion has been disbursed to various Local Authorities countrywide. The Local Authorities are required to use at least 50% of the allocation for capital development. They are also required to prepare the Local Authority Service Delivery Action Plan (LASDP) in consultation with local communities/stakeholders. In this respect LATF resources are available to communities as far as they can determine their use.

Homa Bay District has two councils; Homa Bay Municipal council and Homa Bay County Council. They get their finances through LATF, Cess and General Rate Fund (GRF), out of which they can spend some amounts in capital investment. Tables 2.4.5 and 2.4.6 show the expenditures for the last five years by category. Among the items, Capital means investment projects which are for example drainage improvement, road improvement, market facility improvement (including toilet construction), construction of dispensary, etc. As summarized in Figure 2.4.2, Homa Bay Municipal Council has spent about Ksh 1.6 million to as high as over Ksh 8.8 million per year for the capital investment. Homa Bay County Council has spent Ksh 3.5 million to Ksh 8.0 million per year.

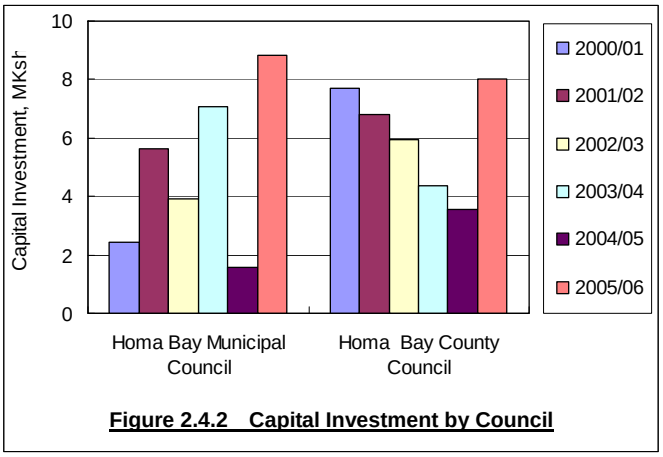


Figure 2.4.2 Capital Investment by Council

Table 2.4.5 Expenditures (in Ksh) for Homa Bay Municipal Council for the FY 2000/01 to 2005/06

Item	FY2000/2001	FY2001/2002	FY2002/2003	FY2003/2004	FY2004/2005	FY2005/2006
Capital	2,416,690	5,627,347	3,920,829	7,058,224	1,576,011	8,838,040
Personnel	13,492,145	14,697,618	17,750,942	17,284,895	14,939,206	20,984,055
Operations[2]	5,847,795	10,486,117	6,629,400	7,115,917	4,636,375	5,168,440
Maintenance	646,268	6,135,991	1,499,575	876,267	787,231	1,941,080
Debt Resolution	2,825,240	3,323,089	4,186,165	4,355,000	6,562,173	4,530,000
Total	25,228,138	40,270,162	33,986,911	36,690,303	28,500,996	41,461,615

Source: Homa Bay Municipal Council Offices, 2005; Republic of Kenya, Ministry of Local Government

Table 2.4.6 Expenditures (in Ksh) for Homa Bay County Council for the FY 2000/01 to 2005/06

Item	FY2000/2001	FY2001/2002	FY2002/2003	FY2003/2004	FY2004/2005	FY2005/2006
Capital	7,700,000	6,800,000	5,931,280	4,362,827	3,538,399	8,000,000
Personnel	10,036,573	5,544,613	7,400,175	12,182,131	11,817,618	17,252,113
Operations	1,828,037	3,062,978	4,053,728	4,296,824	6,626,232	5,050,150
Maintenance[3]	1,032,980	1,350,233	2,008,975	544,000	1,497,945	1,726,000
Debt Resolutions	5,981,572	3,882,928	6,410,647	5,344,982	2,682,653	3,166,073
Total	26,579,162	20,640,752	25,804,805	26,730,764	26,162,847	35,187,516

Source: Homa Bay County Council Offices, 2005; Republic of Kenya, Ministry of Local Government

The variation of the capital investment by year may be correlated to personnel expenses. According to an officer in Homa Bay County Council, during the FY 2000/2001 the County Council used LATF

[2] Operations costs include the following: traveling and subsistence allowance; postage; electricity bills; subscriptions to affiliated bodies such as Association of Local Government Authorities of Kenya (ALGAK), Lake Victoria Regional Local Authority Cooperation (LVRLAC), Association of Local Government Employers (ALGE); fuel; Insurance of vehicles; entertainment; printing and stationery; uniforms and clothing; sewage expenses; advertisements; hire of security and legal expenses.

[3] Maintenance costs include repair of markets; construction of public toilets; repair of tools and equipment; purchase of small tools (pangas, slashers etc.); maintenance of motor vehicles, furniture and repair of buildings.

funds to clear backlog of salaries that had not been paid in the previous financial years. During the FY 2002/2003 the Local Authorities received a salary increase ranging from 60 per cent to 300 per cent depending on the scale. This award was implemented during the second half of the financial year. The salary increases were fully implemented during the financial year 2003/2004. During the FY 2004/2005 there was suspension of ghost workers and casuals resulting in reduced personnel costs.

2.5 Major Development Actors in the District

Within Homa Bay District there are donor supported projects and programmes. SIDA supports two development projects; Road 2000 and National Agriculture and Livestock Extension Programme (NALEP), and IFAD is implementing the Southern Nyanza Community Development Programme (SNDP). Also, engaged in development in the district are number of NGOs both international and local. Following are the brief description of some of the development activities supported by donors.

2.5.1 Roads 2000; SIDA supported Programme

In early 1990s GoK with assistance of development partners developed a road improvement and maintenance strategy under the generic name "Roads 2000" as part of the vision that all districts in Kenya would be covered by the new strategy by the year 2000. Unfortunately due to the prevailing political and economic difficulties in the 1990s, the strategy was only implemented in six districts under the support of DANIDA and SIDA. Under the new NARC government the strategy has been re-launched as part of the implementation of the Economic Recovery Strategy for Wealth and Employment Creation. The current plan is to have the Roads 2000 strategy implemented in all districts by the end of 2009.

SIDA has been supporting the strategy in 11 districts[4] in Nyanza since 2002. The districts have a total of 7,227 km of classified road network (11.3% of the national network) of which 556 km is surface dressed, 185 km is premix, 3,982 km is gravel, and 2,503 km is earth[5]. Most of the roads are in a poor condition. The Roads 2000 aims to bring 75% of the road network back to maintainable standard and under routine maintenance by the end of the programme in 2009. For the 11 districts in Nyanza, donor contribution will be Ksh 1,128 million while GoK contribution through the Fuel Levy will be Ksh 596 million during the four-year period July 2005 to June 2009.

Technical Assistance Consultants were appointed in July 2005 and have carried out a detailed review of reports and studies provided by the recipient organisations and by SIDA. They have come up with recommendations on the resources (human, physical and financial) required for implementation of the programme and a plan of action for the financial year 2005/2006 and 2006/2007. Training of engineers, and inspectors has already started as of mid 2005 while training of contractors will commence in January 2006.

The proposed programme involves a phased expansion of the Roads 2000. The first phase in Nyanza Province includes five districts, one of which is Nyando, and the second phase will cover additional six districts namely, Suba, Rachuonyo, Kisumu, Bondo, Siaya, and Homa Bay. The programme in phase 2 districts will start in the 2nd year subject to the successful start of the first phase. The programme conducts training for local contractor as well as government officers. The training for engineering and inspectors course for the officers is started in late 2005. The 2nd batch of the training started early in 2006, in which Homa Bay participated.

[4] The 11 districts include Kisii Central, Gucha, Nyando, Kisumu, Siaya, Suba, Homa Bay, Rachuonyo, Nyamira, Migori, Kuria and Bondo.

[5] Ministry of Roads and Public Works, 2005. Inception Report of the Consultant Providing Technical Assistance to R2000 Nyanza Implementation. September 2005.

2.5.2 NALEP; SIDA Supported Programme

Phase one of SIDA supported NALEP started in 2000 and ended in June 2005. For the last three financial years, the annual financial allocation to SIDA – NALEP in Homa Bay District has been Ksh 1.7 million to Ksh 5.5 million (see Figure 2.5.1). The Phase two started in July 2005. The phase two is from July 2005 to June 2010, and the SIDA support for this phase is Ksh 2.15 billion. The allocation for FY 2005/06 was Ksh 431 million for the whole country. Out of this Ksh 171 million was used for purchase of vehicles, motorcycles, computers, etc. The GOK contribution in FY 2005/06 was Ksh 50 million which was in recurrent expenditure. For the FY 2005/06, the NALEP allocation to Homa Bay District is Ksh 5.5 million.

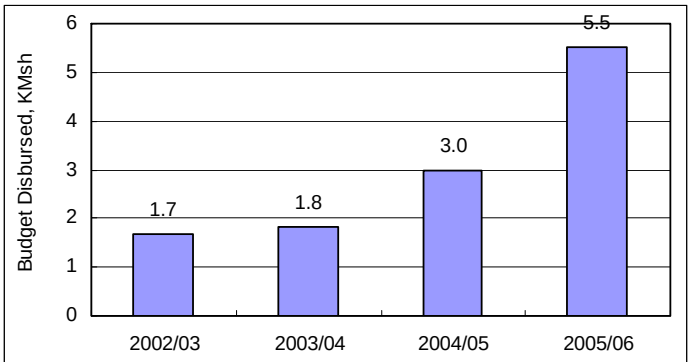


Figure 2.5.1 NALEP Allocation for Homa Bay District

NALEP is meant to support the implementation of the National Agricultural Extension Policy (NAEP). The programme was in response to the realization that much broader and more carefully differentiated strategies are required if extension is to reach its potential to reduce poverty among the rural poor in the country. It is based on the principle that all extension service providers must work together to empower farmers in their production as well as post-production and marketing endeavours. The NALEP framework provides for the improvement of collaboration and the formation of partnerships and the flow of resources into the agricultural sector. Main features of the programme may be summarized as: 1) extension pluralism through stakeholder fora, 2) promotion of local resource mobilization, and 3) focus on production for market and value adding among others.

The NALEP extension framework uses the Focal Area Approach (FAA). At this Focal Area level, Focal Area Development Committees (FADCs) is organized, under which Common Interest Groups around crop or livestock enterprises or natural resource management are established. It also calls upon linking mechanisms promoting the establishment of Stakeholder Fora and Consultative Committees at the Focal Area level in line with the extension pluralism. Follow-up by the front-line extension worker is done mainly on progress by Common Interest Groups (but not on implementation of actions specified in the Farm Specific Action Plans nor on impact of implemented activities on farm income or household food security).

2.5.3 Southern Nyanza Community Development Project (IFAD)

GOK and IFAD signed the project loan agreement on 17th March, 2004, and the loan became effective on 10th August, 2004. The project is implemented in a seven-year period (2004 – 2011). The project covers six districts; Homa Bay, Rachuonyo, Kuria, Migori, Suba, Nyamira, all of which used to form former South Nyanza District. Targeted communities and participating government technical departments (district and divisional levels) are involved in project implementation while the Project Management Unit ensures coordination and integration of the project components, backstopping and facilitation. The Project is being implemented through six components, namely:

- Agriculture and Livestock Production 18%
- Community Empowerment 15%
- Domestic Water 16%

- Primary Health Care 30%
- Project Coordination 22%

The Project Management Unit is located at Homa Bay Town, and in the district the project has commenced activities in Kasirime Sub-Location, West Kwabwai Location of Kobama Division. The Project has allocated to the sub-location Ksh 15.5 million for 50 outreach visits for mobilisation, two Participatory Rural Appraisals (PRAs), 30 community trainings, two community start-up workshops, two boreholes, three roof catchments and two dams/ pans.

2.5.4 International and Local NGOs

There are 6 international and 17 local NGOs registered as operating in Homa Bay District. Some of the active NGOs include Care-Kenya, AMREF, MILD MAY, C-MAD, Animal Draft Power, Heifer-International, and Christian Children Fund (CCF) among others. Some of the NGO and CBO programmes are involved in HIV prevention, AIDS mitigation, water supply and sanitation, environmental conservation, agriculture and fisheries. Some of the major activities are briefed as follows:

1) AMREF

African Medical Research Foundation (AMREF) is a non governmental organization, which has been involved in development activities in Homa Bay District since 1990. It initially started supporting activities focused to Community Based Health Care (CBHC) such as construction of water pans in Rangwe Division and construction of latrines covering the whole District as part of an "Environmental Health/Malaria Control Programme". From 2000 to 2002 the organization's activities focused on women and HIV/AIDS. For the period 2003 to 2006 AMREF's activities focused on widows and orphans. Their activities are concentrated in four Locations in Rangwe Division with the following activities:

- Home based care;
- Voluntary counseling and testing (VCT);
- Nutritional support for Test club members, which involves provision of four packets of flour and moducare tablets (a tin with 90 capsules) for each member per month,
- Payment of school fees for orphans in secondary schools and uniforms for orphans in primary schools, and
- Widows' support through provision of grants for revolving loan scheme (see Box).

Revolving Scheme by AMREF

AMREF gives a grant of Ksh 50,000 to each group to give to its members as a loan at an interest of 10%. The interest goes to the group. The groups have divided themselves into cells. Each cell selects two people to be given the money depending on their requests. Once the loan has been issued the member is given a grace period of one month after which she starts paying back the money to the group. A pre-condition of issuing the grant is that the group should have a bank account. All groups have been trained in all aspects of what they are handling: leadership, financial management, legal rights for women and children, home based care and counseling.

2) CARE KENYA

For the Homa Bay District Care Kenya is supporting a Livelihood Security Programme called "DAKACHANA" meaning good living or healthy households. The programme has five components:

- HIV Life Project, which helps in supplementary feeding of orphans and vulnerable children.
- Community Savings Mobilization (COSAMO); Care Kenya aims at developing a sense of savings and loaning from internal savings, which is a form of improved merry-go-round. The group decides on monthly contributions and by-laws on fines and interest to be charged. Once this is agreed upon then the members have to make their contributions, which are used to provide loans to the members.

- Water Sanitation and Education for Health (WASEH); This involves provision of water through boreholes, shallow wells, and roof catchment. Care Kenya is operating in South Kabuoch Location in Riana Division. For the safe water assistance Care Kenya looks for communities that cannot access safe water but which can still access other forms of water that are not very safe. Thus they focus on water treatment at the point of use using chlorine (water guard).

3) PLAN INTERNATIONAL

Plan International operates in 47 countries in the World. It operates in 10 districts in Kenya, Homa Bay being one of them. It started its operations in Homa Bay in 2001. Plan International is "a child centered community development organization". It works with community-based organizations (CBOs) in five different programmes; 1) Health, 2) Education, 3) Livelihood, 4) Water and Sanitation, and 5) Capacity building (rights of the children, gender and facilitating growth of CBOs).

Plan International is currently operating in Asego Division but not on the town location because their focus is in rural areas. However, they are likely to expand either to Ndhiwa or Riana Divisions. They have 15 projects in Homa Bay all linked to the above five programmes. The approach used is child-centered where children and CBOs take lead in development. They lay emphasis on child's right, networking, collaboration and partnerships. For instance in construction of classrooms in schools they make sure that they consult the children and also ensure that the environment created is in favour of the children. They make use of the parents instead of contractors and pay for the work done to ensure that the development cash flow reaches the community.

4) HEIFER INTERNATIONAL

Heifer International is an NGO that started operating in Kenya in 1981. The programme started supporting a small women group in Western Kenya with a dairy cow project. From 1995, it expanded to other areas and diversified into other livestock species, including bees, dairy goats, camels and oxen for ploughing and assistance to people with disabilities. The main rationale for reaching out with people with disabilities was to help them acquire productive assets and restoring hope in their livelihoods. Apart from the traditional funding of the rural communities with livestock species it has also undertaken very keen interest to see that the challenges facing farmers in milk marketing are addressed.

Heifer International Kenya started operating in Homa Bay in 2003. The Organization has assisted groups in Homa Bay with 73 goats. In Homa Bay it targets groups that are dealing with orphans. The following groups in Rangwe, Nyarongi and Asego Divisions have benefited from the organization:

Table 2.5.1 Daily Goat distributed by Heifer-International, as of October 2004

Division	Group	No. of Members	No. of Dairy Goats placed	No. of families benefiting
Asego	Imbo orphans	20 (4M, 16F)	20	10
Asego	Daro Kech	31 (3M, 28F)	13	12
Asego	Adingo orphans	25 (8M, 17F)	13	13
Rangwe	Asumbi Complex	57 (14M, 43F)	21	20
Nyarongi	Kalamidi Labalu	33 (7M, 26F)	6	5
Total	5 groups	166 (36M, 130F)	73	60

Source: Heifer International Kenya Homa Bay Office, October 2004

5) MILD MAY

MILD MAY is a UK based international NGO, specialized in improving the quality of life of adults and children living with or affected by HIV/AIDS, primarily in resource-limited countries and

communities. In Kenya, the MILD MAY works in Nyanza Province to sensitize the wider community and address the need for regular psychosocial activities to support those infected and affected by HIV/AIDS. MILD MAY utilizes existing relationships with selected health professionals in all the 11 districts in Nyanza Province to scale up community-based initiatives in partnership with the Kenya Ministry of Health. Currently, the organization is leading home-based care (HBC) programme targeting people living with HIV/AIDS (PLWHA).

The HBC programme in Homa Bay started with a Need Assessment, a baseline survey, in December 2003, followed by planning for all the 12 districts in Nyanza province. The implementation was commenced in June 2004 with sensitization of health workers who are government officers working in different health facilities under MOH. The number of officers sensitized in HBC is around 30 (not necessary they were trained in HBC), and they started identifying community volunteers who are expected to engage in HBC programme. The trained government health workers started administering a net 11-day training course to community health workers (CHW) in March 2005, and over 100 CHWs were trained by the end of 2005 in the 6 divisions of Homa Bay District. MILD MAY is the funding sponsor for the HBC programme, which gives Ksh 250,000 per month as the ceiling to the Homa Bay District.

CHAPTER 3 DEVELOPMENT PLANNING

This chapter exerts the develop planning based on the previously discussed issues and also the outcome from a series of participatory workshops. The planning here follows the outcome from the workshops in terms of priority settings for the development approaches and strategies, and combines the priority settings with what the Study Team recommends in terms of socio-economic and spatial development frameworks, development timeframe, development programmes and projects, etc.

3.1 Development Vision, Guiding Principles and MDGs Relevance

3.1.1 Development Vision

In Homa Bay District, we can see development challenges and at the same time opportunities. Major challenges may be said to originate in high rate of HIV prevalence, still over 20% in economically active generation[1]. This leads to a lot of orphans and vulnerable children who are at risk of dropping out of school. Safety net measures should be tailored by not only providing support to these vulnerables but also by creating an enabling environment wherein they can empower themselves on their own. On the other hand, favorable rainfall, which enables two cropping seasons, may be the biggest development opportunity. If the opportunity is well utilized together with the fertile soils, it would be possible for the District to be a leading production area in the southern Nyanza region.

Therefore, the Team suggested the district stakeholders, who participated in district planning workshop and through discussions, a preliminary development vision[2] that is " District secured with Social Safety Network, and enjoying Food Production by being a Granary in Southern Nyanza". With reference to the vision, the stakeholders extensively discussed and finally reached the development vision of **"A Highly Productive, Healthy and Secure District"**.

3.1.2 Guiding Principles

Taking into account all the issues raised during the participatory workshops and based on what the Team identified as development challenges and opportunities, the Study points out the following as guiding principles which can lead the people of Homa Bay to the district development vision. The guiding principles elaborated below are the issues that are undertaken throughout the planning process.

1) Promotion of Safety Network Strengthening

High rate of orphans is a critical issue in Homa Bay District; total orphans who have neither father nor mother consist of 10 % of all the public primary pupils, and partial orphan who lost either farther or mother consist of 20 %, totaling to 30 %. These figures were recorded in July 2005, which had increased from 8 %, 17 % and 25 % recorded in December 2004 respectively. In just seven months, it had increased by 5 % in terms of the total of both partial and total orphans, and probably it is still in an upward trend. Most of the orphans are believed to be caused by the parent's deaths of AIDS related diseases. HIV prevalence in pregnant women is still over 20% (22% in 2006). Though the prevalence already started declining, still there have to be a lot of cares given to PLWHAs.

To cope up the issues of orphans and HIV/AIDS, needless to say public intervention should be put in place; for example, establishment of more VCTs, PLWHA care supports, orphan supports, etc., addressed in line with the strategy of 'HIV/AIDS is controlled' during the district planning workshop. Faced with the limited resources, however, we may have to understand that the ones who ultimately

[1] The prevalence is in fact for pregnant women who are considered to represent economically active generation.

[2] At first, the Study Team asked stakeholders during district analytical workshop what the vision as district should be. The suggestions were not beyond where they came from; namely, a health officer suggested 'a district free from HIV/AIDS'. Therefore, the JICA Team gave an idea for the vision which can overarch different sectors.

take care of OVCs and PLWHAs are the community members. Therefore, in addition to the public interventions, a safety net built in the communities should also be strengthened. This safety net strengthening should accompany livelihood improvement wherever it is possible. Without livelihood improvement, community itself may not be able to support the vulnerables. Income generating activities where possible should be promoted in line with the safety net strengthening.

2) Promotion of Food Production for Export

The present food crop production in the district is not yet enough to be self-sufficient if only maize and sorghum are considered as staple food. However sweet potatoes and cassava are supplementing the staple food, with which the average production per household per annum arrives at well over 1,100 Kg and in some years over 1,500 Kg. Especially sweet potatoes have taken root in this area. The production of sweet potatoes has been nearing that of maize as shown in Figure 3.1.1. With this trend, the people of Homa Bay can be said to be self-sufficient for food crop, or even they may have an opportunity to export the surplus food in a processed form, which is at present sweet potatoes.

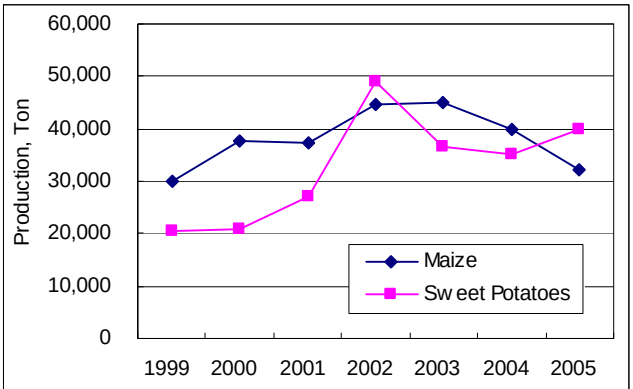


Figure 3.1.1 Production of Maize & Sweet Potatoes

Another opportunity is rainfall pattern, which enables two crops per year. In Homa Bay, most of the people have been practicing long as well as short rainy seasons' cultivation. Short rain sometimes may not be enough to well support crop throughout the season, so that they cannot go on intensive agriculture requiring hybrid seeds together with chemical fertilizers. However, during long rainy season there should be a possibility to practice intensive agriculture. The rain could support hybrid maize seeds, and if well supported with chemical fertilizers the yield can be boosted.

Right now, less than 10 percent of farmers, though precise data is not available, are using hybrid seeds and very few farmers use chemical fertilizers. As they are blessed with two rainy seasons in a year, they might not have embarked on intensive agriculture because they have been able to feed on them. Taking into account this potential and the existence of food shortage in neighbouring districts such as Migori and Suba, food crop production in Homa Bay should be strengthened. The surplus cereal will have an opportunity to export to the neighboring districts and also processed food, say sweet potato bread among others, etc., may also be marketed in the district as well as to the neighboring districts.

3) Supports to the Local Initiative and Practice; Pineapples, Minimum Tillage, etc.

There are local farmers' initiatives. One good example is pineapple production. Pineapples were brought from Mombasa in mid 1980s by a local person who worked there. Since then it has been extended from farmer to farmer, reaching about 600 ha. Pineapples have well rooted in Rangwe area where soils are good in drain (heavy black cotton soil which is very common in the district is not conducive to pineapple cultivation). There are many widows who plant pineapples as good cash crop. Pineapples are now traded within the district and to some extent in some of the outside centers like Oyugis town, and still have a potential of expansion in terms of marketing (demand is higher than production). However, given no agriculture extension to pineapples, some farmers lack some of the basic knowledge of pineapple husbandry; an example is that purple leaves are sign of deficiency of phosphorus but they think it is a natural color.

In Kobama and Ndhiwa Divisions, there are many farmers who lost livestock due to tsetse flies coming from a national park located nearby. Farmers who lost the oxen usually hire them from neighbors but it is very expensive, say as high as Ksh 2,500 per acre for tillage. Those who cannot afford to hire oxen usually do meager pitting seeding. They dig a small hole by jimbe and drop the seeds in the hole, which is actually a form of minimum tillage. Since they do not apply fertilizers or manure, the growth is often stunted and weeds surpass the crop growth. However, if those who can afford to hire oxen use the money to employ people who dig holes for seeds and to buy chemical fertilizers, there will be a possibility to embark on minimum tillage cultivation. Also, if those who cannot afford to hire oxen are organized in a group, they may try merry-go-around for the digging with even a little amount of fertilizers. This practice may lead them to well established minimum tillage.

There may be, aside from above examples, many local initiatives that can be easily enhanced if supportive extensions are given properly. Local practices exist, which can be improved to another advanced form of agriculture. These initiatives which started on the local people's own have a great possibility of further improvement, provided that supportive extensions which are right in the context are available. Demand driven sounds good but in cases this may turn government officers to just wait for the local people to come. Extension officers should try to be always aware of such local initiatives and practices that can be further improved with little physical but worth advices.

4) Quantity to Quality in Life; Comprehensive Approach

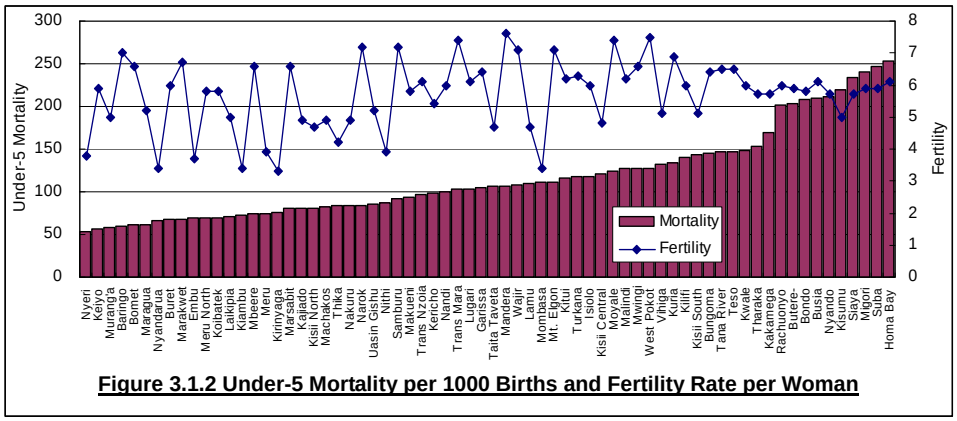


Figure 3.1.2 Under-5 Mortality per 1000 Births and Fertility Rate per Woman

According to 1999 Census, the under-five mortality rate in Homa Bay is 254 per 1,000 births, which is actually the highest amongst all the districts in Kenya except for North-Eastern areas where no data is available. Fertility rate is also high, which is 6.1 per woman, though there are many districts whose fertilities are higher than that of Homa Bay (very high fertility rates can be found in ASAL districts where pastoralist lives). It could be said that under this situation it is very difficult for the people to raise the living standard. Faced with very high children's mortality, there might be a difficulty to reduce the number of children. More number of children means less investment per child, but more total time devoted into child rearing. However the high mortality prevalent in this area would wipe out what the parents have devoted so far, resulting in vain but grief. If this situation were left out, there could be a difficulty for the people to raise the quality of life.

Poverty is prevalent in this area. To cope up with the poverty, enhancement of just production sectors do not bear enough fruits for the people who are forced to live on not able to pursue quality of life. Unless otherwise high mortality were well undertaken to reduce, the people would still remain in the trap of the poverty vicious circle. Therefore the development in this area should be programmed in an across-the-board way that incorporates social sectors together with the production sectors. Health sector should be given priority aside from strengthening the production sectors such as agriculture.

3.1.3 MDGs Relevance

In September 2000, 189 countries including Kenya adopted the Millennium Declaration. Since then,

Kenya has initiated the implementation process for the MDGs, and undertook an assessment of Kenya's performance in relation to each of the eight MDGs and issued a report in July 2003. The report indicates that there is high potential to meet some of the goals such as goal 2 (Universal Primary Education) and Goal 6 (HIV/AIDS, Malaria and Other Diseases). However, for the rest of the goals, the report said that the Government needs to stop the usual business and embark on a well thought-out planning process aimed at putting the country on track towards realizing the goals. Accordingly, the MDG based planning process in Kenya was officially launched on 12th May 2004 to demonstrate the government's commitment to reach the MDGs by 2015. In line with this, the planning for the district refers to the status of the MDGs to clarify which areas to be emphasized more.

MDGs are composed of eight goals which are summarized in the following table with the prospects to achieve, in a five scale ranging from very high to very low with fair being the center, if the current situation continues up until 2015. Taking into account the present situation already discussed in the earlier chapters, statements indicated in the Assessment Report of 2003 may be once again repeated with specific situations to the district as follows:

- With regard to Goal 1 "Eradicate extreme poverty and hunger", the prospect to achieve the target, which is to halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day, may be very low. Though the base data of Homa Bay in 1990 is not available, the poverty of the national average has increased from 45% in 1992 to 56% in 2002, and is now projected to increase to 66% in 2015[3]. With reference to the community workshops arranged under this Study, all the 6 communities have addressed life has been becoming difficult, implying that the poverty has continuously worsened.

- On the other hand, another target under the Goal 1 "Halve, between 1990 and 2015, the proportion of who suffer form extreme hunger" can be achieved or already negative statements from communities or from health officers have hardly been reported. However, one thing which is arising now is HIV/AIDS related orphans and vulnerable children. Unless those OVCs are well taken care of, they may start suffering from extreme hunger indicated by under-weight or stunting condition, which may adversely affect the achievement.

- Goal 2 "Achieve universal primary education" may be achieved by 2015 with the free primary education being strongly supported by the Government. The target says "Ensure that by 2015, children everywhere, boys and girls, will be able to complete a full course of primary schooling." The present gross and net enrollment is already 100%, but this does not necessary entail the "completion of the full course of primary schooling". Figure 3.1.1 indicates that of the 5,731 boys and 5,619 girls enrolled in school in class one in the year 1998, eight years later in 2005, only 4,257 boys and 2,800 girls reached class eight. That is 26 % drop out rate for boys and 50 % for girls. Those who are at risk of drop out are in most cases orphans, so that without supports to the OVCs, the achievement of the goal may not be done.

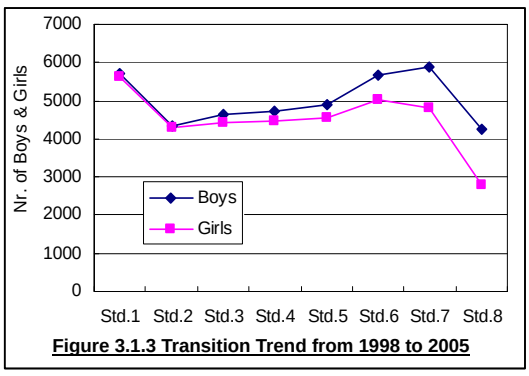


Figure 3.1.3 Transition Trend from 1998 to 2005

- Goal 3 "Promote gender equality and empower women" may be achieved by 2015 in terms of primary education and may be still a bit far from the achievement in terms of secondary education. From the Figure 3.1.1, it can be known enrollment for girl becomes lower than that of boys as they

[3] Millennium Development Goals, Status Report for Kenya, 2005

progress to higher classes. For the secondary level, girls' enrolment has been always less than that of boys as shown in the Table 3.1.1. Therefore, without strong effort by the Government, the enrollment for girls may remain lower, thereby making it difficult to achieve the goal, especially for the secondary level. Girl OVCs who have to take care of siblings, younger brother and sisters are at the risk of drop out, and they have to be given supports.

Table 3.1.1 Secondary School Enrolment Trend fr. 2002 to 2005

Sex/Year	2002	2003	2004	2005
Boys	4,206	5,242	5,109	6,371
Girls	3,136	3,368	3,665	4,004
Total	7,342	8,610	8,774	10,375

Source: Education office Homa Bay District

- Goal 4 "Reduce child mortality" looks very difficult to achieve. The target is "Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate", while the district wide under-five mortalities over periods are: 333 in 1969, 279 in 1979, 244 in 1989, and 254 in 1999 according to the census results. Declining trend were seen until 1989, but the rate went up in 1999. Though the data until 1989 are for then South Nyanza District which covered present 6 district including Homa Bay, while the data for 1999 is for Homa Bay District only. Therefore the data consistency is a problem, but at least we can say the mortality rate is still high far away from the goal. If take the data in 1989 as the base for the MDG, it is 244 and therefore the mortality rate should be reduced to 81 by 2015. Taking into account the latest rate of 254 recorded in 1999 and also the upheaval of malaria, which affects children's morbidity and mortality, it seems extremely difficult to achieve the goal.

- Goal 5 "Improve maternal health" may also be difficult to achieve. Though precise data is not available in Homa Bay District, the nation wide average of maternal mortality per 100,000 has changed from 670 in 1990, 590 in 1998 and 414 in 2003 (reduced by 38% from 1990). Though it has been continuously reduced at the national level, the target addresses "Reduce by three-quarters (75%), between 1990 and 2015, the maternal mortality ratio", which is still far from the past achievement.

- Goal 6 "Combat HIV/AIDS and other diseases" has been already achieved in terms of prevention and control of HIV/AIDS expansion while as per other diseases especially for malaria it seems extremely difficult to achieve. The target of the latter part is "Have halted by 2015, and begun to reverse the incidence of malaria and other major diseases". Malaria out-patient morbidly is now increasing from 49,264 cases in 2001 to 80,177 cases in 2004.

- Goal 7 is "Ensure environmental sustainability". With regard to Target 1 "Integrate the principles of sustainable development into country policies and reverse the loss of environmental resources", there are many community tree nurseries and lots of communities have been engaged in tree planting. They are already accustomed to tree plantation to greater extent. Given the relatively rich rainfall, the loss of environmental resources could be reversed, and thereby the target could be achieved. Target 2 addresses drinking water in that "Halve, by 2015, the proportion of people without sustainable access to safe drinking water". The ratio of poor household without access to safe water was projected at 83.5 percent[4] in 1997. As of 2004, the ratio is reported by District Water Office at 64 percent, which has not been reduced much for the last 7 years. Since water facility establishment requires substantial investment, the target would not be achieved should great deal of investments do not come.

- Goal 8 addresses "Develop global partnership for development" for which the target is "In cooperation with developing countries, develop and implement strategies for decent and productive work for youth." Though this target does not specify any numerical achievement,

[4] The First Poverty Report Vol. I, 1997

with the sign of present nation wide economic recovery one may see the possibility of the target to be achieved. Target 2 says "In cooperation with the private sector, make available the benefits of the new technologies, especially information and communication." This can be talked by phone subscribers. Since cellular phone is becoming familiar in the district, this target would be achieved.

In sum, specific efforts addressed below will be required to get the MDGs close to the achievement:

Goal 1 (poverty); Present major industry which is agriculture be strengthened, and the production be increased. Value addition and also income generation activities be promoted.

Goal 3 (gender); Girls enrollment be increased especially in secondary school. Girl orphans are at very high risk of dropping out of the school since they have to take care of siblings. Therefore, special supports be given to those girl pupils.

Goal 4 (child mortality); Diseases affecting child mortality such as acute respiratory infections, diarrhea, measles, malnutrition and malaria be well addressed in the health sector. Specially, malaria combat be strengthened.

Goal 5 (maternal health); Reproductive health entailing family planning, antenatal care, clean and safe delivery, essential obstetric care, postpartum care, new born care, and post abortion care be strengthened.

Goal 6 (malaria); In response to the child mortality, measures to put malaria under control be put in place such as ITN, sensitization, vector control.

Goal 7 (environment); To increase the number of people able to access safe water, bore holes and shallow wells be constructed in their vicinity, which will need financial assistance from the Government, donors, NGOs, etc.

