

MINISTRY OF PLANNING AND NATIONAL DEVELOPMENT  
THE REPUBLIC OF KENYA

**THE DEVELOPMENT STUDY  
FOR  
REGIONAL DEVELOPMENT  
PROGRAMME  
IN  
NYANDO AND HOMA-BAY DISTRICTS  
IN  
THE REPUBLIC OF KENYA**

**FINAL REPORT  
SUMMARY**

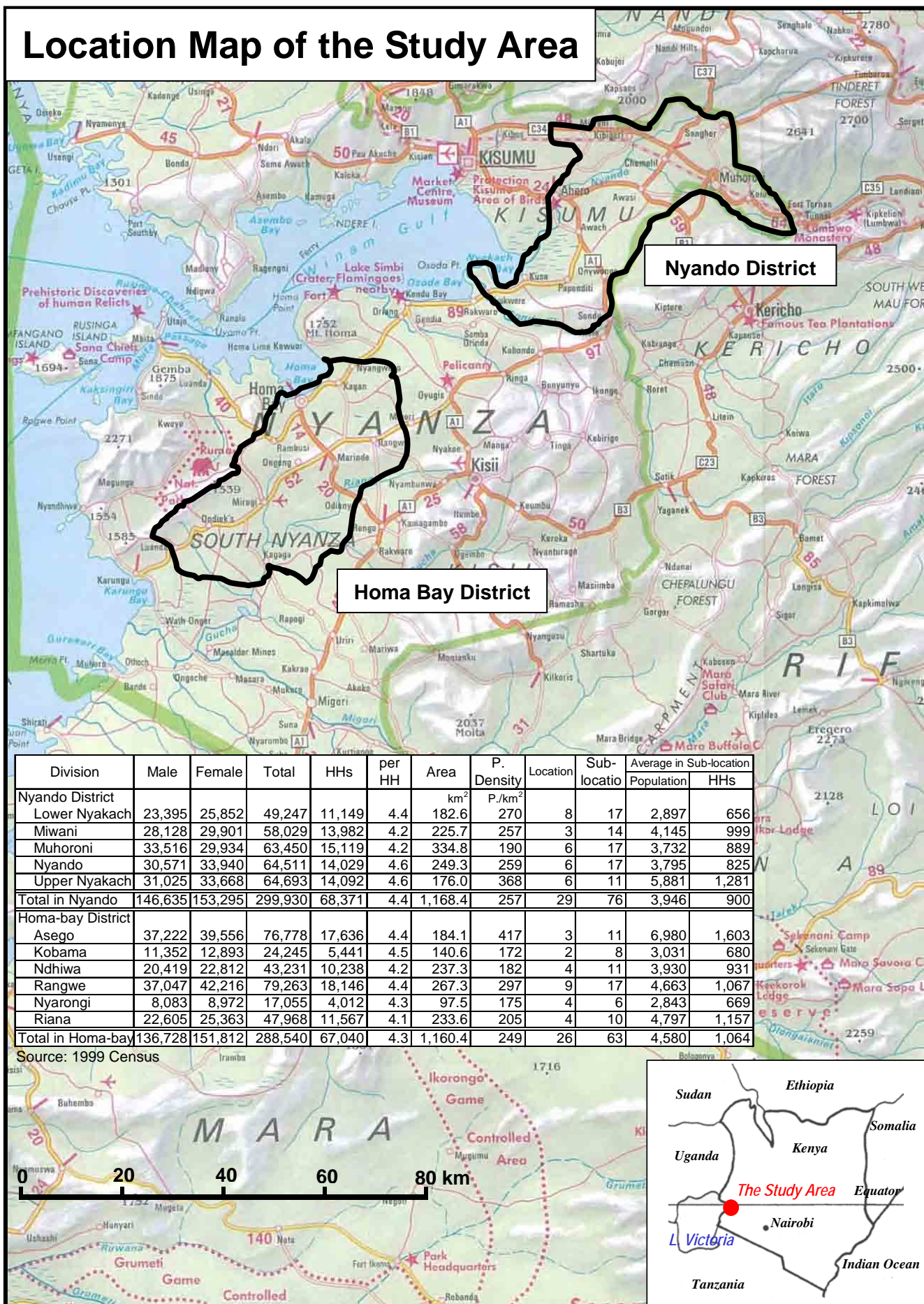
**AUGUST 2007**

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
SANYU CONSULTANTS INC., TOKYO, JAPAN**

**CURRENCY EQUIVALENTS (AS AT MAY 2007)**

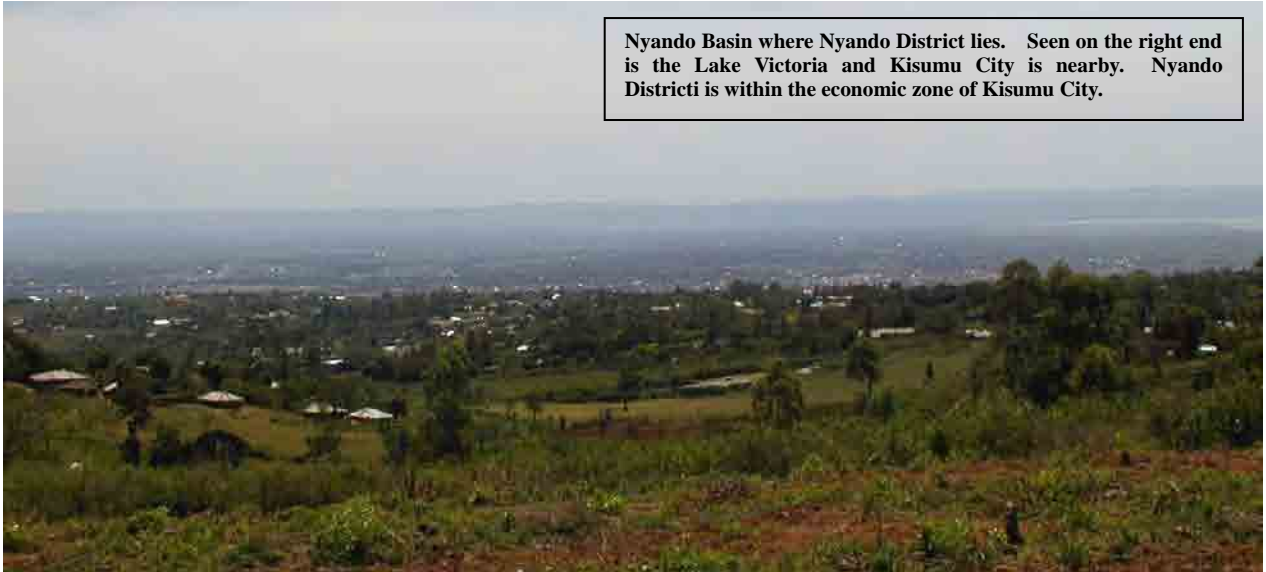
1 US\$	=	68.02 Kenyan Shilling (TTB)
1 US\$	=	119.034 Japanese Yen (TTB)
1 Ksh	=	0.0147 US\$
1 Ksh	=	1.750 Japanese Yen
1 Japanese Yen	=	0.571 Ksh

# Location Map of the Study Area

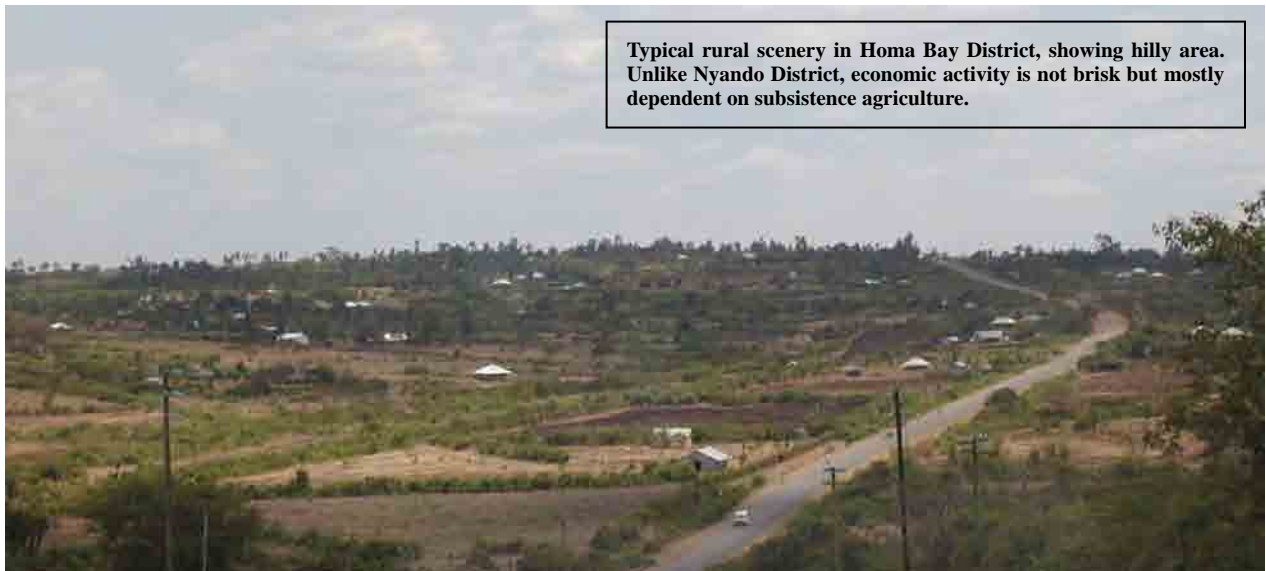




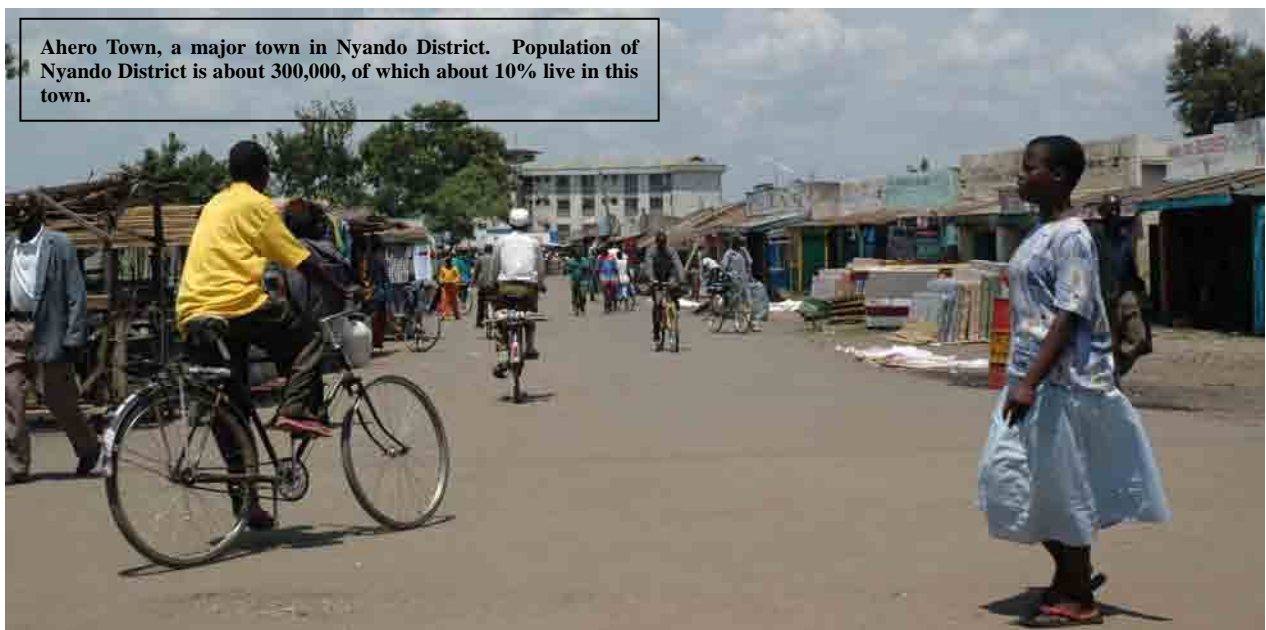
## TYPICAL SCENERY IN NYANDO AND HOMA BAY DISTRICTS



Nyando Basin where Nyando District lies. Seen on the right end is the Lake Victoria and Kisumu City is nearby. Nyando District is within the economic zone of Kisumu City.



Typical rural scenery in Homa Bay District, showing hilly area. Unlike Nyando District, economic activity is not brisk but mostly dependent on subsistence agriculture.



Ahero Town, a major town in Nyando District. Population of Nyando District is about 300,000, of which about 10% live in this town.

## TYPICAL SCENERY IN NYANDO AND HOMA BAY DISTRICTS



A typical beach called Ngegu Beach. Fish catch has really declined to about 20% only compared to that of 1990s.



Homa Bay Town where the capital of Homa Bay District is placed. About 56,000 population resides



ADIS orphans are now one of the challenges. About one-third of pupils now do not have either mother or father or the both.



A typical rural centre where divisional government officers and also health centre are usually placed



A community workshop which was held in a church. Villagers around the venue discuss their challenges and opportunities.



A district level workshop. In this study, participatory was pursued from community, division and at this district level.



## PILOT PROGRAMME IMPLEMENTATION



A training on home based care for PLWHA. The trainees are to teach care givers of how to undertake HBC PLWHA.



A community health worker now talks to the community about local disease management.



Training on Baking Technology at KIRDI. Total 44 community representatives attended 8 different courses.



Now sowing vegetable seeds to the nursery. The trainer is a divisional agriculture officer.



Hand fabric weaving out of cotton wool. A cottage industry promotion in line with the cotton revitalization pursued by GOK.



Line-transplanting: one of the significant technologies introduced by the key-farmers.

## **COMPOSITION OF REPORTS**

### **SUMMARY**

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GUIDELINES to prepare district development plan

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## **ACRONYMS AND ABBREVIATIONS**

ART	Anti-retroviral Drug Treatment
CACC	Constituency AIDS Control Council
CBO	Community-Based Organization
CDF	Constituency Development Fund
COMESA	Common Market for Eastern and Southern Africa
DAO	District Agriculture Officer
DASCO	District AIDS and STI Coordinator
DDC	District Development Committee
DDO	District Development Officer
DEC	District Executive Committee
DFO	District Fishery Officer
DFRD	District Focus for Rural Development
DLPO	District Livestock Production Officer
DMOH	District Medical Officer Health
DPHO	District Public Health Officer
DSDO	District Social Development Officer
FBO	Faith Based Organization
GF	Global Fund
HIV/AIDS	Human Immuno-deficiency Virus/ Acquired Immune Deficiency Syndrome
ITN	Insecticide Treatment Net
KCPE	Kenya Certificate of Primary Education
LATF	Local Authority Transfer Fund
LBDA	Lake Basin Development Authority
MOH	Ministry of Health
MOLFD	Ministry of Livestock and Fisheries Development
MPND	Ministry of Planning and National Development
MOA	Ministry of Agriculture
NACC	National AIDS Control Council
NALEP	National Agriculture and Livestock Extension Programme
NASCOP	National STD Control Programme
OVCs	Orphans and Vulnerable Children
PRSP	Poverty Reduction Strategy Paper
TOT	Trainers of Training
VCT	Voluntary Counseling and Testing (Center)

## **CURRENCY EQUIVALENTS (AS AT MAY 2007)**

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## **KENYAN FINANCIAL YEAR**

July 1 to June 30



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# **EXECUTIVE SUMMARY**



# THE DEVELOPMENT STUDY FOR REGIONAL DEVELOPMENT PROGRAMME IN NYANDO AND HOMA BAY DISTRICTS IN THE REPUBLIC OF KENYA

## ■ RATIONALE

Nyanza Province, where Nyando and Homa Bay Districts are located, represents a densely populated area in Kenya with about 400 persons per square kilometre. This high population density has been achieved thanks to the favourable natural resources such as productive soils and mild climate. Nevertheless, the production of major cash crops such as sugarcane and paddy in the province has been stagnant due to falling market prices, floods taking place in Kano plains, etc. In addition, the province is hit by high prevalence of HIV/AIDS, which affects economically active populations, increases medical expenses to cope with infectious diseases, and leaves a lot of orphans. Thus, as many people recognize, such economic recession and epidemic diseases have converted Nyanza Province into one of the poorest areas in Kenya.