Table 3.1.2 Millennium Development Goals with Achievement Prospect in Homa Bay District

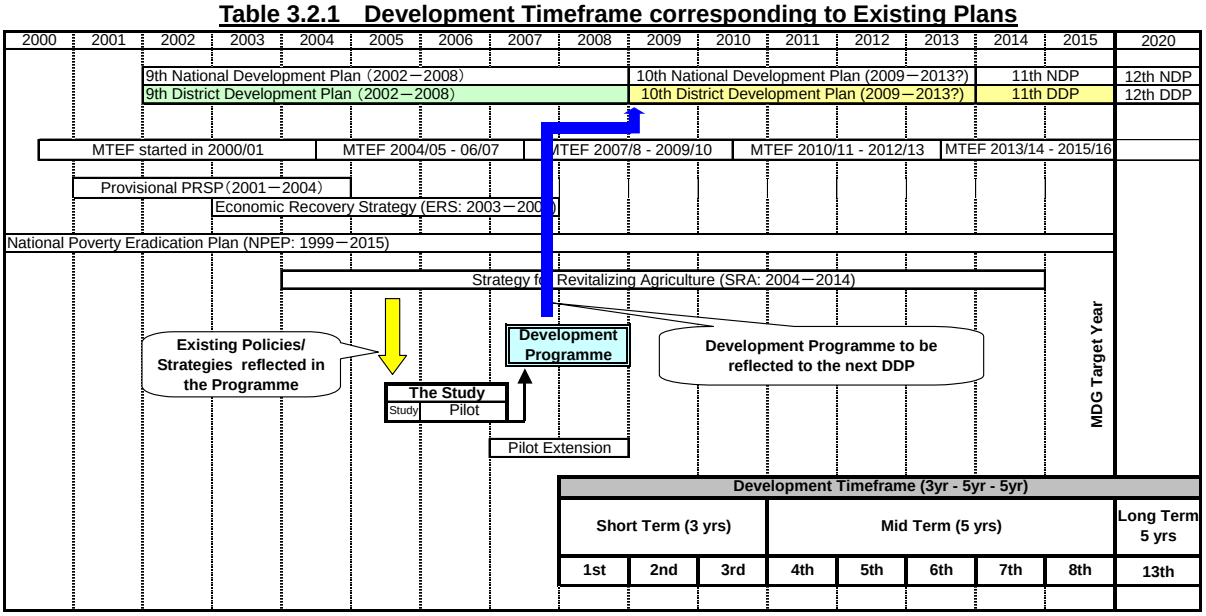
Goal	Target	Prospect
1. Eradicate extreme poverty and hunger	Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.	**Very low**
	Halve, b/t 1990 and 2015, the proportion of who suffer form extreme hunger.	**Very high**
2. Achieve universal primary education	Ensure that by 2015, children everywhere, boys and girls, will be able to complete a full course of primary schooling.	**Fair**
3. Promote gender equality and empower women	Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015.	**Low**
4. Reduce child mortality	Reduce by two-thirds between 1990 and 2015, the under five mortality rate.	**Very low**
5. Improve maternal health	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.	**Low?**
6. Combat HIV/AIDS and other diseases	Have halted by 2015, and begun to reverse the spread of HIV/AIDS.	**Done**
	Have halted by 2015, and begun to reverse the incidence of malaria and other major diseases.	**Very low**
7. Ensure environmental sustainability	Integrate the principles of sustainable development into country policies and reverse the loss of environmental resources.	**Fair**
	Halve, by 2015, the proportion of people without sustainable access to safe drinking water.	**Low**
	Have achieved, by 2020, significant improvement in the lives of at least 100 million slum dwellers.	**Not Applicable**
8. Develop global partnership for development	In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.	**Fair**
	In cooperation with the private sector, make available the benefits of the new technologies, especially information and communication.	**Fair**

Source: Millennium Development Goals, Status Report for Kenya, 2005 and JICA Study Team

3.2 Development Timeframe and Phasing

Time Framework should be defined, composed as it is of short, medium and long terms, when preparing any development plan. To define short, mid and long term frame, the Development Programme prepared under this Study should refer to the existing development plans and broader development commitment such as MDGs. Those that the Study should refer to are schematically shown in the following figure with the timeframe on which this Study operates.

Table 3.2.1 Development Timeframe corresponding to Existing Plans



This Study presents the final development programme in mid of year 2007 after feeding back all the lessons from the pilot programme implementation. Therefore, year-one of the Development Programme should start in 2008 which corresponds to the last year of the current national and district development plans. Short-term development is programmed to cover 3 years from year 2008 to 2010, during which urgent and focal programmes should be undertaken. Then followed is the mid-term timeframe covering the next 5 years period from 2011 to 2015, the last year of which corresponds to the target year of MDGs. The long term is set to cover the next 5 years, covering year 2016 to 2020.

- Short-term: from 2008 to 2010, 3 years
- Mid-term: from 2011 to 2015, 5 years, corresponding to the target year of MDGs
- Long-term: from 2016 to 2020, 5 years; namely, totaling the terms to 13 years

How long the next development plan covers is yet known[5] as of 2005. However, provided that the next plan follows standard development term, which is 5-year, it would run from year 2009 to year 2013, and therefore the completion is correspondent to the 6th year of the District Development Programme prepared under this Study.

Year 2007, one year before the year-one of the shot-term development, should serve for extension of pilot programmes/ projects which were carried out in 2006 to early 2007. The extension of the pilot should also be foreseen in year 2008 which rolls over on the year-one of the short-term development. In the short-term development, focal or urgent programmes/ projects are also put in place. In this sense, most of the pro-poor targeting programmes that can be started by utilizing locally available resources or easy to have donor supports are of course placed in the short development term.

[5] The current national and district development plan covers 7 years, which is composed of 2 MTEF budgeting cycles with one-year roll over, because it was meant to address the medium term poverty reduction challenges over the first half of the NPEP. Otherwise, the national and district development plans could have followed usual 5-year development.

Towards mid and long term developments, value addition to the primary products such as crops, fruits, livestock, and fishes should be considered. Given already high population density, one may say without value addition the economy cannot keep growing in terms of per-capita economic development. Infrastructure components that cannot be handled by community members are programmed from mid term to long term since it may take some time to arrange the necessary fund.

3.3 Socio-economic Framework

This Study builds up a socio-economic framework to give basis for clarifying the priority development alternatives. Socio-economic framework is defined as to describe the socio-economic situation of the target area in the target year by using several indicators[6]. Population projection consists of the basis of the socio-economic framework. Based on the projected population and available data, gross regional income per capita is projected from 2004[7] to the target year of 2020. To achieve positive growth per capita, the production increment in economic term should not be less than the population growth. Some development scenarios are examined in the course of building the framework.

3.3.1 Population Projection

Based on the latest census of 1999, Analytical Report Volume VII made population projections taking into account past trends of mortality and fertility plus the effect of HIV/AIDS. The Report estimated the population up to year 2010. At the time of year 2010, the population growth ratio was estimated at 1.46 percent per year. With this population growth ratio, following table projects the population of Homa Bay District and by division. The projected population is to increase to 413,626 in year 2020 which is the end year of the Programme. This means the population is to increase by 19 percent from the onset year of the Programme which is 2008 (or 27% from the year 2004 for which most of the production data are available, and hence forms the base year of the projection of the future production discussed below). As per population density, it is estimated at 299 persons per km^2 as at year 2008, and this is to increase to 356 persons per km^2 as at the end year of 2020.

Table 3.3.1 Population Projection in Homa Bay District over the Plan Period

Year			2004	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Distirct		Population	326,534	332,079	347,503	352,653	357,803	363,028	368,330	373,709	379,166	384,703	390,321	396,021	401,805	407,673	413,626
		Density	281	286	299	304	308	313	317	322	327	332	336	341	346	351	356
		Increment ag/2004	1.00	1.02	1.06	1.08	1.10	1.11	1.13	1.14	1.16	1.18	1.20	1.21	1.23	1.25	1.27
Division	Population	Rangwe	89,700	91,223	95,460	96,875	98,290	99,725	101,182	102,659	104,158	105,679	107,223	108,789	110,377	111,989	113,625
		Asego	86,888	88,363	92,468	93,838	95,208	96,599	98,009	99,441	100,893	102,366	103,861	105,378	106,917	108,478	110,062
		Riana	54,284	55,206	57,770	58,626	59,483	60,351	61,233	62,127	63,034	63,955	64,889	65,836	66,798	67,773	68,763
		Ndhiwa	48,924	49,754	52,065	52,837	53,608	54,391	55,186	55,992	56,809	57,639	58,481	59,335	60,201	61,080	61,972
		Kobama	27,438	27,903	29,199	29,632	30,065	30,504	30,949	31,401	31,860	32,325	32,797	33,276	33,762	34,255	34,756
		Nyarongi	19,301	19,628	20,540	20,845	21,149	21,458	21,771	22,089	22,412	22,739	23,071	23,408	23,750	24,097	24,449
	Density	Rangwe	336	341	357	362	368	373	379	384	390	395	401	407	413	419	425
		Asego	472	480	502	510	517	525	532	540	548	556	564	572	581	589	598
		Riana	232	236	247	251	255	258	262	266	270	274	278	282	286	290	294
		Ndhiwa	206	210	219	223	226	229	233	236	239	243	246	250	254	257	261
		Kobama	195	198	208	211	214	217	220	223	227	230	233	237	240	244	247
		Nyarongi	198	201	211	214	217	220	223	227	230	233	237	240	244	247	251

Source: JICA Study Team based on Analytical Report Volume VII of Census 1999

3.3.2 Estimation of Gross Regional Income per Capita

Estimation of gross regional income per capita (or household income per capita) is based on available data that are the annual reports of the District Agriculture, Livestock, Fishery, among others, and the fact sheet of Nyando District Development Plan (2002-2008). As the starting point of the framework, the gross regional income per capita in 2004 is estimated. Using the above data, firstly the gross production values of agriculture and others are estimated. The products include cereals, legume, root crops, vegetables, fruits, cash crops such as rice, sugarcane, groundnuts, cotton, livestock products

[6] T. Hashimoto (2004), "Competitive Edge for Development Consultants", Engineering & Consulting Firms Association, Japan (ECFA)

[7] Though the development programme starts in 2008, the year for which most data is available during the Phase 1 study is 2004. Therefore, the base year of building socio-framework is 2004.

such as meat, eggs, honey, hide and skin, and fish.

Then the net income of the agriculture production is estimated multiplying the gross value of each product by net income ratio. The net income ratio of each product is estimated based on the field survey of the Study Team. Then the data on contribution to household income appeared on the District Development Plan is used to estimate the incomes of other categories or sectors defined as agriculture, rural self-employment, wage employment, urban self-employment and other, whose contributions to household income in 2004 are 52%, 15%, 3%, 23%, and 7% respectively (In Nyando District these percentages are 52%, 10%, 25%, 10%, 3% respectively).

Lastly, the gross income per capita is estimated by dividing the total household income by the rural and urban populations. The monthly gross incomes per capita of district total, rural and urban populations are estimated at Ksh1,083, Ksh907, and Ksh1,787 respectively (In Nyando, Ksh 1,105, Ksh 913, and Ksh 1,680 respectively). These incomes per capita are lower than the poverty lines of Ksh 1,562 and Ksh 2,913 for rural and urban areas respectively defined in KIHBS-2005/06. Since the poverty incidence in Homa Bay District is estimated at 45% by KIHBS-2005/6 (or 71% in 1997 WMS-III, and 77% and 69% in rural and urban areas of the district by the District Development Plan, 2002), the level of the income per capita estimated here is within the possible range.

The increase of gross regional income is projected and targeted to improve the living standard of the district population as well as to keep up with the population growth. Here we define two primary cases: 1) the Target Case and 2) the double growth of the Target Case; called 2 x Target Case. The Target Case sets the growth per capita almost equal to the highest experiences of national level per capita growth ratio. As the Figure 3.3.1 indicates, the optimal annual growth of GDP per capita in Kenya for the last two and half decades is around 2 %. Therefore our target for the Target Case sets the annual growth per capita at 2 percent. This translates into about 3.5 percent growth per annum of gross regional product as the population growth rate is now projected at about 1.5 percent per annum.

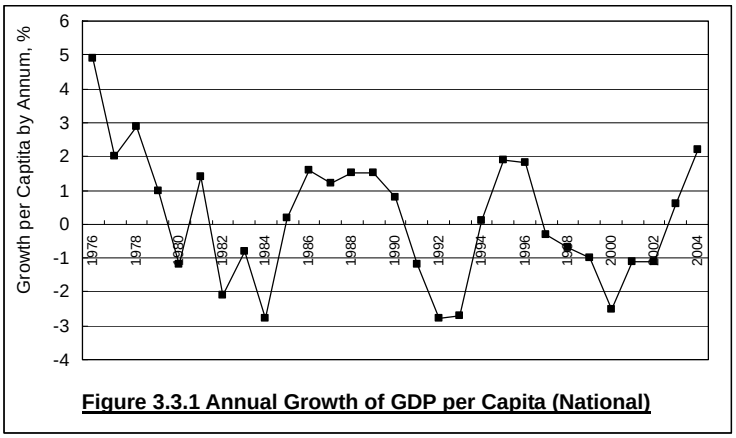


Figure 3.3.1 Annual Growth of GDP per Capita (National)

2 x Target Case is actually a reference towards challenging the achievement of the MDGs. As the Table 3.3.2 indicates, the incomes for the Target Case at the target year 2015 and 2020 are Ksh1,345 (Ksh1,126 for rural and Ksh2,219 for urban) and Ksh1,485 (Ksh1,244 for rural and Ksh2,450 for urban) respectively. It means that both target incomes for rural and urban are below the poverty line, which would mean that even in year 2020 after Homa Bay has grown up at a pace of 2 percent per annum per capita, still more than half of the Homa Bay people would remain below the poverty line.

The 2 percent of the growth per capita applied under the Target Case is far from the achievement of the MDGs, though even this 2 percent is referring to the optimal growth attained for the last two and half decades in Kenya. Therefore, the double growth case, which is 4 percent growth per capita per annum, is also included in the simulation. This translates to about 5.5 percent growth ratio for the district upon considering the population growth. In sum, the target / projected incomes per capita in 2015 and 2020 are estimated at Ksh1,601 (Ksh1,341 for rural and Ksh2,641 for urban) and Ksh1,947 (Ksh1,631 for rural and Ksh3,213 for urban) respectively.

Table 3.3.2 Monthly Gross Incomes per Capita at Base Year 2004, and at the Target Year 2019

Case	District, Ksh	Rural, Ksh	Urban, Ksh	Remarks
In 2004	1,083	907	1,787	Base year
Target Case (2015)	1,345	1,126	2,219	
Target Case (2020)	1,485	1,244	2,450	
2x Target Case (2015)	1,601	1,341	2,641	
2x Target Case (2020)	1,947	1,631	3,213	
Poverty Line, Ksh	-	1,562	2,913	By KIHBS-2005/06

Source: JICA Study Team

3.3.3 Development Scenarios

1) Assumptions

There could be various development scenarios to achieve the level of the target income by the target year 2020. Considering the fact that in the district majority of the population live in rural area, and agriculture with the related sectors are still considered potential area of the development, following three scenarios for each primary case are examined upon the conditions; 1) Growth of cropping area for basic crops is equivalent to population growth (increase of area is limited to the arable land of the district), 2) Some strategic crops like rice increases the area over the population growth rate, 3) Unit prices of the products are consistent with the prices in 2004, 4) Growth of livestock production is equivalent to population growth, and 5) Fish production maintains current level of 2004:

Table 3.3.3 Development Scenarios in Homa Bay District

Primary Case	Scenarios	
Target Case	Case 1	Productivity development of agriculture sector (unit yield increase of crops)
	Case 2	Productivity development + increase of rural self-employment (value adding of the products)
	Case 3	Urban sector development without agricultural productivity development
2x Target Case	Case 1	Productivity development of agriculture sector (unit yield increase of crops)
	Case 2	Productivity development + increase of rural self-employment (value adding of the products)
	Case 3	Urban sector development without agricultural productivity development

2) Examination of Alternative Scenarios

Above six scenarios are simulated and Tables 3.3.4 and 3.3.5 below show the results of the simulation. Scenario 1 of Target Case and 2 x Target Case for year 2020 need the regional annual growth rate of 3.5% and 4.4% (3.5% and 4.6% for year 2015) respectively. To achieve the target, 1.0 to 1.5 times of yield increase in 16 years are required for the Target Case and 1.5 to 3.0 times of yield increase for the 2 x Target Case. Such increase under the Target Case may be attainable since the current yield level is very low, but still seems very difficult without strong supports to the agriculture sector. For the 2 x Target Case, it shows difficulty to achieve the target income even though assuming the very ambitious yield increase of 1.5 to 3 times more than the 2004 level. As Table 3.3.5 shows, the 2 x Target Case can only achieve 87% of the target income in 2020 (94% in 2015) with the scenario.

Scenario 2 focuses on intensive development of value adding activities in the rural area (on the sheet categorized as rural self-employment). With less ambitious yield increase such as 1.0 to 1.3 times for the Target Case (except for cereals which are strategically targeted to increase the yield by 1.5 times), the target income could be achieved though the annual growth rate of rural self-employment is required at a rate of 5.2% (for both 2015 and 2020). For the 2 x Target Case, the target income in 2020 could be achieved with 1.0 to 1.5 times increase of the crop yield which looks still attainable, and also the annual growth rate of rural self-employment should reach 9.5% (9.7% for the target in 2015) which looks difficult to achieve without strong supports to the sector. Since the initial share of rural self-employment is already 15% of total income, the estimated growth rate for Target Case comes

up with fair degree in the simulation.

Scenario 3 defines an extreme case that the improvement of neither agriculture productivity nor quality (value adding) takes place but the intensive development in urban sector is assumed. Contribution of urban sector to income increases from 33% to 50% or annual growth rate of 6.4% for Target Case of 2020 (the income share of 45% and annual growth rate of 6.4% for the target in 2015) and from 33% to 62% or annual growth rate of 9.6% for 2 x Target Case of 2020 (the income share of 52% and annual growth rate of 9.4% for the target in 2015). Annual growth of agriculture sector is 1.7% for both Target Case and 2 x Target Case, which is close to the population growth rate. Because urban development is concentrated, migration of rural population into urban area would have to be led for maintaining productivity per capita of the rural area. In the scenario, it is assumed that 16% and 29% for of rural population for Target Case and 2 x Target Case respectively need to migrate to urban area to make rural and urban income achievement equal level to the target in 2020[8].

Table 3.3.4 Development Scenarios: Change of Socio-economic Structure

Case	Target	Scenario 1				Scenario 2				Scenario 3			
Target Case	2% Increase of Annual Gross Regional Income per Capita	Crop productivity increase: Yield Increase: 1.0 - 1.5 times in 2019				Crop productivity increase: 1.0 - 1.3 times in 2019 (1.5 times for cereals) Significant growth of rural self-employment: (142% of agri. Sector)				Without crop productivity increase: Significant growth of urban sector: (197% of the growth of agri. sector) 16% of rural population migrate to urban area			
		Share of Income (ave. annual growth rate (%))				Share of Income (ave. annual growth rate (%))				Share of Income (ave. annual growth rate (%))			
			Agriulture	Rural SE	Urban		Agriulture	Rural SE	Urban		Agriulture	Rural SE	Urban
		2004	52	15	33	2004	52	15	33	2004	52	15	33
		2015	52 (3.5)	15 (3.5)	33 (3.5)	2015	49 (3.0)	18 (5.2)	33 (3.6)	2015	43 (1.7)	12 (1.5)	45 (6.4)
		2020	52 (3.5)	15 (3.5)	33 (3.5)	2020	48 (3.0)	19 (5.2)	33 (3.6)	2020	39 (1.7)	11 (1.4)	50 (6.4)
2 ×Target Case	4% Increase of Annual Gross Regional Income per Capita	Crop productivity increase: Yield increase: 1.5 - 3.0 times in 2019 (maximum increase)				Crop productivity increase: Yield increase: 1.0 - 1.5 times in 2019 Significant growth of rural self-employment: (234% of agr sector)				Without crop productivity increase: Significant growth of urban sector: (305% of the growth of agri. sector) 29% of rural population migrate to urban area			
		Share of Income (ave. annual growth rate (%))				Share of Income (ave. annual growth rate (%))				Share of Income (ave. annual growth rate (%))			
			Agriulture	Rural SE	Urban		Agriulture	Rural SE	Urban		Agriulture	Rural SE	Urban
		2004	52	15	33	2004	52	15	33	2004	52	15	33
		2015	52 (4.6)	15 (4.6)	33 (4.6)	2015	43 (3.5)	24 (9.7)	33 (5.3)	2015	37 (1.7)	11 (1.7)	52 (9.4)
		2020	52 (4.4)	15 (4.4)	33 (4.4)	2020	39 (3.5)	28 (9.5)	33 (5.3)	2020	29 (1.7)	9 (1.7)	62 (9.6)

Table 3.3.5 Projected Monthly Gross Income per Capita

Case		Target (2015)	Projection (Ksh/month/capita)			Achievement Rate		
			S 1	S 2	S 3	S 1	S 2	S 3
Target Case	Total	1,345	1,346	1,352	1,337	100%	101%	99%
	Rural	1,126	1,127	1,132	1,052	100%	101%	93%
	Urban	2,219	2,221	2,231	2,007	100%	101%	90%
2 ×Target Case	Total	1,601	1,512	1,613	1,558	94%	101%	97%
	Rural	1,341	1,266	1,351	1,187	94%	101%	89%
	Urban	2,641	2,495	2,661	2,177	94%	101%	82%

Case		Target (2020)	Projection (Ksh/month/capita)			Achievement Rate		
			S 1	S 2	S 3	S 1	S 2	S 3
Target Case	Total	1,485	1,471	1,493	1,501	99%	101%	101%
	Rural	1,244	1,232	1,251	1,117	99%	101%	90%
	Urban	2,450	2,427	2,464	2,256	99%	101%	92%
2 ×Target Case	Total	1,947	1,700	1,955	1,966	87%	100%	101%
	Rural	1,631	1,424	1,638	1,343	87%	100%	82%
	Urban	3,213	2,806	3,226	2,749	87%	100%	86%

Urban areas in the district are not the cities but just small townships, where small-scale retailers and jua kali artisans are earning their living. Furthermore, Homa Bay town has lost its role to be the industrial center of the South Nyanza since the ferry transportation stopped its service. It would be impractical to prioritize the urban development for the district development program. Rather, Homa Bay District could take a role to export maize and sorghum to vicinity districts since the district has the potential to increase the food

[8] Table 3.3.5 indicates that if making balance in achievement for rural and urban income, both sectors cannot reach the target (around 90% of achievement for both rural and urban incomes, while district total achieves 101% of the target). It indicates that movement of population would narrow the income gap between rural and urban areas. This could be due to the gap between labor supply and job opportunity. Migration from rural area increases labor productivity i.e. rural income per capita, but over migration results in unemployment in urban area leading to low urban income per capita. It should also be remarked that the result is subject to the constraint of the simulation: correlation between rural population and agriculture productivity is not considered.

crops. The scenario 3 would discourage to cultivate such opportunity.

The resources of the district mainly lie in the rural area. Therefore, emphasis should be put on agriculture development. As the scenario 1 of 2 x Target Case shows, solely targeting increase of productivity would face the limit to development. Therefore, quality development (value adding activities) together with productivity increase would be more effective and better be prioritized as in the scenario 2. As a result of the examination, socio-economic framework for formulating development program is set based on the scenario 2 under the Target Case. As per 2 x Target Case, though it seems difficult to achieve, still there is a possibility that can be achieved given strong supports in the agriculture sector increasing the production by 1 – 1.5 times with creation of rural self-employment at a rate of 9.5 percent per annum (In Nyando, the scenario 2 under the 2 x Target Case requires production increase by 1.5 – 2.0 times with rural self-employment creation by 11.6 % per annum can hardly be achieved).

Table 3.3.6 Socio-economic Framework of Homa Bay District (Target Case: Scenario 2)

	Year	2004	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Distirct	Population	326,534	332,079	347,503	352,653	357,803	363,028	368,330	373,709	379,166	384,703	390,321	396,021	401,805	407,673	413,626
	Density	281	286	299	304	308	313	317	322	327	332	336	341	346	351	356
	Annual Growth rate	1.00	1.70	4.64	1.48	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46
	Increment ag/2004	1.00	1.02	1.06	1.08	1.10	1.11	1.13	1.14	1.16	1.18	1.20	1.21	1.23	1.25	1.27
Household Income (Ksh000)																
	Crop	*1,859,596*	*1,936,920*	*2,082,060*	*2,159,606*	*2,249,058*	*2,329,052*	*2,410,082*	*2,492,345*	*2,575,733*	*2,660,633*	*2,746,139*	*2,832,865*	*2,920,607*	*3,009,771*	*3,099,931*
	Livestock	*334,630*	*340,315*	*356,122*	*361,399*	*366,676*	*372,032*	*377,465*	*382,975*	*388,568*	*394,243*	*400,000*	*405,842*	*411,769*	*417,782*	*423,882*
	Fishery	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*	*12,148*
	Agriculture Total	2,206,374	2,289,383	2,450,330	2,533,153	2,627,882	2,713,232	2,799,695	2,887,468	2,976,449	3,067,024	3,158,287	3,250,855	3,344,524	3,439,701	3,535,961
	Rural-self employment	636,454	675,988	770,862	813,589	861,483	907,949	956,438	1,007,103	1,060,000	1,115,365	1,172,970	1,233,140	1,295,908	1,361,548	1,430,016
	Wage	127,291	132,778	144,232	149,854	156,240	162,142	168,185	174,384	180,737	187,271	193,937	200,776	207,781	214,981	222,357
	Urban self employment	975,896	1,017,963	1,105,782	1,148,882	1,197,842	1,243,092	1,289,419	1,336,942	1,385,647	1,435,746	1,486,849	1,539,282	1,592,984	1,648,190	1,704,738
	Other	297,012	309,815	336,542	349,660	364,561	378,332	392,432	406,895	421,719	436,966	452,519	468,477	484,821	501,623	518,833
	Total	4,243,027	4,425,927	4,807,748	4,995,138	5,208,008	5,404,747	5,606,169	5,812,792	6,024,552	6,242,372	6,464,562	6,692,530	6,926,018	7,166,043	7,411,905
	% of Food expenditure	58%	56%	54%	52%	51%	49%	48%	47%	46%	44%	43%	42%	42%	41%	40%
Annual income/capita (Ksh)		12,994	13,328	13,835	14,164	14,556	14,888	15,221	15,554	15,889	16,226	16,562	16,899	17,237	17,578	17,919
Monthly income/capita (Ksh)		1,083	1,111	1,153	1,180	**1,213**	1,241	1,268	1,296	1,324	**1,352**	1,380	1,408	1,436	1,465	**1,493**
Rural Population (80%)		261,227	265,663	278,002	282,122	286,242	290,423	294,664	298,967	303,333	307,763	312,257	316,817	321,444	326,138	330,901
Urban Population (20%)		65,307	66,416	69,501	70,531	71,561	72,605	73,666	74,742	75,833	76,940	78,064	79,204	80,361	81,535	82,725
% of food expenditure (Rural		69%	67%	64%	62%	60%	59%	57%	56%	54%	53%	52%	51%	50%	49%	48%
% of food expenditure (Urba		35%	34%	33%	32%	31%	30%	29%	28%	28%	27%	26%	26%	25%	25%	24%
Annual rural Income/capita(Ksh)		10,883	11,162	11,587	11,863	12,190	12,469	12,747	13,027	13,307	13,590	13,871	14,153	14,436	14,722	15,007
Annual urban Income/capita(Ksh		21,440	21,991	22,828	23,371	24,016	24,565	25,114	25,665	26,217	26,774	27,328	27,884	28,442	29,004	29,567
Monthly rural Income/capita(Ksh		907	930	966	989	**1,016**	1,039	1,062	1,086	1,109	**1,132**	1,156	1,179	1,203	1,227	**1,251**
Monthly urban Income/capita(Ks		1,787	1,833	1,902	1,948	**2,001**	2,047	2,093	2,139	2,185	**2,231**	2,277	2,324	2,370	2,417	**2,464**
Household Income Share (%) (2002-2008 District Development Plan)																
	Agriculture	52	52	51	51	50	50	50	50	49	49	49	49	48	48	48
	Rural-self employment	15	15	16	16	17	17	17	17	18	18	18	18	19	19	19
	Wage	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Urban self employment	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
	Other	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Annual Growth Rate (%)																
	Agriculture		3.8	*7.0*	3.4	3.7	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8
	Rural-self employment		6.2	*14.0*	5.5	5.9	5.4	5.3	5.3	5.3	5.2	5.2	5.1	5.1	5.1	5.0
	Wage		4.3	*8.6*	3.9	4.3	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4
	Urban self employment		4.3	*8.6*	3.9	4.3	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4
	Other		4.3	*8.6*	3.9	4.3	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4
	Total		4.3	*8.6*	3.9	4.3	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4

3.4 Land Use and Spatial Framework

Following the socio-economic framework presented above, land use is examined. As the economic framework has been based on agriculture production as the major contributor to the economic growth, the land uses accommodating the strategic crops shall be planned in line with the natural condition, present cropping patterns, etc. Another contributor to the growth is increase of rural employment, which means value addition to the primary products. Therefore, this contributor is very closely associated with the strategic crops. Land use for the strategic crops is given of the following:

- Most of the crops are to increase the area planted in keeping with the population growth which is equivalent to 19 % increase over the plan period, while fruits including pineapples are to increase by 50%. Pineapples in Rangwe Division are good cash crop, which should be promoted further.
- Yield of maize is targeted to increase by 50 percent over the plan period, so that the district is expected to export maize to the neighboring districts. The surplus is expected to come out from

year 2016 with the condition of yield increase by 50% over the plan period according to the economic framework established above. The expected year of 2016 may look very late, but with the sweet potatoes supplementing their staple food, maize can be exported even from the onset of the plan period (as of 2004, food crops' production including sweet potatoes surpasses the district requirement). As a mean of increasing the yield of maize, introduction of hybrid maize is foreseen to the long rainy season cultivation.

- Paddy is planned to increase by 7 times in terms of area. This increase is realized upon the completion of Oluch River Irrigation System. The appraisal is already done, which is to be financed by ADB. The construction is expected to commence in 2007, and in three years the paddy area is to increase to about 480 ha from the present 70 ha.

- Livestock production increase is followed by population increase as district average. However, by division dairy promotion should be programmed in Rangwe Division which is far away from Ruma National Park

As for increase of rural employment being one of the contributors to economic growth, rural centers located in those areas where strategic crops especially having potential of processing should be strengthened. Markets located in those centers should be improved, for example putting up of concrete floor, roofing, toilet facilities, information center, etc.

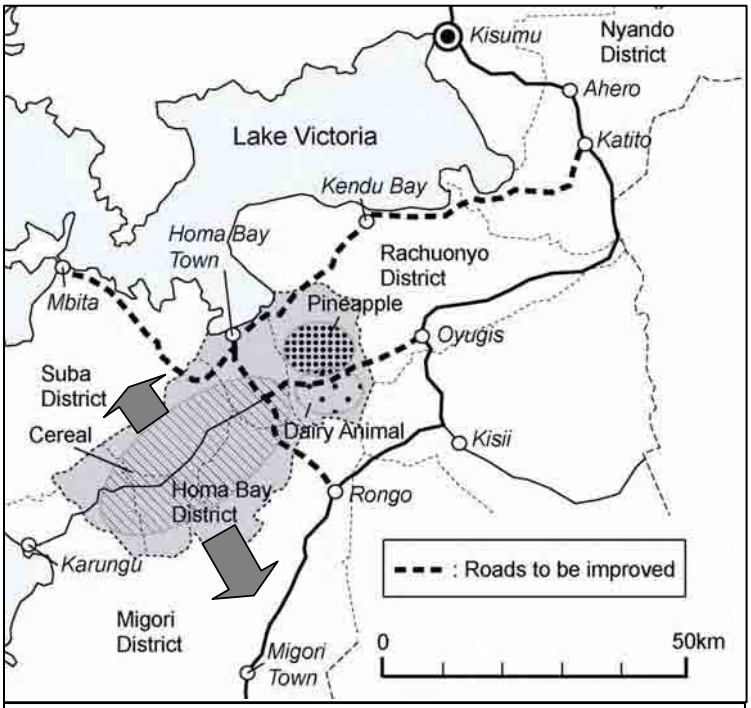


Figure 3.4.1 Land Use and Spatial Framework for Homa Bay

For transportation, road network in the north-eastern part of Rangwe Division should be improved, so the transportation to Oyugis town will be facilitated. Road connecting Homa Bay Town to Kisumu is at present very bad, but the rehabilitation is already on-going. The construction from Katito in Nyando District up to Kendu Bay is about to complete as of early 2007, and the extension to the Homa Bay Town is also under planning. To export surplus food crop to Migori, the existing road to Rongo should be improved but the road from Rongo to Migori is already well established. Therefore, once the surplus gets to Rongo, no hardship is foreseen to reach Migori. To Suba District, the road is very bad which increases transportation cost. A plan already exists to improve the road up to Mbita in Suba District. As the surplus of the food crop is increasing, the road to Mbita should also be improved.

3.5 Priority Approaches and Strategies by Participatory Workshops

In Homa Bay District, a planning workshop at the divisional level was held on October 12 & 13, 2005, and the district level on October 17 & 18, 2005. Both of the workshops involved representatives from the community workshops carried out prior to the divisional planning workshop; two representatives, composed of the leader of the community and the area chief, from each community to the divisional workshop and one representative from each community to the district level planning workshop. Participants to these planning workshops are summarized below:

Table 3.5.1 Participants to the Divisional and District Planning Workshop

Category	Divisional Workshop	District Workshop	Remarks
District Officer	6	24	
Divisional Officer	25	16	
NGOs	5	5	
CBOs	2	2	
Community	12	6	
Total	49	53	

Source: Workshop supported by JICA Study Team

The plenary session of the divisional workshop started with the presentation of the results of the community workshops: Ngegu Beach of Rangwe Division, Kogelo Kalanya Village of Asego Division, Murram Village of Riana Division, Okok Village of Ndhiwa Division, Oriang Village of Kobama Division, and Otange Village of Nyarongi Division, which were selected as typical village representing the division in terms of nature, economic activities, etc. Following the presentation, the Study Team presented an overall objective tree, as shown in Figure 3.5.1.

To establish the objective tree, the Team at first put together all the problems raised by the communities, at the divisional level analytical workshop, and at the district level analytical workshops. Then, the problem statements in the tree were converted into positive statements which now can be approaches and strategies which can contribute to realizing the simplified development objective of 'Living Standard of the People of Homa Bay District is High'. Here 'Approach' is the statement placed right under the development objective, and 'Strategy' is the statements appearing under each approach. The overall objective tree presented by the Team also included some sectors like environment, provided that the sector had not been identified during the previous workshops.

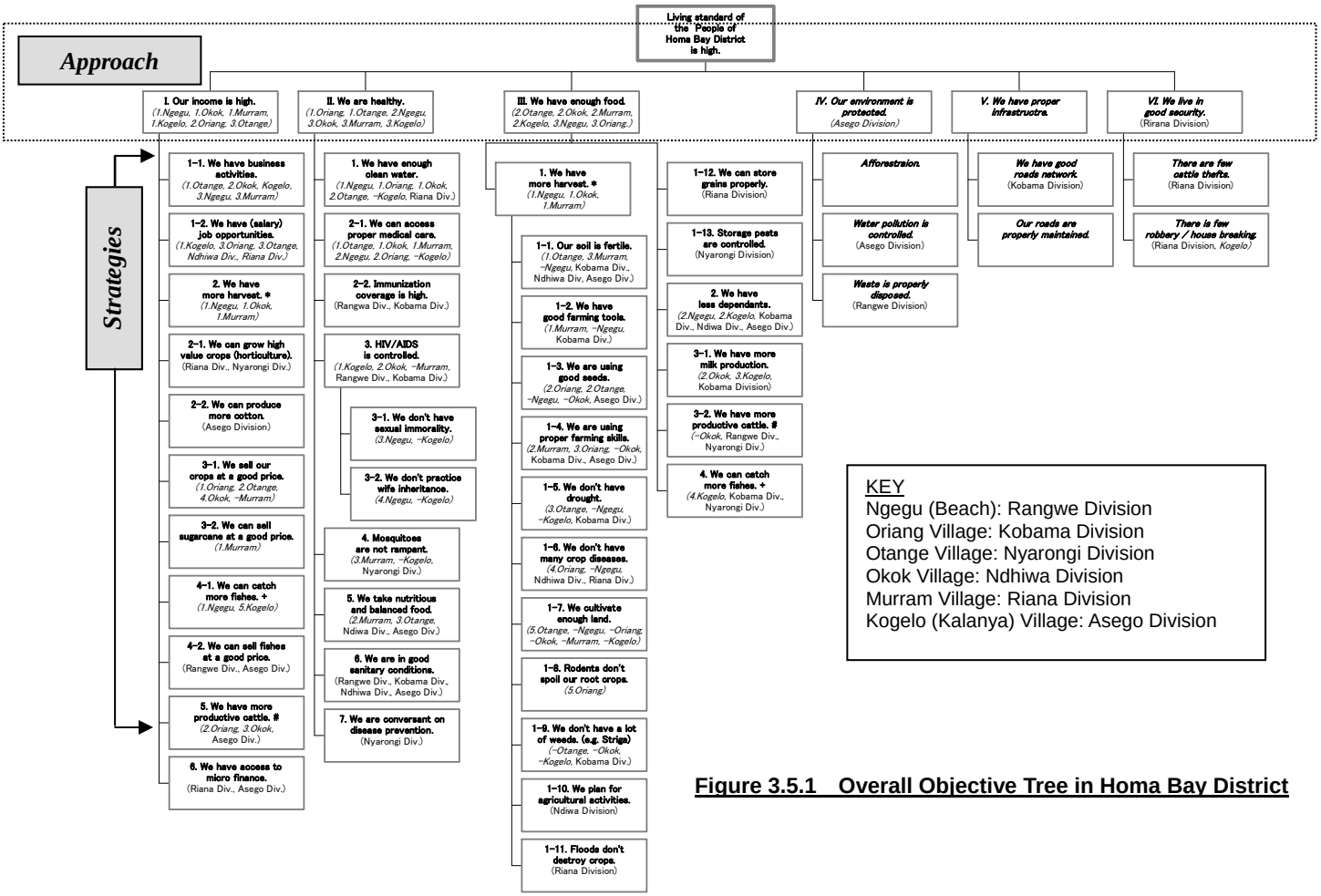


Figure 3.5.1 Overall Objective Tree in Homa Bay District

With reference to the overall objective tree, the participants reviewed and refined the development approaches in the objective tree, and went into the prioritization of the approaches. The prioritized approaches at the divisional level are shown in the Table 3.5.2 as compared to the priorities made at the community level. Some changes in terms of priority came at the divisional level from the community level since the participants at the divisional level looked issues at broader perspective than the communities.

Table 3.5.2 Priorities at Community and Divisional Levels

	Homa Bay District					
Community level WS	**Ngegu Beach**	**Kogelo Kalanya Village**	**Murram Village**	**Okok Village**	**Oriang Village**	**Otange Village**
Priority No.1	Income **1.Fish catch**, 2.Harvest, 3.IGA	Income **1.Job**, 2.IGA, 3.Harvest	Income **1.Harvest**, 2.Sugarcane price, 3.IGA	Income **1.Harvest**, 2.IGA, 3.Livestock	Health **1.Clean water**, 2.Medical care, 3.Mosquitoes	Health **1.Medi. care**, 2.Clean water, 3.Balanced diet
Priority No.2	Health **1.Clean water**, 2.Medical care, 3.Immorality	Food **1.Harvest** (rain, land, weeds), 2.Dependants, 3.Milk	Food **1.Tools**, 2.Skills, 3.Fertility	Food **1.Harvest** (seeds, skills, land, weeds), 2.Milk	Income **1.Price of products**, 2.Cattle, 3.Job	Food **1.Fertility**, 2.Seeds, 3.Drought
Priority No.3	Food **1.Harvest** (drought, seeds, tools), 2.Dependants	Health **1.HIV/AIDS**, 2.Diseases (clean water, mosquitoes, medical care)	Health **1.Medi. care**, 2.Nutrition	Health **1.Diseases** (clean water, medical care), 2.HIV/AIDS, 3.Nutrition	Food **1.Weeds**, 2.Seeds, 3.Skills	Income **1.IGA**, 2.Price of products, 3.Job
Division level WS	**Rangwe Division**	**Asego Division**	**Riana Division**	**Ndhiwa Division**	**Kobama Division**	**Nyarongi Division**
Priority No.1	Food **1.Fertility**, 2.Tools, 3.Seeds	Income **1.IGA**, 2.Micro finance, 3.Cattle	Income **1.IGA**, 2.Micro finance, 3.Horticulture	Income **1.Harvest**, 2.Price of products, 3.Cattle, 4.IGA	Health **1.Clean water**, 2.Medical care, 3.Immunization, 4.HIV/AIDS	Health **1.Medi. care**, 2.Mosquitoes, 3.Clean water, 4.Balanced diet
Priority No.2	Income **1.IGA**, 2.Harvest, 3.Fishes	Health **1.Clean water**, 2.Sanitary conditions, 3.Mosquitoes, 4.HIV/AIDS	Food **1.Skills**, 2.Milk, 3.Crop diseases, 4.Livestock diseases	Health **1.Clean water,** 2.Sanitary conditions, 3.Balanced diet, 4.HIV/AIDS	Income **1.Price of products**, 2.Cattle, 3.Micro finance, 4.Job	Food **1.Fertility**, 2.Weeds, 3.Seeds, 4.Cattle, 5.Storage pests
Priority No.3	Health **1.HIV/AIDS**, 2.Clean water, 3.Immunization	Food **1.Fertility**, 2.Weeds, 3.Skills	Health **1.Clean water**, 2.Medical care, 3.HIV/AIDS	Food **1.Skills**, 2.Plan, 3.Weeds, 4.Fertility	Food **1.Skills**, 2.Fertility, 3.Tools, 4.Seeds, 5.Milk	Income **1.IGA**, 2.Price of products, 3.Job, 4.Horticulture

As per priority No.1, though Ngegu Beach raise 'income' as their top priority, Rangwe Division chose 'food' as the top priority, which was ranked at No.2 priority at the community level, taking into account food deficit in the area. Aside from Rangwe Division, no change for the top priority was made. As for priorities No.2 and No.3, some changes also took place; for example, Asego Division put 'health' at the second priority though it had been placed at priority No.3 at the community level. For Ndhiwa Division, they raised 'health' to the second priority from the third priority set during the community level workshop.

The priorities ranked at the divisional level was forwarded to the district planning workshop, where all the approaches and strategies under the simplified development objective 'Living Standard of the People of Homa Bay District is High' were once again reviewed and prioritized by strategy and approach, and by division. During the review process, a modification was made to the approach level, which was to newly put up 'We get good education'.

The prioritization by approach was made by 10-seed method by all the participants two times, and by strategy was done by those inclusive of district officers who are engaged in relevant sector(s) to the approach level – say, agriculture officer was included in the group in charge of prioritization of the approach 'We have enough and nutritious food' –, and by division was done mainly by divisional officers and organizations operating in the respective division. The summary of the approaches and strategies with the divisions prioritized is shown in Figure 3.5.2.

District Level Planning Workshop

Figure 3.5.2 Prioritization of Approaches, Strategies and Divisions of Homa Bay District

Living standard of the people of Homa Bay District is high.

Approaches I-III

Strategies

	III. We have enough food. (① 138/439 (31.4%) ① 169/459 (36.8%))	RA	AS	RI	ND	KO	NY
1	III-3. We are using proper crop and animal husbandry practices.			●	●		
2	III-1. Our soil is fertile.	◎	(●)				●
3	III-6. We plan for agricultural activities.				○		
4	III-7. We have proper and adequate farming implements.					○	
5	III-4. We have enough water for farming.	◎					
6	III-11. We have no livestock pests and diseases.	●					○
7	III-8. We don't have pests and diseases in crops.			○			
8	III-10. We put more land under cultivation.						
9	III-13. We practice bee, poultry and small animals keeping.						
10	III-5. We can practice proper post harvest handling and strage.						◎
11	III-2. We have proper weed control. (e.g. Striga)		(●)			○	
12	III-12. We have more livestock production (milk, meat, eggs, etc.)			◎		○	
13	III-9. We use clean / certified planting materials.						
14	(III-14. We can catch more fishes.) **Refer I-9**						
15	III-15. We have less dependants.				○		

	II. We are healthy. (② 125/439 (28.5%) ② 131/459 (28.5%))	RA	AS	RI	ND	KO	NY
1	II-4. We are conversant on diseases prevention and control.						●
2	II-1. We have enough clean water.	●	●	◎	●	●	
3	II-2. We are in good sanitary conditions.	○		○	○		
4	II-7. Immunization coverage is high.	○				○	
5	II-8. We take nutritious and balanced food.						
6	II-6. Endemic diseases are controlled.		◎				
7	II-5. HIV/AIDS is controlled.	◎	◎		◎	◎	
8	II-3. We can access proper medical care.	○		●		●	◎

	I. We get good income. (④ 112/439 (25.5%) ④ 99/459 (21.6%))	RA	AS	RI	ND	KO	NY
1	I-2. We have access to micro finance.		●	●		◎	
2	I-1. We have business activities.	●	◎	◎	●		○
3	I-9. We can catch more fishes.	◎					
	I-10. We can sell fishes at a good price.		○				
4	I-6. We can grow high value crops. (horticulture).			○			◎
5	(I-5. We have more harvest.) **Refer III-1~10**		○		◎		
6	(I-3. We have more productive cattle.) **Refer III-11~13**		◎		◎	◎	
7	I-7. We sell our crops at a good price.				○		○
8	I-8. We can sell sugarcane at a good price.			◎			
9	I-11. We can produce more cotton.						
10	I-4. We have (salary) job opportunities.					●	

Approaches IV-VII

Strategies

	VI. We get good education. (⑥ 23/439 (5.2%) ⑥ 24/459 (5.2%))	RA	AS	RI	ND	KO	NY
1	VI-2. We can acquire appropriate skills.	N/A (New for district-level workshop)					
2	VI-1. We can get good formal education.						
3	VI-3. All the adults can read and write.						

	V. Our environment is protected. (⑤ 21/439 (4.8%) ⑤ 19/459 (4.1%))	RA	AS	RI	ND	KO	NY
1	V-1. Afforestation.		○	○	◎	○	●
2	V-4. Our rivers are protected.						
3	V-2. Waste is properly disposed.	○			○		
4	V-3. Environmental pollution is controlled.						○

	IV. We have proper infrastructure. (③ 15/439 (3.4%) ③ 14/459 (3.1%))	RA	AS	RI	ND	KO	NY
1	IV-3. Rural electrification. (Diversification)		○				
2	IV-1. We have good road network.		○	○	○	◎	
3	IV-2. Our roads are properly maintained.	○					◎

	VII. We live in good security. (⑦ 5/439 (1.1%) ⑦ 3/459 (0.7%))	RA	AS	RI	ND	KO	NY
1	VII-1. There are few cattle and property thefts.						○
2	VII-2. There is few robbery / house breaking.						
3	VII-3. There is minimum inter-personal and community conflicts.						

KEY

Top Priority Strategies by Division	:	●
High Priority Strategies by Division	:	◎
Priority Strategies by Division	:	○

RA: Rangwe Division, AS: Asego Division, RI: Riana Division, ND: Ndhiwa Division, KO: Kobama Division, NY: Nyarongi Division

Table 3.5.3 and Figure 3.5.3 below are the excerpt of the approaches arranged in the priority order. The table indicates similar prioritization results between the two 10-seed practices. Approach which came first is related to 'Food production or in broader term Agriculture & Livestock', followed by 'Health', and then by 'Income'. These are the top three priorities in terms of development approaches, and in fact these three approaches surpass the rest of the approaches in terms of priority. Given 4th priority is 'Education', followed by 'Environment', by 'Infrastructure' and finally by 'Security'.

Table 3.5.3 Development Approaches and the Priorities identified during District Planning Workshop

Approaches	1st prioritization, %	2nd prioritization, %	Ranking In Order	Remarks
1. To have enough food	31	37	1	
2. To be healthy	29	29	2	
3. To get good income	26	22	3	
4. To get good education	5	5	4	
5. To protect environment	5	4	5	
6. To have proper infrastructure	3	3	6	
7. To live in good security	1	1	7	

Source: District Planning Workshop held October 17 & 18, 2005

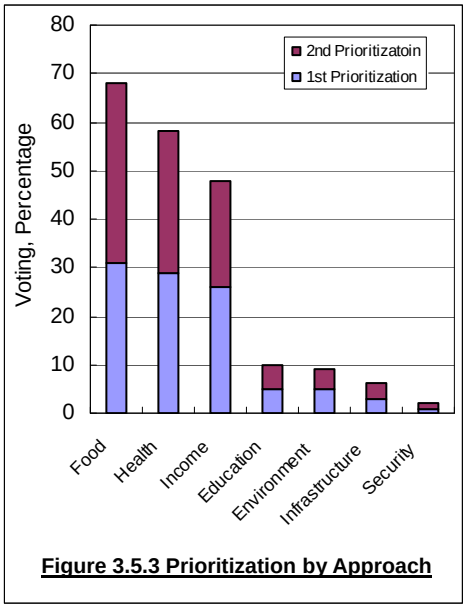


Figure 3.5.3 Prioritization by Approach

Strategies are, as shown in Figure 3.5.2, arranged in the priority order under each approach. At every right side of the strategies is the priority marked by symbols of '● ◎ ○' amongst the divisions. Symbol '●' shows the top priority, '◎' shows high priority, and '○' means priority. These symbols imply which division(s) the strategy should be put in place at which priority. Ideally, strategies having high priority are to be given more '● ◎ ○' in the divisions. However, they are not always correlated, implying different opinions between district officers and lower cadre participants who are divisional officers and organizations operating at the divisional or community level. Pointed out are:

- Under the approach of 'have enough food', the correlation between the priorities on divisions and the priority on the strategy looks high. The 1st strategy of 'proper crop and animal husbandry' is given two top priorities by Riana and Ndhiwa Divisions, and 2nd strategy, which is 'soil is fertile', is also given two top priorities and one high priority.

- Strategies ranked at No.8 and No.9 under the approach of 'have enough food' were not given any priorities by division. However, divisions gave some priorities to the livestock production under the approach of 'get good income'. For example, though no priority from divisions is given to 'practice bee, poultry, and small animals keeping' ranked at 9th under the approach of 'have enough food', Asego, Ndhiwa, and Kobama gave high priority to the strategy of 'have more productive cattle' under the approach of 'get good income'.

- For the approach of 'we are healthy', difference can be found between the district priority that is by strategy and the one by division. Two divisions of Riana and Kobama have given top priority to the strategy of 'can access proper medical care' which was ranked at 8th, the least priority by district. On the other hand, divisions except Nyarongi did not give any priority to the strategy of 'conversant on disease prevention and control' while the district gave the 1st priority to it. This is

because divisions gave more priority to facilities while district thought awareness is more important than facilities. Strategy given 2nd priority by district was 'have enough clean water', which were also given 4 top priorities by the divisions. Clean water together with sanitary condition can be said to be of high priority issue recognized by almost all.

- Under the approach of 'get good income', 1st strategy is 'have access to micro finance' and 2nd is 'have business activities', which were also given top and high priorities by divisions. Therefore it can be said priority areas between divisional level and district level are more or less correlated. Strategies ranked at 4th to 6th are very related to those strategies appearing under the approach of 'have enough food'. The logic is if they can produce surplus, they can sell and get income. Ranking of 4th to 6th may not seem so high, however combined with the strategies appearing under the approach of 'have enough food', the strengthening of primary sector can be given very high priority.

- For the approach of 'environment is protected', the priorities are more or less same between the district and divisional level. Most important issue is afforestation.

- For the approach of 'have proper infrastructure', district ranked 'rural electrification' at 1st position while only Asego division gave priority to that issue. 4 divisions gave priority with Kobama giving high priority to 'good road network' which was ranked at 2nd by district. From the viewpoint of people who are in rural areas, road network is more worth to their life while for the district officers electrification sounds more important.

3.6 Development Programmes and Projects

During the district planning workshops, the participants identified programmes and projects under each of the strategies. Then, one more process was required to recommend the components of the District Development Programme. The process was to consolidate some of the programmes into one integrated or comprehensive programme. For example, a programme titled "Crop Husbandry Improvement" may appear under the approach of 'We get good income' and at the same time may appear once again under the approach of 'We have enough and nutritious food'. In this case, there should be a consolidation. Likewise, if we propose an integrated programme, it may cover some of the programmes which were identified during the planning workshop.

Now, Figure 3.6.1 shows the comprehensive development framework of Homa Bay District. This was finally drafted during the final evaluation/ review workshop held on February 26 & 27, 2007. The participants were more or less same as the ones to the district planning workshop held back on October 17 & 18, 2005. The framework flows from left to right; namely, starting with development vision, followed by approaches, then strategies, and respective programmes, some of which are integrated one as above-mentioned. The upper the approach is placed, the higher the priority is given, and likewise the upper the strategy in an approach is placed, the higher the priority is given within the approach. Symbols of ●, ◎, ○ show priority divisions at which the programme should be implemented. Further it shows responsible implementing agency and supporting agencies (collaborators), implementation period covering up to mid term year 2015, project cost and prospective funding sources.

3.7 Programme/ Project Design

The programmes/ projects in the framework were detailed in a form of 'project description' during the final evaluation/ review workshop. The project description is a simplified project design matrix showing objectives, rationale, major outputs, major activities, input, required budget, project risks, etc. With some modifications by JICA Team to the ones drafted by the district workshop participants, final versions are attached in the Appendix VI PROGRAMME/ PROJECT DESCRIPTIONS.

Figure 3.6.1 Comprehensive Development Framework, Homa Bay District

Priority: High → Low

Vision: A Highly Productive, Healthy and Secure District

Approaches (Priority)	Priority	Strategies	No.	Programmes/ Projects	Priority Division (RA / AS / RI / ND / KO / NY)	Implementing Agency	Collaborators	Implementation Schedule 2008–2015	Project Cost Ksh	Sources
1. We have enough food. (1st Priority)	1.1	We are using proper crop and animal husbandry practices.	1	Crop Management and Development Programme	○ ● ● ○	Ministry of Agriculture	MLFD, CARE, AEP, CMAD, ICIPE, KAPP, KARI	■■■■■■■■	25,200,000	GOK , Donors
	1.2	Our soil is fertile.	2	Land Management Programme	◎ ● ●	Ministry of Agriculture	MLFD, MWI, MSS, CMAD, AEP, KARI, ICIPE	■■■■■■■■	4,575,000	GOK, Donors
	1.3	We plan for agricultural activities.		included in Strategy No.1.1	○					
	1.4	We have proper and adequate farming implements.	3	Appropriate Agro-technology Programme	○	Ministry of Agriculture	CARE-K, AEP, CMAD, PLAN-K, ADP, MLED	■■■■■■■■	2,661,600	GOK, KARI, ICIPE, AEP
	1.5	We have enough water for farming.	4	Small Scale Irrigation and Drainage Programme	◎	Ministry of Water and Irrigation	MOA, NIB, AEP, CARE-K, PLAN-K, C-MAD	■■■■■■■■	2,990,000	MWI, NIB, NGOs
	1.6	We have no livestock pests and diseases.	5	Livestock Management and Development Programme	● ○	Ministry of Livestock and Fisheries	MOA, PLAN-K, C-MAD, ICIPE, KARI	■■■■■■■■	3,456,000	GOK, Donors
	1.7	We don't have pests and diseases in crops.		included in Strategy No.1.1	○					
	1.8	We put more land under cultivation.		included in Strategies No.1.2, No.1.3 and No.1.4						
	1.9	We practice bee, poultry and small animals keeping.		included in Strategy No.1.5						
	1.10	We can practice proper post harvest handling and storage.		included in Strategy No.1.3	◎					
	1.11	We have proper weed control. (e.g. Striga)		included in Strategy No.1.1	● ○					
	1.12	We have more livestock production (milk, meat, eggs, etc.)		included in Strategy No.1.5	◎ ○					
	1.13	We use clean / certified planting materials.	6	Farm Input Research and Supply Programme		Ministry of Agriculture	KARI, STOCKISTS, AGRO-VET, NGOs	■■■■■■■■	1,000,000	GOK, NGOs
	1.14	We have less dependants.	7	Orphan Support Programme	○	Office of the V-President and Home Affairs	PA, CACC, NACC, MOA, MOE, SS, CD	■■■■■■■■	2,433,000	GOK, CDF, NGOs
2. We are healthy. (2nd Priority)	2.1	We are conversant on diseases prevention and control.	8	Mother and Child Health Programme	●	Ministry of Health	NEREGA, AMREF, PLAN-KACCOM-K, KEMRI, CDC	■■■■■■■■	48,000,000	GOK, FBOs, NGOs
	2.2	We have enough clean water.	9	Water Supply and Sanitation Programme	● ● ◎ ● ●	Ministry of Water and Irrigation	MOH, NGOs, CBOs, CDF	■■■■■■■■	194,100,000	GOK, CDF, Donors
	2.3	We are in good sanitary conditions.		included in Strategy No.2.2	○ ● ○ ○					
	2.4	Immunization coverage is high.		included in Strategy No.2.1	○ ○					
	2.5	We take nutritious and balanced food.	10	Nutrition and Health Improvement Programme		Min of Agriculture,Min of Health	AMREF-MAANISHA, MILDMAY, CRS,CACC, CARE	■■■■■■■■	16,000,000	CBOs, FBOs, GOK, NGOs
	2.6	Endemic diseases are controlled.	11	Endemic Diseases Control Programme	◎	Ministry of Health	PLAN-K, APHIA-NYANZA, CARE, PSI	■■■■■■■■	233,625,000	GOK, NGOs, FBO
	2.7	HIV/AIDS is controlled.	12	HIV/AIDS Control Programme	◎ ◎ ◎ ◎	Ministry of Health	NACC, NASCOP	■■■■■■■■	231,600,000	GOK, CDF, FBO, NGOs
	2.8	We can access proper medical care.	13	Medical Care Strengthening Programme	○ ● ● ◎	Ministry of Health	PDPW, FCI, APHIA-NYZ, Essential Health	■■■■■■■■	120,000,000	GOK, CDF, FBO, NGOs
3. We get good income. (3rd Priority)	3.1	We have access to micro finance.	14	Rural Credit Facilities Programme	● ● ◎	Ministry of Co-operatives	Social Services, NGOs	■■■■■■■■	2,350,000	GOK
	3.2	We have business activities.	15	Local Entrepreneurs Development Programme	● ◎ ◎ ● ○	Ministry of Trade and Industry	Min. of Labour-Enterprise Dev., KWFT, AEP	■■■■■■■■	1,200,000	GOK
			16	Market Centre Improvement/Establishment Programme		Ministry of Local Government	Ministry of Trade-Enterprise & Dev.	■■■■■■■■	1,600,000	GOK
	3.3	We can catch more fishes. We can sell fishes at a good price.	17	Sustainable Fishery Management Programme	◎ ○	Fisheries Department	Cooperative Societies and NGOs	■■■■■■■■	700,000	GOK, NGOs
	3.4	We can grow high value crops. (horticulture).	18	Income Generation Activities (IGA) Promotion Programme	○ ◎	Ministry of Agriculture	Animal Draft Power, KARI, ICIPE, FIS, DSDO	■■■■■■■■	1,100,000	GOK
	3.5	We have more harvest.		included in Strategies No.1.1 and No.1.5	○ ◎					
	3.6	We have more productive cattle.		included in Strategy No.1.6	◎ ◎ ◎					
	3.7	We can sell sugarcane at a good price.	19	Sugarcane Cottage Industry Promotion Programme	◎	Ministry of Agriculture	SONY Sugar Co, Jaggeries, KESREF	■■■■■■■■	4,340,000	GOK
	3.8	We can produce more cotton.	20	Cotton Revitalization Programme		Ministry of Agriculture	Min of Coop, Min of SS, Agro Chemical Ginneries	■■■■■■■■	5,257,720	GOK
4. We get good education. (4th Priority)	4.1	We can acquire appropriate skills.	21	Polytechnics and Vocational Support Programme		Ministry of State for Youth Affairs	MOE, CDF, LATF, CDTF, MSRT, NGOs	■■■■■■■■	122,700,000	CDF, GOK, Donors
	4.2	We can get good formal education.	22	OVCs FE Support Programme (Bursary, etc.)		Ministry of Education	MOH, CACC, FBOs, NGOs	■■■■■■■■	8,100,000	GOK, CACC, AMREF, PLAN-K
	4.3	All the adults can read and write.	23	Functional Adult Literacy Programme		Department of Adult Education Ministry of Gender	Line Departments, NGOs	■■■■■■■■	35,000,000	GOK, CDF, LATF, Donors
5. Our environment is protected. (5th Priority)	5.1	Afforestation.	24	Community Based Afforestation Programme	○ ○ ◎ ○ ●	Ministry of Environment & Natural Resources	MOA, MOH, MOE, MOW, MG, JICA, MORINGA K, AEP,CARE, ICIPE	■■■■■■■■	5,680,000	GOK, Donors
	5.2	Our rivers are protected.	25	Rivers Protection Programme		Ministry of Environment & Natural Resources	MOA, MOW, C-MAD, PLAN-K, MORINGA R AGENCY	■■■■■■■■	1,900,000	GOK, Donors
	5.3	Waste is properly disposed.	26	Solid Waste Management Programme	○ ○	Ministry of Health	HB Municipal Council,County Councils, CBOs	■■■■■■■■	58,800,000	GOK, Donors, LATF, CDF
	5.4	Environmental pollution is controlled.	27	Homa Bay Sewerage Improvement Programme	○	Lake Victoria South Water Service Board	MOH, UN-HABITAT, CBOs, NEMA, Other Donors	■■■■■■■■	29,000,000	GOK, CDF, Donors
6. We have proper infrastructure. (6th Priority)	6.1	Rural electrification. (Diversification)	28	Rural Electrification Programme	○	Ministry of Energy	CDF, LATF, MRPW	■■■■■■■■	13,007,500	GOK, CDF, LATF, Donors
	6.2	We have good road network.	29	Community Based Roads Network Programme	○ ○ ○ ◎	Ministry of Roads and Public Works	CDF, LATF, SIDA(Roads 2000 Program)	■■■■■■■■	182,000,000	GOK, CDF, LATF, Donors
	6.3	Our roads are properly maintained.	30	Trunk Road Improvement Programme	○ ◎	Ministry of Roads and Public Works	SIDA	■■■■■■■■	192,500,000	
7. We live in good security. (7th Priority)	7.1	There are few cattle and property thefts.	31	Community Policing Programme	○	Office of the President	Ministry of Internal Affairs	■■■■■■■■	10,000,000	
	7.2	There is few robbery / house breaking.		included in Strategy No.7.1						

Italic number: Development Cost

Total	1,560,875,820 Ksh
Development	1,489,005,500 Ksh
Recurrent	71,870,320 Ksh
Total (per year)	195,109,478 Ksh
Development (per year)	186,125,688 Ksh
Recurrent (per year)	8,983,790 Ksh

RA: Rangwe
AS: Asego
RI: Riana
ND: Ndhiwa
KO: Kobama
NY: Nyarongi

●: Top priority
◎: High priority
○: Priority

Solid line: mainly by development budget
Dotted line: mainly by recurrent budget

3.8 Programme / Project Cost and Disbursement Plan

Total Programme / Project cost of 31 programmes / projects identified in the comprehensive development framework shown in Figure 3.6.1 is estimated at Ksh1,560,875.8 million. Of the total cost, Ksh71,870.3 million or 4.6% is categorized as recurrent cost and Ksh1,489,005.5 million or 95.4% is categorized as development cost. The disbursement plan is shown in the following Table 3.8.1, and the demarcation between recurrent and development, and further development by prospective source is shown in Table 3.8.2. The cost is the sum of the required programme/ project costs covering from year 2008 to year 2015; that is from short to mid term development. Although long term development year is set at year 2020, budgeting covers only up to mid term development year of 2015 since we think that the budget for long term development should be planned by reviewing the achievement of short and mid terms.

Table 3.8.1 Programme / Project Cost and Disbursement Plan for Nyando District Development Programme

Year	2008	2009	2010	2011	2012	2013	2014	2015	**Total**
Recurrent Cost (Ksh)	8,765,040	9,100,754	9,100,754	9,100,754	9,100,754	8,900,754	8,900,755	8,900,755	**71,870,320**
Development Cost (Ksh)	173,524,750	187,142,964	187,142,964	187,142,964	194,392,964	194,392,964	182,632,965	182,632,965	**1,489,005,500**
Total (Ksh)	**182,289,790**	**196,243,718**	**196,243,718**	**196,243,718**	**203,493,718**	**203,293,718**	**191,533,720**	**191,533,720**	**1,560,875,820**
Total Recurrent Budget (Ksh)	29,804,414								**238,435,312**
Share of the Cost to the Budget (%)	*29*	*31*	*31*	*31*	*31*	*30*	*30*	*30*	***30***
Total Development Budget (Ksh)	174,089,069								**1,392,712,552**
Share of the Cost to the Budget (%)	*100*	*107*	*107*	*107*	*112*	*112*	*105*	*105*	***107***

Note: 1) Source of the budgets is from DDO Office
2) Recurrent Cost / Budget is not inclusive of salaries of officers/staff but for regular activities of the offices.
3) Development Budget includes 1) government development budget, 2) CDF, and 3) LATF
4) Recurrent Budget is of 2005/06 of the offices to implement the programme / projects
5) Development Budget is 2005/06 for government development budget and LATF, and 2006/07 for CDF.

Recurrent cost is estimated for the activities of the programmes / projects which are implemented as a part of the recurrent activities of the respective offices (for example, agriculture extension, primary health care promotion, etc.). The recurrent cost per year is estimated from Ksh8.7 million to Ksh9.1 million per year as shown in Table 3.8.1. Compared to the current status of the recurrent budgets of the district offices, the estimated annual recurrent cost shares from 29% to 31% of the current budget level (see below part of Table 3.8.1). This may look small share. However, the recurrent cost covers not only officers' recurrent activities but also O&M of offices, night-out and travel allowances, etc. According to past accountings, it is said that recurrent activities relative to projects consists of about 40 - 50% only, and hence the planned share of 29% - 31% must be reasonable (or rather safer side).

The cost for the activities of the programmes / projects which require investment in some particular area such as road construction, health center construction etc. is estimated as development cost. To implement these programmes / projects, a special budget for the particular programme / project will have to be approved and arranged by the respective authorities. The sources of the development cost can be government development budget, CDF, LATF and other funding agencies. According to the disbursement schedule shown in above Table 3.8.1, annual development cost is estimated from Ksh173,525 million to Ksh194,393 million.

Table 3.8.1 also compares the estimated annual development cost with the current level of the government related development budgets available in the district; namely, 1) department development budget, 2) CDF and 3) LATF. Development budget available in the district can also be from some INGOs, however these are not always open. Therefore, the current level of the development budget shown in the below part of Table 3.8.1 is the sum of the recent year's government related development budgets. The planed disbursement indicates that disbursement plan presented in this Study is feasible as a whole with reference to the past trend of the budget available.

Table 3.8.2 Programme/ Project Cost by Category and by Source

No.	Programmes/ Projects	Implementing Agency	Total	Recurrent	Development	CDF	LATF	Sources
1	Crop Management and Development Programme	Ministry of Agriculture	25,200,000	10,200,000	15,000,000			GOK
2	Land Management Programme	Ministry of Agriculture	4,575,000	575,000	4,000,000			GOK
3	Appropriate Agro-technology Programme	Ministry of Agriculture	2,661,600	661,600	2,000,000			GOK
4	Small Scale Irrigation and Drainage Programme	Ministry of Water and Irrigation	2,990,000	2,990,000				GOK
5	Livestock Management and Development Programme	Ministry of Livestock and Fisheries	3,456,000	3,456,000				GOK
6	Farm Input Research and Supply Programme	Ministry of Agriculture	1,000,000	1,000,000				GOK
7	Orphan Support Programme	Office of the V-President and Home Affairs	2,433,000		513,000	1,920,000		GOK, CDF
8	Mother and Child Health Programme	Ministry of Health	48,000,000	1,000,000	7,000,000	30,000,000	10,000,000	GOK, CDF, LATF
9	Water Supply and Sanitation Programme	Ministry of Water and Irrigation	194,100,000	18,100,000	34,000,000	142,000,000		GOK, CDF
10	Nutrition and Health Improvement Programme	Min of Agriculture,Min of Health	16,000,000	2,000,000	14,000,000			GOK
11	Endemic Diseases Control Programme	Ministry of Health	233,625,000	2,000,000	41,625,000	100,000,000	90,000,000	GOK, CDF, LATF
12	HIV/AIDS Control Programme	Ministry of Health	231,600,000	2,000,000	51,600,000	100,000,000	78,000,000	GOK, CDF, LATF
13	Medical Care Strengthening Programme	Ministry of Health	120,000,000	2,000,000	18,000,000	100,000,000		GOK, CDF
14	Rural Credit Facilities Programme	Ministry of Co-operatives	2,350,000	2,350,000				GOK
15	Local Entrepreneurs Development Programme	Ministry of Trade and Industry	1,200,000	400,000	800,000			GOK
16	Market Centre Improvement/Establishment Programme	Ministry of Local Government	1,600,000	100,000		750,000	750,000	GOK, CDF, LATF
17	Sustainable Fishery Management Programme	Fisheries Department	700,000	700,000				GOK
18	Income Generation Activities (IGA) Promotion Programme	Ministry of Agriculture	1,100,000	1,100,000				GOK
19	Sugarcane Cottage Industry Promotion Programme	Ministry of Agriculture	4,340,000	4,340,000				GOK
20	Cotton Revitalization Programme	Ministry of Agriculture	5,257,720	5,257,720				GOK
21	Polytechnics and Vocational Support Programme	Ministry of State for Youth Affairs	122,700,000		40,000,000	82,700,000		GOK, CDF
22	OVCs FE Support Programme (Bursary, etc.)	Ministry of Education	8,100,000	8,100,000				GOK
23	Functional Adult Literacy Programme	Adult Education M of Gender,Culture and SS	35,000,000		10,000,000	20,000,000	5,000,000	GOK, CDF, LATF
24	Community Based Afforestation Programme	Ministry of Environment & Natural Resources	5,680,000	2,840,000	2,840,000			GOK
25	Rivers Protection Programme	Ministry of Environment &Natural Resources	1,900,000	700,000	1,200,000			GOK
26	Solid Waste Management Programme	Ministry of Health	58,800,000		10,800,000	36,000,000	12,000,000	GOK, CDF, LATF
27	Homa Bay Sewerage Improvement Programme	Lake Victoria South Water Service Board	29,000,000		5,500,000	23,500,000		GOK, CDF
28	Rural Electrification Programme	Ministry Of Energy	13,007,500			8,007,500	5,000,000	GOK, CDF, LATF
29	Community Based Roads Network Programme	Ministry Of Roads and Public Works	182,000,000		66,000,000	66,000,000	50,000,000	GOK, CDF, LATF
30	Trunk Road Improvement Programme	Ministry of Roads and Public Works	192,500,000		66,000,000	126,500,000		GOK, CDF
31	Community Policing Programme	Office Of The President	10,000,000		1,000,000	9,000,000		GOK, CDF
CostTotal Cost			1,560,875,820	71,870,320	391,878,000	846,377,500	250,750,000	
					1,489,005,500			

PART IV

THE PILOT PROGRAMMES

CHAPTER 1 INTRODUCTION

1.1 Rationale

Under this Study, implementation of the pilot programmes/ projects is a key to formulating the development plan that could really work on the ground. During Phase I, a draft development plan was prepared and a number of pilot programmes/ projects were identified, and Phase II put some of the identified programmes/ projects into practice. The lessons and experiences were fully utilized in converting the draft development plan into the final District Development Plan. Also, suggested through the implementation of the pilot programmes was a sound mechanism of implementing the Plan; so-called implementation disciplines. This part discusses the implementation of the pilot programmes/ projects.

1.2 Selection of the Pilot Programmes/ Projects

During a district level planning workshop held in late 2005, the participants identified some programmes/ projects which had higher priority, could be implemented without much external input and could be placed as short-term development programmes. These programmes were considered to try out as pilot programmes under this Study. Also, the Study Team considered some criteria in selecting the pilot programmes as follows:

- Select projects from strategies with higher priority in each development approach,
- Select projects which are considered to be effective in view of extension when implemented together with other projects, even if their priorities by their own are low,
- Consider implementing one as a part of suggested programmes in the District Development Plan because of the limited implementation period; 9 months for the actual implementation on the ground,
- Do not select projects for which technology has already been established even if it has higher priority than others (e.g. water supply etc.), as it does not require the piloting of new ideas but mainly budget only,
- Do not, in principle, select projects which are being implemented by other programmes (e.g. National Agriculture and Livestock Extension Programme supported by SIDA) in order not to duplicate taking into account scarce resources,
- Does not select large-scale public works or structure construction (e.g. flood mitigation project, road/ hospital construction, etc.), which are basically dependent on external resources and therefore difficult to implement in the pilot period, and
- Try to apply new technologies, which have already been established but not yet familiar in the Study area (e.g. push-pull methodology to combat striga weed and maize stalk borer).

Taking into account the above criteria, pilot programmes shown in Table 1.2.1 have been identified. There are 9 major types of pilot programmes or 13 pilot programmes in total including sub-programmes under the No.1 Centre Based Livelihood Improvement and No.2 Outreach Oriented Community Health Improvement Programme. Under this pilot implementation, the centre based approach is tried with the outreach oriented programmes hand in hand in order to create synergy effect. The relation to the overall development framework from which the pilot were curved out is shown in Figures 1.2.1 and 1.2.2 for each of the two districts.