Under these circumstances, the GOK made a request to the Government of Japan for the assistance of implementing this development study in order to bring stability on the life of population and economic development in the selected districts. The request was also meant to disseminate to other areas facing similar issues the approaches and methodologies to bring the stability in the selected districts. Accepting the request, JICA dispatched a preparatory study mission to Kenya in November 2004, and the Scope of Works (SW) was agreed and signed on December 1, 2004 between the two governments. The Study commenced in June 2005 and was completed in May 2007.

## ■ OBJECTIVES

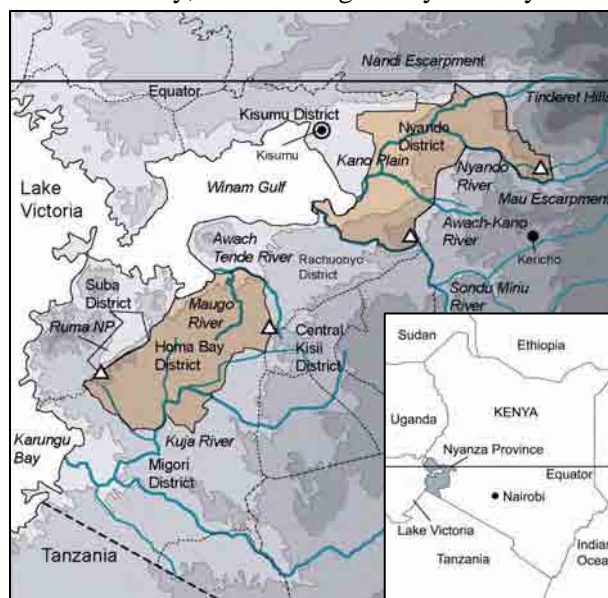
The Study aims at designing a programme to comprehensively promote area-wise multi-sectoral development focusing on the districts concerned. The whole process of this Study centres on the following objectives agreed upon in the SW:

- To formulate a Development Programme for sustainable development for each of the two districts, and present the planning approach and methodology based upon bottom-up approach, and
- To enhance the capacity of the counterparts to promote and lead development, which contributes to raising the ownership of the

Government in the process of the programme implementation.

## ■ THE STUDY AREA

The Study area includes Nyando and Homa Bay Districts located at the shores of Lake Victoria in western part of Kenya. According to the demographic census in 1999, Nyando and Homa Bay Districts had a population of 299,930 and 288,540 respectively (372,602 and 342,356 at 2007 projection). Their geographic areas extend over 1,168 km<sup>2</sup> and 1,160 km<sup>2</sup> respectively. Primary sector dominates the economic activities in both districts, although Nyando is now enjoying diversified economic activities due to the proximity to Kisumu City, the third largest city in Kenya.

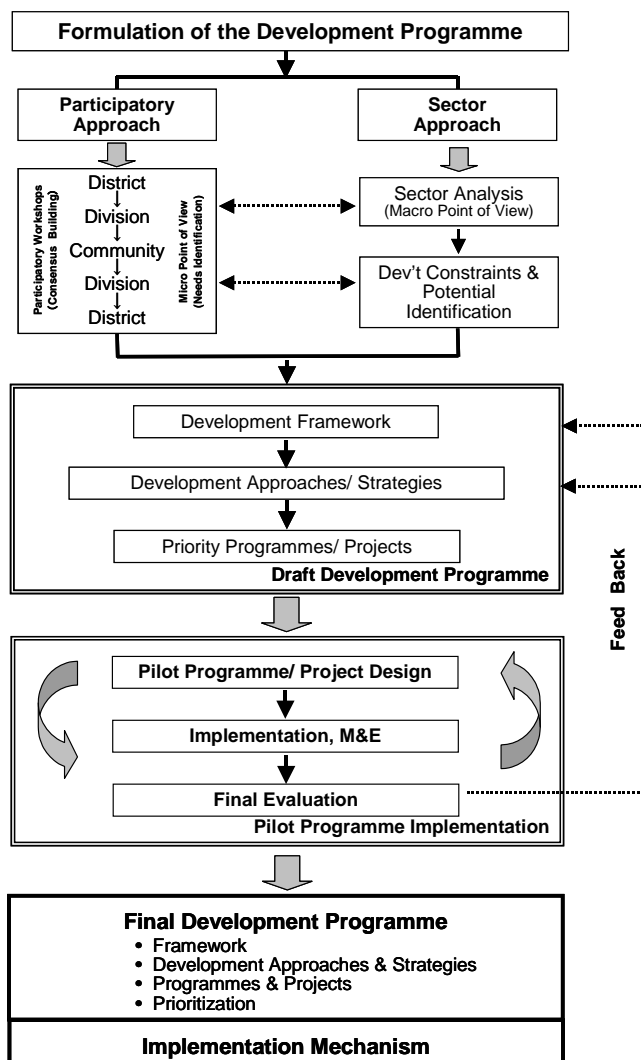


**Figure 1 Location Map of the Study Area**

## ■ THE STUDY APPROACH

This Study contains two new elements apart from conventional sector approach: 1) a participatory planning approach involving not only the community but also government officers together with other development actors in the districts such as NGOs, CBOs, etc., and 2) implementation of pilot programmes/projects before finalization of the development programme. The preparation of the Development Programme is, therefore, characterized by active participation as well as consensus building process by all the concerned parties. Implementation of the pilot programmes is another key to formulating the development

programme that would really work on the ground. The final District Development Programme is formulated with a sound implementation mechanism by feeding back all the experiences and lessons coming up through the implementation of the pilot programmes.



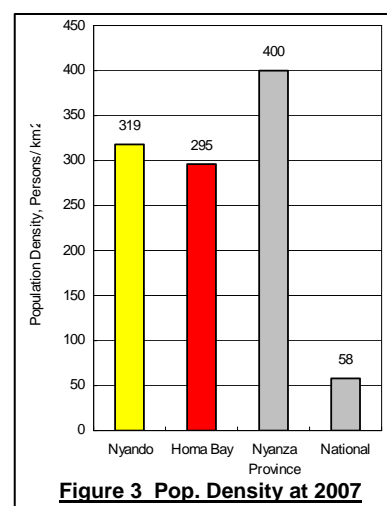
**Figure 2 Overall Study Framework and Flow**

## ■ NATURAL AND SOCIAL INDICES

Both study districts have an equatorial type of climate. Because of the high altitude of about 1,130 – 1,800 m above mean sea level and cooling influence that the Lake exerts, temperatures are a little lower than a typical equatorial type climate, ranging in most places from 10 °C to 34 °C. Lakeshore area has less rainfall while areas located away from the lake are blessed with more rainfall especially as elevation increases. In general, the western areas near the lakeshore receive an average annual rainfall of between 700 and 800 mm while the eastern area receives about 1,500 to 1,800 mm.

Nyando District has flat lowlands, which gradually changes to steep slopes in the highlands. The largest lowlands are called Kano Plains. The total area is estimated at about 73,000 ha. The lower parts of the plains are very often hit by floods. In Homa Bay District, two high lying areas can be found; one in the southwestern part and the other in the northeastern part. The higher lying areas receive relatively high rainfall while the low-lying lands are sometimes hit by drought.

As of year 2007, it is projected that there are 34,652,581; 5,021,695; 372,602; and 342,356 people in Kenya, Nyanza Province, Nyando and Homa Bay Districts respectively. These give population densities of 58, 400, 319, and 295 persons per km<sup>2</sup> respectively. The nationwide population density of 58 persons per km<sup>2</sup> is in fact more or less same as the average density of all the 47 sub-Saharan countries. The densities of Nyando and Homa Bay Districts are about five fold of the nationwide density. This high density implies high carrying capacity of the districts due mainly to relatively high rainfall and fertile soils.



Primary sector, based on agriculture, plays a dominant economic role in the study districts. Both food crops and cash crops are produced. Food crops include maize, sorghum, cassava, beans, groundnuts, sweet potatoes, while among cash crops are tea, coffee, tobacco, raw cotton, sugarcane, rice, vegetables, and fruits. Fishery is another important industry, though since 2002 the fish production has reduced. Other industries are pyrethrum growing, brick making, ballast crushing, sisal fiber decorticating, and handicrafts using water hyacinth and papyrus. Nyando District has developed agro-based industries like sugar. Other potential agro-based products in the districts are jaggery, jams, juices, breads, snacks, honey, wax, vegetable oils, organic fertilizers, and livestock feed.

Both districts are well known for high infant and under-five mortality rates. This is believed to be mainly due to high prevalence of malaria, unhygienic water, etc. Infant mortalities in Nyando and Homa Bay are 116 and 149 out of 1000 births, which are higher by 50% and 93% than the national average of 77. The under-five mortalities are also very high; 212 and 254 in Nyando and Homa Bay respectively, and in fact the mortality of Homa Bay is the worst in all the districts of Kenya. It is recognized that about one in every 4.7 children in Nyando and one in every 3.9 children in Homa Bay cannot see their five-year birthday.

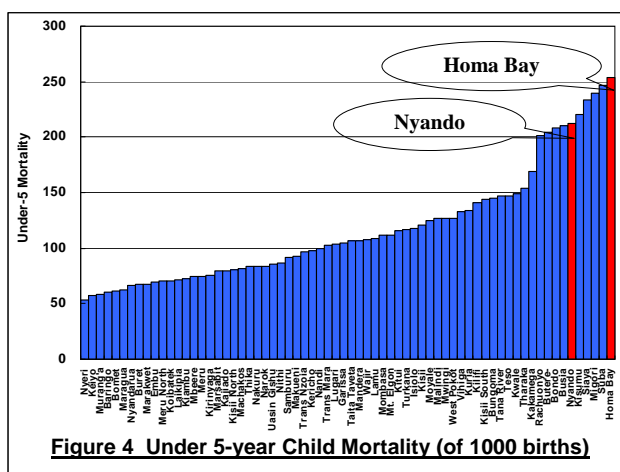


Figure 4 Under 5-year Child Mortality (of 1000 births)

Up until 1989, Kenyan's life expectancy had been increasing, and then started falling. The rate of the drop is quite remarkable for Nyando and Homa Bay Districts. The population in the districts had reduced their life expectancy by about 10 years during 10-year time from 1989 to 1999. This big drop may be attributed to two main reasons; higher prevalence of malaria than before and high prevalence of HIV/AIDS cases (17% and 22% HIV positive in pregnant women in Nyando and Homa Bay as of 2006). The latter is probably much more contributory.

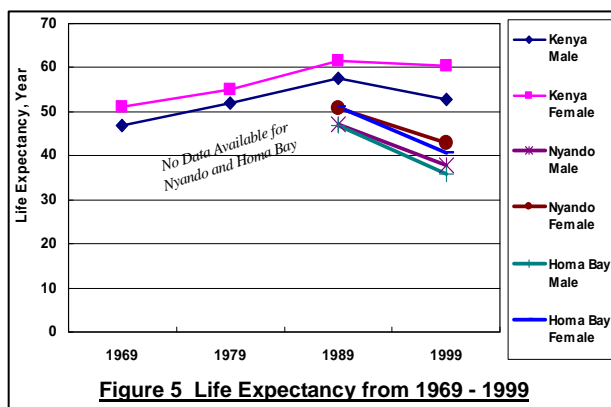


Figure 5 Life Expectancy from 1969 - 1999

The poverty incidences of the Study districts are

48% and 45% for Nyando and Homa Bay Districts respectively according to Kenya Integrated Household Budget Survey-2005/06. Nyando District is ranked at 28 and Homa Bay at 22 amongst 67 rural districts in 2005/06, while the ranks in 1997 were 42 and 61 respectively according to the Welfare Monitoring Survey-III. This does not necessarily mean that both districts have remarkably reduced poverty prevalence between 1997 and 2005/06 but the results in 1997 were exceptionally bad due to El Nino related calamities. Though the present poverty prevalence is better than the ones in 1997, still about half of the population in the Study districts are below poverty line.

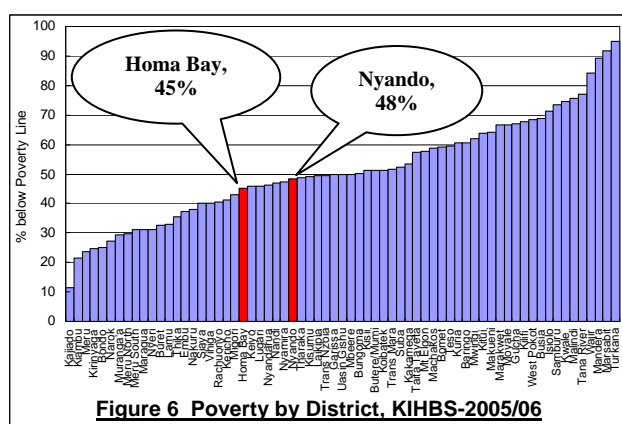


Figure 6 Poverty by District, KIHBS-2005/06

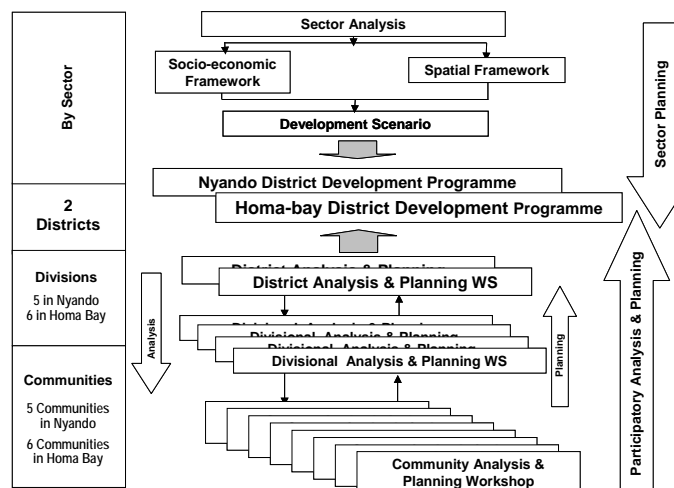
In summary both districts are now suffering from poverty despite the relatively rich natural resources. Some of the core causes are high prevalence of HIV/AIDS, which takes life of economically active generations, and high child mortality. It has often been said that high child mortality takes investment in child away from the parents and also naturally leads to high fertility rate. The fertility rate per woman is about six for both districts. The more the children die, the more they are delivered if one may say cold-heartedly. In this situation, parents would not stop having more children, that is, if again cold-heartedly said, not able to stop pursuing quantity rather than pursuing quality of life. The more quantity (e.g. number of children) the parents have, the less they can invest per child, and thus the poverty is inherited from the parents to the less invested children, making them very difficult to get out of the trap of the poverty vicious circle.

## DEVELOPMENT PLANNING

The approach of the planning in this Study is a sort of hybrid, composed of conventional sector approach and participatory approach. The upper part of Figure 7 shows the conventional sector



approach, which starts with sector analysis. Based on the sector situation analysis especially from the macro point of view, the Team presented the socio-economic framework, which mainly consists of population projection as well as economic growth indicators, represented by gross regional (district) income. Another frame, called spatial framework, defines the recommended future land use pattern and also improvement of road network.



**Figure 7 Conceptual Flow of the Hybrid Planning**

The socio-economic frame projected the income per capita in target years of 2015 and 2020 assuming the constant economic growth of 2% per capita, the optimal annual growth of GDP per capita in Kenya for the last two and half decades. The following are the target incomes per capita for both districts (Table 1).

**Table 1 Monthly Gross Incomes per Capita**

Target	District (Ksh)		Rural (Ksh)		Urban (Ksh)	
	Nyando	H/Bay	Nyando	H/Bay	Nyando	H/Bay
2004	1,105	1,083	913	907	1,680	1,787
2015	1,382	1,345	1,142	1,126	2,100	2,219
2020	1,526	1,485	1,261	1,244	2,319	2,450
Poverty Line (Ksh)			1,562		2,913	

Recommended future land use for the strategic crops in Nyando is; introduction of short maturity variety of sugarcane, increase of cotton fields from the present 324 to 1,620 ha (by five times) over the plan period, fruit expansion by 50% in higher elevation areas, rice production expansion by 20% in area and by 30% in yield, beef cattle promotion in Miwani, amongst others. As for the future land use in Homa Bay, fruits including pineapples are to increase by 50%. Pineapples in Rangwe Division is a good cash crop, which should be promoted further. Yield of maize is targeted to increase by

50% over the plan period, so that the district is expected to export maize to the neighbouring districts.

Based on the socio-economic and spatial (land use) frames mentioned above, the Study draws a development scenario of “quality development (value adding activities) together with increase of agricultural productivity”. This scenario targets the yield increase of 1.3 to 1.5 times of the present in Nyando and 1.0 to 1.3 times in Homa Bay and the annual growth rate of rural self-employment of 8.3% and 5.2% in Nyando and Homa Bay respectively.

On the other hand, the participatory approach shown in the lower part of Figure 7 means not necessarily a bottom-up approach where only people’s participation is at stake. It is rather participation of all the stakeholders such as rural people, community leaders, district officers, divisional officers, NGOs, CBOs, etc. To involve these stakeholders, the Team conducted a series of workshops for analysis and for planning at district, divisional and community levels.

Through the planning workshops held in the third quarter of 2005 and also the final workshops in February 2007 upon feeding back all the lessons from implementation of the pilot programmes, a Comprehensive Development Framework was formulated. It comprises a development vision, as the starting point, development approaches, development strategies, development programmes/projects, and priority divisions. As shown in the structure of the development framework attached in the last two pages, the upper the approach is placed, the higher the priority it is given, and likewise the upper the strategy in an approach is placed, the higher the priority is given to it within the approach. Symbols ●, ◎, ○ show priority divisions at which the programme should be implemented with top priority, high priority and priority in the order. This Framework is a sort of development platform where all the stakeholders engaged in the district development can know where they are and where they should be heading.

## ■ IMPLEMENTATION ARRANGEMENT

The implementation of the district development plan should follow the District Focus Strategy for Rural Development (DFSRD), which is currently in operation. The District Development Committee

(DDC) should be the agency responsible for coordination of the implementation of development plans. The membership of the DDC will, as is the present case, 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 the private sector, and civil society organizations (NGOs, FBOs, CBOs).

For effective and sustainable development it is important that the development projects financed within a district should consider those that are identified and prioritised within the Framework. With regard to block grant funds such as CDF and LATF, the decision-making mechanism should be closely linked to the prioritised Framework. For line ministries, it may not be easy to allocate fund according to the priority established in the Framework. However, it is also true 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 to the district priorities.

## ■ PILOT PROJECT IMPLEMENTATION

Pilot projects were identified in line with the development framework, whereby pilots were selected basically from highly prioritised strategies in each of the development approaches. Pilot projects implemented are shown in Table 2; six in Nyando District and seven in Homa Bay District.

**Table 2 Summary of the Pilot Projects**

Pilot Programme/Project	Nyando	Homa Bay
1. Centre Based Livelihood Improvement Programme	○	○
2. Outreach Oriented Community Health Improvement Programme	○	○
3. Livelihood Improvement Oriented Forestry Programme	○	○
4. Human Resource-led Cottage Industry Programme (Training Provision)	○	○
5. Local Key Farmer-led Paddy Cultivation Extension Programme	○	
6. Local Cotton Industry Promotion Programme (hand weaving & spinning)	○	
7. Ecological Farming Promotion Programme (push-pull, etc)		○
8. Pro-poor Non-tillage Improvement Programme		○
9. Youth Polytechnics Strengthening Programme		○

Above pilot projects have been implemented from June 2006 to February 2007. Activities planned

have been mostly carried out with some modifications as required. Following are major achievements by pilot project:

### *No.1 Centre Based Livelihood Improvement:*

- 5 learning centres established
- 18 sub-learning centres established
- 159 training days & 4,162 participant-day done

### *No.2 Outreach Oriented Health Improvement:*

- 177 CHWs & 205 HBC TOTs established
- 2 community pharmacies established
- 5 information sharing chalkboards established

### *No.3 Livelihood Improvement Oriented Forestry:*

- Tree nurseries at target 8 CBOs strengthened
- 15 training days & 240 participant-day
- 18,030 tree seedlings produced

### *No.4 Human Resource-led Cottage Industry:*

- 44 community representatives trained
- 14 people (32%) started small-scale business

### *No.5 Local Key Farmer-led Paddy Cultivation:*

- Total 30 demonstrations in 3 demo plots done
- 24% of target farmers adopted line transplanting
- 66% of surveyed farmers increased yield

### *No.6 Local Cotton Industry Promotion:*

- 22 participants trained for 6 weeks
- 1 production centre, hand weaving, established

### *No.7 Ecological Farming Promotion:*

- 24 officers trained on Push-pull method
- 619 people trained by the above 24 officers
- 101 demonstration farms established

### *No.8 Pro-poor Non-tillage Improvement:*

- 24 officers trained on conservation agriculture
- 604 people trained by the above 24 officers
- 40 demonstration farms established

### *No.9 Youth Polytechnics (YPs) Strengthening:*

- Production units for 3 target YPs established
- 14 instructors trained in business management

## ■ CONCLUSION & RECOMMENDATIONS

This Study concludes that the implementation of the District Development Programmes presented in this Study would be a comprehensive approach in reducing the poverty in the districts. 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.

During the process of undertaking this participatory development, the Study Team learned a number of lessons. Some of them are given of the following as recommendations:

- The Development Framework established in this Study works as a development platform. Given its priorities by approach, by strategy and by area (division), the Development Framework can be the hub of coordinating all the stakeholders' development activities. This guides the stakeholders to the most needy people as prioritised and leads to avoidance of misallocation of funds to activities that are not a priority, thereby accelerating district development as a whole. Therefore, all the development stakeholders in the districts should always look at the Framework in implementing development activities.
- In implementing district development guided under this Study, 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 community level interventions are well implemented. On the other hand, 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, 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.
- There is a tendency that people think much of development in an exogenous way. Chiefs tend to request very much whenever they receive a guest. Request itself may not be wrong but here comes first is the request rather than them stating proudly what they have achieved themselves. This is very much resource oriented in that people try to 'hunt' assistances. Such attitude might originate in today's development context 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. We all should focus on output, or achievement, rather than input.
- For community participation to be effective, it would be necessary to organize them into common interest groups (CIGs), so that the community members can show collective actions and thereby they can achieve more than what each individual could do. Dealing with groups can also ensure that the government can reach them with minimal transaction cost. Group approach, however, sometimes shows its weakness. Group exercises exclusivity as its nature. 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 anybody, though success is very much dependent on the person's effort and in fact it should be so.
- It has been observed during the pilot implementation that government officers, who do not practice farming themselves, are likely to teach farmers only about what is written in the textbooks. One way to challenge this weakness will be collaboration between the government extension officers and the lead farmers in the area. Knowledge of the 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, 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.
- Monitoring & evaluation is not just for the supervisor but also for 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 materials for years. It is really great incentive for instructors and facilitators to get feedback from the participants and thereby improve themselves. Those are actually the fundamentals of M&E, which should be implanted in the frontline implementers.



Priority	Vision	Approaches (Priority)	Priority	Strategies	No.	Programmes/ Projects	Priority Division					
							NY	LN	MI	MH	UN	
High	A District Enjoying Diversified and Sustainable Socio-economic Development	1. We get good income. (1st Priority)	1.1	We can grow more sugarcane.	1	Sugar Industry Strengthening Programme			●	⊗		
			1.2	We can harvest more rice.	2	Small Holder Rice Irrigation Improvement Programme	●	○	⊗			
			1.3	We can grow more horticulture.	3	Horticultural Crop Improvement Programme	●		○	⊗		
			1.4	We keep healthy and productive livestock.	4	Livestock Improvement Programme	⊗	⊗	○	⊗	●	
			1.5	We can do IGAs.	5	Cottage Industry Development Programme	⊗					
					6	Micro-Finance Establishment Programme						
			1.6	We can grow more cotton (added at the final WS)	7	Cotton Revitalization Programme	⊗					
			1.7	We can find job opportunities.	8	Small Scale Entrepreneur Promotion Programme				●		
			1.8	Quality and quantity of our yield is good.	9	Appropriate Agro-Technology Programme				○	○	
			1.9	Livestock is not stolen.	10	Community Policing Programme						
					11	Livestock Branding & Movement Control Programme						
			1.10	We get more income from fish.	12	Sustainable Fishery Management Programme						
		2. We have enough and nutritious food. (2nd Priority)	2.1	We plant enough and diversified subsistence crops.	13	Food Security Enhancement Programme		○		○	⊗	
			2.2	Our farms are protected from floods.	14	Flood Prevention and Control Programme		⊗	○			
			2.3	Our production of crops is high.	15	Land Reclamation Programme			●	●	●	
					16	Water Harvesting Programme			●	●	●	
			2.4	We keep healthy and productive livestock.	included in No.14							
			2.5	Post harvest management is good.	included in No.2.1						○	
			2.6	We don't have many dependants.	17	Orphanage Support Programme						
			2.7	Our soil is fertile.	18	On-farm Soil and Water Conservation Programme						
					19	Soil Fertility Improvement Programme						
		3. We are healthy. (3rd Priority)	3.1	We can drink safe water.	20	Water and Sanitation Programme		⊗	○	●	○	⊗
			3.2	We have good sanitation system.	included in No.3.1				⊗			
			3.3	Promotion of Disease Prevention	21	Primary Health Care Promotion Programme			●	⊗		○
			3.4	We protect ourselves from diseases.	22	Health Services Strengthening Programme		⊗		○	○	
					23	Malaria Prevention Programme		⊗		○	○	
			3.5	We can get proper medical care.	24	Nutrition And Health Improvement Programme				⊗		
		4. Our environment is protected. (Priority)	3.6	We have good recreational facilities.	25	Social Amenities Promotion Programme						○
			4.1	We do afforestation and reforestation.	26	Community Based Afforestation Programme			⊗		○	●
			4.2	We control floods.	27	Community Based Flood Management Programme		○		⊗		
			4.3	We can manage solid and liquid waste.	28	Waste and Disposal Management Programme						
					29	Water Pollution Management Programme						
			4.4	Alternative sources for fuel are available.	30	Alternative Energy Promotion Programme						
			4.5	Erosion is prevented.	included in No.2.7				⊗		○	
		5. We control and manage cases of HIV/AIDS. (5th Priority)	4.6	We manage air pollution.	31	Air Pollution Management Programme						
			4.7	Environmental policies are enforced.	32	Environment Awareness Campaign Programme						
			5.1	We are aware of and protect ourselves from HIV and AIDS.	33	HIV/AIDS Awareness and Control Programme					●	
			5.2	We can easily access VCT centers.	34	VCT and PMCT Upscaling Programme		○		○		
		6. We get quality education. (6th Priority)	5.3	We have enough equipped patient support centers.	included in No.3.4			●				⊗
			5.4	We have quality home based care facilities.	35	Integrated Home Based Care Programme			⊗	⊗		○
		7. Infrastructure is improved. (7th Priority)	6.1	We can get good formal education.	36	School Materials Procur't & Improv't Programme			⊗	○		
			6.2	We can get good non-formal education.	37	Functional Literacy Programme (for Adult & Youth out of School)		⊗	⊗	○		○
	7.1	Good drainage to protect from floods.	included in No.4.2									
	7.2	We have more access roads and foot bridges.	38	Rural Access Road Improvement Programme			○					
	7.3	Squatters are settled.	39	Squatters Settlement Programme								
	7.4	We have good housing.	40	Town Planning Programme								
			41	Rural Planning Programme								
		7.5	Electricity network is good, Telephone network is good, IT infrastructure is good.	42	Rural Electrification, R & Telecommunication Establishment Programme							
							NY: Nyando    ●: Top priority LN: Linyakach    ⊗: High priority MI: Misanzi    ○: Priority MH: Muhoroni UN: Ushiyakach					
Low												

NY: Nyando  
 LN: L/Nyakach  
 MI: Mikanzi  
 MH: Muhoroni  
 UN: U/Nyakach

●: Top priority  
 ⊗: High priority  
 ○: Priority

## Homa Bay District: Development Framework (A Development Platform composed of Development Vision, Approaches, Strategies, Programmes/Projects, and Priority Divisions)