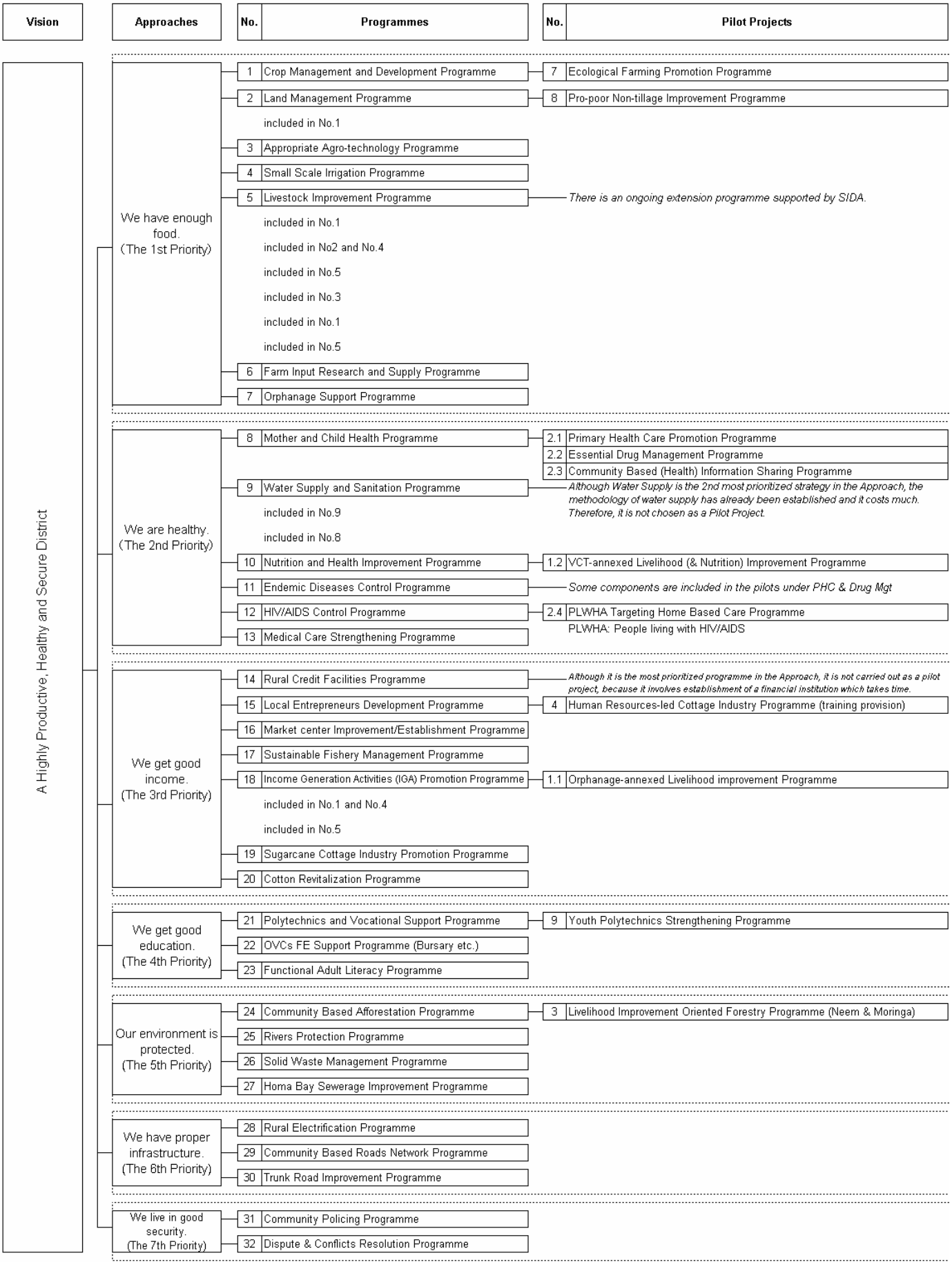
Table 1.2.1 Overall Schedule of the Pilot Programmes

		Pilot Programme	Nyando (places/batches)	Hama Bay (places/batches)	Location in Nyando District / Location in Homa Bay District	Year / Month
						2006 / Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec / 2007 / Jan Feb Mar
						200mm Rainfall 1,156mm (Homa Bay Town) 0mm Long Rain Short Rain
Centre Based	1.	**Centre Based Livelihood Improvement Programme**				
		1.1 Orphanage Annexed Livelihood Improvement Programme	○ (1 place)	○ (2 places)	Tonde S/L, God Nyithindo L., Muhoroni Div.	Prep'n
					North Kaganda S/L, South Kaganda S/L, Central Kanyadoto L., Nyarongi Div.	Implem'n
		1.2 VCT Annexed Livelihood (& Nutrition) Improvement Programme	○ (1 place)	○ (1 place)	Wangaya II S/L, North East Kano L., Miwani Div.	Prep'n
					Konyango S/L, Central Kabuoch L., Riana Div.	Implem'n
Outreach oriented	2.	**Outreach Oriented Community Health Imp't Prgrm**				
		2.1 Primary Health Care Promotion Programme	○ (3 batches)	○ (4 batches)	at same places of above 1.1 & 1.2	Prep'n
					at same places of above 1.1 & 1.2	Implem'n
		2.2 Essential Drug Management Programme	○ (1 batch)	○ (1 batch)	Tonde S/L, God Nyithindo L., Muhoroni Div.	Prep'n
					South Kaganda S/L, Central Kanyadoto, Nyarongi Div.	Implem'n
		2.3 Community Based (Health) Information Sharing Programme	○ (2 batches)	○ (3 batches)	at same places of above 1.1 & 1.2	Prep'n
					at same places of above 1.1 & 1.2	Implem'n
		2.4 PLWHA Targeting Home Based Care Programme	○ (3 batches)	○ (4 batches)	at same places of above 1.1 & 1.2	Prep'n
					at same places of above 1.1 & 1.2	Implem'n
	3.	**Livelihood Improvement Oriented Forestry Programme (Neem and Moringa)**	○ (3 places)	○ (5 places)	Upper Nyakach Div.	Prep'n
					Rangwe Div., Asego Div., Ndhiwa Div.	Implem'n
	4.	**Human Resource-led Cottage Industry Programme (Training Provision)**	○ (5 places)	○ (6 places)	4 reps. of one community each for all the 5 division	Prep'n
					4 reps. of one community each for all the 6 division	Implem'n
	5.	**Local Key Farmer-led Paddy Cultivation Extension Programme**	○ (3 places)		Nyando Div., Lower Nyakach Div.	Prep'n
						Implem'n
	6.	**Local Cotton Industry Promotion Programme (hand weaving and spinning)**	○ (1 place)		Ahero town (participants fr. Nyando div., L/Nyakach div , Siaya dis., Suba dis., Kajiado dis.)	Prep'n
						Implem'n
	7.	**Ecological Farming Promotion Programme (push-pull, etc)**		○ (6 places)		Prep'n
					all the 6 divisions in Homa Bay	Implem'n
	8.	**Pro-poor Non-tillage Improvement Programme**		○ (6 places)		Prep'n
					all the 6 divisions in Homa Bay	Implem'n
	9.	**Youth Polytechnics Strengthening Programme**		○ (3 places)		Prep'n
					Homa Bay YP(Asego Div.), Sero YP (Asego Div.), Langi YP (Ndhiwa Div.)	Implem'n
		Pilot Programme	Nyando (23)	Hama Bay (41)	Location in Nyando District / Location in Homa Bay District	Month / Year
						Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec / 2006 / Jan Feb Mar / 2007

Figure 1.2.1 Nyando District: Pilot Programmes in relation to the Development Framework

Vision	Approaches	No.	Programmes	No.	Pilot Projects
A District Enjoying Diversified and Sustainable Socio-economic Development	We get good income. (The 1st Priority)	1	Sugar Industry Strengthening Programme		*Although the programme is the most prioritized one, it is not chosen as a Pilot Project, because Kenya Sugar Research Foundation (KESREF) is developing early ripening*
		2	Small Holder Rice Irrigation Improvement Programme	6	Local Key Farmer-led Paddy Cultivation Extension Programme
		3	Income Generation Activities (IGA) Promotion Programme	1.1	Orphanage-annexed Livelihood Improvement Programme
		4	Livestock Improvement Programme		*There is an ongoing extension programme supported by SIDA.*
		5	Cotton Revitalization Programme	6	Local Cotton Industry Promotion Programme
		6	Cottage Industry Development Programme		
		7	Micro-Finance Establishment Programme		
		8	Small Scale Entrepreneur Promotion Programme	4	Human Resources-led Cottage Industry Programme (training provision)
		9	Appropriate Agro-Technology Programme		*There is an ongoing extension programme supported by SIDA.*
		10	Community Policing Programme		
		11	Sustainable Fishery Management Programme		
	We have enough and nutritious food. (The 2nd Priority)	12	Agriculture Extension Programme		*Although the Approach is ranked as the 2nd priority, the Government of Kenya is implementing Agriculture/Livestock Related Programmes with support of SIDA (e.g. Agricultural Development and Extension, Soil Conservation, etc.). Therefore, those are not chosen as a Pilot Project.*
		13	Flood Control and Prevention Programme		
		14	Land Reclamation Programme		
			included in No.4		
			included in No.12		
		15	Orphanage Support Programme		
		16	Soil and Water Conservation Programme		
	We are healthy. (The 3rd Priority)	17	Water Supply and Sanitation Programme		*Although Water Supply and Sanitation Improvement is the most prioritized strategy in the Approach, the methodology has already been established and it costs much. Therefore, it is not chosen as a Pilot Project.*
			included in No.17		
		18	Primary Health Care Promotion Programme	2.1	Primary Health Care Promotion Programme
				2.2	Essential Drug Management Programme
				2.3	Community Based (Health) Information Sharing Programme
		19	Health Services Strengthening Programme		
		20	Nutrition And Health Improvement Programme	1.2	VCT-annexed Livelihood (&Nutrition) Improvement Programme
		21	Social Amenities Promotion Programme		VCT: Voluntary Counseling and Testing
	Our environment is protected. (The 4th Priority)	22	Community Based Afforestation Programme	3	Livelihood Improvement Oriented Forestry Programme (Neem & Moringa)
		23	Community Based Flood Protection Programme		
		24	Waste and Disposal Management Programme		
		25	Alternative Energy Promotion Programme		
			included in No.16		
		26	Environment Awareness Campaign Programme		
			included in No.26		
	We control and manage cases of HIV/AIDS. (The 5th Priority)	27	HIV/AIDS Awareness And Control Programme		
		28	VCT and PMCT Upscaling Programme		
			included inNo.19		
		29	Integrated Home Based Care Programme	2.4	PLWHA Targeting Home Based Care Programme
	We get quality education. (The 6th Priority)	30	School Materials Procur't & Improv't Programme		PLWHA: People living with HIV/AIDS
		31	Functional Adult Literacy Programme		
	Infrastructure is improved. (The 7th Priority)		included in No.23		
		32	Rural Access Road Improvement Programme		
		33	Squatters Settlement Programme		
		34	Rural Electrification, It & Telecommunication Establishment Programme		

Figure 1.2.2 Homa Bay District: Pilot Programmes in relation to the Development Framework



1.3 Consensus Making Process

Together with some ideas by the Study Team taking into account our selection criteria aforementioned, the pilot programmes were officially presented to the Steering Committee in December 5, 2005. Then, the Study Team started consensus building with the district respective officials, concerned CBOs, etc. from January to March 2006. The consensus building process entailed some planning workshops and also several meetings during which activities, outputs, objectives, inputs, budget, time schedule, etc. were identified in a participatory manner.

1.3.1 Places and Responsible Persons Agreed at Kick Off Workshops

Kick off workshops for the formulation of pilot programmes were held on January 26 & 27 and February 14 & 15, 2006 for Nyando and Homa Bay Districts respectively, involving the district development stakeholders who had participated in the planning workshop held in late 2005. The places for the pilot programmes were agreed, taking into distribution over all the districts, with the responsible persons in charge as shown in the following tables:

Table 1.3.2 Places and Responsible Persons by Pilot for Nyando District

Pilot Programme	Division	Responsible
1.1 Orphanage-annexed Livelihood Improvement + No.2.1-2.4	Muhoroni, Jaber	Jaber MC, SDA, DAEO, DLEO, DPHO, HBC, DFiO, DfoO, PA, 3CHWs
1.2 VCT-annexed Livelihood & Nutrition improvement + No.2.1-2.4	Miwani, Masago MC	Masogo HC MC, DAEO, DLEO, SDA, DHEO, NU, DPHO, HBC, PA, 3CHWs
2.1 Primary Health Care Promotion Programme	Ditto	Ditto
2.2 Essential Drug Management Programme	Ditto	Ditto
2.3 Community Based (Health) Information Sharing Programme	Ditto	Ditto
2.4 PLWHA Targeting Home Based Care Programme	Ditto	Ditto
3. Livelihood Improvement Oriented Forestry Programme	U/Nyakach Nyarande	DfoO, VI Agro, DAEO
4. Local Key Farmer-led Paddy Cultivation Extension Programme	L/Nyakach Gem Rae	DAEO, IO, DFiO
5. Local Cotton Industry Promotion Programme	-	W/ cotton forum
6. Human Resource-led Cottage Industry Programme	-	Leaders (5 communities)

Table 1.3.3 Places and Responsible Persons by Pilot for Homa Bay District

Pilot Programme	Division	Responsible
1. Orphanage-annexed Livelihood Improvement	Nyarongi, Rapedhi Lwala Orphanage	Div.PHO, DAEO, DLEO, SDA, PA, Manager of the Ins.
2. VCT-annexed Livelihood & Nutrition improvement	Riana, Kinda Women Group	Div. PHO, DAEO, DLEO, SDA, CACC, PA, Manager of the Ins.
2.1 Primary Health Care Promotion Programme	ditto	Ditto
2.2 Essential Drug Management Programme	ditto	Ditto
2.3 Community Based (Health) Information Sharing Programme	ditto	Ditto
2.4 PLWHA Targeting Home Based Care Programme	ditto	Ditto
3. Youth Polytechnics Strengthening Programme	Homa Bay, Sero and Langi YPs	PM, DATO, DEO, DEO, PA.
4. Livelihood Improvement Oriented Forestry Programmes	Asego, Ndhiwa, Rangwe	DFO Forest, DAEO, DEO Environment, DSDO, PA.
5. Ecological Farming Improvement Programmes	All division	Into NALEP/ DAEO,
6. Pro-poor Non-tillage Improvement Programme	All divisions	Into NALEP/ DAEO, RTDC
7. Human resources-led Cottage Industry Programme	All divisions	Leaders of 6 communities

1.3.2 Pilot Project Budget

The budget was firstly prepared by the stakeholders during the relevant planning workshops, and then the Study Team reviewed and made some modifications taking into prevailing market price in case of materials/ equipment available in the market, limited pilot implementation period, budget limitation suggested by the JICA Headquaters, etc. Table 1.3.3 shows the budget by pilot programme which was scrutinized and approved by the JICA Headquaters.

Table 1.3.4 Budget Approved for the Pilot Programmes

Pilot Programme/Project	Nyando Budget, Ksh	Homa Bay Budget, Ksh	Total Budget, Ksh
1.1 Orphanage-annexed Livelihood Improvement Programme	847,767	1,146,638	1,994,405
1.2 VCT-annexed Livelihood (Nutrition) Improvement Programme			
2.1 Primary Health Care Promotion Programme	1,418,745	1,915,165	3,333,910
2.2 Essential Drug Management Programme			
2.3 Community Based (Health) Information Sharing Programme			
2.4 PLWHA Targeting Home Based Care Programme			
3. Livelihood Improvement Oriented Forestry Programme	133,595	158,815	292,410
4. Human Resources-led Cottage Industry Programme	841,485		841,485
5. Local Key Farmer-led Paddy Cultivation Extension Programme	248,785	-	248,785
6. Local Cotton Industry Promotion Programme	1,042,660	-	1,042,660
7. Ecological Farming Promotion Programme	-	633,509	633,509
8. Pro-poor Non-tillage Improvement Programme			
9. Youth Polytechnics Strengthening Programme	-	1,350,283	1,350,283
10. Evaluation Workshop	538,480	671,760	1,210,240
Ground Total	**4,650,775**	**6,296,913**	**10,947,687**
Ground Total	**10,947,687**		

Note: Above figure does not include necessary expenses for the Study Team's logistics.

1.4 Overall Schedule

Since the overall study period is specified in the Scope of Work agreed between the two governments, the completion of the pilot should also be in line with the completion of the Study, which was early March 2006 (draft final report was presented in May 2007, but activities in Kenya should have been finished beforehand, which was early March). Given this time frame, the schedule of the pilot implementation is given as follows; actual implementation period is 9 months from June 2006 to February 2007.

CHAPTER 2 THE PILOT PROGRAMMES

Detail report of each pilot programme is attached as Appendix VII. In this main report, the summary of the pilot activities is described.

2.1 Objectives of Pilot Programmes

Objectives of the pilot programmes are as follows:

No.1 Centre Based Livelihood Improvement Programme:

- The target orphanages are financially supported through their own income generation activities together with the assistance of their sponsors,
- Learning venue for IGAs is provided to the villagers residing nearby communities of the target orphanages by inviting them to the IGA trainings held at the orphanages, and
- Communication network between communities and the orphanages is strengthened through the above process.

No.2 Outreach Oriented Health Improvement Programme:

- Community based primary health care management is improved by increasing the number of community health workers (CHWs).
- Essential drugs are availed in the target sub-locations by equipping already trained CHWs on PHC with knowledge of prescribing essential drugs.
- Information mainly for critical health issues prevalent in the community is shared amongst the community members, thereby direction to move to better situation as community is spelled out.
- Outreach of home base care services is extended by increasing the number of home based care trainers.

No.3 Livelihood Improvement Oriented Forestry Programme:

- People plant trees that are useful for medical care, or nutritious supplement, and
- People utilize and sell these useful trees to improve their living conditions.

No.4 Human Resource-led Cottage Industry Programme:

- Potential leaders of the communities are trained for any skills available to learn in Kenya, and
- The potential leaders disseminate the skills learned from the trainings to the community members.

No.5 Local Key Farmer-led Paddy Cultivation Extension Programme:

- Paddy cultivation techniques of the community are improved through acquiring the techniques from the key farmers who learned them at KATC, and
- Income of paddy growers increases by adopting the above techniques.

No.6 Local Cotton Industry Promotion Programme:

- Cotton is locally processed into high value added products, e.g. hand woven textiles, hand spun thread by the community members, and
- Thereby the income of community members engaged in the local industry is increased.

No.7 Ecological Farming Promotion Programme:

- Ecological farming techniques, e.g. push-pull method, are adopted by farmers of the project area, and
- Crop production of the farmers is stabilized by applying the ecological farming techniques.

No.8 Pro-poor Non-tillage Improvement Programme:

- Non-tillage farming method is adopted by farmers who have no drafting animals, and

- Crop production of the farmers is stabilized by applying the non-tillage farming method.

No.9 Youth Polytechnics (YPs) Strengthening Programme:

- Financial viability of the targeted Youth Polytechnics is improved by taking orders and selling their products in the local communities, and
- Network of Youth Polytechnics in the local communities is developed through the above activities.

2.2 Major Activities and Inputs

Following Tables 2.2.1 to 2.2.9 summarize the activities / inputs for each pilot programme. Considering the short period of the pilot and sustainability toward district-wide development, most of the activities were to provide mainly trainings except for the programmes of cotton indutry and youth polytechnics. Relatively larger amount of equipment and tools were procured to implement these two programmes as compared to other pilot programmes.

Table 2.2.1 Major Activities / Inputs of the Pilot Programmes (1)

Pilot Programme	No.1: Centre Based Livelihood Improvement Prgoramme
Target Area / Instituions	Nyando District (2 sites): Jaber Orphanage in Muhoroni Division and Masego HC in Miwani Division Homa Bay District (3 sites): Rapehdi and Nguku Orphanages in Nyarongi Division, and KINDA VCT in Riana Division
Planned Activities	Trainings: 1. Kitchen Gardening: 25 days in Nyando and 22 days in Homa Bay 2. Poultry: 16 days in Nyando and 17 days in Homa Bay 3. Bee keeping: 3 days in Nyando and 12 days in Homa Bay 4. Dairy goat: 6 days in Nyando and 21 days in Homa Bay 5. Community animal health: 4 days in Nyando 6. Improved jiko: 1 day in Homa Bay 7. Value addition: 13 days in Nyando and 20 days in Homa Bay Total 160 days
Inputs	From Study Team (Government): Trainers' fee, vegetable seeds for kitchen gardening, ingredients for value addition, cockles (3 – 5 per site x 5 sites), pullets (36 – 40 per site x 5 sites), beehives (5 per sites x 5 sites), dairy goats (1 buck and 2 does per site x 5 sites), materials for dairy goat and poultry units From Community: Part of materials for dairy goat and poultry units, and labor for building the units

Table 2.2.2 Major Activities / Inputs of the Pilot Programmes (2)

Pilot Programme	No.2: Outreach Oriented Community Health Improvement Programme
Target Area / Instituions	Nyando District (2 sites): Tonde Sub-location (Jaber) in Muhoroni Division and Wangaya II Sub-location (Masego HC) in Miwani Division Homa Bay District (3 sites): North Kaganda Sub-location (Rapehdi) and South Kaganda Sub-location (Nguku) in Nyarongi Division, and Konyango Sub-locaiton (KINDA VCT) in Riana Division
Activities	Trainings: 1. PHC promotion: 5 days x 3 batches in Nyando and 4 batches in Homa Bay 2. Essential drug management: 5 days x 1 batch in Nyando and 2 batches in Homa Bay 3. Health information sharing: 5 days x 2 batches in Nyando and 3 batches in Homa Bay 4. HBC programme: 11 days x 3 batches in Nyando and 4 batches in Homa Bay Total 152 days
Inputs	From Study Team (Government) Trainer's fee, allowance for trainees, essential drugs as seed (2 sites), gumboots & bicycles for CHW, and chalkboards (5 sites)

Table 2.2.3 Major Activities / Inputs of the Pilot Programmes (3)

Pilot Programme	No.3: Livelihood Improvement Oriented Forestry Programme
Target Area / Instituions	Nyando District: 3 CBOs in Upper Nyakach Division Homa Bay District: 2 CBOs in Rangwe Division, 1 CBO in Asego Division and 2 CBOs in Ndhiwa Division (Total 8 CBOs which grow tree seedlings)
Activities	Distribution of seeds: Neem, moringa, grevillea etc. to 3 CBOs in Nyando and 5 CBOs in Homa Bay Trainings: Tree nursery management for 8 CBOs, forest products utilization for 3 CBOs, and grafted mango for 4 CBOs (Total 15 days) (8 CBOs are supposed to produce seedlings, disseminate usefulness of the introduced trees and sell them to community
Inputs	From Study Team (Government): Seeds of moringa (5.9kg), neem (3.1kg), grevillea (0.8kg) and pots (70kg) Trainer's fee From CBOs: Space for tree nursery, labor to grow seedlings

Table 2.2.4 Major Activities / Inputs of the Pilot Programmes (4)

Pilot Programme	No.4: Human Resource-led Cottage Industry Programme
Target Area / Instituions	4 community representatives each from 11 divisions of Nyando and Homa Bay Districts (total 44 representatives)
Activities	Assisting the representatives in attending training courses (baking technlogy (14 people), fruit & vegetable processing (8), milk processing (7), grain processing (3), poultry keeping (6), dairy animal husbandry (4), beekeeping (1) and fish preservation & processing (1)) (the representatives are supposed to start business on their own)
Inputs	From Study Team (Government): Logistics support (trainer's fee, transportation and accomodation) From Community: Any materials and capital to start business

Table 2.2.5 Major Activities / Inputs of the Pilot Programmes (5)

Pilot Programme	No.5: Local Key Farmer-led Paddy Cultivation Extension Programme
Target Area / Instituions	3 rice irrigation schemes (Awach Kano, Nyachoda and Gem Rae) Total 1,067 farmers (280 in Awach Kano, 387 in Nyachoda, and 400 in Gem Rae)
Activities	Trainings and demonstration: 1. Scheme management training: 5 days 2. Classroom training on new rice cultivation technlogy: 24 subjects x 2 sites and 8 subjects x 1 site 3. Demonstration: 9 – 11 demonstrations x 3 demo farms
Inputs	From Study Team (Government): Trainer's fee, inputs for demonstration (plowing, rice seeds, fertilizers, materials for 3 levelers, 24 push-weeders and a threshing stand)

Table 2.2.6 Major Activities / Inputs of the Pilot Programmes (6)

Pilot Programme	No.6: Local Cotton Industry Promotion Programme
Target Area / Instituions	Local NGO (CREAM) in association with Ebenezer, a faith based institute, people who are keen on cotton processing (weaving, tie & dying etc.) in Nyando District
Activities	Trainings: 6 weeks x 1 batch (1. hand spinning, 2. fabric handloom weaving, 3. hand frame weaving (carpet making), 4. tie & dying) Cotton product promotion: Trainees are supposed to produce and sell cotton products using the procured equipment.
Inputs	From Study Team (Government): 5 spinning wheels, 1 winder, 2 drum carders, 4 hand looms, 6 leeds, 8 flying shuttles, 1 large winder, 2 splooers and accessories, and trainer's fee From Local NGO: Space for placing equipment and logistics support for trainees

Table 2.2.7 Major Activities / Inputs of the Pilot Programmes (7)

Pilot Programme	No.7: Ecological Farming Promotion Programme
Target Area / Instituions	All the 6 divisions in Homa Bay District, where damages from striga and maize stem borer are prevalent
Activities	Trainings for agriculture officers: 3 days on push-pull farming method at ICIPE (agriculture officers are supposed to disseminate the technology to the farmers in their jurisdictions as a part of their recurrent activities)
Inputs	From Study Team: Logistics for training, desmodium seeds (60kg) for establishing push-pull farm From Government: Logistics for dissemination

Table 2.2.8 Major Activities / Inputs of the Pilot Programmes (8)

Pilot Programme	No.8: Pro-poor Non-tillage Improvement Programme
Target Area / Instituions	All the 6 divisions in Homa Bay District, where farmers have difficulty in renting animal draft in terms of finance
Activities	Trainings for agriculture officers: 3 days on non-tillage method (conservation agriculture) (agriculture officers are supposed to disseminate the technology to the farmers in their jurisdictions as a part of their recurrent activities)
Inputs from Study Team	From Study Team: Trainer's fee, and logistics for training From Government: Seeds for cover crops (mucuna (20kg) and dolichos lablab (40kg)), and logistics for dissemination

Table 2.2.9 Major Activities / Inputs of the Pilot Programmes (9)

Pilot Programme	No.9: Youth Polytechnics Strengthening Programme
Target Area / Instituions	3 Youth Polytechnics in Homa Bay District (Homa Bay, Sero and Langi)
Activities	Establishment (Enhancement) and operation of production unit: Homa Bay YP: Motor vehicle mechanics and carpentry & jpinery Sero YP: Garment making, carpentry & joinery and welding & fabrication Langi YP: Tailoring & dress making, carpentry & joinery and metal work – welding Trainings for YP instructors: 5 days x 1 batch
Inputs	From Study Team: Equipment & tools for: motor vehicle mechanics (1 wheel alignment, 2 spray guns, 1 compressor and 1 welding machine), carpentry (4 sash cramps, 3 woodworking tool kits, 1 molding machine, 1 band saw, and 2 jack planes), garment / tailoring (13 sewing machines, 3 over-locking machines, 2 knitting machines, and 3 iron boxes), and welding (1 welding machine, 2 bench vices, 1 generator welder, 1 drilling machine and 1 grinder), and trainer's fee

2.3 Major Outputs

Pilot programme implementation was completed by the end of February 2007. Activities planned have been mostly carried out with some modifications. Modifications made were; establishment of sub-learning centres for kitchen garden under pilot No.1, additional training on health information sharing and drug management under pilot No.2, establishment of additional demonstration farms under pilot No.5 amongst others. Following are the summary of major achievement by pilot programme:

No.1 Centre Based Livelihood Improvement Programme:

- 5 learning centres established for livelihood improvement
- 18 sub-learning centres for kitchen garden established
- Total 4,162 participant-day (1,312M, 2,849F) training done
- About 70 % of the participants tried simple skills such as kitchen garden and value addition, while for bee keeping and dairy goat which require certain capitals, only 20% tried at most.

No.2 Outreach Oriented Health Improvement Programme:

- 177 Community Health Workers (CHWs) established (51M, 126F)
- 205 Home Based Care Trainers of Training (HBC TOTs) established (53M, 152F)
- 2 community pharmacies established (Muhoroni and Nyarongi Divisions)
- 5 health information sharing chalkboards established
- Attitude change happened such as openly disclose and talk about HIV/AIDS (at an occasion, 4 out of 10 interviewees disclosed they are HIV positive voluntarily), more use of condom including youths, and discreet sexual behaviour for youth, etc.

No.3 Livelihood Improvement Oriented Forestry Programme:

- Tree nurseries at target 8 CBOs strengthened, with necessary materials provided
- Total 240 participant-day (130M, 110F) training done
- 18,030 tree seedlings produced (8,130 Moringa, 5,450 Neem, 4,150 Grevillea)
- 2,845 tree seedlings sold to community members (970 Moringa, 700 Neem, 1,175 Grevillea)
- 3,697 tree seedlings planted in farms, school, etc. (1,205 Moringa, 958 Neem, 1,534 Grevillea)

No.4 Human Resource-led Cottage Industry Programme:

- 44 community representatives (21M, 23F) attended and completed their interested training course (8 different courses in total)
- 14 people or 32% have started small-scale business as of February 2007 e.g. selling cakes, mandazi, eggs, and grain porridge

No.5 Local Key Farmer-led Paddy Cultivation Extension Programme:

- 22 committee members from 3 irrigation schemes trained for scheme management
- 108 farmers (80M, 26F) trained by classroom-type training on new rice cultivation technology
- On average 25 farmers per time attended the demonstration (total 30 demonstrations in 3 sites)
- 255 farmers out of 1,067 or 24% of the target farmers adopted line transplanting
- 46 farmers out of 70 farmers or 66% of the farmers whose data were collected increased yield from last crop season by adopting new technology (12 farmers or 17% of surveyed farmers increased the yield 150% to 200% and 13 farmers or 19% of surveyed farmers more than doubled the yield)
- Local key farmers have conducted trainings in other irrigation schemes with other collaborators

No.6 Local Cotton Industry Promotion Programme:

- 22 participants (7M, 15F) trained on cotton value addition for 6 weeks
- 1 production centre for cotton value addition established, with 5 spinning wheels, 4 looms, etc.

- About Ksh 50,000 sales (Ksh35,000 in net) done at the production centre for about 4 months
- 11 participants (7M, 4F) newly trained at the production centre, financed by MOA

No.7 Ecological Farming Promotion Programme:

- 24 agriculture officers in Homa Bay District trained on Push-pull method at ICIPE
- 619 people trained by the above 24 agriculture officers on push-pull method
- 101 demonstration farms for push-pull method established.

No.8 Pro-poor Non-tillage Improvement Programme:

- 24 agriculture officers in Homa Bay District trained on conservation agriculture
- 604 people trained by the above 24 agriculture officers on conservation agriculture
- 40 demonstration farms for conservation agriculture established.

No.9 Youth Polytechnics (YPs) Strengthening Programme:

- Production units for 3 target YPs established, with necessary equipment and tools provided
- 14 YP committee members and instructors trained in business management for 5 days
- Net profits of Ksh 170,000, 203,000, 17,000 for Homa Bay YP, Sero YP, Langi YP from June 2006 to January 2006 achieved out of the production
- Enrollment increased by 8%, 49% and 13% for Homa Bay YP, Sero YP and Langi YP from 2005 to 2006

2.4 Issues Arisen

This Section summarizes the issues arisen during the implementation of the pilot programmes. Major issues that could be more generalized toward district development planning and implementation disciplines are described in the following chapter 4. Hence in this section, rather specific issues in each particular pilot programme are summarized.

No.1 Centre Based Livelihood Improvement Programme:

- Suggestions given by the participants to improve the trainings are: more frequent trainings inclusive of repetition of same training, inclusion of supervision and more demonstration, further down to community level. This suggests that the participants have been given very rare opportunities of learning in their past. Questionnaire results revealed that there were only 1 – 3 participants, out of every 10 participants, who have been given some training opportunities in the past. Given very precious opportunity to learn, it was observed during the training sessions that they were in fact very much eager to learn.
- However, a tendency of not giving critical observation to trainers was seen across almost all the training sessions. Participants always gave very high level of satisfaction to training sessions as shown in Figure 2.4.1[1] even when JICA Team notified a lot of rooms to improve. This may be attributed to a gap of education level between the participants, who are mere villagers, and trainers, or less opportunity of being given trainings so far thereby appreciating very much. Such attitude of not giving critical comments and observation may hinder us from further trying to improve the training.

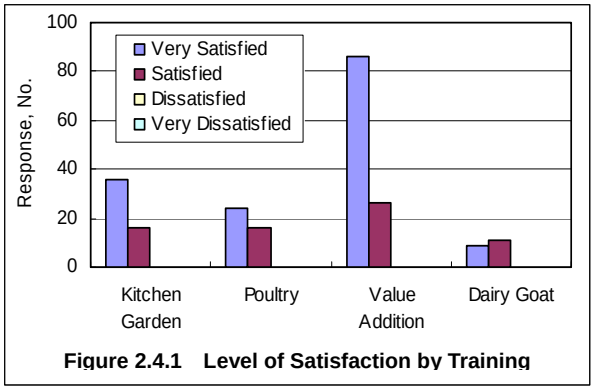


Figure 2.4.1 Level of Satisfaction by Training

[1] Almost every time after a topic was finished, we carried out simple questionnaire survey covering randomly sampled 10 participants each. Figure 2.4.1 summarizes the replies from a total of 234 interviewees.

- For the sake of public equity, i.e. giving training opportunities for more people, training venue should be further going down to village levels rather than conducting trainings just at the center. Of course, going down to village level requires more budget. Here suggestion is that simple skills such as kitchen garden and value addition should be more tried even at the cost of sophisticated ones such as bee keeping and dairy goat which usually require more capital. Figure 2.4.2[2] shows the percentage of the participants who have actually applied what they learned. For such simple skills as kitchen garden and value addition, about 70% of the participants actually tried while only less than 20% tried bee keeping and dairy goat which require certain capital. Suggestion here is that, to extend outreach, we should go down to village level with such simple skills as kitchen garden and value addition and probably including poultry to disseminate.

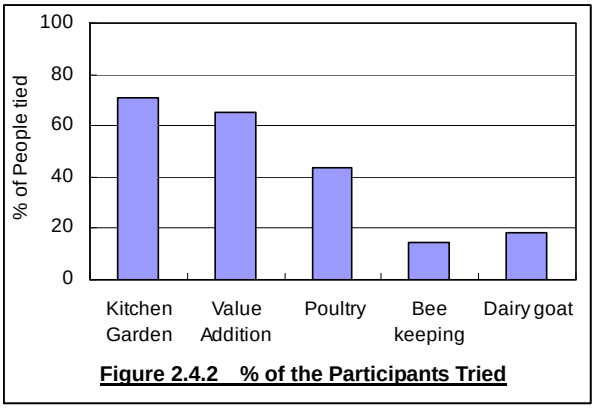


Figure 2.4.2 % of the Participants Tried

- According to a questionnaire survey asking what changes have happened upon trying out what they learned, one may notify that participants are very concerned about saving money or income increase out of kitchen garden, value addition, poultry, etc. as shown in Table 2.4.1. They are also very much concerned about family happiness, and this may be related to the fact that about 70 % of the participants were women. Such skills as kitchen garden, value addition and poultry are not difficult to try but can be a means to earn immediate income even though the amount is not big. What villagers, especially women, need is such means that they can earn profit easily. We should put more emphasis on such means, which can easily generate money, rather than big projects which need longer time to mature for harvest.

Table 2.4.1 Changes Which Happened in their Life Upon They Tried out What They Learned

Changes which happened upon they tired out what they learned	Reply (out of 150 interviewees)
1. Now not spend money to buy vegetables, rather saving out of selling.	36
2. Now not spend money to buy juice, jam and/or cakes, better income.	19
3. Poultry diseases reduced, Have more and health chickens.	12
4. Happy family enjoying juice, jam.	9
5. Happy family taking a balanced diet.	6
6. Improved farming methods.	5
7. Family and neighbors appreciated what I made for them.	3
8. More income from poultry.	2
9. Improvement in vaccination on poultry.	2
10. Neighbours now want to vaccinate their local poultry.	2
Dissemination from the participant to neighbors	
1. Community started kitchen garden.	9
2. Neighbor practiced, neighbor came to my house.	3
3. Neighbors leaned how make jam from me.	1

No.2 Outreach Oriented Health Improvement Programme:

- Training participants tend to show high satisfaction in front of trainers same as observed during livelihood training sessions. Therefore, trainers should always try to get feed back not only

[2] From January to February 2007, an evaluation questionnaire was administered covering a total of 150 samples. As there are five places to have tried the livelihood improvement pilot programme, 30 each questionnaires were administered per site.

from the trainees' direct comments but also through careful observation of trainees' attitude to improve the training contents.

- Difficulties for CHW to implement among being taught were 'family planning', 'community based rehabilitation', 'HIV/AIDS control' and 'convincing the sick to go for VCT test' in PHC training, 'HIV/AIDS test and awareness creation' in Essential Drug Management training, and 'how to approach the patients from their side' in HBC training. It is in many cases found that HIV/AIDS related issues are still difficult for CHWs to deal with community people.

- Difficulties relative to health promotion activities by CHW/HBC TOTs can be summarized in two; one is volunteerism and the other one is recognition by community members, local leaders, etc. Regular interaction between health officers, trained CHWs/ HBC TOTs and local authorities are strongly recommended. In addition, to introduce trained CHWs/ HBC TOTs to community members, there should be a baraza or special occasion organized by local leaders with the divisional PHO in charge. In fact, every time we finished PHC and HBC trainings, we together with PHO and local leaders arranged a special occasion to introduce CHWs and HBC TOTs to community members. By doing this, they became recognized by the community members. Figure 2.4.3 shows a questionnaire survey results of how much they think they are recognized by the community members. Since they were official introduced to the community members, they strongly feel they are well recognized by the community members. Although how long this feeling lasts depends on how much she/he continues the voluntary work in their community, at least such high recognition can generate motivation to work and thereby reducing drop-out of CHWs and HBC TOTs.