Priority	Vision	Approaches (Priority)	Priority	Strategies	No.	Programmes/ Projects	Priority Division					
							RA	AS	RI	ND	KO	NY
High	A Highly Productive, Healthy and Secure District	1. We have enough food. (1st Priority)	1.1	We are using proper crop and animal husbandry practices.	1	Crop Management and Development Programme						
			1.2	Our soil is fertile.	2	Land Management Programme						
			1.3	We plan for agricultural activities.		included in No.1.1						
			1.4	We have proper and adequate farming implements.	3	Appropriate Agro-technology Programme						
			1.5	We have enough water for farming.	4	Small Scale Irrigation and Drainage Programme						
			1.6	We have no livestock pests and diseases.	5	Livestock Management and Development Programme						
			1.7	We don't have pests and diseases in crops.		included in No.1.1						
			1.8	We put more land under cultivation.		included in No.1.2, No.1.3 and No.1.4						
			1.9	We practice bee, poultry and small animals keeping.		included in No.1.5						
			1.10	We can practice proper post harvest handling and storage.		included in No.1.3						
			1.11	We have proper weed control. (e.g. Striga)		included in No.1.1						
			1.12	We have more livestock production (milk, meat, eggs, etc.)		included in No.1.5						
			1.13	We use clean / certified planting materials.	6	Farm Input Research and Supply Programme						
			1.14	We have less dependants.	7	Orphan Support Programme						
		2. We are healthy. (2nd Priority)	2.1	We are conversant on diseases prevention and control.	8	Mother and Child Health Programme						
			2.2	We have enough clean water.	9	Water Supply and Sanitation Programme						
			2.3	We are in good sanitary conditions.		included in No.2.2						
			2.4	Immunization coverage is high.		included in No.2.1						
			2.5	We take nutritious and balanced food.	10	Nutrition and Health Improvement Programme						
			2.6	Endemic diseases are controlled.	11	Endemic Diseases Control Programme						
			2.7	HIV/AIDS is controlled.	12	HIV/AIDS Control Programme						
			2.8	We can access proper medical care.	13	Medical Care Strengthening Programme						
		3. We get good income. (3rd Priority)	3.1	We have access to micro finance.	14	Rural Credit Facilities Programme						
			3.2	We have business activities.	15	Local Entrepreneurs Development Programme						
					16	Market Centre Improvement/Establishment Programme						
			3.3	We can catch more fishes. We can sell fishes at a good price.	17	Sustainable Fishery Management Programme						
			3.4	We can grow high value crops. (horticulture).	18	Income Generation Activities (IGA) Promotion Programme						
			3.5	We have more harvest.		included in No.1.1 and No.1.5						
			3.6	We have more productive cattle.		included in No.1.6						
			3.7	We can sell sugarcane at a good price.	19	Sugarcane Cottage Industry Promotion Programme						
		4. We get good education. (4th Priority)	4.1	We can acquire appropriate skills.	21	Polytechnics and Vocational Support Programme						
			4.2	We can get good formal education.	22	OVCs FE Support Programme (Bursary, etc.)						
			4.3	All the adults can read and write.	23	Functional Adult Literacy Programme						
		5. Our environment is protected. (5th Priority)	5.1	Afforestation.	24	Community Based Afforestation Programme						
			5.2	Our rivers are protected.	25	Rivers Protection Programme						
			5.3	Waste is properly disposed.	26	Solid Waste Management Programme						
			5.4	Environmental pollution is controlled.	27	Homa Bay Sewerage Improvement Programme						
		6. We have proper infrastructure. (6th Priority)	6.1	Rural electrification. (Diversification)	28	Rural Electrification Programme						
			6.2	We have good road network.	29	Community Based Roads Network Programme						
			6.3	Our roads are properly maintained.	30	Trunk Road Improvement Programme						
		7. We live in good security. (7th Priority)	7.1	There are few cattle and property thefts.	31	Community Policing Programme						
			7.2	There is few robbery / house breaking.		included in No.7.1						
Low	A Highly Productive, Healthy and Secure District											

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

● : Top priority  
 ⊗ : High priority  
 ○ : Priority

# SUMMARY

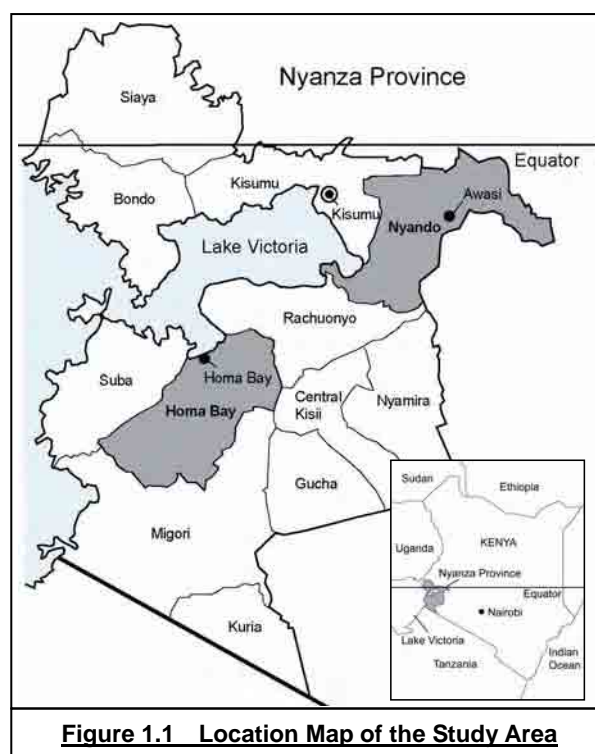
## 1. INTRODUCTION

1.1 Nyanza Province, where Nyando and Homa Bay Districts are located, carries an estimated population of around 5.02 million<sup>1</sup> accounting for 14 % of the national population as of year 2007. It represents a densely populated area in Kenya with a density of about 400 persons<sup>2</sup> per square kilometer. The province is bestowed with relatively favorable natural conditions such as productive soils and mild climate, and owing to these it is referred to as an area with “high potential for agricultural productivity”. Nevertheless, the production of major cash crops such as sugarcane and paddy in the province has been stagnant due to falling of market prices and halting function of irrigation systems among others.

1.2 As a result, many of the provincial population have been leaving their home villages, seeking for new income opportunities and means of livelihood, resulting in lingering demographic exodus of manpower and labor force out of the province. At the same time, a sharp decline of productive stratum of population caused by prevalent epidemic of HIV/AIDS has become a heavy burden to the regional economy. In addition, frequent floods fostered by deforestation and random felling of forest resources have brought the population serious damages. Thus, as many people recognize, such economic recession and increased disasters have converted Nyanza Province into one of the poorest areas in Kenya.

1.3 In this regard, immediate measures are acutely sought for coping with these serious situations facing the people. Under these circumstances, the Government of Kenya (GOK) made a request to the Government of Japan for the assistance of implementing “The Development Study for Regional Development Programme in Nyando and Homa Bay Districts in the Republic of Kenya”. Accepting the request, JICA dispatched a preparatory study mission to Kenya in November 2004 to consult on the Scope of Works and the framework of the Study with the relevant GOK officers. The Minutes of the Meetings on the Scope of Works (SW) were agreed and signed on December 1, 2004 between the two governments, and the plenary Study commenced in June 2005. The process of this Study centers on the following, which themselves are the objectives of the Study agreed upon in the SW:

- 1) To formulate a Development Programme for sustainable development for each of the two Districts; Nyando and Homa Bay,
- 2) To improve the planning process at the district, division, location and community levels based upon bottom-up approach, and
- 3) To enhance the capacity of the Counterparts to promote and lead the development, assuring the ownership of the Government in the process of the programme implementation.



**Figure 1.1 Location Map of the Study Area**

<sup>1</sup> Based on 1999 Census, this was estimated as the population in 2007.

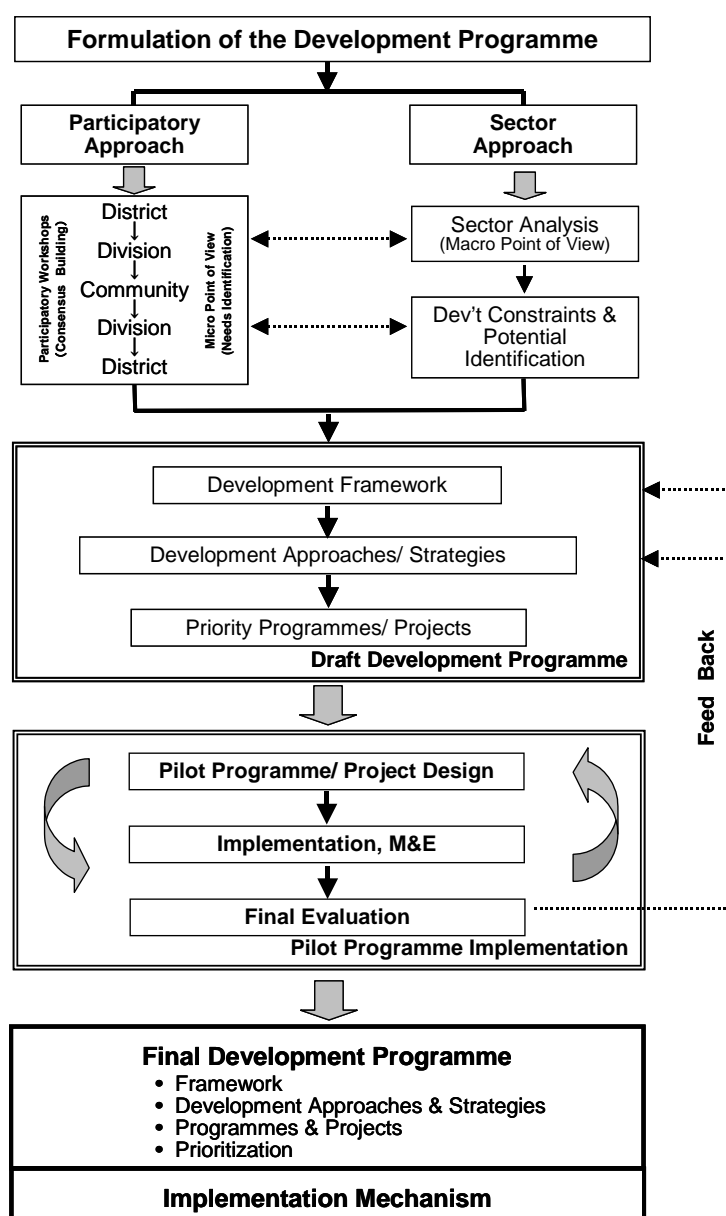
<sup>2</sup> At the Census year 1999, it was 350 persons per km<sup>2</sup>, and it is now projected at 400 as of 2007.



## 2. STUDY APPROACH

2.1 Learning from past experiences in planning an area-wide development programme, this Study contains two new elements apart from conventional plan formulation: 1) a participatory planning approach involving not only the community people but government officers themselves as well, together with distinct development actors in the districts such as NGOs, CBOs and FBOs, and 2) implementation of pilot programmes/ projects before the finalization of the development programme. The Development Programme is, therefore, characterized by the active participation as well as consensus making process by all the concerned parties in its preparation; also, before the Programme is finalized, several of the most important hypotheses of the provisional development programme are verified through the actual implementation of certain programmes/ projects, which may be called as verification programmes.

2.2 This process of formulating the Development Programme is shown in Figure 2.1. As shown in the figure, the approach to formulating the programme may be called a hybrid type, composed of both conventional sector approach, which may be called top-down approach, and a participatory approach which entails bottom-up movement. In order to gain a clear overview of the Study districts and to take into account the economic frame-work projected based upon population growth among others, overall resource availability and the need to maintain a balance with other alternative plans, a certain degree of top-down approach needs to be adopted. On the other hand, a bottom-up approach is also required. The bottom-up approach does not necessarily mean a participation of the community people but means a process to which all the development actors such as the people on the ground, government officers, NGOs, and CBOs participate.



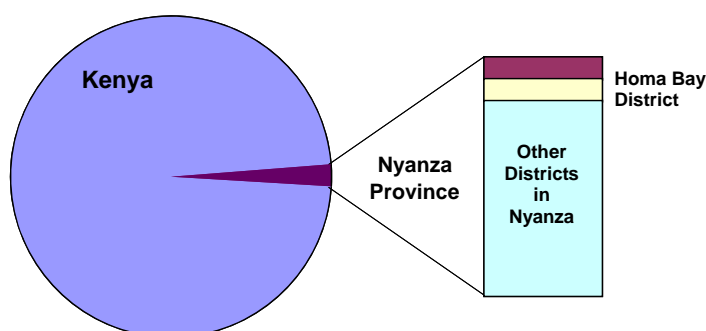
**Figure 2.1 Overall Study Framework and Flow**

2.3 Implementation of the pilot programmes/projects is another key to formulating the development programme that could really work on the ground. As this Study is composed of two phases, during Phase I, a draft development programme was prepared and a number of pilot programmes/projects were identified. Phase II of the Study put some of the identified programmes/projects into practice, and converted the draft programme into the final District Development Programme by feeding back

into it the experience and lessons coming up through the implementation of the pilot. Also the pilot practice identified the soundest mechanism with which the district development programme is to be put into real implementation.

### 3. THE STUDY AREA

3.1 The Study covers Nyando and Homa Bay Districts belonging to Nyanza Province. These districts are located at the coast of Lake Victoria in the western part of Kenya. Nyando District covers an area of 1,168 km<sup>2</sup> including 71 km<sup>2</sup> of lake water surface. Homa Bay has a total area of 1,160 km<sup>2</sup>, out of which 29.5 km<sup>2</sup> is lake water surface. The two districts together cover a total area of 2,329 km<sup>2</sup>, which occupies 19 % of the Nyanza Province, and are characterised with varied environmental features such as swampy plains, shorelines, upland areas, hilly areas, etc.



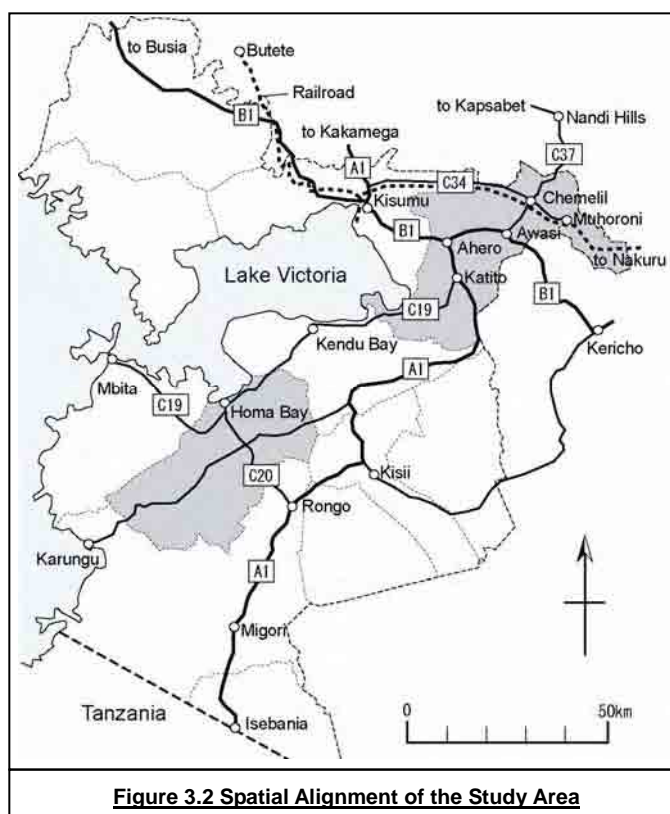
**Figure 3.1 Nyando and Homa Bay Districts in Area Settings**

**Table 3.1 Nyando and Homa Bay in Area Settings**

Category	Total Area, km <sup>2</sup>	Water Mass, km <sup>2</sup>	Land Area, km <sup>2</sup>	Remarks
Kenya	592,909	11,230	581,679	
Nyanza Province	12,547			2% of Kenya
Nyando District	1,168.4	71.0	1,097.4	9% of Nyanza
Homa Bay District	1,160.4	29.5	1,130.9	9% of Nyanza
Nyando+ Homa Bay	2,328.8	100.5	2,228.3	19% of Nyanza

Source: District Development Plan 2002-08, 1999 Census

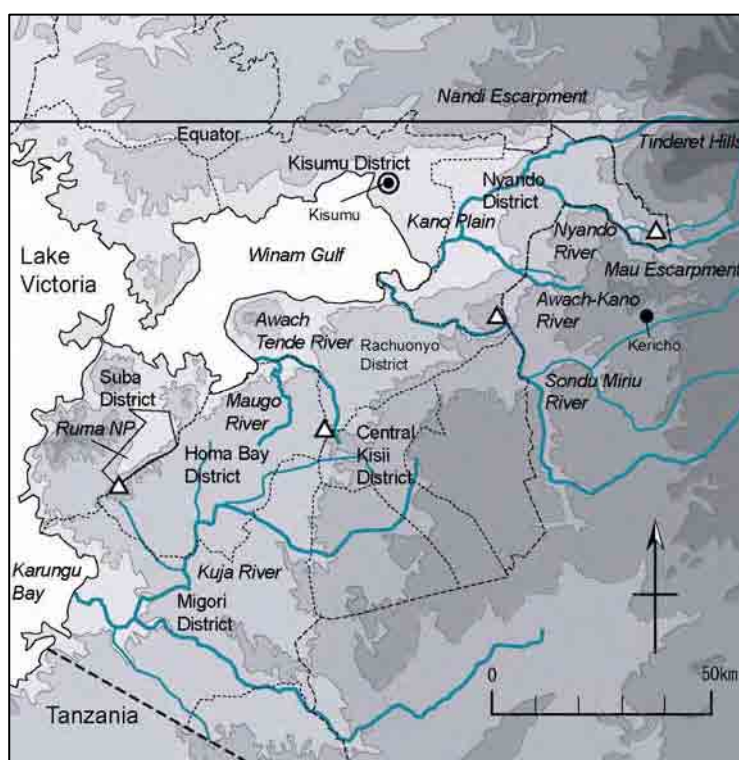
3.2 An international trunk road, named A1, starts at the border with Tanzania and runs via Kisii toward north and finally joins national trunk road B1 at suburb of Ahero Town. The B1 national trunk road runs between Kericho town and Busia town, a border town with Uganda, through Kisumu City. Apart from the two major trunk roads, Nyando is also given C34, a primary road, which starts at Kisumu City and runs in the sugarcane belt area. Traversing the C34 toward Nandi hills is another primary road called C37, which is well maintained. Homa Bay District may be said to be somewhat being left behind from a major road network. The international trunk road A1 runs almost in parallel along the district borders with Migori and Kisii with a distance of about 10 km. C20, which is the primary road connecting Homa Bay Municipality with the A1 international trunk road, is very



**Figure 3.2 Spatial Alignment of the Study Area**

poorly maintained, lessening the opportunity of benefiting from the traffic on A1.

3.3 Since both districts have shorelines, the lowest altitude is therefore same as the water surface level of Lake Victoria, which is 1,134m above mean sea level. Nyando District has flat lowlands, which gradually changes to steep slopes in the highlands. The largest lowlands in Nyando are called Kano Plains which extend deep into Kisumu District. Total area of this Kano Plains is estimated at about 73,000 ha, which is very often hit by flood. In Homa Bay District, altitude gradually rises alongside the border with Suba District forming an escarpment down to the Ruma National Park and ascends from the Lake toward Kisii District. Therefore two high lying areas can be found in the district; one in south-western part and the other in north-eastern part. Higher lying areas receive relatively high rainfall while low lying lands like lower parts of Rangwe Division are sometimes hit by drought.



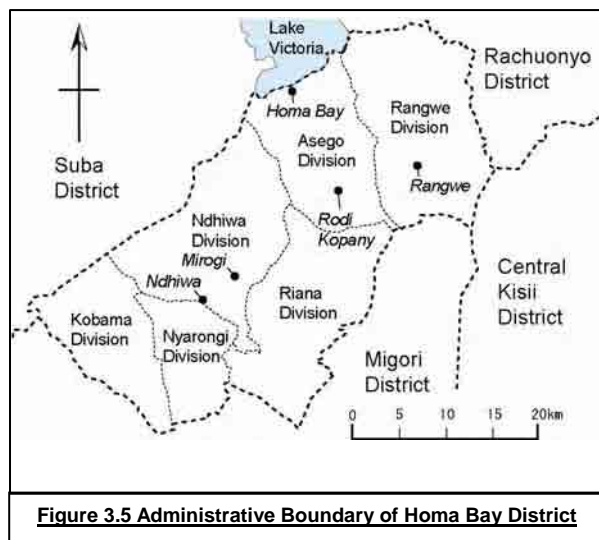
**Figure 3.3 Topography of & around the Study Areas**

3.4 Major rivers in Nyando District are: Nyando, which is the biggest one, Awach-Kano and Sondu Miriu Rivers. Nyando River basin mainly lies in Kisumu, Nyando, Nandi South and Kericho districts. The basin has a total area of 3,450 km<sup>2</sup> and a river course of 153 km and drains into Lake Victoria at Winam Gulf. In Homa Bay District, River Kuja is running between the two high lying areas, which originates behind the Kisii Town and flows into Homa Bay District while collecting water from smaller catchment areas through Migori District and then drains into Karungu Bay of Lake Victoria. Second biggest river in Homa Bay is Awach Tende, which runs along the border with Rachuonyo District from its mid to down stream reaches. Maugo River, which merges with Awach Tende, is also important for farmers who cultivate paddy in the downstream.

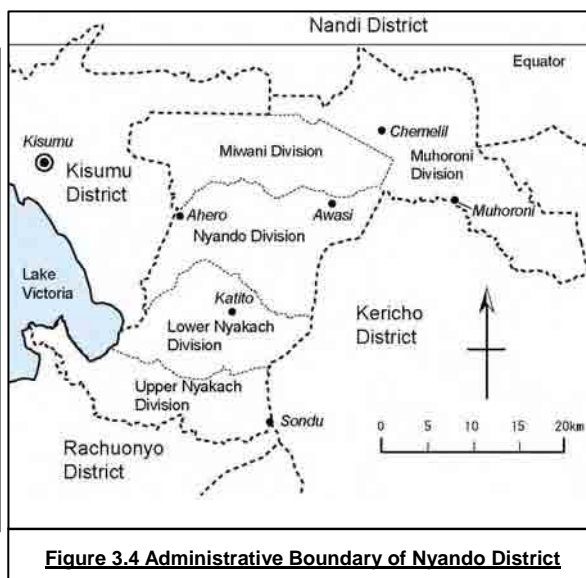
3.5 Both study districts have an equatorial type of climate, which is modified by the effects of altitude, relief and the influence of the Lake Victoria water mass. Because of the cooling influence that the Lake exerts, temperatures are a little lower than a typical equatorial type climate. Temperatures vary between approximately 15 and 30 degrees Celsius with an average value of around 20 degrees Celsius though it is dependent mainly on altitude. Although temperatures get low in the early morning and increase during afternoon time, the monthly average temperature fluctuates within a very small range since the equator runs in the area. Lakeshore area has less rainfall while areas located away from the lake are blessed with more rainfall especially as elevation increases. In general, the western areas nearby the lakeshore receive an average annual rainfall of between 700 and 800 mm, while the eastern area receives about 1,500 to 1,800 mm. The long rainy season is from late March to May and the short rain season is experienced between October and November.

3.6 Nyando District is divided into five administrative divisions, namely Muhoroni, Miwani, Nyando, Lower Nyakach and Upper Nyakach Divisions. Large towns in the District are Ahero and

Muhoroni Towns, which according to the 1999 Census had a population of 30,327 and 31,145 people respectively. Awasi, the seat of the District Headquarters, is another important town in Nyando District. Homa Bay 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 according to 1999 Census accounts for 20% of the total population in the District. Other centres include Ndhiwa, Mirogi, Rangwe, Rodi Kopany etc; most of which are located along C18 road.



**Figure 3.5 Administrative Boundary of Homa Bay District**



**Figure 3.4 Administrative Boundary of Nyando District**

3.7 The major economic activities come from the primary industry sector; mainly agriculture. Markets of the districts are dominated by the primary products, which are maize, sorghum, finger millet, cassava, sugarcane, rice, vegetables, fruits, raw cotton, livestock and fish. There are also several processed products marketed in the districts including sugar, spirits, jaggery, bakers yeasts, tomato pastes and jams, sweet potato chips and bread and processed fish, almost all of which are in fact processed from the primary products. Among these, sugar from sugarcane is the main industry in Nyando District. In Homa Bay District, disease outbreaks in livestock are an impediment to access to markets when there is declaration of quarantine particularly for foot and mouth disease.

3.8 The latest census was carried out in 1999, and made population projections taking into account past trend of mortality and fertility plus the effect of HIV/AIDS. As of year 2007, it is projected that there are 34,652,581; 5,021,695; 372,602; and 342,356 people in Kenya, Nyanza Province, Nyando and Homa Bay Districts respectively. These give population densities of 58, 400, 319, and 295 persons per km<sup>2</sup> respectively. The nationwide population density of 58 persons per km<sup>2</sup> is in fact more or less same as the average density of all the 47 sub-Saharan countries. Nyando District has a population density of 319 and Homa Bay carries 295 persons per km<sup>2</sup>, both of which are about 5 fold of the nationwide density. High population densities mean high birth rate, and also imply high carrying capacity of the land blessed with rainfall and rich soils as compared to other parts of Kenya.

3.9 The 1999 Census indicates that 10.7 percent of the total population of Nyando District live in urban areas while the rest in rural areas. Urban population specified in the census survey means those who reside in the municipal council areas of Ahero and Muhoroni. Employed people in Nyando District accounted for 44% of the total inhabitants. They are classified into three categories of working for pay (12%), working in family businesses (9%), and working in family farms (23%). People working for pay and people working in family businesses were rather concentrated in the ages from 20 to 49 and the ages from 20 to 39 respectively. People working in family farms, on the other



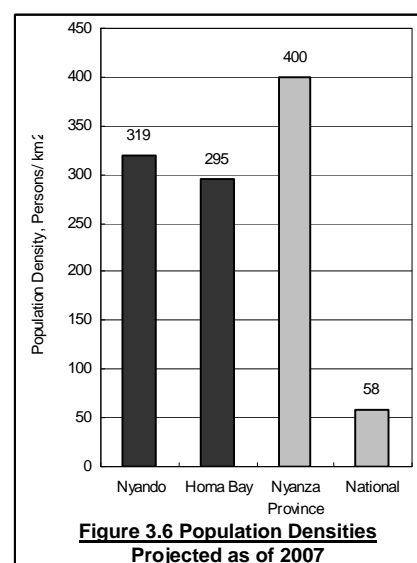
hand, had high ratios regardless of age because of the presence of the sugarcane belt in the district.

**Table 3.2 Population Projections by Year**

	Census Year	Onset of the Present D/P*	Onset of this Study	Completion of this Study
Year	1999	2002	2005	2007
Population				
National	28,686,607	31,517,142	33,445,119	34,652,581
Nyanza Pr.	4,392,196	4,731,887	4,916,569	5,021,695
Nyando	299,930	333,274	357,393	372,602
Homa Bay	288,540	315,116	332,079	342,356
Population Density				
National	48	53	56	58
Nyanza Pr.	350	377	392	400
<b>Nyando</b>	<b>257</b>	<b>285</b>	<b>306</b>	<b>319</b>
<b>Homa Bay</b>	<b>249</b>	<b>272</b>	<b>286</b>	<b>295</b>

Source: 1999 Census and Analytical Report Vol.VII

Note: \* district development plan



3.10 The 1999 census indicated that 11.5 percent of the total population of Homa Bay District live in urban area which is Homa Bay Municipal Council while the rest in rural areas. Employed people in Homa Bay District accounted for 49.0% of the total inhabitants; 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 the percentage of those working in family farms becomes higher reaching 36% (in Nyando, it is 23 percent). People working for pay and 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 from 20 to 39 and held a ratio of 78.8% of the total employment of the ages from 40 to over 60.

3.11 The population growth rates for the period 1989 – 1999 for Nyando and Homa Bay Districts are 3.4 % and 2.7 % respectively. These rates are higher than those of Nyanza Province and national average, which are 2.3 % and 2.9 %. High population growth rate naturally implies high birth rate as well as high fertility rate per woman. Crude birth rates per 1000 population for Nyando and Homa Bay are 44.1 and 50.8 and total fertility rates per woman are 5.7 and 6.1. National averages of the crude birth rate and total fertility per woman are 41.3 and 5.0. Both districts, especially Homa Bay District, show very high crude birth rate and fertility rate as compared to the national averages.

**Table 3.3 Population Growth, Crude Birth rate, and Total Fertility Rate**

	Population Growth, %	Crude Birth Rate per 1000 Population	Total Fertility Rate per Woman	Remarks
National	2.9	41.3	5.0	
Nyanza Province	2.3	45.8	5.5	
Nyando	3.4	44.1	5.7	
Homa Bay	2.7	50.8	6.1	

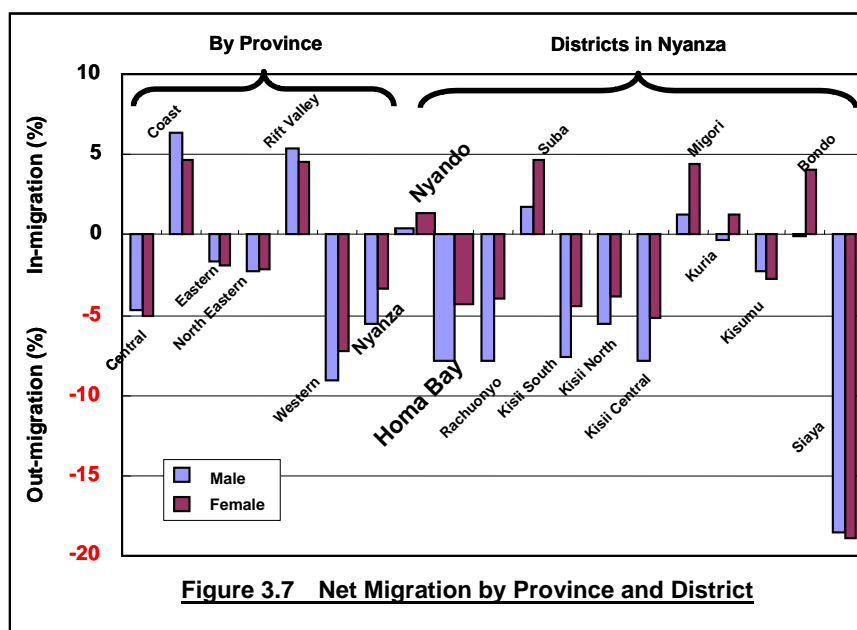
Source: 1999 Census

3.12 Both birth rate and fertility rate for Homa Bay are higher than those of Nyando District; however the population growth is higher in Nyando than in Homa Bay. This can be explained by high incidence of out-migration taking place in Homa Bay while migration for Nyando was plus (means more in-migration than out-migration). Generally, Nyanza Province shows high out-migration next to Western Province, and by district in the Nyanza Province Homa Bay District shows very high out-migration reaching about 8% for male and 4% for female. Net migration for Nyando is a little surplus, showing in-migration to the district. This migration shows the movement

of people in the period of one year before the date of the census interview. After that, Miwani Sugar Factory closed down in 2000. Due to this close down, the present tendency for Nyando might no longer be in-migration.