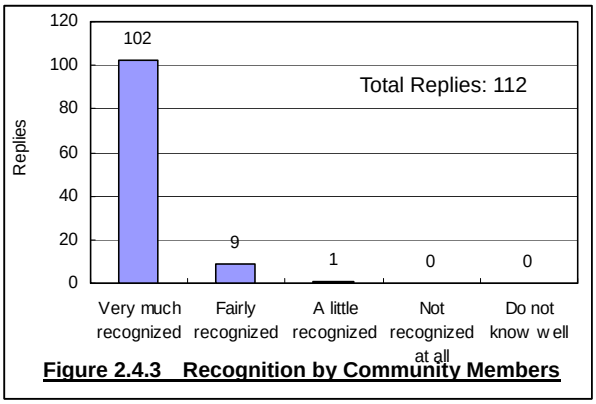


Figure 2.4.3 Recognition by Community Members

- After the official introduction, CHWs and HBC TOTs started their work. Figure 2.4.4 shows how many times they talked about community health and HIV/AIDS publicly, and Table 2.4.2 lists up the places where they talked. Figure 2.4.4 shows about 10% of the CHWs/HBC TOTs did not speak about health/HIV in a public occasion but the rest, namely 90% of them, at least tried publicly to talk about. Surprisingly about 30 % of the CHWs/HBC TOTs have already talked over 10 times in about 3 to 6 months after they received the training. This suggests talking about health/ HIV may be already becoming a routine work. From Table 2.4.2, they mostly talk about health/ HIV issues at Balaza (public gathering) and church. One thing unique between the two districts is that CHWs in Nyando District

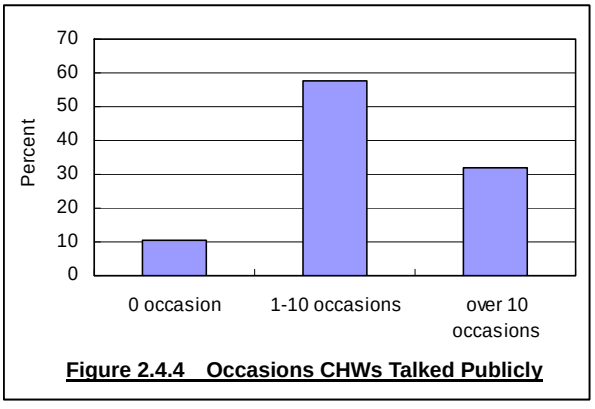


Figure 2.4.4 Occasions CHWs Talked Publicly

Table 2.4.2 Places CHWs Talked Publicly

Place they talked publicly	No, (%)
Baraza (Public Gathering)	95 (38%)
Church	78 (31%)
Burial	26 (10%)
School	23 (9%)
CBO/ Group Gathering	17 (7%)
Market	2 (1%)
Others	12 (8%)

talk more at church than at balaza while in Homa Bay they talk more at balaza than at church. It was heard in Miwani Division of Nyando District that nowadays few people attend balaza. Nyando people can be said they are living more contemporary than Homa Bay people, which may explain why there are fewer people in balaza of Nyando District. In addition, balazas are often dominated by men, which makes difficult for female CHWs to talk about sensitive issues like usage of condom, etc. Table 2.4.2 suggests that health promotion activities should well be coordinated with church leaders, people in charge of burial, and school teachers in addition to area chiefs in charge of balaza.

- CHWs and HBC TOTs saw a lot of changes that took place in their community upon commencement of their activities. Table 2.4.3 summarizes the changes they saw; most commonly recognized change is related to sanitation and environment improvement in their community. Pointed out is positive change related to HIV/AIDS issues such as; more people turn up for VCT test, increase in condom usage, more accepting their status even if it is HIV positive, etc. One thing, which surprised a JICA team member, is that 4 out of 10 interviewees whom the team member met on that day openly disclosed their HIV status which was positive. Not only JICA but also many organizations, including of course GOK, are now engaged in HIV combating efforts. Through these efforts, people have become very familiar to what the HIV/AIDS is and how to treat or at least how to live with HIV/AIDS positively. As people become familiar to this disease, more people start talking about this disease positively and not in a stigmatizing way. One may say that stigma may no longer be so big as is said; or rather it originates in the relationship between the HIV positive person and others whom the person fears to know his/her status. Likewise, such was of openly discussing their status would facilitate peer monitoring and follow up amongst those HIV positive already on ART.

Table 2.4.3 Changes Which Happened in their Life Upon CHWs/HBC TOs Activities

Changes which happened after CHWs/HBC TOTs started the Work *(bold & italics are related to HIV/AIDS)*	Reply (out of 150 interviewees)
1. Sanitation/environment improved (toilet const'n, dish rack, etc.)	61
2. Villagers turn for VCT test	***36***
3. Using treated water	18
4. Increase in condom usage	***10***
5. Increased use of insecticide treated net	9
6. Common diseases, including malaria & diarrhea, reduced	8
7. Visit hospitals	6
8. More accepting their HIV status	***6***
9. Community started talking about HIV/AIDS openly	***5***
10. Change of sexual behaviour for youth	***4***
11. Give birth in hospitals	4
12. Started disclosing their HIV status openly	***3***
13. Aware that HIV/AIDS is not a believe but a diseases	***2***
14. More aware of health	2
15. Children get vaccinated	2
16. Wife inheritance is on decline	2

No.3 Livelihood Improvement Oriented Forestry Programme:

- To acquire quality seeds, we must keep in mind the necessity to confirm the origin, date of yield, condition of storage etc. since seeds supplied even by very famous institutes sometimes fail to germinate.
- It is recommended that we should select the seeds from the area of similar climate to the target area to well establish the tree.
- Tree nurseries should be located near perennial water source because tree seedlings needs a

period longer than the period of rainy season in the Study area, otherwise the nursery will face water shortage.

- The difference of the sale among species is due to that of popularity in the area. Grevillea, for example, has been well known as timber tree in the areas and hence the sale was the biggest, on the other hand, the other two species are comparatively new therefore the sale was small (see Figures 2.4.5 and 2.4.6). Therefore, it is recommended to adopt different extension approaches according to the popularity of the tree in the area; namely, to put more emphasis on awareness campaign when we disseminate new tree species.

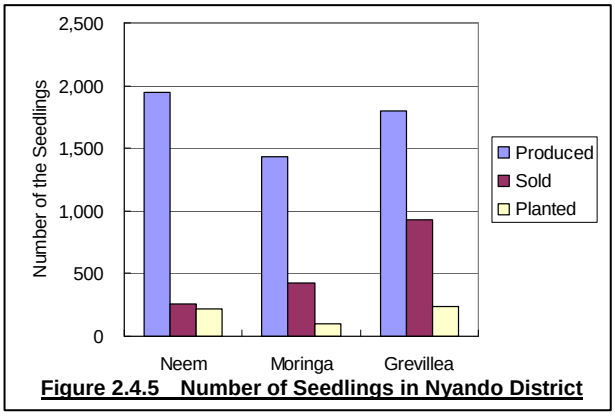


Figure 2.4.5 Number of Seedlings in Nyando District

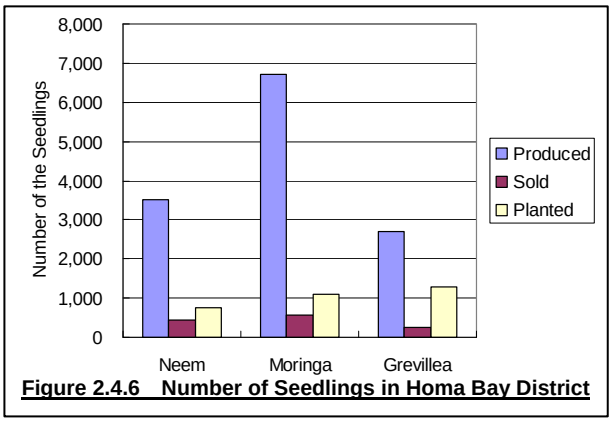


Figure 2.4.6 Number of Seedlings in Homa Bay District

- Most community members cannot easily access to the tree nurseries of the Government, which are located in the centers of the divisions, and hence the nurseries of the CBOs are important tree seedling sources for the people in most rural areas. It is recommended to support potential CBOs to be the tree seedling production centers in the community.
- Regarding the limited human and financial resources of the Forestry Department, it is recommended for the department to strengthen the collaboration with other ministries and NGOs, e.g. the Ministry of Agriculture, etc.

No.4 Human Resource-led Cottage Industry Programme:

- One issue to implement this Pilot was how to select community representatives. It is envisaged from the pilot experience that the traditional system, namely baraza organized by area chief and clan elders could work better in selecting right representatives than the selection done by external agencies.
- We should carefully consider the contents of the trainings if they are possible to implement for the community people with their financial capacity and also study about the financial capacity of trainees before the selection of training courses, otherwise the trainees could be discouraged to discharge their own initiative and be oriented again to seek external aids.

No.5 Local Key Farmer-led Paddy Cultivation Extension Programme:

- When establishing a demonstration farm, it would be necessary to agree with the owners of the farm on their role, e.g. land owner is to offer light meal to farmers who work for his farm though they do as a mean of learning, so that everybody would feel fair and happy to work for the demonstration farm.
- Continuous extension activities more than one crop season would be effective, because 1) some farmers have the attitude of wait and see other's result as their risk management, 2) new technologies cannot always indicate better outputs due to external factors such as water shortage, and 3) some farmers may not be able to capture the correct knowledge about the new technologies at once.

- Women are mostly the actual farming managers or laborers vis-à-vis men are mostly landowners. Therefore, gender consideration in disseminating new technologies should be considered, e.g. increasing women attendance in trainings. Children are also found majority of transplanting workers (81% of the work is borne by upper primary or secondary pupils as shown in Table 2.4.4). It is, therefore, suggested that the extension officers should teach children at school on new rice cultivation technologies. Table 2.4.4 shows the distribution of labor in paddy cultivation as a result of questionnaire survey for 120 farmers. As the table shows women labor occupies 44% (11% by own, 33% by hired) followed by children (7% by own, 24% by hired).

Table 2.4.4 Distribution of Labor by Operation

Operation	Men		Women		Children		Total	
	Own	Hired	Own	Hired	Own	Hired	Own	Hired
Band making	30%	38%	15%	8%	9%	0%	54%	46%
Leveling / Puddling	13%	38%	11%	31%	6%	1%	30%	70%
Nursery Preparation	35%	14%	31%	9%	11%	0%	77%	23%
Transplanting	1%	1%	5%	11%	11%	70%	17%	83%
Weeding	3%	2%	12%	82%	1%	1%	16%	84%
Harvesting	7%	38%	13%	37%	6%	0%	26%	74%
Overall	9%	17%	11%	33%	7%	24%	27%	73%

- It is said that tenancy system hinders the extension of technologies, i.e. tenant changes renting land every year causing inconsistency of the technology dissemination. It is found from a questionnaire survey that most of the tenants actually live within the same sub-location in which the landowners live. Therefore, community gathering such as chief baraza can be a venue to disseminate new technologies not only to land owners but also to tenants.
- Such negative impacts should be kept in mind as: 1) push-weeder accompanied with line transplanting can drastically reduce weeding labor, but weeding worker (mostly women) may lose job opportunity, 2) threshing stand which is a new simple thresher reduces loss of harvest, but poor who come to collect grains dropped on the ground during threshing may not be able to get their share as used to be. While seeking productivity increase of rice cultivation, a regional development programme to create job opportunities is also necessary.
- According to the questionnaire survey, rice grown by line transplanting marked 161% higher yield than by random transplanting for basmati and 129% higher yield for IR[3] (see Figure 2.4.7). In total of the three target schemes, the average yields of basmati by line transplanting and random transplanting are 2.4t/ha and 1.5t/ha respectively and the average yields of IR by line and random are 4.0t/ha and 3.1t/ha respectively. Although the floods which occurred in this crop season gave damages to some of the farms, 74% of farmers who adopted line transplanting increased the yield this year and 20% of them indeed doubled their harvest compared to the previous crop season. On condition that proper water management with appropriate irrigation facilities and pest control are incorporated, the introduced new crop husbandry technologies can bring about the positive impact in paddy production as it has been experienced and described as *"Green Revolution"* in Asian countries in 1970's.

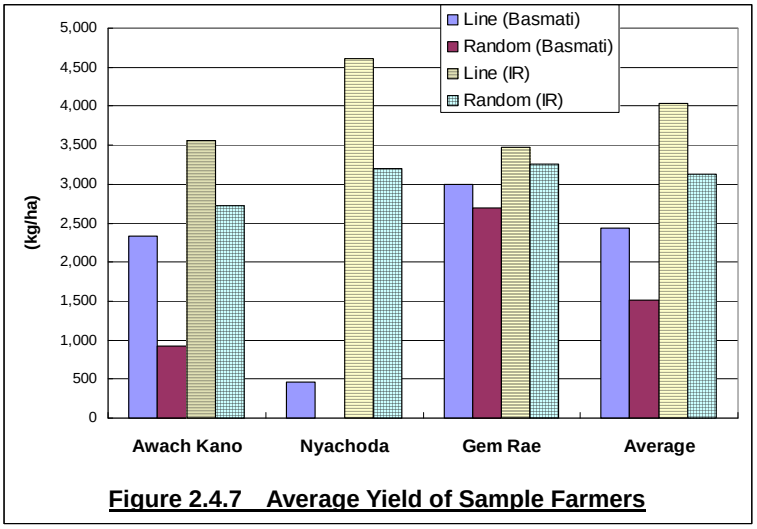


Figure 2.4.7 Average Yield of Sample Farmers

[3] Similar varieties to IR such as BR, Nyaboda are represented by IR in the figure.

No.6 Local Cotton Industry Promotion Programme:

- The Programme required the training participants to source their food and lodging expenses during the 6-week training on their own. Although we know the arrangement was very hard to all the participants, we still believe that was the very drive of implanting the necessary skills to the participants very quickly. Seriousness or commitment in broader term very much lies on how they have managed the necessary fund. It was seen that the more they sourced their own fund, the more was their commitment.
- It is in fact not so easy to start the value addition to cotton in their locality. To upkeep and also improve their products enough to compete in market, they may need to be further trained.
- Since value addition to cotton takes long time to become full-fledged cottage industry, the production centre, now under a CBO called CREAM, should not only produce the products but also work as training center in conjunction with the Ministry of Agriculture.

No.7 Ecological Farming Promotion Programme:

- Availability of desmodium seeds is a key factor to establish push-pull farm and the silver leaf variety of desmodium is better than green leaf variety. It is expected that the established desmodium in each division in this crop season will be the source of the seeds.
- With the advantage of the fact that ICIPE research station (International Center of Insect Physiology and Ecology: promoter of push-pull method to suppress striga weed and maize stem borer) is located at the vicinity of Homa Bay District and also ICIPE has been posting field staffs in Homa Bay, it is expected that collaboration between ICIPE and the Government will go on continuously.
- Traditional communal grazing is a constraint to promote ecological farming. If the ecological farming (conservation agriculture) methods are applied to small area, it will be possible to get consensus among community members to keep animals away from the farm. However, if these methods were meant to extend to larger areas, the method of animal rearing would have to shift from grazing to semi-zero grazing, i.e. it would need to restrict grazing land and farmers have to harvest fodders for animals. To make such shift, close communication among stakeholders including the Ministry of Agriculture and Ministry of Livestock and Fisheries will be necessary.
- At the evaluation workshop, the agriculture officers in Homa Bay District summarized their lessons learnt through the pilot implementation. Following box shows the lessons leaned from the agriculture officers:

Lessons Learned by the Divisional Agriculture Officers in Homa Bay for Ecological Farming

On Mobilization / Training:
- Response from farmers was very positive, but turnout will depend on the agency mobilizing.
- Dealing with interested farmers will be effective
- More farmers opt to take push-pull rather than conservation agriculture since striga is the major problem in the area.
- Targeting groups would be more efficient to conduct trainings

On Demonstration / Field Day:
- Demonstration farm became a learning place for farmers and they learn better from fellow farmers.
- Performance varied from farmer to farmer (those who dedicated their time were very successful).
- Field day should be done twice during the growing period and harvesting period.

On Technical Issue:
- Timing of planting desmodium is critical for better germination (it takes longer time to germinate and requires good water supply at the time of establishment).

On Cost – Benefit Aspect
- Initial establishment is labor intensive and requires training of farmers and supervision (initial cost of inputs is also high e.g. seeds of desmodium, mucuna and dolichos lablab).
- Push-pull farm might be tedious to establish in vast area.

No.8 Pro-poor Non-tillage Improvement Programme:

- Mucuna, a cover crop for the conservation agriculture, has no alternative use other than cover crop. This may discourage farmers to adopt it because farmers prefer to grow edible crops.
- Conservation agriculture requires timeliness in planting both main crop and cover crop.
- Same issue of communal grazing in Pilot No.7.
- At the evaluation workshop, the agriculture officers in Homa Bay District summarized their lessons, some of which are same as those in above No.7 Ecological Farming Promotion Programme. Following box shows the lessons leaned from the agriculture officers:

Lessons Learned by the Divisional Agriculture Officers in Homa Bay for Non-tillage

On Mobilization / Training:
- Response from farmers was very positive, but turnout will depend on the agency mobilizing.
- Dealing with interested farmers will be effective
- More farmers opt to take push-pull rather than conservation agriculture, since striga is the major problem in the area.
- Targeting groups would be more efficient to conduct trainings

On Demonstration / Field Day:
- Demonstration farm became a learning place for farmers and they learn better from fellow farmers.
- Performance varied from farmer to farmer (those who dedicated their time were very successful).
- Field day should be done twice during the growing period and harvesting period.

On Technical Issue:
- Mucuna has a difficulty in extension due to no alternative use other than cover crops (farmers prefer to intercrop plants which are edible or can be used as fodder).
- Dolichos lablab has to be trained in order not to let the vine entwine maize stalk (maize will be damaged by it).
- Conservation agriculture requires timeliness in planting both crop and cover crop.

On Cost – Benefit Aspect
- Analysis showed that conservation agriculture saves 30 – 40% of production cost as compared to conventional agriculture once it is established.
- Initial establishment is labor intensive and requires training farmers and supervision (initial cost of inputs is also high e.g. seeds of desmodium, mucuna and dolichos lablab).
- Conservation agriculture needs spraying for weed clearance and it is cumbersome for farmers.

No.9 Youth Polytechnics (YPs) Strengthening Programme:

- The subsidies of instructors' salary from the government are delayed for several months now. That affects the morale of the instructors and they become more dependent on external resources such as production units and training allowances. High morale of instructors is expected to be the outcome of the production units.
- Managers and instructors of Youth Polytechnics do not have enough knowledge on management of YPs, workshops or occupational health & safety. That is why District Employment Officer and the Study Team decided to have one-week management training. The level of management, occupational health & safety needs to be monitored periodically.
- There are a lot of inconsistencies and unrealistic figures in terms of net income, gross income and the orders received in the production units. It is impossible to practice efficient and effective production without proper bookkeeping. All the instructors need to have appropriate business mind.

CHAPTER 3 PROGRAMME EVALUATION AND APPRAISAL

3.1 Process of the Appraisal

Upon completion of implementation of the pilot programmes, the Study Team with the relevant stakeholders conducted an evaluation as well as appraisal workshops for the pilot. First of all, evaluation workshops at community level, i.e. with implementers of the pilot were carried out from the end of January to mid February 2007 except for Local Cotton Industry Promotion Programme and Livelihood Improvement Oriented Forestry Programme, for which the Study Team itself assessed the output and outcome from these two programmes. Then, the evaluation took a form of appraisal in that district-wide extension of the pilot programmes was assessed at district level workshops.

The programme appraisals at the district level workshop in Nyando District and Homa Bay District were carried out on February 13 and February 26, 2007 respectively. The participants were the district development officer (in Homa Bay the deputy DDO attended), district officers from the line ministries such as Health, Agriculture, Livestock and Fisheries, Water, Public Works, Environment, Education, Social Services, among others, County and Town Councils, CDF offices, and CBO representatives. During the morning session, the representatives of the Pilot programme implementers presented their activities and the result of their own evaluation of the pilot programme. Based on what was presented in the morning session, the district stakeholders did the appraisal in the afternoon.

The evaluation as well as appraisal of the pilot was conducted from the viewpoints of efficiency, effectiveness, impact, relevance and sustainability and the participants voted for marking in range from 5 as the highest to 1 as the lowest. For the evaluation of the pilot programmes by the implementers, evaluation with formative (development) index was also carried out, i.e. the implementers evaluated themselves whether the programmes have changed them in terms of individual, group/ organization, and networking.

After the appraisal sessions in Nyando and Homa Bay Districts ended, the Study Team also rated the programmes in the same manner of the appraisals at the district level workshops. The four team members who were assigned longest in the Study rated the programmes individually from the five aspects - efficiency, effectiveness, impact, relevance and sustainability -, and assessed the aggregate marks of the four members. Then again the team members rated the programmes as the final vote. Details of the appraisals were shown in Appendix VII.

3.2 Evaluation of the Pilot Programmes at Community Level

This section summarizes the result of the evaluation workshops done with the pilot implementers. Pointed out hereunder are performance and formative (development) indexes and issues discussed during the evaluation workshops. Commonly observed from the evaluation of the implementers are:

- Relevance has got very high marks across all the programmes. They think the programmes are very needed in the community. The Study Team may think that projects given input from outside may always tend to be marked very high. If they were asked to contribute to larger extent, they might have rated the relevance lower.
- Impact tended not to be given high marks. This is mainly due to the project implementation period, which they thought was too short. Also the attitude of people, especially negative attitude toward HIV/AIDS issues, was attributed to the lower marks for the health programme.

3.2.1 Centre Based Livelihood Improvement & Outreach Oriented Health Improvement

Tables 3.2.1 and 3.2.2 summarize the rating for the livelihood and community health improvement programmes. Evaluation in AM was done by CHWs, and the one in PM by local leaders including CHW leaders and area chiefs and government officers. The formative (development) index was rated as a combination of the two programmes, since the major implementers / beneficiaries were more or less the same, while the project performance for the two programmes was rated individually. Following are the remarks and major issues discussed during the workshops:

- In general, markings by committee members and CHWs are higher than those by local leaders and government officers (marking is higher in AM session than in PM session). Government officers usually give more critical evaluation, which has resulted in the lower markings. They especially gave critical evaluation on sustainability in the community health programme. This is because they think that some CHWs may drop out as is the case already experienced. Some officers and even CHWs think that voluntarism / commitment will go down without token.

- In Muhoroni and Miwani Divisions of Nyando District, the participants discussed the inefficiency on 'sensitizing community through balaza and churches' under PHC component. They argued the reasons as; those who attend barazas are few, and in fact not many mothers and women do not attend balaza nowadays; time for explaining is always too short; those who got the messages do not pass the right messages; churches do not want CHWs to talk about condoms, family planning or even how to prevent HIV/AIDS.

- In Miwani Division of Nyando District and Nyarongi Division of Homa Bay District, 'education on family planning' under PHC component was intensively discussed. They said that; no need of family planning because HIV/AIDS has killed so many people apart from accidents, malaria and TB; infant mortality rate is high; not many pregnant women can bee seen on the street nowadays (implies many widows were left due to HIV/AIDS); injection/pills have side effects of bleeding, stomach ache and back pain; men do not agree to use condoms; FP increases prostitution; pills, injection, condoms etc. are against the Bible.

- In Riana Division of Homa Bay District, some participants raised an issue that clients wanted some input, where CHWs could not afford. They also argued on 'HIV/AIDS awareness creation' under HBC component. They say; already a lot of efforts have been done and everybody knows about HIV/AIDS today, and hence it is waste of time; awareness campaign has been repeated so that people do not see the importance anymore, thinking only one day event, etc.

- For the livelihood improvement programme in Miwani Division, government officers marked efficiency low, which is 3.7. They commented that the efficiency was low because not many people had got information of the training courses at household level. Although CHWs disseminated information of when and what training was to be held, balaza did not work well for disseminating training information. This is because not many women participate in balaza. Apart from this, level of literacy and high expectation were said other factors, leading to lower efficiency mark.

- For the livelihood improvement programme in Nyarongi Division, committee members and CHWs marked effectiveness lower than that by local leaders and government officers. The mark is low because some people do not practice though they have learned, according to the participants. Time factor was also one of the reasons of the lower mark of effectiveness. Some said people could not buy input due to high poverty, resulting in lower sustainability.

- Also for the community health programme in Nyarongi Division, CHWs gave a low mark to effectiveness, and government officers gave low marks to both efficiency and effectiveness, to

which they raised there were not enough bicycles and gumboots for the CHWs. Also there is no chemist and no capital to buy essential drugs in one of the two sites in Nyarongi Division. Here one may see a tendency that people think evaluation in relation to input but not in relation to output.

- In Riana Division, all the marks by government officers were significantly lower as compared to the marks given by the CHWs for both livelihood and community health improvement programmes. This is due to the fact that there were conflicts between the demonstration centre guardian group (composed of mainly new settlers) and other community members. Internal wrangles led to the lower marks across all the five-aspect excluding relevance. Divisional PHO raised the issue by saying that when the project started, people in Konyango (the target sub-location) fought and fought for democracy, and in fact they were in problems. This issue was attributed to the lower marks. However both CHWs and government officers gave sustainability high marks for the community health programme. According to them, now there is no longer war and they no longer fight either, resulting in good mark on sustainability.

Table 3.2.1 Summary of Pilot Evaluation (1)

Programme Evaluation Index	(1) Centre Based Livelihood Improvement (AM: by CHWs, PM: by Leaders/ Government Officers)							
	Muhoroni		Miwani		Nyarongi		Riana	
	AM	PM	AM	PM	AM	PM	AM	PM
(1) Efficiency	4.3	4.0	4.9	3.7	4.2	4.4	4.5	3.9
(2) Effectiveness	4.0	3.8	4.8	4.4	3.2	4.0	4.4	3.9
(3) Impact	4.0	3.7	5.0	3.8	3.8	3.2	4.0	3.6
(4) Relevance	4.9	5.0	5.0	5.0	4.4	4.9	5.0	4.9
(5) Sustainability	4.2	4.8	5.0	5.0	4.2	3.0	4.6	3.5

Table 3.2.2 Summary of Pilot Evaluation (2)

Programme Evaluation Index	(2) Outreach Oriented Health Improvement (AM: by CHWs, PM: by Leaders/ Government Officers)							
	Muhoroni		Miwani		Nyarongi		Riana	
	AM	PM	AM	PM	AM	PM	AM	PM
(1) Efficiency	4.8	4.4	5.0	4.4	5.0	3.5	4.0	3.9
(2) Effectiveness	4.0	4.3	4.0	4.0	3.5	3.1	4.1	3.6
(3) Impact	3.9	4.0	5.0	4.0	4.1	3.7	4.0	3.8
(4) Relevance	5.0	5.0	5.0	5.0	4.9	4.8	5.0	4.9
(5) Sustainability	4.7	3.7	5.0	3.8	4.6	3.0	5.0	4.2
Development Index	AM	PM	AM	PM	AM	PM	AM	PM
(1) Individual	4.7	4.5	5.0	4.5	4.7	4.1	4.1	4.6
(2) Group/ Community	3.9	3.9	4.5	4.1	4.4	3.3	3.9	4.0
(3) Networking	4.8	4.5	4.9	4.7	4.8	4.9	4.8	4.3

3.2.2 Human Resource-led Cottage Industry

Table 3.2.3 summarizes the evaluation of the pilot programmes (cottage industry, paddy cultivation, ecological farming, non-tillage farming and Youth Polytechnics). For the Human Resource-led Cottage Industry Programme, all the 44 community representatives who attended the training courses gathered again in early February and carried out the evaluation workshop. For the project performance, the participants gave high marks in relevance, efficiency and sustainability. In relation to relevance, however, few trainees said after all that they wished to attend other training courses. Effectiveness and impacts were given relatively lower marks. They said because; they need enough capital, profit margin is small, it is too early to see the impact, etc.

For the evaluation from the formative point of view represented by the indexes of individual, group /

community and networking changes, they rated the highest mark to individual changes and high mark to networking and the lowest to group/ community changes. The reasons for the low mark the participants gave were: products like jam are too luxury to attract community, the trainees cannot give practical messages to the community without tools, community expectation is too high, many people think training is for incentive (allowance), etc.

3.2.3 Local Key Farmer-led Paddy Cultivation Extension

For the paddy cultivation programme, firstly we held the evaluation workshops with the farmers in the target irrigation scheme from late January. Then, we held a district level paddy cultivation evaluation workshop with the government officers from the Agriculture and Irrigation Offices, to which all the key farmers and representative farmers of each irrigation scheme were invited.

Commonly from the three target irrigation scheme level workshops to the district level workshop, the participants showed high appreciation for the technologies such as nursery preparation, and line transplanting, but not for fertilizer application. For fertilizer application, intensive discussion was made during the district level paddy evaluation workshop. Though some farmers insisted the land is fertile without fertilizers, key-farmers and agriculture officers still pointed out importance and effectiveness of the fertilizer application for rice cultivation. Also it was pointed out that inadequate water management facilities hinder the effect of fertilizers (fertilizers are flown away with water).

The participants rated the project performance and development aspects severely but fairly, although the Study Team felt the efficiency, effectiveness and sustainability would be higher than their marks. The participants gave reasons for the mark of effectiveness as: this has been the first season (effect not yet fully seen), and those who were trained were mainly landowners (means that most of farm laborers were not trained).

3.2.4 Ecological Farming Promotion

The workshop participants, namely the agriculture officers evaluated the pilot programme. The participants rated relatively high marks in relevance, impact and efficiency. Sustainability was rated the lowest and they gave the major reasons for it as “communal grazing destroys the cover crops”, “cost and availability of desmodium hinder the sustainability”, “quality assurance of desmodium – fear of failure”, and “land tenure system may not allow to spread the technology”. As for formative aspects, individual changes were rated relatively high compared to other 2 aspects. They gave lower marks to community / organization changes and networking changes because “there are still too few demonstration farmers”, “duration of the project is too short to see the change”, “time of the project was not enough for serious networking”, etc.

3.2.5 Pro-poor Non-tillage Improvement

The workshop participants, the same agriculture officers for Ecological Farming Promotion Programme, evaluated the pilot programme. The participants rated relatively high marks in relevance, impact and efficiency but the marks were lower than ecological farming, namely push-pull method promotion. In fact, they saw on the ground better performance of the push-pull farming than non-tillage method (conservation agriculture) as far as the pilot concerns.

Sustainability was rated the second lowest and they gave more or less same reasons as above ecological farming programme. The lowest mark was given to effectiveness of the project. The major reasons the participants gave were: “it is a new technology for farmers”, “inputs for the pilot programme was inadequate (amount was little and some inputs had been expired”, “training of cover crop was not effective”, “scale of the project was small”, and “mucuna (a cover crop) has no alternative utilization other than covering land”.

3.2.6 Youth Polytechnics Strengthening

There was a one-day evaluation workshop for Youth Polytechnics Strengthening Programme in late February 2007 and 10 stakeholders including instructors, charman of the management committee and chief of each youth polytechnic participated. The participants reviewed major activities during the implementation period and identified the factors which have contributed the income generation most. The factors identifeid for Homa Bay YP were mostly locational, but those for other YPs are more human. Community mobilization was ranked number one at Langi YP. The three major factors which got higher scores for each YP were as follows:

Homa Bay YP: [1] Availability of **electricity** for all the courses. (4.9 mark out of 5)
[2] **Nearness** to source of raw materials for all the courses. (4.8)
[3] **Large number of vehicles** in Homa Bay for MVM. (4.6)

Sero YP: [1] **Good marketing strategy** (display, fair pricing) for welding. (5.0)
[2] **Awareness creation** by management committee, instructors and students for all the courses. (4.8)
[3] **Skills and commitment** of the instructors for garment making and carpentry & joinery. (4.8)

Langi YP: [1] **Community mobilization** by management committee, PA and instructors. (5.0)
[2] Introduction of **Production Unit**. (4.95)
[3] **Skill and commitment** of the instructors. (4.9)

As for project performance index and development index, sustainability was marked low because 1) problems of transportaion and availability of materials especially at Langi YP, 2) external funding is still necessary, 3) full-scale production unit is necessary, and 4) training for trainers (instructors) done was only introduction and they need more.

Table 3.2.3 Summary of Pilot Evaluation (3)

Programme Evaluation Index	(3) Cottage Industry	(4) Paddy Cultivation	(5) Ecological Farming	(6) Non-tillage Farming	(7) Youth Polytechnics
	Nyando / H. Bay	Nyando	Homa Bay	Homa Bay	Homa Bay
(1) Efficiency	4.9	4.0	4.3	3.3	4.8
(2) Effectiveness	4.1	4.1	4.1	3.1	4.2
(3) Impact	4.0	3.8	4.6	3.4	4.3
(4) Relevance	5.0	5.0	4.9	4.6	5.0
(5) Sustainability	4.8	4.0	3.9	3.3	3.9
Development Index					
(1) Individual	4.6	4.0	4.6	4.6	4.0
(2) Group/ Community	3.1	3.1	3.3	3.3	3.8
(3) Networking	4.1	4.3	3.5	3.5	4.1

3.3 Appraisals by the Districts and Study Team

Tables 3.3.1 and 3.3.2 below shows the comparison of the programme appraisal marks between the two Districts and the Study Team. The Study Team marked more severely than the districts and Homa Bay District gave relatively higher marks compared to Nyando District. Common marks given by the two districts are the very high marks for relevance of the programmes and low marks for sustainability, which may indicate the anxiety of the districts to extend the programmes with absence of donors.

For the cottage industry programme, the district workshop participants in Homa Bay District gave the highest marks in all the five aspects. One reason could be the impressive presentations of the community representatives who started off their own business after the trainings facilitated by the programme. In fact, the 2nd best to 4th best performers among the 44 community representatives were chosen from Homa Bay District by vote at the evaluation workshop of the cottage industry programme held on February 5, 2007 prior to the district workshops.

As for paddy cultivation extension programme, the Study Team gave relatively higher marks in overall than the district workshop participants. Compared to the district workshop participants, the Study Team gave higher marks in three aspects, namely efficiency, effectiveness, and sustainability. The Study Team considered that with minimum external input the programme succeeded to achieve high project performance and also the Team counts high commitment of the stakeholders for extension of the programme.

For Youth Polytechnics Strengthening programme, the district workshop participants in Homa Bay District gave very high marks in overall showing drastic contrast with the marks given by the Study Team. As a recipient side, a big amount of external input would have been appreciated so much, while the Study Team did not give high mark to the programme because the project performance was not beyond the expectation to have been assumed with the input provided by the programme.

Table 3.3.1 Comparison of Programme Appraisal Index (1)

Programme Appraisal Index	(1) Livelihood			(2) Health			(3) Forestry			(4) Cottage Industry		
	N	H	S	N	H	S	N	H	S	N	H	S
(1) Efficiency	3.6	4.4	4.3	3.6	4.2	4.0	3.5	3.0	3.8	3.9	4.5	3.3
(2) Effectiveness	3.8	4.2	3.0	3.8	4.4	3.3	3.6	3.8	3.3	4.3	4.4	3.5
(3) Impact	4.7	4.3	3.5	4.7	4.2	3.3	4.6	3.0	3.0	4.0	4.2	3.0
(4) Relevance	5.0	5.0	4.3	5.0	5.0	4.5	4.9	5.0	3.5	5.0	5.0	3.8
(5) Sustainability	3.3	3.6	3.5	3.3	3.6	3.0	3.7	3.8	3.0	3.7	4.0	3.5

Note: N = Nyando District, H = Homa Bay District, S = Study Team

In Nyando District appraisal for livelihood and health programmes were made as a combination programme.

Table 3.3.2 Comparison of Programme Appraisal Index (2)

Programme Appraisal Index	(5) Paddy Cultivation			(6) Cotton Industry			(7) Eco. Farming			(8) Non-tillage			(9) Youth P.		
	N	H	S	N	H	S	N	H	S	N	H	S	N	H	S
(1) Efficiency	4.1	-	4.5	3.7	-	2.8	-	4.5	4.0	-	4.5	3.8	-	4.7	2.8
(2) Effectiveness	4.6	-	4.8	3.6	-	2.8	-	4.4	3.5	-	4.4	3.5	-	5.0	3.3
(3) Impact	4.8	-	4.0	4.4	-	3.0	-	4.6	3.3	-	4.6	3.0	-	4.4	3.3
(4) Relevance	5.0	-	4.5	4.9	-	3.5	-	4.9	4.0	-	4.9	4.0	-	5.0	4.0
(5) Sustainability	4.1	-	4.5	3.5	-	3.0	-	3.9	3.5	-	3.9	3.0	-	4.3	3.5

Note: N = Nyando District, H = Homa Bay District, S = Study Team

In Homa Bay District appraisals for Ecological Farming and Pro-poor Non-tillage were made as one programme.