3.13 Nyanza Province is well known for its high infant and under-five mortality rate. This is believed mainly due to high prevalence of malaria, unhygienic water, etc. At a glance one may be very

much surprised with the exceptionally high mortality rate as compared to the national level. Infant mortalities in Nyando and Homa Bay are higher by 50% and 93% as compared to the national level. Under-five mortality rates for the districts are also about double the national average. The under-five mortalities are 212 and 254 for the Nyando and Homa Bay, and in fact the one of Homa Bay is the worst in Kenya. Therefore, about one in every 4.7 children in Nyando and one in every 3.9 children in Homa Bay cannot see their five-year birthday. Affected by these high infant and under-five mortalities, crude death rates for the districts also become very high, showing about two-fold death rates against the national level.



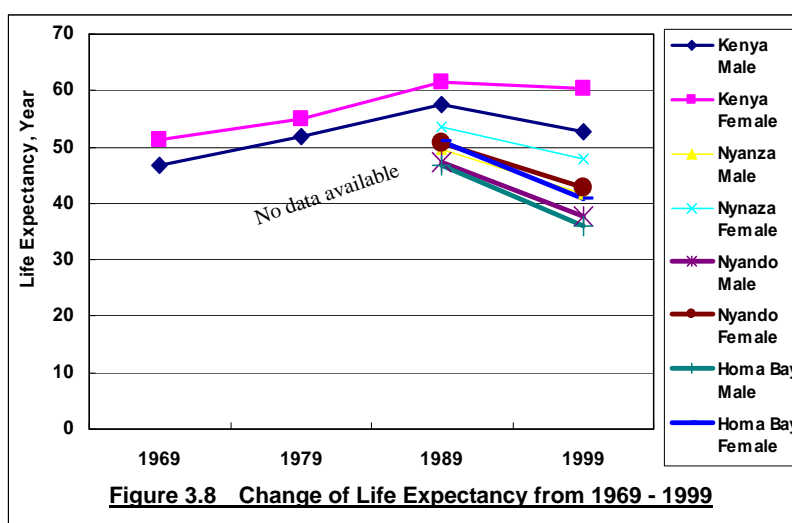
**Figure 3.7 Net Migration by Province and District**

**Table 3.4 Infant Mortality, Under-5 Mortality, Crude Death Rate and Life Expectancy**

	Infant Mortality per 1000 live births	Under-five Mortality per 1000 live births	Crude Death Rate per 1000 pop.	Life Expectancy at Birth, yr		Remarks
				Males	Females	
National	77.3	116	11.7	52.8	60.4	
Nyanza Province	111.6	192	19.0	41.7	48.0	
Nyando	116.1 (150%)	212 (183%)	22.4 (191%)	37.7 (-15.1)	42.9 (-17.5)	
Homa Bay	149.2 (193%)	254 (219%)	25.1 (215%)	35.9 (-16.9)	40.7 (-19.7)	Worst in Kenya

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

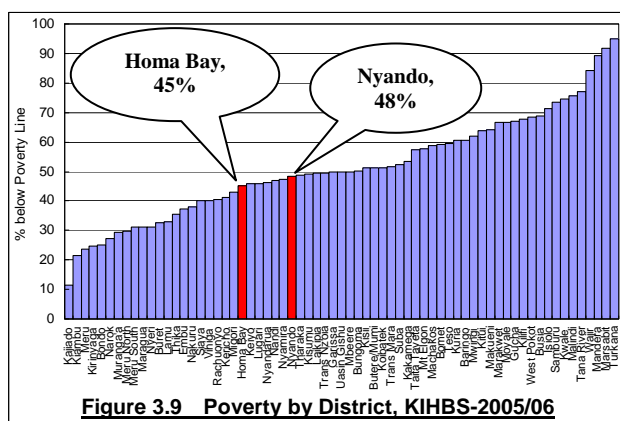
3.14 As for life expectancy, those of Nyando and Homa Bay Districts are very low compared to the national average. Male life expectancy at birth according to the 1999 census is already below 40 years old, 37.7 for Nyando and 35.9 for Homa Bay, against the national average of 52.8. Life expectancy for women is longer than men, giving over 40 years old which, though, is still very low compared to the national average of 60.4. The life



**Figure 3.8 Change of Life Expectancy from 1969 - 1999**

expectancy in fact dropped very much in recent years<sup>3</sup>; up until 1989, Kenyan's life expectancy had been increasing, and then started falling down. The life expectancy of the population in Nyando District had reduced by 10 years and 8 years for male and female respectively. The life expectancy of the population in Homa Bay District dropped by 11 years and 10 years for male and female. This big drop may be attributed to two main reasons; higher prevalence of malaria than before and high prevalence of HIV/AIDS pandemic, with the latter probably being much more influential.

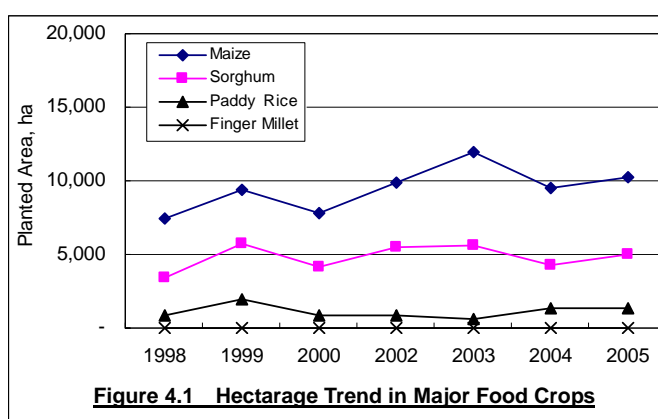
3.15 The poverty incidences of the Study districts are 48% and 45% for Nyando and Homa Bay Districts respectively according to Kenya Integrated Household Budget Survey-2005/06. Nyando District is ranked at 28 and Homa Bay at 22 amongst 67 rural districts in 2005/06, while the ranks in 1997 were 42 and 61 respectively according to the Welfare Monitoring Survey-III. This does not necessarily mean that both districts have remarkably reduced poverty prevalence between 1997 and 2005/06 but the results in 1997 were exceptionally bad due to El Nino related calamities. Though the present poverty prevalence is better than the ones in 1997, still about half of the population in the Study districts are below poverty line.



## 4. SECTOR PERFORMANCE IN NYANDO DISTRICT

4.1 Concerning land use for Nyando District, communal land ownership is getting unpopular and most parcels of the land have been registered to individuals. Major land use pattern is pasture and farm. According to NEMA (2005), it is estimated that total agricultural potential area is 1,040 km<sup>2</sup>, which accounts for 95% of the total land area, while 394 km<sup>2</sup>, which accounts for 36%, is currently utilized. The District has a large area of wetlands which supply important natural resources to the local people. However, the people around the wetlands have been affected by flooding almost every year. Another environmental hazard is expanding gully erosion which is found in Lower Nyakach Division.

4.2 Trend in hectareage for major food crops varies 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<sup>4</sup>. The food crop which occupies the largest area is maize, the staple food of Kenyans, followed by sorghum and by paddy rice to lesser extent. The maize planted area is now around

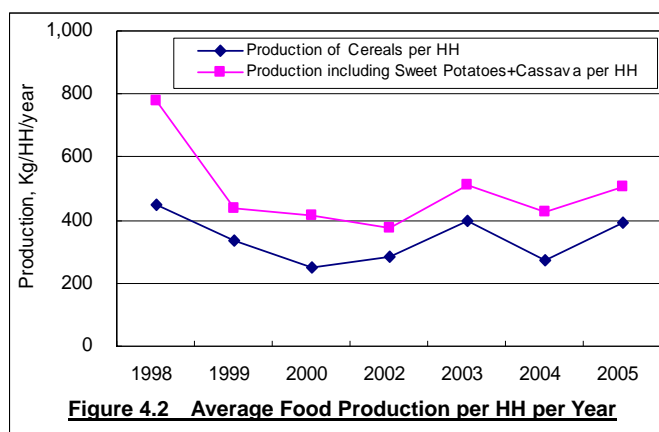


<sup>3</sup> District life expectancies in 1969 & 1979 are not available. For the 1989 data, Nyando data was represented by Kisumu which encompassed Nyando at that time. Also, Homa Bay data in 1989 was represented by South Nyanza District which encompassed a total of 5 current districts including Homa Bay.

<sup>4</sup> 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 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.

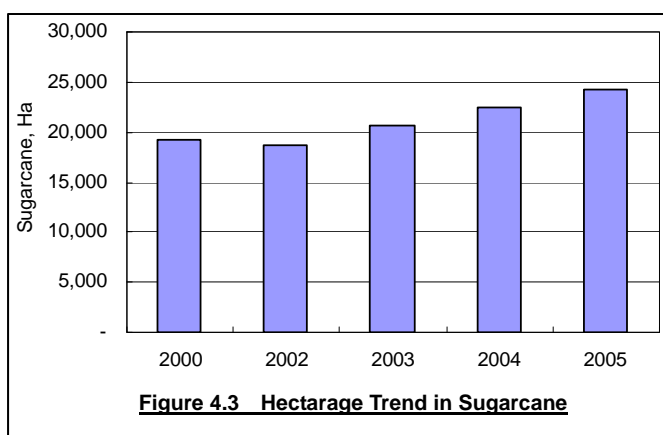
10,000 ha and the one of sorghum is 5,000 ha. Acreages of rice were affected by the closing down of the operations of the National Irrigation Board (NIB) in 1999. The scheme is now revitalized and acreages are set to go up from the season of 2005/06. Finger millet has been planted in very small areas less than 50 ha in total, which is already a form of dying crop.

4.3 Cereal production in Nyando District is remarkably low, which has been hovering between 200 and 400 Kg per household only. Though specific data with regard to cereal consumption per HH is not available, it can be said that a better-off family consumes over 1,000 Kg per annum, while a 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. Even after

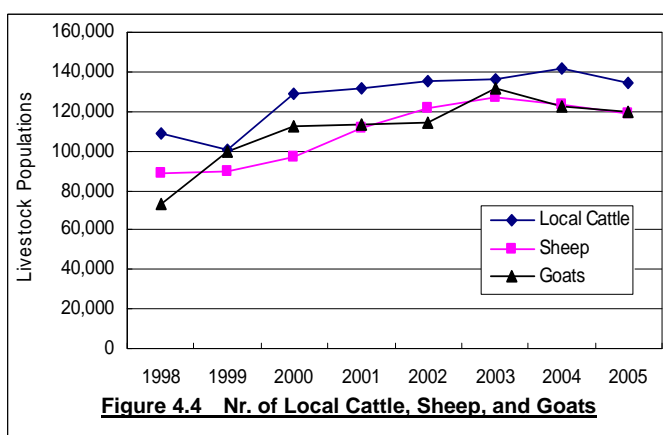


adding sweet potatoes and cassava, which can supplement the staple food, to the four major cereals, maize, sorghum, paddy rice and millet, the total production is quite low, around 400 – 500 Kg only per household, not reaching 750 Kg per HH per annum. These figures tell us about as much as half volume of the food crop is now imported from outside of the district.

4.4 Sugarcane is a very famous cash crop in Nyando District. The northern part of Nyando District is well occupied with sugarcane fields, wherein there are three sugar factories (though Miwani Sugar Factory was closed down in 2000). Trend in hectareage of sugarcane field from 2000 – 2005 shows a continuous increment by year, reaching 24,250 ha in 2005. In fact, maize which occupies the second largest farmland now covers about 9,700 ha only. Though it is said that all the three factories suffer from the problem of using old and inefficient technology and this makes it difficult to extract all the sugar which they could have extracted, still sugar remains a valuable cash crop for the farmers in Nyando.



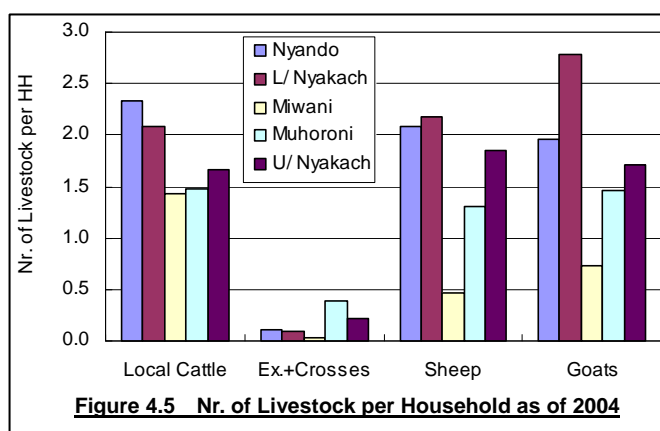
4.5 Populations of major livestock in Nyando District have been steady increasing until 2004. As of 2005, the numbers of local cattle, sheep and goats are estimated at around 134,000, 119,000, and 120,000 respectively. Number of households as at 2005 is estimated at around 81,000, and therefore on average one family nowadays keeps less than two cattle each. As for population growth ratio, the cattle have increased by 23%





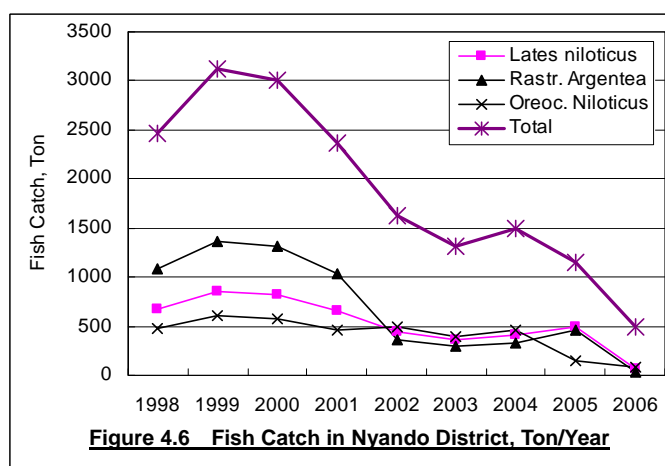
(from 109,000 to 134,000), the sheep by 34% and the goat by 64% during the period from 1998 to 2005. The human population has increased during the same period by 26% (from 282,910 to 357,393), which means sheep and goat but cattle population growths have surpassed the human population growth.

4.6 Figure 4.5 picks up major livestock populations, and divides them by number of households in each division as of 2004. It shows that Nyando and Lower Nyakach Divisions, which are characterized by relatively flat land having rangelands, have more numbers of livestock than other divisions. For example, on average a typical household in Nyando and Miwani owns about 2 local cattle, while other three divisions have an average of about 1.5 cattle per household. As per exotic and cross breed cattle, however, divisions located at higher elevation such as Upper Nyakach and Muhoroni have more because of the favorable climatic condition. Miwani Division has less numbers of livestock in almost all the livestock. This may be attributed to large areas of wetlands which often give tick borne disease.