CHAPTER 4 LESSONS LEARNED AND WAY-FORWARD

This chapter discusses lessons learned from the pilot implementation and way-forward toward district development. Apart from identifying some individual lessons which were mostly mentioned in the aforementioned sub-chapter 2.4, 'Issues Arisen' under Chapter 2, a generalization is also tried to enrich the formation and implementation of the district development plan. Lessons discussed hereunder are categorized into levels of; 1) planning and implementation approach, 2) implementation strategy, 3) norm embedded in the people's society, and 4) comprehensive implementation of the district development plan as well as monitoring and evaluation:

At the level of Planning and Implementation Approach:

- Integration of Livelihood Improvement and Health Improvement

At the level of Implementation Strategy:

- An Integrated Extension Mechanism: Combination of Centre Based with Outreach Oriented Programme
- Interaction Point between the People and the Government Officers
- Group Approach and Individual Open Participatory Approach
- Government Extension Officers and Local Lead Farmers

At the level of Norm Embedded in Local Society:

- Learning Attitude and Incentive

Related to Recommended Comprehensive Implementation of the Plan as well as the M&E

- Indicator Oriented M&E and Learning Oriented M&E

4.1 Integration of Livelihood Improvement and Health Improvement

Livelihood and health improvements are both higher prioritized development approaches in the Study districts. Nyando District ranked 'good income' as the first priority approach, 'enough food' as the second priority approach, and 'good health' as the third priority approach, first two approaches of which together constitute of livelihood improvement. In Homa Bay District, first priority approach is 'enough food', second is 'good health', and third is 'good income'. The first and third priority approaches together constitute of health improvement. In the pilot implementation, an integration of the livelihood improvement and health improvement was sought, which was tried under a combination extension model.

Looking at the district situation from different perspectives, no one can disagree to recognize that livelihood and health improvements are almost foremost important. Poverty prevalence is high in both districts. Health status in the Study districts is worse than most of the other districts as shown in such indicators as child mortality, life expectancy, crude death ratio, etc. Under 5-year child mortality for Homa Bay is ranked at the worst

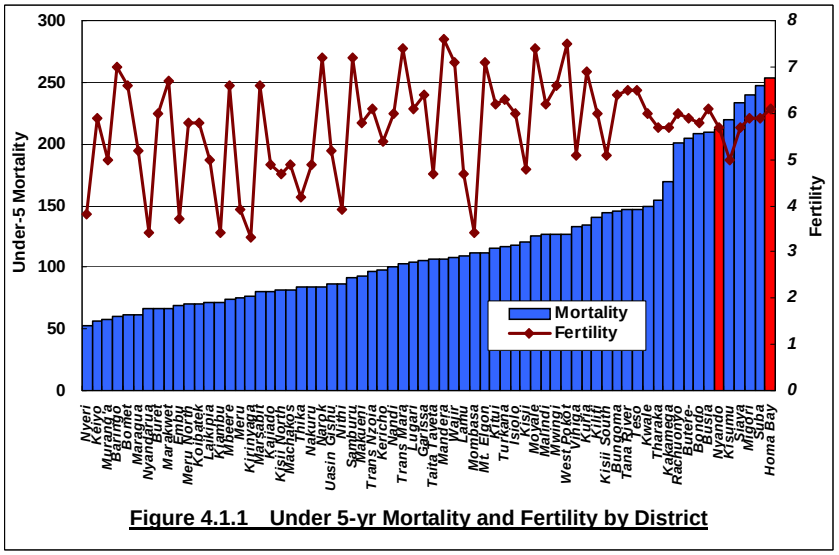


Figure 4.1.1 Under 5-yr Mortality and Fertility by District

amongst the 63 districts and the one for Nyando is sixth worst.

It may be known there is a relationship between high child death ratio (substituted by under 5-year child mortality) and poverty prevalence. Given high child mortality, the present poverty prevalence can even be inherited from the parents to the children, making them difficult to get out of poverty vicious trap. The logic here is, as suggested by W. Easterly[1] and others, that there is a tendency of high fertility where there is high child mortality. To cope up with the high child death the parents could not help stop having many children. Fertility ratios in the study area are 6.1 and 5.7 for Homa Bay and Nyando respectively according to 1999 Census. Having many children means meager investment per child. There is also a big risk that the parents lose even the meager investment where high child mortality ratio prevails. In this situation, poverty is inherited from the parent to the children.

Putting important sectors such as health, education, agriculture, etc., major approaches identified in the district development plan is schematized as in Figure 4.1.2. Core approaches are livelihood improvement, consisting mainly of food and IGAs sectors, health improvement and education improvement, all of which should also be supported by infrastructure from the physical point of view. Infrastructure can be supported by CDF fund which is nowadays the biggest development fund in the Study districts. Primary education is currently supported by the government commitment; free primary education for all. The difficulty associated with education sector comes from poverty as well as from high prevalence of HIV/AIDS. Orphans have difficulty to continue schooling even if it is free, and poverty hinders the pupils from attending school throughout terms. Therefore, it can be said that livelihood improvement together with health improvement can support the education sector in one way or the other.

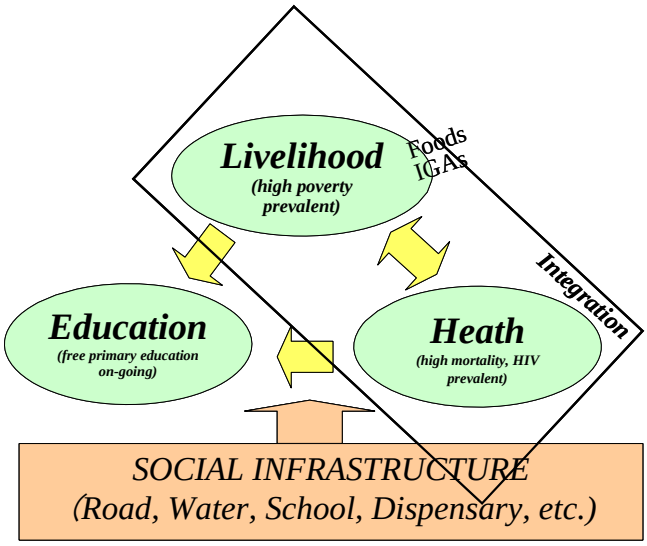


Figure 4.1.2 Core Sectors in Development

Aforementioned is the background why most of the pilot programmes have undertaken livelihood and health improvement sectors directly and in cases integration between the two sectors was tried. Out of the nine types of the pilot programmes, Youth Polytechnics Strengthening Programme does not deal with people's livelihood directly, however other pilot programmes were all undertaking the two core sectors in one way or in an integrated way. For example, Centre Based Livelihood Improvement Programme was carried out in combination with Outreach Oriented Community Health Improvement Programmes. The trained community health workers recognized the importance of nutritional aspect to improve their community's health status, which should be supported by balanced and nutritious food which can be now supported by Livelihood Improvement Pilot programmes.

Another example is forestry pilot programme which promoted neem and moringa trees. These trees can work as medicinal plant and also can produce marketable products, covering both health and livelihood improvement sectors. Since the pilot implementation period was not long enough to see such long-term effects as lower child mortality, lower fertility, poverty mitigation, visible impact in

[1] The Elusive Quest for Growth, Economists' Adventures and Misadventures in the Tropics, William Easterly, 2002.

those aspects was not available within this Study period. However, it should be noted that district development stakeholders shared the ideas of the integration.

4.2 An Integrated Extension Mechanism: Combination of Centre Based with Outreach Oriented Programme

Livelihood improvement pilot programmes, No.1.1 & No.1.2, are of centre-based approach in terms of extension because it was to establish a demonstration unit to which villagers were invited to learn relevant skills. Though the trainings held at the centre are very open to anybody who is interested, extension may not well reach down to each corner of the target area, which in this pilot implementation is sub-location. Information for training held at the centre has to be delivered to the target population beforehand. This information flows through the organization members who are attached to the centre, through provincial administration at the sub-location level; namely, from area chief (assistant chief) to village elders and then to villagers. However, this is not yet enough to adequately disseminate the necessary information over the target sub-location. Hence, there has to be a supporting mechanism to dissemination.

There are so called outreach-oriented programmes that are health related pilot programmes. Out of the four health sector pilot programmes, three pilots; PHC Promotion, Health Information Sharing, and PLWHA targeting HBC Promotion are very much outreach oriented. In these pilot programmes, community volunteers are trained as PHC promoter, health information collector and HBC TOTs, and all of them are supposed to make household visits. An idea is to combine this outreach oriented programmes with the above centre based extension programme. What is meant here is the possibility that the trained community health workers could function as agents of disseminating livelihood improvement information as well.

In fact, most of the livelihood improvement components are very much related to health sector, by saying nutrition can play a big role in improving the people's health status. Nutrition can be secured by adopting kitchen garden, poultry production, value addition, bee-keeping, etc. which can all be provided with trainings under the Livelihood Improvement Programme. Therefore, this pilot implementation tried to construct an extension mechanism by combining the Centre Based Livelihood Improvement Extension (under No.1.1 and No.1.2) with Outreach Oriented Health Improvement Extension. With this combination, systematic collaboration between health and livelihood improvement sectors could be realized and the extension activities on both sectors would be strengthened. Figure 4.2.1 draws the mechanism of the combination extension model.

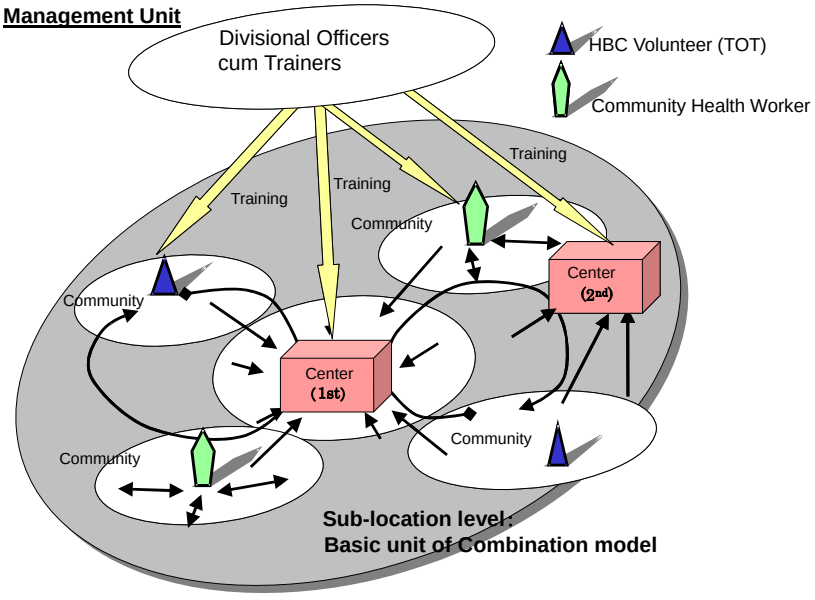


Figure 4.2.1 Combination of Center based and Outreach Type Programmes

In the Study districts, poverty incidences count 45% to about half of the population, and about 20% of

pregnant women are HIV positive. Furthermore, a child of four to five cannot see their 5-year birthday due to prevalent malaria cases, unhygienic water, etc. Under such situation, health and sanitation improvement is a crucial issue as well as income generation, or livelihood improvement in broader term, of the community members. Hence, this Study tried to bring about the synergy effects with the above combination extension model in that health volunteers in the community encouraged nearby families, especially those who were taking care of vulnerable people, to attend the trainings on income generation activities conducted at the centers of the community. Also, equipped with some skills of nutrition improvement and income generation, such community health workers themselves can teach the households they are allocated necessary skills while doing community health promotion activities. This combination model has been tried in all the following five places where the centre based pilot programme were implemented.

Table 4.2.1 Venue of the Combination Extension Model

District	Centre Based Extension No.1.1 & No.1.2:	Outreach Oriented Extension: No.2.1, 2.2, 2.3:		
	Centre Based Livelihood Improvement P.	PHC Promotion Programme	Community Health Information Sharing Prg	PLWHA targeting HBC Programme
Nyando	Muhoroni Division Jaber Orphanage	Tonde Sub-location, where Jaber orphanage is located.		
	Miwani Division Masago HC (VCT)	Wangaya II Sub-location, where Masago HC is located.		
Homa Bay	Nyarongi Division Rapedhi Lwala Orphanage	North Kaganda Sub-location, where Rapedhi Lwala Orphanage is located.		
	Nyarongi Division Nguku Orphanage	South Kaganda Sub-location, where Nguku Orphanage is located.		
	Riana Division KINDA Women G (VCT)	Konyango Sub-location, where the VCT is located.		

Note: Essential Drug Management Programme is also one of the heath sector pilot programmes. This programme was to open a community chemist hence no intention of doing outreach activities. Therefore the above table does not have this programme combined with the centre based extension programme.

Synergy effects of the combination model observed are; 1) community health workers (CHWs) trained under Primary Health Care Promotion Programme have been delivering the information of the livelihood improvement trainings, and 2) community members have understood more about nutrition issue by linking the health aspect with some livelihood improvement aspect.

In Tonde sub-location of Muhoroni Division, participants for health trainings have been always informed any livelihood improvement trainings to come, so they delivered the information to their villages by taking such opportunities as household visit, church services, etc., and actually came to the livelihood training with their neighbors. In Wangaya II sub-location of Miwani Division, information of livelihood training has been distributed through CHWs to the villagers, contributing to high turn out to the trainings. Target sub-locations in Homa Bay Districts did almost same thing; namely, CHWs delivered training information while making household visit and public speaking about health. Figure 4.2.2 evidences that the information was actually delivered by CHWs in many cases. Figure 4.2.2 summarizes whom the participants got training information from. In fact about 40 % of the participants got the information from CHWs, followed by chief and assistant chief, PHO, CBOs she/he belongs, etc.

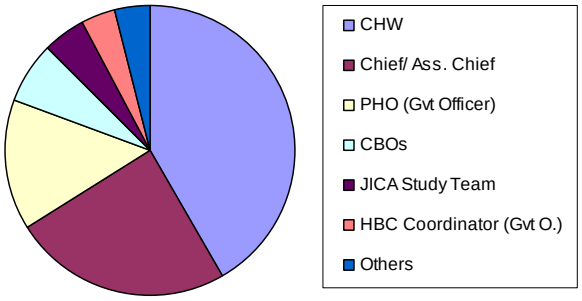


Figure 4.2.2 Whom They Got Information From?

It was in fact observed that government extension officers do not have their own established means of

delivering information and in most cases depend on provincial administration, area chief and assistant chief. The provincial administration is in fact mandated to deliver government policy, thereby in charge of information delivery as also shown in Figure 4.2.1. However, if dependent only on provincial administration, it is very hard to disseminate information to every corner of the target sub-location. Involving CHWs as agents of information dissemination can contribute to improving the turn up of the participants as observed, thereby increasing the efficiency of the livelihood improvement programme.

A remark given by a woman surprised us very much. She remarked that vegetables were meant for income generation activities, which is very much true, but not meant for consuming. The woman did not know how nutrition could improve her health status and nutrition could be taken by vegetables, eggs, honey, etc. either. There may be more such women who do not know the relationship between health, nutritious food, and at the same time products of IGAs. Given health trainings, the participants become well aware of how important they should grow vegetables, do value addition out of food, take nutritious food, etc. Now the skills of those activities are all related to livelihood improvement activities, which were available under the Livelihood Improvement Programme. Those villagers who learned the importance also attended livelihood improvement training with more seriousness. It can be said that combination extension model undertaking both health sector and livelihood sector contribute to making them understand the relationship easily and also raising the people's commitment in taking up such activities.

4.3 Interaction Point between the People and the Government Officers

To examine the service delivery from the government officers to villagers, we should look at the government technical officers' distribution starting at district level, divisional level, and below. Also considered is the physical extension of administrative stratum especially the one that affects information flow and distribution and easiness of organizing of people's groups. Table 4.3.1 shows that while there are technical officers at district level for all the line ministries, only few ministries deploy their technical officers to divisional level. They are agriculture, livestock & fishery, and health ministries, which are mandated to extend their services as close as possible to the people on the ground (MOA has extension staff assigned at location level, but they are few).

Table 4.3.1 Distribution of Government Technical Staff in Administrative Structure

Administrative Stratum	Government Technical Staff	Physical Coverage
District (appointed DC)	All the technical ministries	Nyando: 1,170km^2 (30x40km) Homa Bay: 1,160km^2 (30x40km)
Division (appointed DO)	Health, agriculture, livestock & fisheries (other ministries do not have)	Nyando: 5 division (234km^2, 15x15km) Homa Bay：6 division (193km^2, 14x14km)
Location (appointed chief))	Frontline extension officers under divisional agriculture extension officer	Nyando：29 loc (40km^2, 6x6km) Homa Bay：26 loc (45km^2, 7x7km)
Sub-location (appointed assistant chief)	No technical government staff	Nyando：76 S loc (15km^2, 4x4km) Homa Bay：63 S loc (18km^2, 4x5km)
Natural Village or Community (elders appointed by chief)	No technical government staff	Mostly there are 7 to as many as 20 villages per sub-location

In case of infrastructure projects such as road rehabilitation, construction of water supply system, public building construction, etc., technical officers assigned at the district level are in charge. These infrastructure projects are very much area specific (or rather pin-pointed), so that the government does not need to deploy relevant officers to lower cadres but to keep them at the district level and dispatch them to the site when need arises. The issue here is arrangement of the necessary funds and also its

fund distribution accountable to the people rather than institutionalization of the interaction between the government technical officers and the people on the ground. An example of prioritization carried out under this JICA Study in formulating the district development programme can be a good tool to soundly allocate funds to various projects with accountability.

On the other hand, extension programmes need an institutionalization of the interaction between government technical officers and the people. Extension programmes here are mostly related to health sector and also livelihood improvement sector, the latter of which falls mostly under agriculture, and livestock and fisheries ministries. These sectors have their technical staff at division level, whereby institutionalization of how to relate the divisional officers with the people on the ground becomes an issue. Typical coverage of a division is 14km x 15km in the two study districts, which is too large to cover at once. We need to start extension programmes at lower cadre such as location, sub-location or even a block consisting of several natural villages within a sub-location. The issue here is at which cadre we should start, and how to move to the next area to extend the outreach.

4.3.1 Livelihood Sector

Livelihood improvement is mainly undertaken by the ministries of agriculture, livestock and fisheries. Divisional officers carry out trainings to local people. Training components are kitchen garden, value addition, poultry, goat improvement, etc. The operation is based at sub-location, which is the smallest administrative unit in Kenya. Since the livelihood improvement programme carries out demonstration, a centre was required. The original plan was to put up a demonstration center at each per sub-location.

From physical point of view, a typical sub-location covers about 15 to 20 km^2, namely 4km x 5km, and involves about 10 natural villages. Natural village means place where people get together to stay and in most cases dominated by *Anyuola* in Luo land. As we continued the training session, we have observed that participants were becoming the same ones. Though at early stage people had come from even very corner of the target sub-locations, participants tend to be fixed who are mostly from nearby demonstration centre. Just one centre in a sub-location can hardly be the learning centre for all the villagers in the sub-location. It was observed that it was difficult for the people who are far from the centre to come and especially if the centre belongs to a specific group, like the case in Riana Division, people tend to less appear.

Going down to lower cadre increases extension impact. If such learning centre is established in all the villages, many people can easily access and learn skills necessary for livelihood improvement. However, it requires more logistics and therefore funds. What is important here is a balance taking into account the available fund. Also, how much deeper one can go is dependent on training components. Some training components such as kitchen garden, value addition, improved cooking stove, etc. do not require much input. These trainings should not be concentrated at the centre only but at least three to four sub-centres in the target sub-location be tried. In the target sub-locations, kitchen gardens were tried in three to five places, and value addition in two to four places. Poultry and goat rearing require some inputs, making it difficult to put up demonstration centres at many places. However, classroom type training which does not accompany demonstration can be tried in different parts of the target sub-location. In doing sub-centre level training, what the government technical officers are meant to deliver could reach deeper to the community members.

Kitchen garden and value addition trainings were very much accepted by the participants because these are easy to try by the villagers and also proceedings can be shared amongst the participants, which entails a sense of equity. Seedlings out of kitchen garden training can be distributed to participants to try apart from being transplanted to the demonstration farm. Value addition training usually carries out juice making, drying food, processing food during the session, and these practices

with the proceeds can be easily shared. On the other hand, poultry, goat raising and bee-keeping can not be well shared amongst the participants in terms of the proceedings. Therefore those trainings which require certain input and cannot be shared easily in proceedings should be demonstrated at discreetly chosen institutes. Such institutes should be of pro-poor, e.g. orphanage.

Though VCT is also one of the demonstration centres tried in pilot implementation, components having certain inputs are not recommended to demonstrate there. This is because community based VCTs are usually operated by specific CBOs which are already better-off as compared to other members of the same community. If richer becomes richer due to the inputs from donors and government, social conflict may arise as what has been observed in Riana Division of Homa Bay District. Lessons here is that instead of putting up few numbers of heavy-input demonstration sites we should rather have small-input demonstration sites at many places.

4.3.2 Health Sector

The Ministry of Health allocates clinics, dispensaries, and hospitals over the district, and also public health officers (PHO) at divisional level. There are staffs at these health institutions such as clinical officers, nurses, etc., and they provide their services at their places to the client who visits. They do not go out to the people's place except the PHO. The PHOs are in charge of community based disease management and health improvement. However, there are only few PHOs per division and PHOs are not given transport in many cases. Faced with this situation, it is in fact very difficult for PHOs to visit each and every village in the division and directly teach the community members of how to improve community health.

To extend community based health improvement programme, an idea is to train community volunteers as community health workers and PLWHA targeting home based care TOTs (trainer of trainings to PLWHA care takers). In this regard, the community volunteers are to become the PHO's copy. Since PHO cannot handle all the villages under her/his jurisdiction, there is no way but to create their clone at the community level. The trained community volunteers are expected that they can be liaison between community members and health institutions, and also in charge of health promotion in local disease management, etc.

Right after completion of health related trainings, the community volunteers started their activities in their locality; household visit, health promotion in schools and churches, and also some of them were deployed in measles campaign organized by the MOH. Of these CHWs trained under the Primary Health Care Promotion Programme, deployed in that campaign were three CHWs in Miwani Division (total 12 CHWs mobilized), two CHWs in Muhoroni Division (total two), and three CHWs in Nyarongi Division (total six), and no trained CHWs was mobilized in Riana Division (total mobilized was 16). The CHWs discharged a role of liaison between the government and the community members during the campaign.

Trainers of the PHC training came mostly from nearby health institutes with the divisional PHO being the coordinator. This arrangement must have got the trainees well acquainted to the trainers who are clinical officers, nurses, laboratory technicians, and physiologists. This may indirectly contribute to making referral easy. CHWs have been trained on referral skills, and with the acquaintance with the health officers they may feel a bit easy to make referral of an ailing villager to the nearby health institute where those already acquainted with the CHWs are stationed.

Critical issue associated with community health improvement is whether trained CHWs and also HBC TOTs can continue their voluntary work or not. Given past experiences, there should be some drop out. This leads us to an idea that increasing the numbers of the CHWs and HBC TOTs itself is important. Besides increasing of the volunteers, recognition of the CHWs amongst the community

members is very important. Unless trained volunteers are recognized in their community, their work coverage cannot go beyond their family members and just some neighbors. Upon completion of PHC training, a baraza was always organized to let the community members know who the CHWs were. During such baraza, CHWs started talking about community health which could enrich what they learned during the training course. Apart from baraza, school and church services are now utilized as opportunities of disseminating community health promotion.

In summary, as health sector does not have enough staff at divisional level, promotion of community health needs some linkage between the health officers and community members. The linkages are called CHWs and/or HBC TOTs who can deliver health information to the community members and also bring back local disease information to health institutes. Thus, having CHWs and/or HBC TOTs in each village could be the best way in the health sector to establish a functional linkage between the government and the community members. Though there are dropouts, at least necessary skills and knowledge is with the trained personnel, which can be useful for their family members and neighbors. However, to cope with the dropout issue, the number of CHWs/ HBC TOTs should be increased and recognition of the trained CHWs/HBC TOTs should always be arranged by taking opportunities of people's gatherings.

4.4 Group Approach vs. Open Individual Approach

In nowadays contexts, many, if not all, community targeted projects operate on group approaches. We do not disregard the group approach at all, but here one of the lessons is that we should not always follow the group approach only but also open individual target approach with even more emphasis. Of course, group approach has its own strengths for which if many people get together they can achieve bigger impact and also from donor or government point of view as supporter, group approach can entail less logistics expenses, and thereby may increase efficiency of project operation. However, group approach has its own weaknesses, and open individual target approach can supplement some weaknesses of the group approach.

Open individual approach in the pilot implementation applied to Centre Based Livelihood Improvement Programme. The approach calls whoever is interested in some livelihood improvement skills, and gives a series of trainings to anybody regardless of who belongs to which group or belongs to no group. This open individual approach does not need any lead-time, while group approach needs longer lead-time, which turns additional so-called transaction cost in economic term. There are lots of vulnerable people in the Study districts such as HIV positive, AIDS orphans, AIDS widows, etc., who may not be able to bear such additional transaction cost. These vulnerable people need immediate benefit even if the benefit is small rather than big benefit sometimes after they have spent certain lead-time.

Simple skill-ups such as vegetable cultivation, local poultry, value addition, etc. can best apply to local vulnerable people by the open individual targeted approach. Trainings for these simple skill-ups do not require big input, so that the training can be repeatedly carried out at a demonstration site or nearby, extending the outreach to poorer people. Also, this approach could increase the relationship amongst people, so called social capital amongst the people who belong to different groups. Nowadays, most of the people belong to at least one community based organization. Under this situation, group approach in a sense may work in such a way of segregating those who are not the members of the target group. Open individual approach on the other hand could increase the social capital since people belonging to different groups can interact.

Through the pilot implementation, it was observed that people have come from different corners or different social groups of the target sub-locations (this in fact was not always the case if the demonstration site belongs to a specific group like the example in Riana Division of Homa Bay

District. However, this happening is not associated with the open individual approach but with the selection of the demonstration site). Another observation is that there are participants who have newly accompanied their friends to the successive training sessions; a person participated in a training session, then knew the training was open to everybody who was interested, and brought friends. Here open individual approach disseminating simple skills-ups can be well adopted and can supplement some aforementioned shortfalls of group approach.

A questionnaire survey was carried out upon completion of the pilot programmes, and one of the questions asked which approach, either group approach or open individual approach, is better and why to about 150 interviewees. Figure 4.4.1 shows the results in that we can see about three quarters of the responses were in favor of open individual approach. The reasons were, as we expected, 1) anyone who is interested can learn, 2) able to invite many friend who are interested, 3) even the oppressed villagers can get skills, 4) work freely after having learned, 5) when every community member is trained then a change is possible, etc. Though about 20 percent of the respondents were preferable to conventional approach, the reasons raised are; 1) in many people one cannot concentrate and thereby learn not as expected, 2) only serious people can concentrate and well learn. We in fact do not advocate open individual approach alone, but it is clear from Figure 4.4.1 that open individual approach can meet what many people want, and also supplement the weaknesses pertaining to conventional approach.

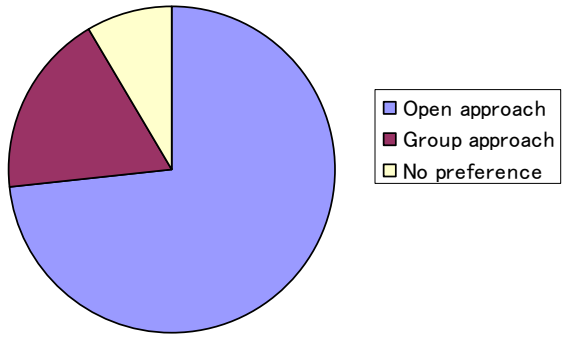


Figure 4.4.1 Preference by Training Approach

Weaknesses associated with group approach can also be discussed in relation to proposal driven funding method. Those weaknesses we think are; 1) supply led nature rather than demand led in today's development context, or in other words exogenously driven development rather than endogenously driven development, and 2) exclusivity exercised to non members which comes out of its nature and furthermore strengthened in the context of getting donor fund. The latter issue, exclusivity especially in cases associated with donor fund, may create even social disintegration between the funded groups and non-funded groups if fund administrator cannot be accountable to explain why some groups were funded and some were not.

Foremost strength of group approach may be of 'harambee', which means when people get together and work together they can do what is not possible by an individual or they can achieve much more than what an individual can achieve. But this is the case if such a group is endogenously formed. A group endogenously formed means that they have come out of their own initiative based upon their own necessity either for combating constraints facing them or for improving the status wherein they make their livings. This is so called demand driven. An inquiry is how many such endogenously formed groups are there especially in present day development context where development funds are meant for group.

As of August 2005, there were as many as 7,155 CBOs registered in Nyando District and 4,992 CBOs in Homa Bay District. Figures 4.4.2 and 4.4.3 show the trend of the registration of CBOs by year. In recent years the number has increased dramatically as proposal method became familiar to most of the rural communities. From the administration side of the fund, proposal method may be one of the most effective ways of disbursing the huge fund. However, this suggests that in present day context many groups are formed because of the fund availability, for we could say they formed such groups exogenously, not meant for solving their problems out of their own resources (human and physical

resources) but rather for searching/ (or even) hunting some funds. Given such situation in that many groups are established having some motivation of soliciting funds at least to some extent, it may be said that because of the fund availability, groups are motivated to move onto demand-driven looking action that is proposal presentation, which however is very much exogenous in essence. Group approach thus easily turns exogenously driven development when we talk in relation to proposal based fund release method. Open individual approach, on the other hand, tried under the pilot implementation may strengthen their own initiative based activities that are endogenously driven development.

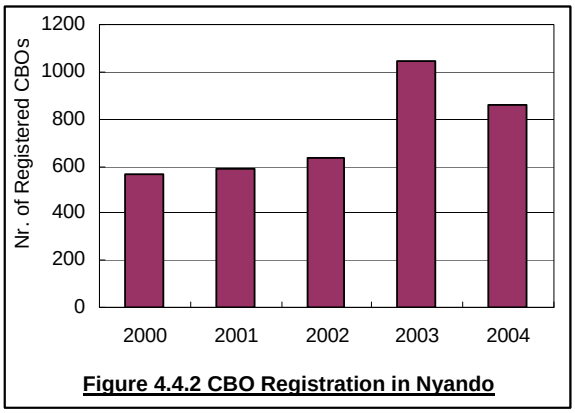


Figure 4.4.2 CBO Registration in Nyando

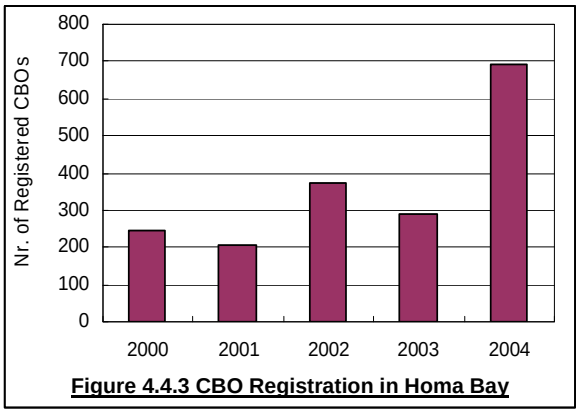


Figure 4.4.3 CBO Registration in Homa Bay

There is also a possibility that funds availed through proposal method may be reaching relatively elite class only in the rural communities because the poorest and vulnerable groups which are in need of such assistances in deed may not have enough capacity to prepare attractive proposals because even those who have so far accessed some funds have asked someone else to prepare the proposal in many cases. It is said in the Study districts, at least half to as much as about 90% of the proposals may have been written by someone else who is not the group member. This situation segregates funded group from non-funded group, leading to a possibility of jealous between them.

What is worse is most of the community development funds come to the bank accounts of approved groups directly from the funding administrations which are in most cases in Nairobi. This can mean that receiving of the money is not always publicly known to other community members (most of the groups do not necessarily cover all the community members but a fragmentation only, say 10 to 30 active memberships). Here, a question relating to accountability is raised. Whatever people perceive for such funds, these are public money which should be accountable not only to administration (donor) side but also to community side, needless to say, inclusive of non-funded members within the same community members as well.

There should be therefore an accountability which can explain why a specific group within a community was funded. However, this is a bit difficult under the present situation. Without this accountability, exclusivity from the viewpoint of fund sharing may easily lead to a possibility of social disintegration within the community. On the other hand, open individual approach may work to supplement this weakness by targeting anyone/ everybody who is interested in a community due to the nature of non-exclusivity. Under the individual approach, opportunity for learning is given to anyone/ everybody in a community, not exclusive at all, though success is very much dependent on the person's effort and in fact it should be so.

4.5 Government Extension Officers and Local Lead Farmers

4.5.1 Capacity Development of Government Extension Officers

It has been observed among all the pilot programmes in the Study that government officers, who do not practice themselves on their farmland, likely teach farmers only about what is written in the

textbooks. Textbooks will give theoretical aspects well to the farmers, but theory does not always fit into the circumstances of each and every farmer. Inputs from actual practices and experiences in the area can enrich the contents of the trainings and contribute actually to improving agriculture production of the farmers.

Here the issue is how to assist the government extension officers in developing their capacity. One way is collaboration between the government extension officers and lead farmers in the area. Lead farmers have been practicing farming under the actual conditions in the area and they find out the suitable and effective ways of farming in the area and also are successful to have earned a living. Their knowledge should be so valuable that it would help other ordinary farmers improve their farming to get higher production and income. In cooperation with the lead farmers on the ground, the extension officers can get ideas on practical application of their theoretical knowledge obtained from textbooks, so that the trainings will be more effective and well received by the ordinary farmers.

In the pilot programmes, collaboration of the government officers with lead farmers has been tried out in three occasions: 1) Promotion of new rice cultivation technology in the three rice irrigation scheme in Nyando District, 2) Joint formulation and implementation of an on-farm training programme on dairy animal husbandry under the Human Resource-led Cottage Industry Programme, and 3) Kitchen garden training in Nyarongi Division in Homa Bay District under Centre Based Livelihood Improvement Programme.

For the new rice cultivation technology promotion, three government officers from the Agriculture Department and Irrigation Department have worked with the key-farmers who learned the technology in Kilimanjaro Agriculture Training Center (KATC) in Tanzania. The government officers have acquired the technology through the demonstration activity with the key-farmers. For the dairy animal husbandry training, four community representatives from Nyando and Homa Bay Districts attended it. The Divisional Livestock Officer was backstopping the farmer trainers but at the same time, he himself was developing further ideas of on-farm training towards the future activity of the department. In Nyarongi Division, a passion fruit farmer was invited to the training as a trainer. He and the agriculture officers prepared the contents of the training together before the training. This process stimulated the extension officers and they were able to get more practical ideas about passion fruits.

4.5.2 Extension System Involving Lead Farmers

Involving local lead farmers into extension activities could contribute not only to capacity development of the government extension officers but also to increasing efficiency and effectiveness of the extension services. The strategy here is that the government provides local lead farmers with the venue and opportunity of being trainers, so that private initiative of extension services may come out. Considering the limited resources and staffing of the government department, the strategy would enable to extend the outreach of the service delivery.

In case of new rice cultivation technology promotion implemented as a pilot programme under the Study, the key-farmers in Nyando and Kisumu Districts have registered their groups with the Social Services Department, so that they are now recognized as CBO by the government and the group from Kisumu District has already conducted trainings on new rice cultivation technology in other areas sponsored by an NGO etc. This privatization of extension services and the government extension function as catalyst is in line with the government policy stipulated in “Strategy for Revitalizing Agriculture 2004 – 2014” prepared by the Ministry of Agriculture and Ministry of Livestock and Fisheries Development (see the box) and the National Agricultural Sector Extension Policy (NASEP).

"Strategy for Revitalizing Agriculture 2004 – 2014", Chapter 6, Section 6.1.2 Extension Services

The government will divest from the direct provision of inputs, mechanization services and marketing, and instead opt for the indirect and efficient support to the non-government actors. **Public extension will play a facilitating and liking role** between farmers or pastoralists or fishery people and research, other technology development institutions, input suppliers, and service providers including marketing and quality control agencies. This will require a change of roles so that the public extension service becomes a catalyzing agent for others to carry out their work while aiming to phase itself out in the future. The following measures will be taken to reform government extension services:

(i) Restructure the public extension service system to become an Agricultural Advisory Service (AAS) that is lean at the national level and devolved to district and location level. In addition, a study will be initiated to review weaknesses and strengths of current organizational arrangements and recommend new arrangements that would facilitate a better linkage between research and extension. This will include examining the feasibility and viability of combining extension with research in a new and autonomous organization.

(ii) Review the legal framework to enable the LAs take up primary responsibility for ensuring the extension services are adequately provided to all farmers within their areas. The majority of extension service provision for smallholders will continue to be financed by the government or LAs in the medium term. **There will be increasing private sector involvement in delivery to complement public extension providers**, however.

(iii) While some NGOs will be able to source funds independently, LAs will require funds and capacity in order to (a) strengthen the public sector extension service delivery and (b) **contract extension services to private providers, where this is more cost-effective**. LAs will coordinate public and private providers to ensure all stakeholders are served. The capacity of the LAs to prepare, administer and monitor extension provision will be improved.

(iv) The LAs will work with sectoral ministries to develop performance standards and a monitoring and evaluation framework for extension services and will evaluate all providers to ensure effectiveness of services.

(v) A National Extension Fund (NEF) will be established and allocated a proportion of government funds for agricultural extension. The LAs will complete for funds from the NEF to offset part of the costs of innovative schemes involving private sector provision of extension services. An institutional framework for managing the fund, including criteria for eligibility, will be developed.

(vi) **To facilitate the partial privatization of extension services and improve delivery, LAs will enter into partnership and cost-sharing arrangements with out-grower and contract farming schemes, projects, non-state actors, or farmer apex bodies for the benefit of smallholder farmers.** This might involve secondment or transfer of extension staff o the schemes. Out-grower or contract farming schemes in partnership with LAs will be eligible for support from the NEF.

<Bold and underline were put by the Study Team>

It may be a shortfall that without sponsorship lead farmers cannot grow as private service providers and also they may lose vigor of volunteer spirit resulting in the story that small-scale farmers who are needy may not be able to access to the teaching. Considering this point, "Strategy for Revitalizing Agriculture" emphasizes the role of Local Authorities to provide the services to all farmers within their area. In case of the pilot programme for rice cultivation technology promotion, farmers of the target irrigation schemes at least prepared lunch for the training and the sub-chief of the area was also present at the training venue. The chief supervised such contribution by the farmers. To some extent, it may be possible that farmers organized by local authority could get fund to invite lead farmers to teach them as far as they recognize that they will benefit from it.

In general, local lead farmers can accept the duty with fairly lower cost compared to the case of bringing trainers from NGOs or consulting companies. For all the cases of rice key-farmers, dairy farmers, and passion fruit farmers, their trainer's fee was even less than 10% of the professionals, say, coming from Nairobi. It implies that involving lead farmers in the government extension services (though it may phase out in the long term according to the strategy of the ministry) could not cost much but can enhance their extension activities.

Figure 4.5.1 simulates the effectiveness and efficiency improvement by involving lead farmers. The current extension services of the Ministry of Agriculture is to set focal area and concentrate on the area for a season and move to the next one in the following season, while the idea here is to provide the venue and opportunity of being trainer to the lead farmers and offer them the opportunity constantly so

that they can keep training farmers. Thus, involving more lead farmers in the extension sphere could accelerate the extension of the technology.

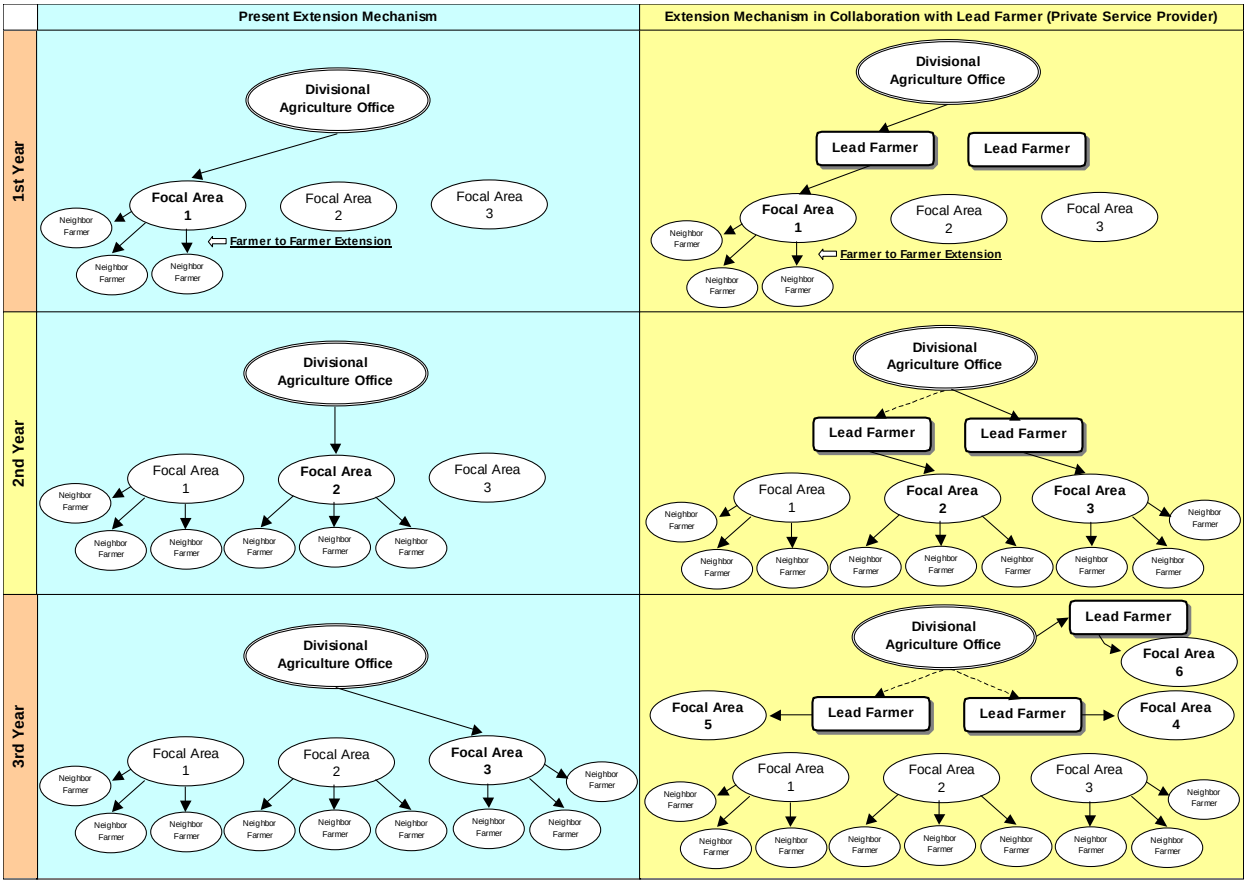


Figure 4.5.1 Extension Service Delivery Involving Lead Farmers (Private Service Provider)

The most cost-effective way should be farmer-to-farmer extension. But like the case of rice cultivation, new technology is so slow to reach to different irrigation schemes. Farmer-to-farmer extension is expected within the irrigation scheme and the lead farmers can contribute to extending the technology to the other irrigation schemes with the facilitation by Agriculture Department.

It has been also observed during the pilot implementation that some of the rice key-farmers went to oversee the demonstration plots sometimes voluntarily. The key-farmers have sense of responsibility for disseminating their skills and that is giving them further commitment as trainer, which is more than the satisfaction of earning on the trainers' fee. It is envisaged that one of the roles of the government extension service in the future would be to find such lead farmers on the ground and provide them with opportunity of training to other ordinary farmers.

Above proposed model of extension has been actually observed taking place in the Study Area. Apart from the fact that a NGO facilitated the rice key-farmers to be trainers, they have also been invited by the farmers in NIB Ahero, and the NIB farmers hired the key-farmer with a group of farm laborers adding a fee of instruction to the ordinary labor wage. Normally they pay Ksh1,200 per acre for transplanting labor and they added Ksh500 to it to get instruction from the key-farmer on seed selection, nursery preparation and line transplanting.

Also the dairy animal husbandry group who conducted an on-farm training for Human Resource-led Cottage Industry Programme has received two youth groups from neighboring location. The trainee who attended the programme introduced youth groups to the dairy animal husbandry group and the

youth did a kind of internship on-the-job training instead of paying the training fee. For the farmer who taught how to grow passion fruits in Nyarongi Division in a training session of the Centre Based Livelihood Improvement Programme, he has received 5 farmers who came to ask for further information on passion fruit cultivation, out of whom 2 farmers attended his training session under the pilot programme. These private initiatives have already been observed.

4.6 Learning Attitude and Incentive

4.6.1 Feedback

From the observation of training conducted by frontline implementers, the Study Team noticed some room for improvement. For instance if only few villagers participate in the training, there can be many reasons behind:

- The topics might not be what many villagers are interested in,
- Notice of the training might not have reached the villagers,
- The venue might be too far from where most of the villagers live,
- It is the busiest season of the year, so villagers might not be able to come in the morning hours,
- There might be too many training sessions in a row,
- It might be a market day, a church day or there is a funeral,
- The previous training was cancelled because the trainer did not show up,
- An association, a society or a group is trying to make the training exclusive,
- People might not understand the language the trainers are using,
- There might be a food-for-work or wage-for-work activity in the area, and / or,
- There is a conflict among different groups in the villages (for example settlers vs. indigenous villagers), etc.

Then it is necessary to change the venue, the way of invitation, date, time, or even the curriculum, etc. of the training, but the reactions seem to be slow usually. To observe and listen to the people, reflect on the situation, and react accordingly is a very important part of monitoring and evaluation (M&E), but many frontline implementers do not think that way. They may think just that M&E is for their supervisors to assess them and not for them to improve themselves. Hence there are cases that they conduct the same training using the same document for many years. Vertical division of the line ministries even at divisional level also makes it difficult for frontline implementers to work together and learn lessons together. The same tendency can be observed also among the farmers. Line planting, for example, does not extend so quickly in the neighborhood. Strong clanship might work against quick progress, but individual attitude against learning seems to be there too.

4.6.2 Real Incentive not Incentives

It is really great incentive for instructors and facilitators to get feedback from the participants and thereby improve themselves. After each training or workshop, instructors and facilitators can meet together and discuss the lessons they have learned. They can always do better training or workshop the next day and on the next opportunity by doing that. Those are actually the fundamentals of M&E.

One of the good ways to change the attitude of implementers is to institutionalize learning oriented M&E (See **4.7 Indicator Oriented M&E and Learning Oriented M&E**). And as far as villagers are concerned, to follow clanship to do training and workshops could be the way to avoid at least jealousy. The other very simple approach, however, seems to be also possible. That is to choose the

courses what villagers really want and/or to choose the villagers who really want to learn the courses.

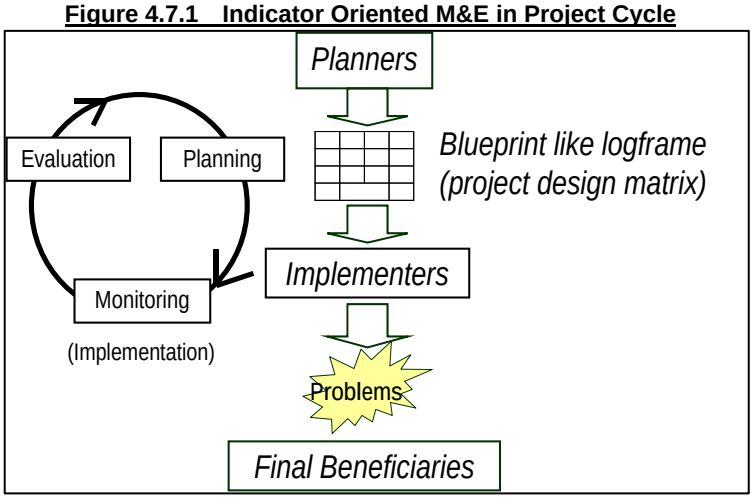
In Human Resource-led Cottage Industry Programme (Pilot No.4), for example, 44 representatives of the villages were the ones to choose the training courses they want. In Handloom Training under Cotton Industry Promotion Programme (Pilot No.6), participants are the ones who paid the six-week board and lodging while JICA paid the instructors' fee and provided the handloom equipment. By observing the attitudes in the training and the outcome, the performance of the participants of these two programmes was better by far.

Three of the participants of Human Resource-led Cottage Industry Programme from a remote rural village in Homa Bay District contributed equal amounts of money and bought a Ksh 15,000 charcoal oven in Nairobi only a few weeks after the bakery training finished. If the training is what they really want and if the amount of money to get into business is not so big, they would start immediately (though, we found that milk processing requires much money for most of the trainees). While some villagers even refuse to attend the training if only board, lodging and transportation are provided and daily allowance is not, the participants of Handloom Training paid boarding and lodging fee by themselves for six weeks. Free education is good and necessary, but free training may not be always good and necessary. They definitely need real incentive to learn, but not incentives to just sit and attend.

4.7 Indicator Oriented M&E and Learning Oriented M&E

4.7.1 Indicator Oriented M&E

Figure 4.7.1 Indicator Oriented M&E in Project Cycle



In classical projects, planning, implementation, monitoring and evaluation go along with a project cycle. Planners make a plan, implementers materialize the plan into project according to the blueprint like a logframe (logical framework or project design matrix), and the third party or managers monitor and evaluate the project according to the logframe. Implementers are the ones to follow the blueprint and to be monitored and evaluated by somebody else in many cases. There are objectively verifiable indicators for the outputs and outcomes (which are also called the project purpose, overall goals and impacts) of the projects, and the performance of the projects is measured by these pre-set indicators, except for some impacts which are not foreseeable.

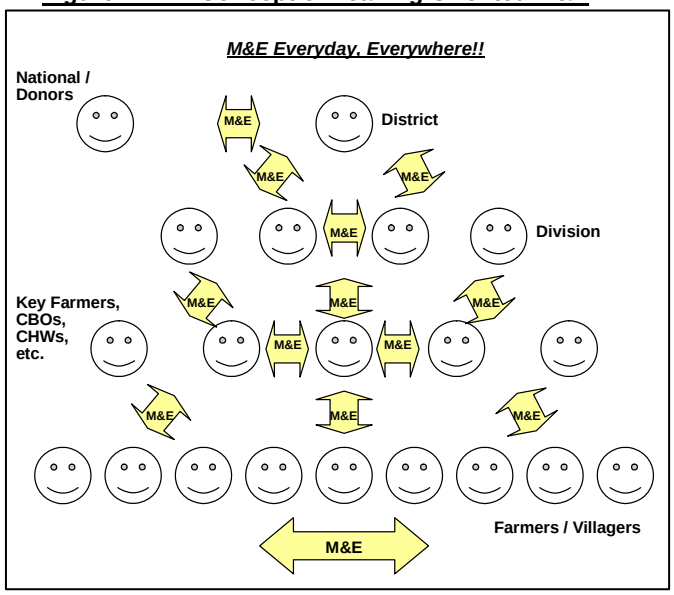
Under this indicator oriented monitoring and evaluation, monitoring is basically carried out to check the fitness to the blueprint, and evaluation is a sort of review of the blueprint by feed-backing the progress and outputs from the monitoring. This indicator oriented model fits the best to physical projects, but not much to social development projects because those projects are not only for the direct outcome of the projects but also for capacity building of the implementers and final beneficiaries as organizations and as individuals. In social development projects, capacity building can be the main objective of the projects and the direct outcome can be secondary.

4.7.2 Learning Oriented M&E

Another school of monitoring and evaluation come from education sector, especially adult education

discipline. In that school, teachers are not the only ones to teach and decide. Teachers must also learn from the students, and ask the students for what they want to study. Where indicator oriented M&E values on the objectives (outputs and outcomes) of the projects, learning oriented M&E values on the development of organizations and individuals. In other words, indicators require unified mission and direction but that is not always necessary for learning. Indicators are more directional, and learning is more attitudinal.

Figure 4.7.2 Concept of Leaning Oriented M&E



These two principles of M&E are not exclusive and both are important for development. Indicator oriented M&E is usually more applicable at macro-level with quantitative evaluation, and learning oriented M&E is more applicable at micro-level with qualitative evaluation. Since indicator oriented M&E has already started to be institutionalized in the Ministry of Planning and National Development, it is time for learning oriented M&E to be introduced as an organizational culture.

To start learning oriented M&E is not difficult; namely,

1) Observe the people and listen to the people in the training or in the workshop. If you notice something (See the examples of **4.6 Learning Attitude and Incentive**), react immediately and do not do just as scheduled. For example, change the date and time of the training or workshop, change the venue, change the language you use, change the way of noticing the training or workshop, change the teaching material, change from theory to practicality, and change the curriculum, etc.
2) Get the feedback from the participants. How do they rate the training or the workshop? What were good and what need some more improvement? What else do they want to learn or do?
3) Have a meeting among the trainers/ instructors/ facilitators after each training or workshop. Discuss how the training or workshop was and how they can improve the session.
4) Send the report of findings and lessons learned, in addition to the results of the conventional indicator oriented M&E, to the district offices of the line ministries.
5) Have periodical inter-ministry meetings at divisional level and discuss the findings and lessons learned. Share what was discovered as lesson, and reflect them in the on-going programmes.
6) Discuss the findings and lessons learned in the quarterly meeting at division level. Reflect them in the approaches, strategies and programmes/ projects of the district development plan.
7) Incorporate the results of learning oriented M&E in the M&E report in addition to the results of the indicator oriented M&E, which is to be submitted to the Monitoring and Evaluation Department, Ministry of Planning and National Development. Reflect the findings and lessons learned in the policy of the Ministry.

PART V

IMPLEMENTATION ARRANGEMENT

CHAPTER 1 OPERATIONALIZATION OF THE PLAN IMPLEMENTATION

Following discussion centers on the implementation arrangement for the district development plans. It starts by giving an overview of potential district development plans from the point of view of development administration systems and institutional arrangements that have taken place over the various development periods, the lessons learned and the way forward in the future. This is followed by a description of the present institutional setting, under which the plans will be implemented, financing arrangement, decision-making for fund allocation, roles of various actors, areas for improvement under the present setting, monitoring and evaluation.

1.1 Present Operation of National and District Development Plans

Kenya has a complex system of resource allocation and service delivery to the people for development. The systems comprise public administration systems (Government, Local Government), private sector including non-governmental organizations (NGOs), development partners approaches and more recently the constituency development approaches. All these target both the rural and urban communities in their development endeavours.

Since independence in 1963 the public administrations have undergone fundamental structural changes in terms of organization, staffing levels, and governance (integrity, transparency and accountability, efficiency and decision-making) in the process of improving service delivery and allocation of resources for development. Kenya has had nine National Development Plans, each covering a planning cycle period of five or three or six years (see Table 1.1.1) and with a theme that highlights the main policy objectives of the plan, implementation modalities and targets to be achieved by various sectors of the economy within the plan period.

Table 1.1.1 National Development Plans and their Themes

National Development Plan	Plan Period	Theme
1st Development Plan	1964 (66)-1970	Redistribution with Growth
2nd Development Plan	1970-1974	Rural Development
3rd Development Plan	1974-1978	Employment and Income Distribution
4th Development Plan	1979-1983	Alleviation of Poverty
5th Development Plan	1984-1988	Mobilization of Domestic Resources for Equitable Distribution
6th Development Plan	1989-1993	Participation for Progress
7th Development Plan	1994-1996	Resource Mobilization for Sustainable Development
8th Development Plan	1997-2001	Rapid Industrialization for Sustained Development
9th Development Plan	2002-2008	Effective Mgt for Sustainable Economic Growth & Poverty Reduction

From the above themes the plans have all been geared to some degree or other, to creation of employment, economic growth and equity. The first six Plans were mainly sectoral in their approach to planning. However, the seventh Plan follows “The Integrated Approach” which was already being applied at then district level planning. However, the integrated approach applied does not attempt to tackle any particular issues at once or at the same time but rather follows some ranking depending on the primary importance of such issues to the development of the economy, for instance wealth and employment creation, improved management of human and financial resources among others.

District Development Plans are essentially documents that are implementation links for the broad policy objectives of the National Development Plans. Several implementation approaches such as the Special Rural Development Programme (SRDP), which was based on the principle of “area-based planning” provided models for key components of the current District Planning system. Lessons learned through its implementation led to appointments of the District Development Officers (DDOs)

and preparation of District Development Plans (DDPs)[1].

With the birth of the "District Focus Strategy for Rural Development (DFSRD)[2] on 1st July 1983 planning and implementation responsibilities were shifted to the districts. The DFSRD is meant to strengthen and fully operationalize the decentralized district planning process that in essence is a reversal of top-down planning into bottom-up planning. This requires involvement and participation of beneficiaries at all stages of the project cycle and management (planning, implementation, monitoring and evaluation).

The DFSRD gives guidelines and the framework for implementation of DDPs. The technical aspects of district planning responsibilities are vested with the District Executive Committee (DEC) assisted by other subordinate bodies of the District Development Committee (DDC) like the District Planning Unit (DPU). Among the major tasks of the DEC is to prepare DDPs and monitor their implementation.

It is noted that over time suggestions on decentralization and devolution have and are still on going hinging around the main administrations involved in development, namely the Central Government and the District Councils/Local authorities. However, considering the outcome of the referendum and rejection of the proposed constitution the following discussions center on the implementation arrangements assuming that the present administrations and institutional arrangement will prevail during the proposed plan period.

Nevertheless it will be necessary to re-examine the institutional arrangements that are currently involved in the development process and institute necessary re-engineering to accommodate the changes in policy at the national and district level when the new constitution will be in place[3]. Meanwhile in this chapter emphasis has been laid on those issues that will require attention and improvement. Among them are: the role of the chief in the development process, the need for reduction of transaction costs, deployment of human resources, project proposals by communities and perceptions of development.

1.2 Present Institutional Setting for Implementing District Development Plan

Under the present administrative system, the implementation of the district development plan will follow the District Focus Strategy for Rural Development (DFSRD), which is currently in operation. The DDC will be the agency responsible for coordination of the implementation of development plans. The membership of the DDC will be the District Commissioner (DC) as the Chair, DDO as the Secretary, heads of various government departments, Local Members of Parliament (MPs), Representatives of the Local Authorities, representatives of private sector, and civil society organizations (NGOs, FBOs, CBOs).

Below the DDC are the various organs involved in the development process in the district, namely the CDF Committee, the Divisional Development Committee, the Local Authorities and the Civil Society Organizations and Private sector (see Figure 1.2.1 below). At the lower level are the Location Development Committees (LDCs) and the Sub-Location Development Committees. The DFSRD does not go below the sub-location level. However, through community initiative most villages have some

[1] Implementation of SRDP contributed and necessitated the setting up of the Ndegwa Commission on "The Working Party on the Coordination of Rural Development" which recommended establishment of DDOs and preparation of DDPs.

[2] The DFSRD is a two way process which begins both at the top (national) level as well as the bottom (local) level and integrates with each other at a point below which macro planning is meaningless and above which planning is irrelevant. The district is the point where bottom up and top down planning can be integrated in a meaningful manner. National planning is centralised and provides policy perspectives for national growth patterns while the decentralised district planning begins with the analysis of the needs of the people and provides a framework for rationalizing those needs and integrates them with the national development goals.

[3] The Team notes that at the time of preparation of this guidelines talks were being held on aspects related to amendments to the existing constitution whose outcome might have an implication on the proposed implementation arrangements.

operational Village Development Committees (VDCs) for the purpose of managing their development processes. Hence we propose the VDC as the lowest organ for coordination of development activities at community level.

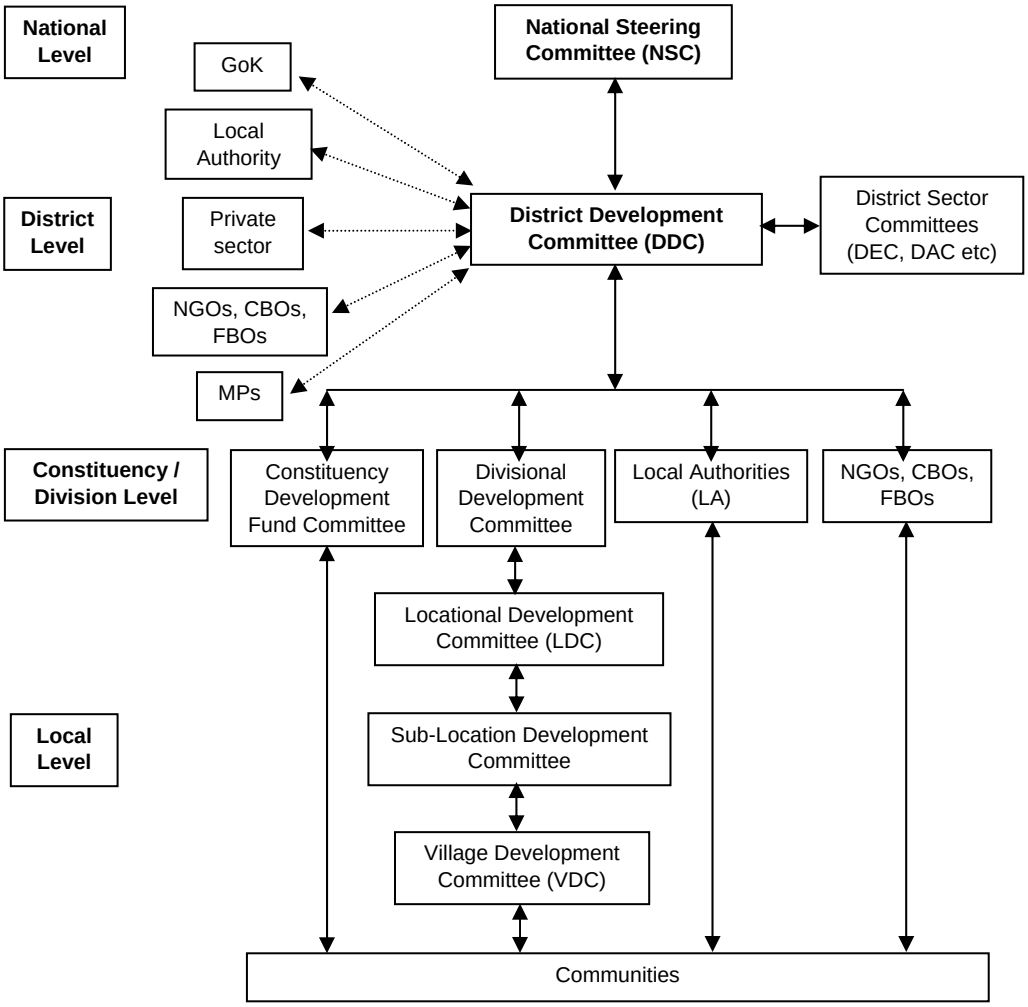


Figure 1.2.1 Proposed DDP Implementation Arrangement under the Current Administrative System

At both the District and Constituency/ Division levels, provision of technical advice and overseeing of the implementation of the development activities will be carried out by sector committees. For example the DEC will provide technical advice to DDC and monitor implementation of development activities while, for example, the District Agricultural Committee (DAC) deals with aspects related to agriculture. The Constituency Development Fund Committee allocates resources and oversees implementation of development projects supported through CDF. The Local Authorities have Sector Committees, which are responsible for overseeing the implementation of development activities supported through Local Authority Transfer Funds (LATF). The Civil Society organizations (NGOs, FBOs and CBOs) have also their own structural organs for implementation of development activities particularly at the Divisional and lower levels. Therefore considering the diversity of organs involved in development activities in the districts it is necessary for them to network and collaborate to avoid duplication and ensure synergy.

There are strengths and weaknesses associated with the organs mentioned above that need to be considered during the implementation of the development plans. The following are some strengths and weaknesses of DDCs, Sub-DDCs, LDCs, CDF Committees, Local Authorities that were observed

in the pilot districts, which need to be addressed during the implementation of the development plans:

Table 1.2.1 Some Strengths and Weaknesses of Organs involved in Development Activities at District Level and Below

Organ	Strengths	Weaknesses	Opportunities for improvement
DDC	• Already established • Wide represent'n of stakeholders	• Irregular meetings • Inadequate funds for M&E	• Hold regular quarterly meeting
DEC	• Qualified technical staff	• Irregular meetings	• Hold regular monthly meetings
Sub-DDC	• Already established • Wide represent'n of stakeholders	• Irregular meetings	• Hold regular quarterly meetings
LDC and Sub-LDC	• Already established • Communities represented	• Irregular meetings	• Hold regular quarterly meetings
CDF Committee	• Legal recognition • Political support • Backstopping from key technical departments	• Poor management of funds • Lack of transparency, accountability • Poor representation • Project and beneficiary identification riddled in politics • Low awareness of the fund by communities • Weak M&E	• Improve management of resources through capacity building • Revise the legal framework of the fund • Sensitize and empower communities on the existence and utilization of the fund • Strengthen M&E
Local Authorities	• Legal recognition • Backstopping from key technical departments • Community involvement (LASDAP)	• Poor service delivery • Lack of transparency, accountability • Low awareness of the fund by communities • Negative public attitude • Weak M&E	• Improve service delivery through capacity building • Sensitize and empower communities on the existence and utilization of the LATF • Strengthen M&E
NGOs and FBOs	• Financial resources • Qualified technical staff	• Inadequate skills • No budget information sharing with other stakeholders	• Enhance skills thr. capacity building • Networking and collaboration w/ GoK • Share project information in stakeholder forum
CBOs	• Some groups have common interest and are cohesive	• Inadequate or no professional skills • High expectations from communities	• Enhance skills thr. capacity building • Sensitize communities

Source: DAMER Nyando and Homa Bay Districts, 2005; Interviews

1.3 Financing Arrangement

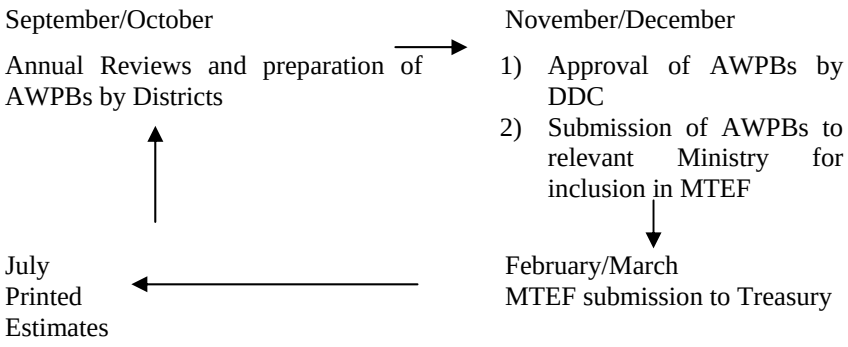
Currently the districts get funds and other resources from various sources such as Central Government from the Exchequer through ministries, local authorities (LATF and locally generated funds from cess and general rate fund), CDF, development partners, non-governmental organizations (NGOs) and faith-based organizations (FBOs). Each source of funds has its own procedures and conditions, which complicates financial management and accounting at district level. This also leads to duplication of efforts and overlaps and opens avenues for resource misappropriation.

The main planning and control mechanism within the DFSRD is the requirement for approved Annual Workplans and Budgets (AWPBs)[4]. These are prepared by district officers and submitted to their respective ministry headquarters in Nairobi for inclusion in the ministry's overall "draft estimates" which are submitted to Parliament each year for approval. Under the new Medium-Term Expenditure Framework (MTEF), each Ministry has to submit annually to Ministry of Finance (MoF) a rolling three-year budget proposal using the categories defined in Government's Poverty Reduction Strategy Paper (PRSP). These "bids" are filled depending on the overall level of funding available and each request's merit in meeting poverty reduction criteria. A recent improvement has been that donor-funded activities are now noted in these budget requests and are generally not affected by Treasury cuts (although this does not necessarily guarantee the Government contribution)[5].

The Finance Officer of the respective ministry sends the budgets to MoF, where the Department of Budgetary Supplies consolidates them into Draft Estimates. The Draft Estimates are eventually

[4] There is no mechanism to ensure that the AWPBs are approved by DDC before funding.
[5] The budget of the financial year 2005/2006 was based on revenues collected locally, earmarking contributions from development partners as budgetary support.

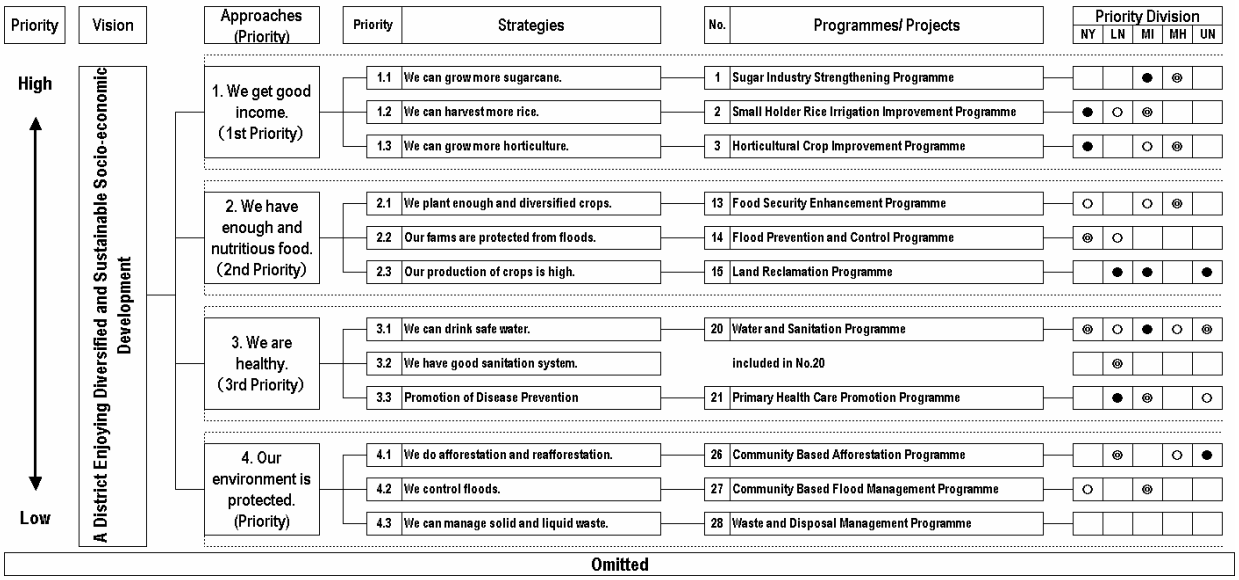
published as Printed estimates around early July. The Minister for Finance presents the printed estimates (budget) to Parliament for approval. The current budget cycle is as follows:



The DFSRD financial flow mechanism has its strengths and weaknesses. One of its strength is that it enables development stakeholders to participate in budgetary process for their identified district priorities. However, despite the participation in budget making and prioritization of activities not all activities receive adequate budgetary allocations for implementation because finances are limited. In the light of this what is important is how to distribute the available funds rationally according to prioritization across sectors and across areas (divisions). This more so applies to block grant funds such as CDF, LATF, Constituency Bursary Funds, Constituency Aids Control Council (CACC) Funds, which are issued following financing mechanisms governed by different legislations and regulations. To circumvent this and ensure rational distribution of block grant funds the development framework developed for the two study districts where development programmes/projects are prioritized and also areas have been clarified showing, which projects should be done and at what priority, could be used as a basis for making decisions on fund allocation (see section 2.4 below).

Thus taking into account the lessons learned so far and cognisant of the fact that due to different financial flow mechanisms, it may not be prudent to recommend harmonization of the financial flow mechanisms at present. However, for effective and sustainable development it is important that the development projects financed within a district should consider those that are identified and prioritized within the development plan by the stakeholders as in the framework described for the two study districts (example is shown below).

Figure 1.3.1 An Example of Development Framework (Nyando District, partly shown)



1.4 Decision Making for Fund Allocation

It may be common knowledge that for a long time decisions for resource allocation for development, particularly funds have been top down without any involvement of the beneficiaries. This has consequently created dependency syndromes, which has had a negative impact in development. Since the approach emphasized in identification and prioritization of development activities contained in this DDP is participatory involving all stakeholders including the communities, it is also important that the decision-making process for resource allocation should also be participatory.

With regard to block grant funds such as CDF and LATF, it is recommended that the decision-making mechanism for block grant fund allocation be closely linked to the prioritized development framework in the two districts. For line ministries, it may not be easy to allocate fund according to the priority established in the framework because in practice the budget submitted by each district officer for each ministry is subject to major and uncoordinated revision at the national level. This may result in the indiscriminate funding of parts of a district's development plan. However, it is also true in fact that the funding is made to a greater extent according to the workplan submitted by each department at the district level. Therefore by reflecting the district priority enumerated in the framework into the workplan, the funding may, to some extent, be able to respond the district priority.

1.5 Role of the Various Actors/Stakeholders

The main stakeholders in the development process at district level include: the Government, communities, civil society organizations (NGOs, CBOs and FBOs), private sector and other development partners (donors). The role of these actors in implementation of the district development plan is described below:

1.5.1 Role of the Government

Government is the major stakeholder in the development process in Kenya and to realize any degree of poverty reduction will require a proactive role for Government Departments and staff. In the past this has meant government being the actual implementer at the field level of the myriad of activities identified for complex integrated projects designed to meet the multi-faceted needs of the poor. It is now recognized that this must change. In part this approach has been the cause of poor coordination and implementation of development plans. In this DDP it is recommended that the government should take the role of:

- Creating the appropriate development environment; and
- Directly providing or facilitating the provision of the technical and management support necessary to ensure that field-level/ community level interventions are well designed and implemented.

The implementation strategy for the development plan would be based on reaching towards this definition of the role for government. It is recognized that such a shift will require a period of transition particularly considering the endogenous approach to development as opposed to exogenous approach, which has been prevalent. This would also allow fuller involvement of beneficiary groups/ communities and other agencies with proven capacity as the implementers. Not only does this help to realize the aspirations expressed in the ERS, but it also recognizes that the civil service reform process is reducing the capacity of government agencies so that they need to concentrate on their core functions of regulation and supervision.