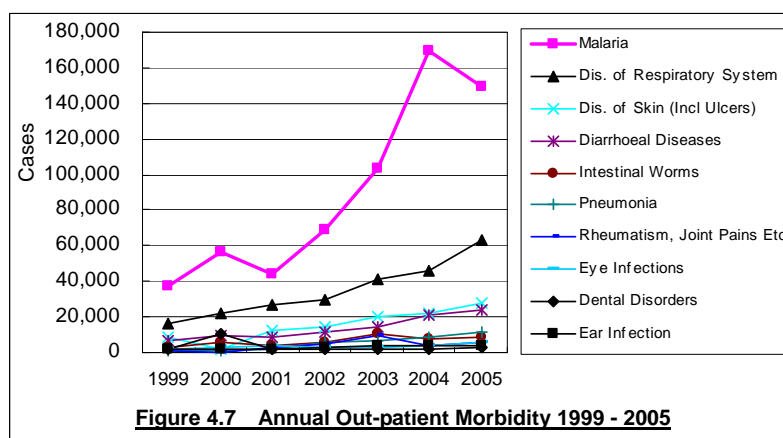
**Figure 4.5 Nr. of Livestock per Household as of 2004**

4.7 Major fish catch comes from three species: *Lates niloticus* (Nile perch), *Rastrineobola argentea* (Omena), and *Oreochromis niloticus* (Nile tilapia). The fish are landed at seven main landing sites in the District accounting for about 2.3% of the 304 landing sites in Lake Victoria under Kenya's jurisdiction. The landing sites are Kusa, Sango Rota, Ng'ou, Bala/Kombewa, Singida, Koguta, and Komwaga beaches. These landing sites are located along the shoreline of about 15 km long in the district. Now, there is a great concern, which is the general declining trend in fish catch since 1999. The fish catch in Nyando District decreased from 3,116 ton in 1999 to only 498 ton in 2006. As per long-term trend in Lake Victoria, the catch reached its peak in 1990. Then, the catch had remained in between 150,000 and 200,000 tons per annum up to year 2000, and then after year 2000 it started reducing. Though after 2004, the catch from the Lake again started increasing, it is not yet so in Nyando District.



**Figure 4.6 Fish Catch in Nyando District, Ton/Year**

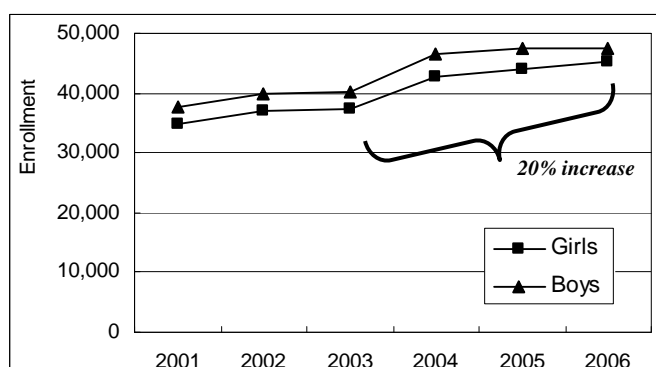
4.8 Disease burden in Nyando District in order of priority includes malaria, upper respiratory tract infections



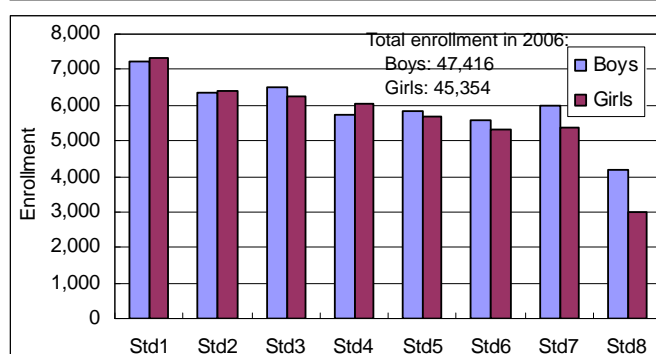
**Figure 4.7 Annual Out-patient Morbidity 1999 - 2005**

(URTIs), diarrhoea diseases, skin infections, intestinal worms, rheumatism, pneumonia, eye infections, and ear infections. Malaria is the top disease in the district and its cases had continued to rise from 37,139 in 1999 to 169,337 in 2004. This steady increase in malaria cases is attributed to several reasons; for example, 1) malaria drugs now free to the patients at government health facilities so that the people suffering from malaria tend to appear, 2) drug resistance mosquitoes which are now found in high altitude, 3) frequent flooding leading to stagnant water in the District, 4) banning of the use of DDT (in 1997) because of its negative effect on the environment, etc. Apart from malaria, HIV/AIDS opportunistic infections largely contribute to the burden of disease in the district and these include TB, pneumonia, URTIs and skin infections.

4.9 Since the inception of Free Primary Education (FPE) in 2003, the enrollment of pupils in primary school has increased by about 20%. The enrollments are 89,434 (46,650B and 42,784G), 91,504 (47,546B and 43,958G), and 92,764 (47,410B and 45,354G) in 2004, 2005 and 2006 respectively (see Figure 4.8). Gross enrollment is now over 100%; for example, 130% and 111% for boy and girl in year 2004. However, as the years progress, both girls and boys start to drop out of school. Though the drop out ratio is not available, Figure 4.9 shows less number of pupils as classes go by. This is attributed to the high poverty levels prevailing in the district. Pupils drop out of school to join the casual labour market. This is mostly in cases where the children are orphaned and the older children drop out of school to take care of their younger siblings. The care of younger siblings is a chore that keeps girls away from attending school.

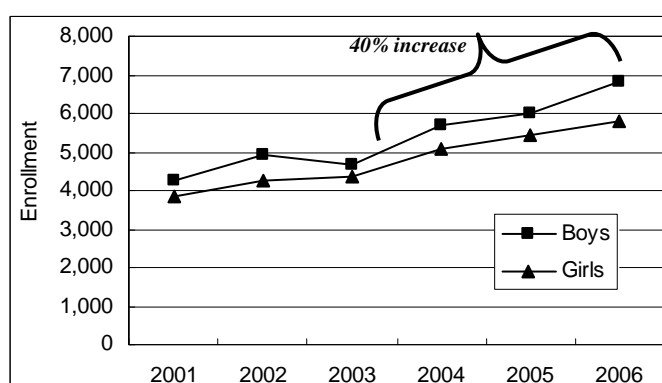


**Figure 4.8 Primary School Enrollment Trend 2001 - 2006**



**Figure 4.9 Public Primary Enrollment, 2006**

4.10 Secondary school enrollment has also increased by 40 percent from 2001 to 2006. The enrollments in 2006 are 6,809 and 5,811 for boys and girls respectively, totaling to 12,620. The increase can 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). In Nyando District where the politicians are much concerned about the educational standards of the area, a percentage of the CDF goes towards paying school fees for needy students.



**Figure 4.10 Secondary School Enrollment Trend, 2001-2006**

However, gross enrollment ratio is still low; for example, it was estimated at 50% and 43% for boys and girls in 2004. The gross enrollment ratios indicate that there is low transition rate from primary school to secondary school.

4.11 Available records in the district water office indicate there are five gazetted water schemes and 11 private schemes. It is also recorded that there are over 600 shallow wells, 32 protected springs, 26 boreholes, 126 small earth dams/pans and over 1,000 roof catchments that are managed by the individual communities, though some of them may no longer be functioning. The accessibility to safe water in the district is said to be between 40 and 45%<sup>5</sup>, which is in a better situation as compared to average national rural area coverage of 32%. However, the accessibility 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 supply schemes.

4.12 The district has a total road network of 1282.4 km composed of 155.6 km for bitumen, 30.6 km for premix, 1,011.8 km for gravel, and 15 km for earth. Most of the gravel road networks have been constructed in the sugar growing zones, whose total length is 650 km. The surface dressed roads are in fair operating conditions. The Road A1 (Ahero- Kisii) is in fair condition and requires minor reconstruction. Katito - Kendu Bay (C19) has been asphalt-paved as of March 2007. The other roads including Ahero - Awasi (B1) Miwani - Kericho (C34), Awasi - Muhoroni (C35) and Awasi - Nandi (C37) are potholed and require repairs. Most of the gravel and earth roads are only motorable during the dry period. During the rainy season, the roads are cutoff by and destroyed by floods in the lower parts of the district such as Nyando, Miwani and Lower Nyakach Divisions.

**Table 4.1 Road Network in Nyando District**

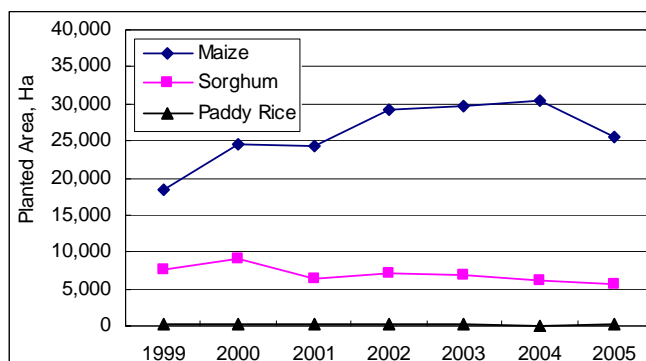
Surface Type	Length, km
Bitumen	155.6 (12%)
Premix	30.6 (2%)
Gravel	1,011.8 (79%)
Earth	15.0 (1%)
Total	1282.4 (100%)

Source: GoK/ SIDA Roads 2000 Report

4.13 There are two large scale irrigation schemes in Kano Plain run by the National Irrigation Board (NIB), one of which is at Ahero and the other is at West Kano with command areas of 870 ha and 970 ha respectively (West Kano Irrigation Scheme in fact falls in Kisumu District). Development of Ahero Irrigation Scheme was intended to be a pilot scheme for paddy cultivation. The Ahero Irrigation Scheme was constructed in 1966 and the first crop was planted in 1969. As for smallholder irrigation schemes, Nyando District has got 19 irrigation schemes including six sub-schemes belonging to a big smallholder South West Kano Irrigation Project, a part of which lies in Kisumu District. The current irrigation area per smallholder scheme varies from just 10 ha to as much as 400 ha. The total irrigable area for the smallholder irrigation by the 19 schemes is 2,829 ha, out of which about 1,200 ha is now in operation.

## 5. SECTOR PERFORMANCE IN HOMA BAY DISTRICT

5.1 Northern and southern areas of Homa Bay District extend at comparatively low altitude about 1,200m above sea level. In the west, altitude gradually rises toward the border with Suba District and meet with Kanyamwa Escarpment. Another highland area is south-eastern parts of Rangwe Division, which lies on western side of Kisii Hills. In Homa Bay District, most areas are used as pasture or farm just same as in Nyando District. According to the Ministry of Livestock and Fisheries Development (2004), it is estimated that the total arable land is 977 km<sup>2</sup>, which accounts for 86% of the total land, and 47% of which is currently under utilization.

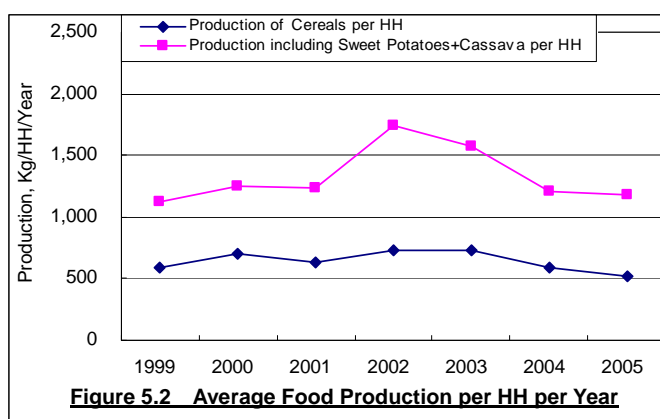


**Figure 5.1 Hectare Trend in Major Food Crops**

<sup>5</sup> Interview to District Water Officer, November 2005.

5.2 Homa Bay District has a varied ecology that allows growing of a large number of crops, amounting to about 30 different crops. The important ones are: maize, tomatoes, 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, cabbages, citrus, finger millet, green grams, simsim, soya beans, arrow roots, tea, coffee and sunflower. The crop which occupies the largest area is maize (25,449 ha in 2005), followed by beans (13,062 ha) which in most cases is intercropped with maize and sorghum, and by sorghum (5,722 ha) to lesser extent. Rice, another staple food, is negligible in Homa Bay District, just less than 300 ha.

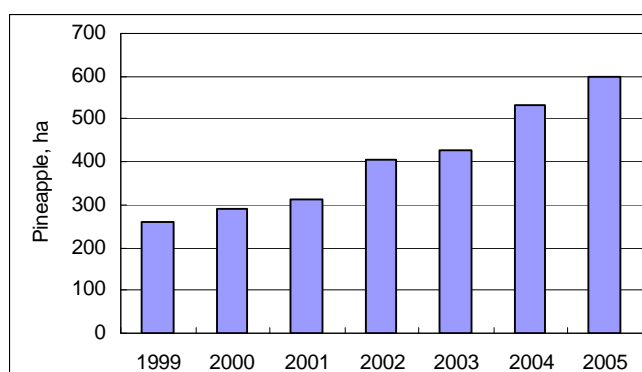
5.3 Cereal production in Homa Bay District is about 600 – 700 Kg per household per annum. General practice may be that a family who produces less than 750 – 800 Kg per annum has to supplement the cereals by either buying or eating other food crops. Total food production inclusive of sweet potatoes and cassava, which can supplement the staple food, is from just over 1,000 kg to over 1,500 Kg in a good harvest year. These figures tell us that Homa Bay District may



**Figure 5.2 Average Food Production per HH per Year**

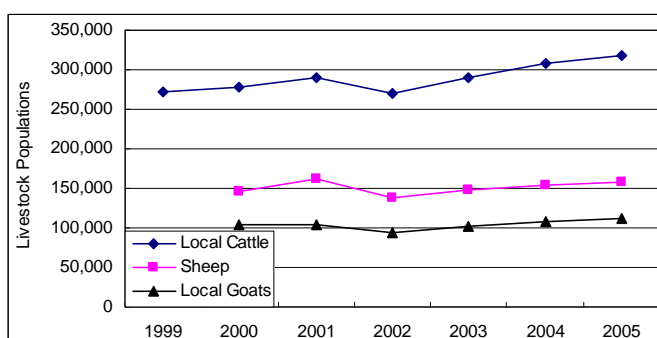
be narrowly producing self-sufficient cereals, and supplemented by sweet potatoes and cassava the total food crop production must be enough to sustain the population. Though there may be some food shortage spots, the District as a whole can support whole population in terms of food crop consumption.

5.4 Pineapple is becoming a popular cash crop in the district. As of 2006, 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 after the planting, 2nd at 6 months after the 1st harvest, and 3rd 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 is not uniform. Pineapple has little pest and diseases, and hence easy to manage by few farmers. According to the interview to a farmer, the pineapple was brought from Mombasa back in 1985, and has been extended through farmer to farmer extension to date.



**Figure 5.3 Hectare Trend in Pineapple**

5.5 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



**Figure 5.4 Nr. of Local Cattle, Sheep, and Goats**



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. As for population growth ratio, the cattle has increased by 17% (from 271,100 to 317,510) from 1999 to 2005, while that of the sheep and goats has 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.

5.6 Figure 5.5 shows major livestock populations divided by number of households in each division. It shows that Nyarongi Division has the biggest number of livestock per household followed by Kobama Division: about 9 local cattle, 4 sheep and 3 goats per household. As compared to Nyando District, Homa Bay people keep more number of cattle; namely, a typical household in Nyando and Lower Nyakach Divisions where many cattle can be found in the district owns about 2 local cattle only. As per exotic and cross breed cattle, though the number is still negligible, Rangwe and Asego Divisions have been up-taking, followed by Ndhiwa Division.