1.5.2 Role of Communities

A major objective of the district development plan would be to strengthen communities over time so that they are more able to be the engines of their own development. The strategy of the plan will be to

build knowledge and understanding of the communities' ownership of the development interventions through consultation at every stage (problem identification and analysis, planning, budgeting, implementation and monitoring and evaluation).

The specific role of the community will depend on the nature of the development project and who has initiated it. For government initiated public (infrastructure) projects such as rural roads, rural drainage etc. the community will be expected to cost share and make contributions either in kind or in form of labour. The corollary is true for community-initiated projects where the government is supposed to provide support or subsidy.

For community participation to be effective from the government point of view, it would be necessary to organize them into common interest groups (CIGs) or Village Development Committees with elected officials. This arrangement may ensure that the government can reach them with minimal transaction cost as well as the community members can show collective actions and thereby they can could achieve more than what each individual could do, which may be called empowerment. The functions of the elected officials would be to oversee and monitor implementation of all development activities within the community members, including resource utilization.

1.5.3 Role of the Chief

Provincial administration is a system of Government that brings government administration closer to the people: Each Province is made up of several districts, which are themselves divided into smaller administrative units being Divisions, Locations and Sub- Locations in that order. The Chiefs and Assistant Chiefs are part of the provincial administration at the Location and Sub-Location level respectively. The duties of Chiefs/ Assistant Chiefs are clearly stipulated in the Chiefs Act (Cap. 128 of the Laws of Kenya Revised Edition 1998). These include security, coordination of development activities, dissemination of government policy and resolution of conflicts and peace building.

The chief chairs the Location Development Committee (LDC), which receives project proposals from the project committees at Sub-Location level, reviews them and then shortlists them according to priorities and send them to sub-DDC or to the Constituency Development Committee. In implementation of the district development plans, the chiefs can play a crucial role in increasing awareness of the communities on issues related to development through barazas. The chief should work closely with the clan Elders and thus they can jointly play a crucial role of mobilizing communities.

Another issue pertinent to chief's attitude is that one may say they tend to think much of development in an exogenous way. One example is that the chief tends to request very much whenever they receive a guest. Request itself may not be wrong at all but here the tendency is that the request comes first rather than them stating proudly what they have done themselves. One may say chiefs are very often resource oriented, or in other words, exogenous development oriented, where no empowerment can come up. Empowerment can come only out of their own initiatives, but otherwise dependency would deepen. Such attitude might be embedded in the process of selection of the chiefs; namely, chief is not elected/ selected by the people but nominated under a top down system.

It may be difficult for chiefs to change such attitude in a short time. But at least, apart from requesting anything they think out, chiefs should turn their mind from outside-resource-oriented to the-people-oriented development, which is from exogenous development to endogenous development. One may not see any empowerment if they just request, but this can be evident if the community members are proudly talking about their achievement upon which assistance may come. Being poor, which may be true at present in economic terms, is not a way of soliciting assistance but the positive attitude of trying to get out of the poverty is the true way of soliciting outside assistance.

1.5.4 Role of Other Stakeholders

Other development partners such as NGOs, FBOs and the private sector would play an important role in provision of services and support to development activities. There may be many local and international NGOs involved in development activities in each district. However, the development activities supported by these NGOs and FBOs are quite often not well embedded in the district development plans and thus need to be coordinated and aligned to the district priorities. This can be done by the NGO or FBO looking at the development framework formulated based on the approaches enumerated in Chapter three. Based on the type of development activities that they want to support they can look at the priorities set and decide on the project area. The NGOs, FBOs, Private sector and other stakeholders involved in the development should also be involved in participatory monitoring and evaluation of activity implementation as well as resource utilization.

1.6 Areas of Attention

1.6.1 Reduction of Transaction Costs

Implementation of some government policies have led to increased transaction costs of the development process. An area of concern is with regard to subsistence allowances for government staff when delivering services or when participating in forums such as planning workshops. Payment of such allowances seems to have created an attitude where people tend to go to workshops targeting the allowances rather than the commitment to the development process and delivery of services. Whereas this report does not advocate complete non-payment of allowances, it may be felt that there is need to re-examine the whole issue of allowances vis a vis service delivery to ensure that transaction costs for development are reduced so that most of the funds go towards contributing to implementation of actual development activities.

The other aspect that adds to transaction costs is overlaps and duplication of activities by the various development partners/ agencies. To avoid this all the stakeholders should refer to the district development plan formulated according to the approaches described in this DDP where the development framework has priority at all the levels of approach, strategy, programme/project, and area (division). If all stakeholders in a district refer to one overall development framework like the one prepared for the pilot districts, no overlapping would take place, thereby reducing overall transaction cost.

The framework would also minimize lead-time whenever an integrated development programme is to start. Experiences practiced so far are to call all the relevant stakeholders to a forum where they discuss their roles, responsibilities, logistics arrangement, etc. The more stakeholders are engaged, the more lead-time they need. They may sometimes end up in no agreement but in meeting at next forum, resulting in increase of transaction cost. Here, if they can have a platform, that is actually the development framework prepared under this Study, they can really minimize the lead-time. By looking at the platform, they can know where they are standing in district development, and thereby where they should be heading. The development framework can direct the stakeholders to which parts each development stakeholder can or should undertake, and thereby meetings for meeting would be left out.

1.6.2 Deployment and Capacity Building of Human Resources

The deployment of technical officers to lower administrative units is dependent on the available staff and specific technical services to be delivered. Considering agriculture as the backbone of the livelihoods of the majority of the rural population in Kenya, it is imperative that there is need for increased agricultural productivity. To achieve this, farmers will need technical advice from extension workers. However, from an examination of the staffing levels at the district, division and location

level, it is evident that there is a skewed distribution of staff. In the two districts, there are about 10 technical staff at the District headquarters and about 45 – 50 in all divisions (including locations). Out of the about 45 –50 staff, more than half are posted at the divisional headquarters.

Considering that most development activities are at the Location and sub-Location level, this is where the extension services are more needed. This implies there should be more extension staff at the location (or sub-location) level rather than divisional headquarters. Reallocation of the extension staff from divisional headquarters to location level should be examined. Or otherwise, to overcome this, it is suggested that the extension staff network and collaborate with advanced farmers (key farmers) to reinforce delivery of extension services as demonstrated under the pilot programme of 'Key-farmer led Paddy Cultivation Improvement Programme'.

1.6.3 Community Project Proposals

In the past, community participation in development activities was not emphasized. This led to lack of ownership of most projects by the community they were supposed to serve. In the quest of making communities involved in the development activities, the idea of financing project activities upon receipt of project proposals became the order of the day. This did not take into account the capacity of the communities to write project proposals. The urge of the communities to have a share of the development resources has made them vulnerable to the elite members of the society whom they have to hire to write proposals, in some cases without any guarantee of funding.

What this proposal writing has done is to enable some CBOs to get funds for development but in some cases it has not adequately prepared them with the necessary tools to ensure effective and transparent way of utilizing these funds. Proposal approach may have the following shortfalls, and to overcome them, support and supervision by provincial administration and government relevant officers should be available at the community level:

- It may lead to advanced groups becoming better off while the less advanced groups may be left out. This is because the advanced groups can write attractive proposals, which attract more funds while the less advanced group, which is in need, may have difficulty in writing the proposal, and hence miss the assistance.
- Upon approval of a proposal, the fund is usually remitted directly to the group's bank account from the funding agency. This means that only the group members know that funds have come to their area. Since these are public funds there is need for transparency and accountability. The current approach of funding proposals may be leading to some social fragmentation brought about by jealous by those who are not funded.
- The funding conditions for the proposal approach is to a group and tends not to give an equal opportunity to people who have not formed groups.

1.6.4 Paradigm Shift on Perceptions of Development

For many years the development process and initiatives have been government led with little involvement of the communities. This top down approach has created different perceptions of development amongst communities, beneficiaries, service providers and some development partners as well. Although there are no documentations of perceptions of the different stakeholders involved in the development process from discussions with various stakeholders, some elements of dependency syndrome were apparent. Some communities and CBOs seem to be of the view that government is responsible for "doing things for them" rather than they taking the lead role. A consequence of this attitude is that once a development partner pulls out all what has been supported seizes to function because of lack of ownership.

From the above scenarios if the exogenous approach, or resource oriented approach, to development has to gain root in the districts there is need for change of the mindset of all stakeholders involved in the development process. Since change of mindsets is a slow process there is need to take this into consideration when designing development activities in the district. In designing district development plan, endogenous development rather than exogenous development approach should be given emphasis. Endogenous development operates on what we have now and therefore on our own initiative. Then available fund can help the initiative in a form of subsidy or by establishing social infrastructure which can improve the communities' life with a sense of public equity.

1.7 Monitoring and Evaluation

1.7.1 Evolution of the National M&E System

The IP-ERS, which augments the National Development Plan 2002-2008, provides for the development of an integrated national M&E system as an integrated component of the IP-ERS itself. The purpose of the integrated national M&E system is to provide feedback on the effectiveness of the implementation of policies and programmes set out in the IP-ERS, Ministry Strategic Plans and annual work plans. The M&E system provides a mechanism for feedback to the budgetary allocation system so that future budget allocations are tailored to maximize their impact on achievement of IP-ERS targets. It should also point to lessons and good practices for replication arising from experience in the implementation of policies and development programmes.

Since the establishment of the IP-ERS, several important steps have been taken towards establishment and institutionalization of the national M&E system; namely, 1) Establishment of the Monitoring and Evaluation Department (MED), 2) Creation of a National Steering Committee (NSC) for M&E, 3) Definition of a national institutional structure composed of a Central Structure and also Devolved Structure, and 4) Preparation of the "Methodological and Operation Guidelines" to guide the implementation of the national M&E system. The guidelines outline the rationale for the M&E system, concepts of M&E, how the M&E system is to be operationalized in government ministries and agencies with the necessary reporting formats, operationalization of the M&E in the devolved structure and the role of the MED in the implementation of the national M&E system. Following discussion refers to the guidelines in the context of district level:

1.7.2 M&E at the District Level

The broad purpose of M&E at the District level is to monitor[6] and evaluate[7] the implementation and effectiveness of programmes/ projects of political, social and economic development at the community level (from the grassroots level to the district level) and to provide feedback for improvement and further development of appropriate policies and programmes/ projects. The M&E at district level is intended to compliment the coverage and content of the M&E system at the central level, without necessarily replicating what is already covered in the central system.

The proposed M&E at district level is designed taking cognizant of the different administrations both at district level, division, location and sub-location levels, various categories of Local Authority (including Town Councils, County Councils and Municipal Councils), structures and systems defined on the basis of constituencies and the local offices of the ministries of central government. In addition to the structures of government it takes into consideration organizations in the private sector and civil society organizations (NGOs, CBOs, FBOs). Figure 1.7.1 shows the organizations which will be included in M&E structure at the district level (referred to the Annex-2, National M&E System

[6] According to Oxford advanced Learners Dictionary to **monitor** means "to watch and check something over a period of time to see how it develops so that you can make any necessary changes".

[7] To **evaluate** means "to form an opinion of the amount, value or quality of something after thinking about it carefully"

Guideline).

The M&E system at District level is based on plans and programmes being implemented in the district and aims to track and assess the extent to which these plans and programmes are successfully implemented and their effects and impact on the livelihood of the beneficiaries. Considering the various actors and categories of programmes / projects implemented at district level, the M&E system should take into account the diversity of these planning processes (see Textbox):

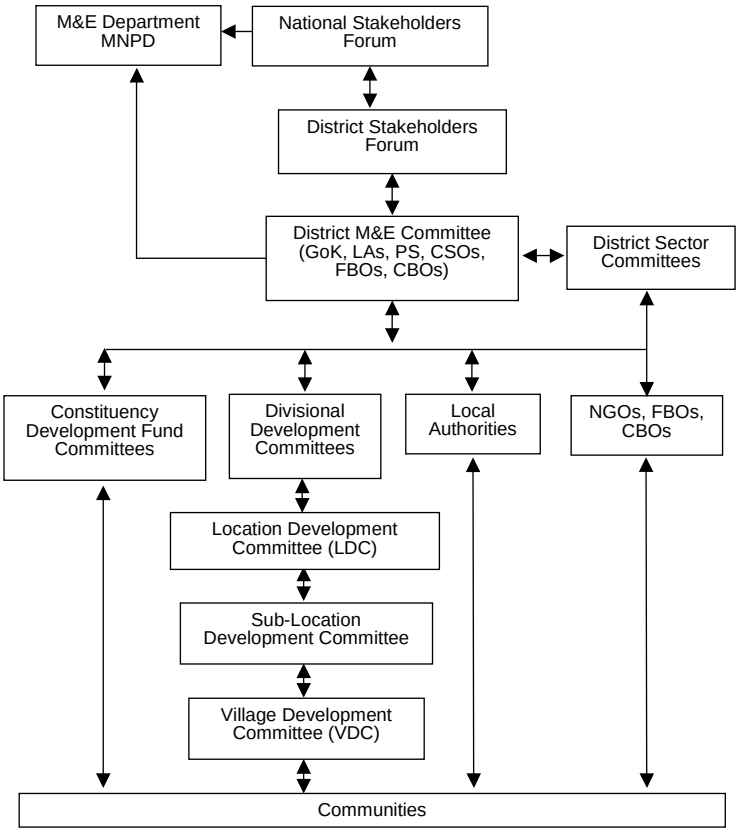


Figure 1.7.1 M&E Institutional Setting-up at District (from National M&E System Guideline)

The different administrations and organizations at different levels (district, division, constituency, location, sub-location/ village) should be encouraged and supported in developing their M&E capacity as a routine element of their planning and programming activities. M&E should be taken as a routine function and part of the planning cycle and hence the need to inculcate this culture at all levels in the district since it is not yet well developed. It should be realized that M&E is a continuous process that should be carried out by all implementers at all levels. Under the current administrative system the responsibility for implementation of the district M&E is vested in the District Commissioner. For the day-to-day management purposes this responsibility is delegated to the District Development Officer (DDO). In the proposed M&E guided in the guidelines of national M&E, the role of the DDO is to:

Different Types of Plans Affecting a District

The M&E at district level should recognize the following diversity of planning processes present at district level and accommodate their diversity:

- The National Programmes set out in the ERS;
- The district level planning process which is centered on the District Development Plans;
- The Plans prepared by the Local Authorities (LASDAPs);
- Plans prepared at the level of the constituency for prioritization of the application of CDF funds;
- Plans prepared by the committees responsible for management of the various special funds available at the district level (District Roads Committee, CACCs and the Bursary Fund Committee); and
- Priorities outlined in the District PRSP documents.

- Convene the District Monitoring and Evaluation Committee (DMEC);
- Prepare the agenda and timetable for meetings of the DMEC and act as facilitator and secretary;
- Take all necessary steps to ensure that there is an appropriate level of financing for the proposed activities of the DMEC;
- Follow-up on decisions of the DMEC and ensure timetables for preparation of the District Annual M&E Report (DAMER) is adhered to; and
- Submit the DAMER to MED and relevant stakeholders.

The DMEC is established to provide well-informed and impartial advice to the DDO in undertaking of

M&E activities in the district. Its composition should comprise representatives from the various organizations and stakeholders operating in the district. The functions of the DMEC are to:

- Promote awareness of the M&E in the district so that a culture of M&E is progressively adopted by all organizations and at all levels in the district;
- Advise and assist the DDO in preparation of a work plan for the preparation of the District annual review/ Report;
- Assist the DDO in ensuring that as wide as possible a range of stakeholders in the district are involved in the District annual review process; and
- Review the draft DAMER and make recommendations on its improvement before finalization.

Most of the districts have adopted or are adopting the proposed national M&E system, which is predominantly output based and indicator oriented. In this guideline, however, it is proposed that two levels of monitoring systems be used; namely, output based M&E which is well elaborated in the national M&E guidelines, and process based M&E, which is a typical learning oriented. These two principles of M&E are not exclusive and both are important for development. Indicator oriented M&E is usually more applicable at macro-level with quantitative evaluation, and learning oriented M&E is more applicable at micro-level with qualitative evaluation. It may be said at the district more emphasis can be placed on output based (indicator oriented) M&E while at the divisional level and below thereof more emphasis on learning oriented process M&E.

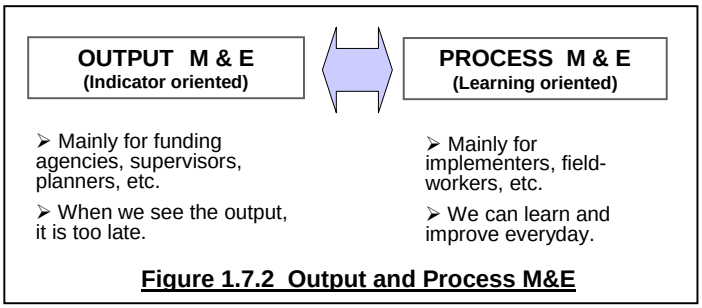


Figure 1.7.2 Output and Process M&E

Output indicator oriented M&E is summarised in Table 1.7.1 in relation to the indicator level presented in the national M&E system.

Table 1.7.1 Different Levels and Types of M&E Systems, Indicators and Clientele

Development Objective Level[8]	Type of M&E (Target by Level)	Indicators	Organisation	Clientele
Approach (Broad aim to be achieved in medium term)	Goal based (Goal of Approach) Comprehending strategies	Goal indicators e.g. We have enough food	National	・ Policy makers ・ Planners ・ Funding agencies ・ Managers & Supervisors
Strategy (Objectives of the programmes / Projects)	Outcome based (Outcome of strategy) Comprehending programmes / Projects	Outcome indicators e.g. We use proper crop husbandry practice.	District	・ Policy makers ・ Planners ・ Funding agencies ・ Managers & Supervisors
Output (Immediate results to be achieved by specific programmes / projects)	Output based M&E for individual Programme / Project	Output indicators e.g. Number of farmers using new technology	Divisional	・ Implementers ・ Field supervisors ・ Beneficiaries
Project activities (Inputs the projects must undertake)	Performance based M&E for individual Programme / Project	Performance indicators e.g. Number of farmers attended training	Divisional Community	・ Implementers ・ Field Supervisors ・ Beneficiaries

[8] The development objectives referred to here corresponds to the levels used in the Development Framework of the pilot districts; Nyando and Homa Bay Districts.

For the process oriented M&E, its implementation is not difficult at all. Process monitoring is very similar to adult education discipline. In that school, teachers are not the only ones to teach and decide. Teachers must also learn from the students, and ask the students for what they want to study. Where indicator oriented M&E values on the objectives (outputs and outcomes) of the projects, learning oriented M&E values on the development of organizations and individuals. To start learning oriented M&E is not difficult; namely,

- Observe the people and listen to the people in the training or in the workshop. If you notice something, react immediately and do not do just as scheduled.
- Get the feedback from the participants. How do they rate the training or the workshop? What were good and what needs some more improvement? What else do they want to learn or do?
- Have a meeting among the trainers/instructors/facilitators after each training or workshop. Discuss how the training or workshop was and how they can improve the session.
- Send the report of findings and lessons learned, in addition to the results of the conventional indicator oriented M&E, to the district offices of the line ministries.
- Have periodical inter-ministry meetings at divisional level and discuss the findings and lessons learned. Share what was discovered as lesson, and reflect them in the on-going programmes.
- Discuss the findings and lessons learned in the quarterly meeting at division level. Reflect them in the approaches, strategies and programmes/projects of the district development plan.
- Incorporate the results of learning oriented M&E in the M&E report in addition to the results of the indicator oriented M&E, which is to be submitted to the MED, MoPND. Reflect the findings and lessons learned in the policy of the Ministry.

CHAPTER 2 POSSIBLE IMPROVEMENT UNDER A DECENTRALIZED SETTING

Under a decentralized system the districts will be the central points for decision-making of priority activities for development and overseeing resource allocation for those activities and their implementation. However, considering the many challenges that have hampered effective delivery of services and implementation of development activities at the district and constituency levels it would be imperative to make the necessary changes to the existing administrative systems and structures in order to be responsive to the needs of the rural communities in line with the economic recovery strategy. This can be done by: 1) harmonizing and strengthening the District and Constituency development and 2) enhancing networking and collaboration.

2.1 Harmonization and Strengthening of the Constituency and District Development

It is proposed to integrate and harmonize and strengthen the existing development committees: the District Development Committee (DDC), the Constituency Development Committee (CDC) and other sector committees. At the District level it is proposed to establish a committee that would be the focal point for district development planning, coordination and monitoring and evaluation. The current name of the Committee "***District Development Committee***" can be adapted but its membership and mandate changed and given the necessary legal framework. Its functions would be to:

- Coordinate planning, implementation, monitoring and evaluation of all development activities in the district;
- Establish development priorities in line with government policies;
- Consider, review and endorse all development projects/programmes in the district;
- Approve district annual work plans and budgets;
- Harmonize the various development plans by different organizations in the district in order to prevent conflict and duplication of activities;
- Mobilize resources for the district;
- Provide technical input in project preparation, implementation, monitoring and evaluation;
- Interpret and disseminate government policies to stakeholders at the district level; and
- Establish and operationalize monitoring and evaluation structures in the district.

The membership of the DDC would be: DC, DDO, Members of Parliament, Chairpersons of Local Authorities, Clerks to Local Authorities, Chairpersons/Secretaries of CDF Committees, Chairpersons/Secretaries of District Sector Committees, Project/Programme Coordinators, Representatives of NGOs, FBOs and CBOs, Representatives of major Private Sector organizations and Representatives of active women organizations, youth, disadvantaged groups and people living with HIV/AIDS. The Chairperson should preferably be an elected local person.

Below the District Level Development Committee it is proposed to amalgamate the Divisional Development Committee with the Constituency Development Committee into one Committee that deals with development planning issues at constituency level. The function of this committee which can be given another name or adopt the name "***Constituency Development Committee***" with a new mandate of harmonizing activities undertaken by the Government agencies, CDF, CDTF, NGOs, LATF, HIV/AIDS control organizations (CACCs) and FBOs within the constituency. The functions of the CDC would be to:

- Assist communities in identification of projects and preparation of project proposals;

- Deliberate on project proposals from all Village Development Committees (from Locations and Sub-locations) in the constituency;
- Compile a list of both short-term, medium-term and long-term projects for submission to DDC;
- Harmonize planning, funding and implementation of projects/programmes at the constituency level;
- Ensure integration of the priorities of the Local authorities with those of other stakeholders in the constituency; and
- Monitor and evaluate all development activities in the constituency.

The membership of the CDC would be: Local MP(s), Chairpersons and Clerks of Local Authorities, DDO or DO, Representatives of Constituency sector committees, Representatives of major NGOs, FBOs, CBOs, and Representatives of active women organizations, youth, disadvantaged groups and people living with HIV/AIDS. The Chairperson should be an elected local person.

2.2 Setting up of Lower Cadre than Constituency

At local level (current Location and Sub-Location), it is proposed that communities drive the development process through Village Development Committees (VDCs). The VDCs will be the link between the CDCs and the community. The functions of the VDC would be to:

- Identify/initiate project proposals and activities;
- Collate and prioritize proposals from the community action plans; and
- Monitor and evaluate on-going development initiatives in the Location/Ward/Sub-Location/Village.

The membership of the VDC would be: Local Councillors, Local Chief, GoK technical staff, Representatives of CBOs, FBOs, NGOs and active women groups, youth and disadvantaged groups. The Chairperson should be an elected local person.

2.3 Overall Responsibility of Implementing DDP and the Structure

The Lead Agency for executing the Development Plans would be the Ministry of Planning and National Development (MoPND). The Permanent Secretary would have the overall responsibility for implementation of the development plans and would be the Chair of the proposed Central Government Coordination Committee (popularly known as National Steering Committee).

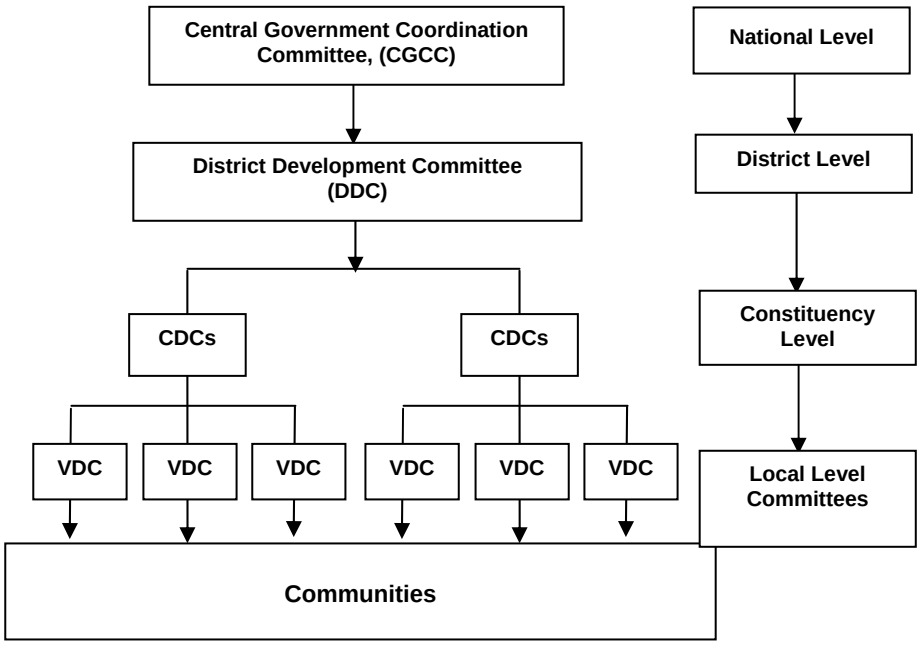


Figure 2.3.1 Proposed Organization Structure under a Decentralized Setting[1]

However, in the decentralised and devolved system the Ministry responsible for the local authorities would also play a key role in overseeing the implementation of the development plans and hence could be a co-Chair of the CGCC.

A possible organization structure taking into account the above institutional organs is given in Figure 2.3.1.

PART VI

CONCLUSION AND RECOMMENDATIONS

CHAPTER 1 CONCLUSION

Taking into account the points outlined below, this Study concludes that the implementation of the District Development Programmes presented in this Report would be the most appropriate comprehensive approach in reducing the poverty in the districts. This is because the Programme, according to the priorities made by all the development stakeholders, would coordinate actions/ projects at a sectoral as well as area levels and balance each other at the district level. The Districts should therefore embark on the district development guided by the Development Programmes. Other districts in Kenya would also benefit from this Study by introducing the new approach of formulating the district development programme, which is presented in a Guideline separately prepared under this Study.

- The Development Programme has incorporated voices of all cadres of stakeholders; district officers, divisional officers, community members and leaders, local authorities, CBOs, NGOs, etc. The stakeholders have worked not only in analyzing district situation but also throughout the process of planning, exercising consensus making all the time. Sector analysis was also carried out mainly from quantitative point of view wherever data was available. The results facilitated the stakeholders to well understand where the districts stood. Exercising the participatory and sector approaches has contributed to making the Development Programme comprehensive and also responsive to different stakeholders.

- The Development Framework, starting with development vision followed by development approaches, strategies, programmes/projects and priority areas, works as a development platform where all the development stakeholders in the respective district can know where they are and where they should be heading. Given its priorities by approach, by strategy and by area (division), the Development Framework integrates all the stakeholders' development activities in line with the district development vision. This guides the development stakeholders to the most needy people as prioritized and leads to avoidance of misallocation of funds to activities that are not a priority, thereby accelerating district development as a whole.

- Fiscal decentralization, so called devolution, is yet to come in Kenya, and hence for the line ministries fiscal allocation of budgets by priority at the district level hardly takes place. However, when they prepare annual work plans they should refer to the Development Framework to ensure that the development budget coming from the central ministries is aligned in accordance with the priorities presented in the Framework. The Framework can also guide allocation of LATF and CDF funds, which are block grants, in responsive to the people's needs and priorities.

CHAPTER 2 RECOMMENDATIONS

During the process of undertaking this participatory development study and implementation of the pilot projects/ programmes, the Study Team encountered a number of issues that led to the recommendations made below. However, as is the case with continuous processes, these recommendations are by no means exhaustive and may need to be changed or modified, depending upon the prevailing condition. Nevertheless, it is believed that the ones covered here constitute a broader spectrum capable of fitting in most conditions reflected in district development:

For the Government and Donors:

- Government is the major stakeholder in the development process in Kenya and to realize any degree of poverty reduction requires a proactive role of Government Departments and staff. In the past this has meant government being the actual implementer at the field level of the myriad activities identified for complex integrated projects designed to meet multi-faceted needs of the poor. It is now recognized that this must change. In part this approach may have been the cause of poor coordination and implementation of development plans. In this Study, it is recommended that the government should take the role of: 1) creating the appropriate development environment; and 2) directly providing or facilitating provision of the technical and management support necessary to ensure that field-level/community level interventions are well designed and implemented.

- The specific role of the community will depend on the nature of the development project and who has initiated it. For government initiated public (infrastructure) projects such as rural roads, rural drainage etc., the community will be expected to cost share and make contributions either in kind or in form of labour. The corollary is true for community-initiated projects where the government is supposed to provide technical support and/or subsidy. In this sense, the government is the one who participates in the community project. For community's development activities to be effective, it would be necessary for them to organize common interest groups (CIGs) or Village Development Committees, so that the community members can show collective actions and thereby they can achieve more than what each and every individual could do. Dealing with groups can also ensure that the government can reach them with minimal transaction cost.

- In nowadays context, many, if not all, community targeted projects operate on group approaches. Group approach, as mentioned above, can show collective achievement. However, there is a weakness pertinent to the group approach, which is exclusivity as its nature. On group approach, there should be an accountability, which can explain why a specific group within a community was assisted and funded. However, this may be a bit difficult under the present situation. Without this accountability, exclusivity from the viewpoint of fund sharing may easily lead to a possibility of social disintegration. On the other hand, individual approach in that whoever is interested can participate in a development activity may work to supplement this weakness due to the nature of non-exclusivity. For example, a field training session targeting whoever is interested can give learning opportunity to anyone/everybody in a community, though success is very much dependent on the person's effort and in fact it should be so.

- Provincial administration is a system of Government that brings government administration closer to the people. In implementation of the district development plans, the chiefs can play a crucial role in increasing awareness of the communities on issues related to development. An issue pertinent to chief's attitude is, however, that one may say they tend to think much of development in an exogenous way. One example is that chief tends to request very much whenever they

receive a guest. Request itself may not be wrong at all but here the tendency is that the request comes first rather than them stating proudly what they have achieved themselves. Rather than requesting anything they think out, it is recommended that chiefs should turn their mind from outside-resource-oriented to the-people-oriented development that is from exogenous development to endogenous development. One may not see any empowerment if they just request, but this can be evident if the community members are proudly talking about their achievement upon which assistance may come. Being poor, which may be true at present in economic terms, is not a way of soliciting assistance but the positive attitude of trying to get out of the poverty is the true way of soliciting outside assistance.

- There are people who think of development success in terms of how much they have got 'input' and not how much 'output' they have achieved. In cases, we may notice that the more we assist the more they request. In connection with this, we noticed several never-ending projects in the pilot districts. If there is a floor and walls, for example, there is more chance of getting funds for the roof. Therefore they spend all the money available, keep the project uncompleted and wait for another 'input'. Such attitude might, to an extent, be related to today's development practice where many development stakeholders urge the people to write a proposal. Here input becomes at stake, while for development we rather believe output should be at stake. A philosopher, Eric Hoffer, said people tend to be progressive if they believe in future, but tend to be conservative if they have fears for the future. Likewise people tend to emphasize the output of project more if they believe in the future, but rather rely on input if they cannot believe in the future. Government and donors, whenever they are to dispense assistances, should emphasis development in relation to 'output' leading to brighter future and never deal with 'input' being the end.

- This Study tried to bring about synergy effects by introducing a combination extension model dealing with health sector and livelihood sector. The synergy effects observed are; 1) community health workers (CHWs) trained under Primary Health Care Promotion Programme have delivered information on the livelihood improvement trainings, 2) trained community health workers realized the importance of nutritional aspect in improving their community's health status, which should be supported by balanced and nutritious food which can now be supported by the livelihood improvement programme. Combination of extension messages, for health sector and livelihood sector, should therefore be tried where possible in order to have such synergy effects.

- The deployment of technical officers to lower administrative units is dependent on the available staff and specific technical services to be delivered. Considering agriculture as the backbone of the livelihoods of the majority of the rural population in Kenya, farmers will need technical advice from extension workers. However, from an examination of the staffing levels at the district, division and location level, it is evident that there is a skewed distribution of staff. There should be more extension staff at the location (or sub-location) level rather than divisional headquarters. Reallocation of the extension staff from divisional headquarters to location level should be examined. Or otherwise, to overcome this, it is suggested that the extension staff network and collaborate with advanced farmers (key farmers) to reinforce delivery of extension services as demonstrated under the pilot programme of 'Key-farmer led Paddy Cultivation Improvement Programme'.

For Project Implementers:

- Development partners such as NGOs, FBOs and the private sector would play an important role in provision of services and support to development activities. However, the development activities supported by these NGOs and FBOs are quite often not well embedded in the district development plans and thus need to be coordinated and aligned to the district priorities. This can be done by

the NGO or FBO looking at the development Framework enumerated under this Study. Based on the type of development activities that they want to support they can look at the priorities set and decide on the project area. The NGOs, FBOs, Private sector and other stakeholders involved in the development should also be involved in participatory monitoring and evaluation of activity implementation as well as resource utilization.

- Extension programmes need an institutionalization of the interaction between government technical officers and the people. From physical point of view, a typical sub-location in the Study Districts covers about 15 to 20 km^2, namely 4 x 5 square km, and involves about 10 natural villages. As we continued the livelihood improvement trainings, we observed that participants have become fixed. Just one centre in a sub-location can hardly be the learning centre for all the villagers in the sub-location. Going down to lower cadre increases extension impact. However, it requires more logistics and therefore funds. What is important is a balance taking into account the available funds. Some training components, which do not require much input, should not be concentrated at the centre only but at least to three or four sub-centres per sub-location. In the target sub-locations under the pilot implementation, kitchen gardens were tried in three to five places, and value addition in two to four places.

- For extension related to health sector, as the ministry does not have enough staff at divisional level, promotion of community health needs some liaisons between the health officers and community members. The liaisons are called CHWs and/or HBC TOTs who can deliver health information to the community members and also bring back local disease information to health institutes. Thus, having CHWs and/or HBC TOTs in each village could be the best way of establishing a functional linkage in the health sector between the government and the community members. Though there are dropouts for the CHWs and HBC TOTs, at least necessary skills and knowledge are with the trained community personnel, which can be useful for their family members and neighbours. However, to cope with the drop out issue, the number of CHWs/HBC TOTs should be increased and recognition of the trained CHWs/HBC TOTs should always be arranged whenever there are opportunities of people's gathering. .

- It has been observed among all the pilot programmes in the Study that government officers, who do not practice farming themselves on their land, are in most cases likely to teach farmers only about what is written in the textbooks. The concern here is how to build the capacity of the government extension officers. One way will be collaboration between the government extension officers and lead farmers in the area. Knowledge of lead farmers would be valuable in helping other ordinary farmers improve their farming to get higher production and income. In cooperation with the lead farmers on the ground, the extension officers can get ideas on practical application of their theoretical knowledge obtained from textbooks, so that the trainings will be more effective and well received by the ordinary farmers.

- Involving local lead farmers into extension activities could also contribute to increasing efficiency and effectiveness of the extension services. The current extension services of the Ministry of Agriculture is to set focal area and concentrate on the area for a season and move to the next one in the following season, while the idea here is to provide the lead farmers with the venue and opportunity of being trainer and offer them the opportunity constantly so that they can keep training ordinary farmers. Thus, involving more lead farmers in the extension sphere could accelerate technology dissemination. This privatization of extension services and the government extension function as catalyst is in line with the government policy stipulated in "Strategy for Revitalizing Agriculture 2004 – 2014" and in the National Agriculture Sector Extension Policy (NASEP).

- Monitoring & evaluation is not just for the supervisor but also us. To observe and listen to the people, reflect on the situation, and react accordingly is a very important part of monitoring and evaluation (M&E), but many frontline implementers do not think that way. They may think that M&E is for their supervisors to assess them and not for them to improve themselves. Hence there are cases that they conduct the same training using the same document for many years. Vertical division of line ministries even at divisional level also makes it difficult for frontline implementers to work together and learn lessons together. It is really great incentive for instructors and facilitators to get feedback from the participants and thereby improve themselves. After each training or workshop, instructors and facilitators can meet together and discuss the lessons they have learned. They should always do better training or workshop the next day and on the next opportunity by doing that. Those are actually the fundamentals of M&E, which should be implanted in the frontline implementers.
- As long as we observe the selection process of the representatives for some training, it is quite fair and equal if it goes through Chief – Assistant Chief – Village Elders decision making. On the other hand if the selection is made by a specific organization or interest group, it could be unfair and unequal. If we try to identify the target beneficiaries through active organizations, we are more likely to choose the elite people who have more education, more network and more money. It is fair and only equal when these elite people are not exclusive and think about the development of the community, not only the organization and its members. Another conservative approach for selection may be to follow the ranking in *anyuola (family chain)*. As well, we should follow Chief – Assistant Chief – Village Elders decision making in training and workshops, and then more than likely we will not face jealousy and witchcraft issues.