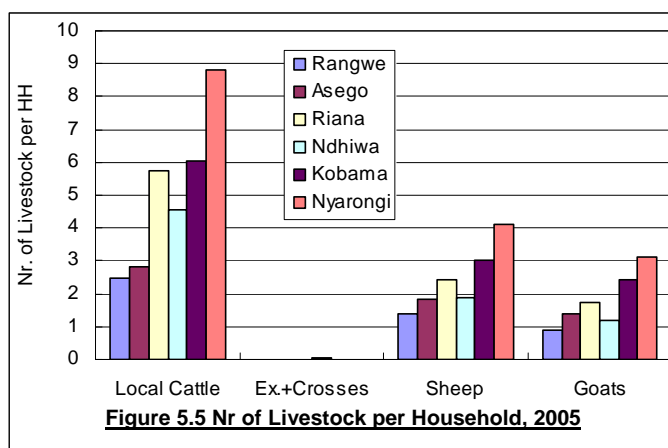


Figure 5.5 Nr of Livestock per Household, 2005

5.7 Major fish catch comes from three species: *Lates niloticus* (Nile perch), *Rastrineobola argentea* (Omena), and *Oreochromis niloticus* (Nile tilapia). The fish are landed at the various fish landing sites. The main landing sites in the District are five accounting for about 2% of the 304 landing sites in Lake Victoria (Kenyan jurisdiction). The landing sites are Kananga, Koginga, Lela, Kuoyo/Ombogo and Ngegu beaches. Decline in fish catch started in year 1999. The fish catch in 1999 was 869 ton and it has reduced to only 170 ton in 2006.

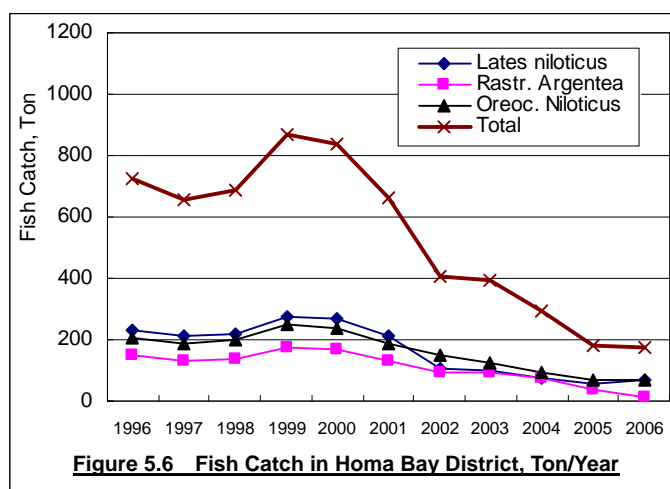


Figure 5.6 Fish Catch in Homa Bay District, Ton/Year

When the fish value in total peaked in 2000, the income was about Ksh 40 million, while the income in 2004 is already Ksh 17 million, less than half of the peak, and it is still going down to date. Though the fish unit price has increased, the hike has not covered the declining of the fish catch.

5.8 Out-patient morbidities by disease are shown in Figure 5.7. Malaria is the top morbidity, followed by

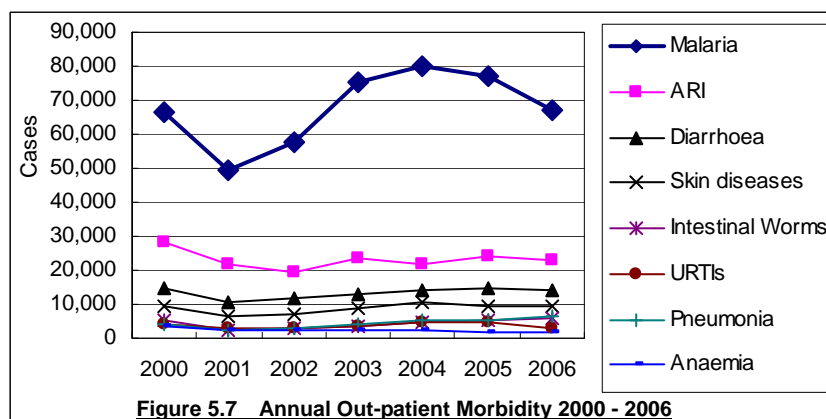
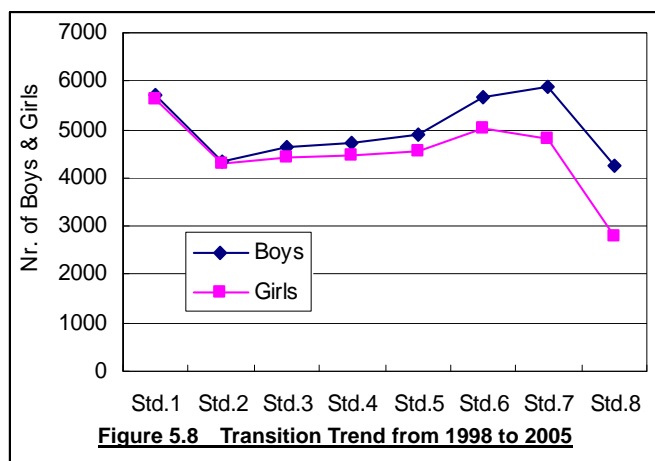


Figure 5.7 Annual Out-patient Morbidity 2000 - 2006

ARI, diarrhoea, skin diseases, etc. Malaria is endemic in the area and is the main cause of both morbidity and mortality in the District. Although malaria case started declining for recent years it had increased by almost 62% from 2001 to 2004. HIV/AIDS is also one of the major health problems in this district. It is estimated that about 22 percent of pregnant women are HIV positive as of 2006, and it causes a lot of infectious diseases.

5.9 Enrollments in primary school in 2004 are 44,852 and 49,454 for girls and boys respectively. Gross enrollment ratio for the year 2004 for boys is 154% and for girls it is 119 %. However, the high enrollment rates can be noticed only from class one to class three and as years go by, both boys and girls start dropping out of school. Data show that the 5,731 boys and 5,619 girls enrolled in school in class one in the year 1998, and eight years later in 2005, only 4,257 boys and 2,800 girls reached class eight. That is 26 % drop



**Figure 5.8 Transition Trend from 1998 to 2005**

out rate for boys and 50 % for girls. In addition, 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.

5.10 Secondary school enrollment has increased since the inception of the free primary education, from a total of 7,342 (3,136 girls and 4,206 boys) in 2002 to 10,373 students (4,004 girls and 6,371 boys) in 2005. This translates to 41% increase. The increase in enrollment can also be attributed to the bursary fund that has been set up for needy students. However, as class goes up many students start dropping out. High poverty level is blamed for the high school drop out rates. Data show 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. Another data indicate that in the period 2002-2005 form one and two had the highest enrollment rates while students start dropping out in form three leading to form four having the lowest enrollment rates.

5.11 There are three gazetted water supply schemes 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<sup>3</sup>. There are over 70 boreholes in the district to supply water for domestic use. From available records, around 40 boreholes are currently operational, implying that 30 boreholes are out of commission. For shallow wells (hand dug or machine drilled), over 300 wells have been developed by a number of agencies. The shallow wells are generally between 20m and 30m deep. In addition, there are around 50 springs. The accessibility to safe water in the district is now estimated at 36 %, which is slightly better than the national rural area coverage of 32%.

5.12 The district has a total road network of only 623.8 km, which can be classified as bitumen (58.1 km), gravel (178.7 km), and earth (387 km). 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 is tarmacked

5.13 but is in poor operating conditions. This is the main exit route for processed fish and commercial products. Kendu-Homa Bay-Mbita is a gravel road, which is also a major fish link and passenger hub. During the rainy season, these roads become impassable in parts. Most of these roads need upgrading to all weather roads.

**Table 5.1 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

5.14 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 by 7 irrigation schemes situated in Rangwe and Asego Divisions. The biggest scheme in the district is the Maugo irrigation scheme with an irrigable potential area of 280 ha. 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.

## 6. DEVELOPMENT CHALLENGES

6.1 In Nyando District, a two-day workshop at district level was held on 21-22 July 2005, and the situation of Nyando District was analyzed by division. Major issues and indicators identified by the participants, who are representatives of all the departments, divisions, NGOs and CBOs, are (1) food security, (2) environmental degradation, (3) prevalence of HIV/AIDS, (4) floods, (5) access to safe water, (6) rainfall pattern, (7) livestock productivity, (8) sanitation, (9) road network, (10) orphans & other vulnerable groups, (11) literacy level, and (12) human disease prevalence as shown in Table 6.1. Then all the five divisions in the district were scored in a scale of 1 to 5 according to the indicators (1 being the worst and 5 being the best). Miwani and then Lower Nyakach Division have more problems, but on the other hand Muhoroni Division has much less problems as one can see from the pattern.

6.2 In Homa Bay, the two-day workshop at district level was held on 28-29 July 2005. Major issues and indices identified by the participants are (1) Road network

**Table 6.1 Scoring of Nyando District by Division**

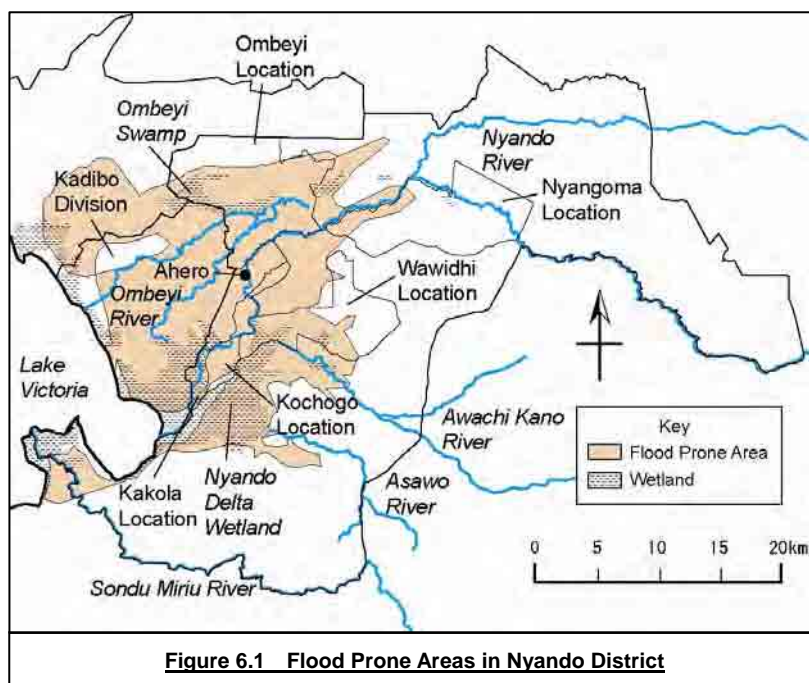
Areas	Nyando Division	Lower Nyakach Division	Miwani Division	Muhoroni Division	Upper Nyakach Division
(1) Food security	2	1	2	4	3
(2) Environmental degradation	3	1	3	3	3
(3) Prevalence of HIV/AIDS	3	1	1	3	2
(4) Floods	1	1	1	5	3
(5) Access to safe water	2	2	1	1	3
(6) Rainfall patterns	2	1	2	4	3
(7) Livestock productivity	3	2	3	4	3
(8) Sanitation	2	2	1	2	3
(9) Road network	3	2	1	3	2
(10) Orphans and other vulnerable	2	2	1	3	3
(11) Literacy level	3	3	2	3	4
(12) Human disease prevalence	3	3	1	3	3

**Table 6.2 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 trees 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

(8 votes), (2) HIV/AIDS and Orphans and Vulnerable Children (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 6.2. 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 from the pattern.

6.3 In Nyando District, the last 30 km with an estimated area of about 30 km<sup>2</sup> before Nyando River enters Lake Victoria is very flood prone area. In 2002 flood, it is reported 88 shallow wells were submerged and 1,915 homes were badly damaged. In the latest flood of 2004, a total of 4,000 ha farmlands were damaged, of which 2,300 ha were under cereals. Though the flood does not stay long, it causes damage to infrastructure, which requires re-investment in rehabilitation, disrupts peoples life, causes water-borne diseases, etc. Also during the



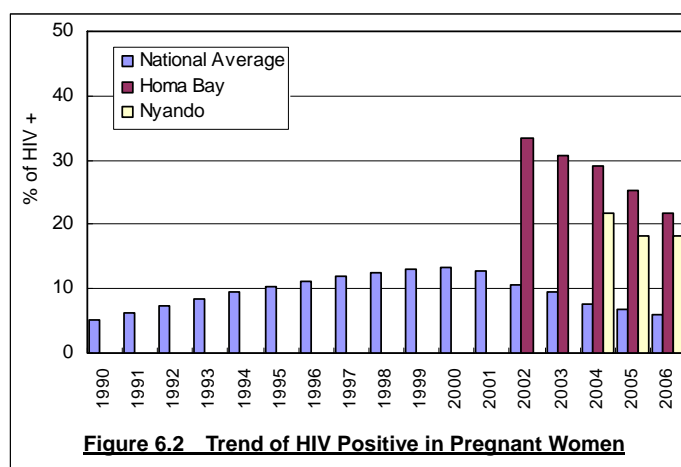
long rainy seasons, no agriculture activities can take place in the flood prone areas because most of the areas are almost always submerged. The areas can only be planted during the short rainy seasons. Thus, the flood has been an economic burden to the Nyando people.

6.4 Sugar industry has faced a multitude of constraints and problems, both at the farm and the factory levels. These various kinds of constraints and problems have interacted closely to make the sugar industry in Kenya inefficient and uncompetitive. Furthermore, in February 2008, liberalization of sugar trade among COMESA countries will be implemented. At the moment, Kenya government imposes 100% of import duty for sugar, with which the Kenyan sugar can compete to the imported ones. This means cheaper sugar produced outside the country could flow into Kenyan market after the liberalization in 2008, e.g. the market price of sugar in Sudan is considered at 1/2 to 1/3 of Kenya. The atmosphere for Kenyan sugar industry is getting severe upon the liberalization, but right now there are many farmers making livelihood on sugarcane in Nyando District and also Homa Bay District to a lesser extent. Strengthening of the sugar industry as well as diversification of the farmers' monoculture are urgently needed especially in Nyando District.

6.5 Animal draft has been very well incorporated in the rural agriculture of Nyanza Province. However, the animal available has been decreasing; 1) simply due to the population increase which in turn decreased the number available per farm family, and 2) frequent attack by tsetse flies especially in Homa Bay District. There is a national park down from the Ndhiwa and Kobama Divisions of Homa Bay. These two divisions in Homa Bay are mostly hit by tsetse flies, loosing many cattle during outbreaks. At a Homa Bay divisional analytical workshop held on 12 and 13 September 2004, the

participants addressed the issue giving rank 1 to Ndhiwa and 2 to Kobama. The rank was given in a range of 1 to 5 with 1 being the worst in terms of livestock situation. Reduced number of oxen affected by tsetse fly is a development constraint especially in Kobama and Ndhiwa Divisions of Homa Bay District located near the national park.

6.6 HIV prevalence in the Study districts is very high as compared to the national average, which is now 5.9 % in 2006. HIV positive of pregnant women in Nyando District ranges from 22 % to 17 % from the last quarter 2004 to the 4<sup>th</sup> quarter 2006. In Homa Bay District, the prevalence was 33 % in 2002, 31 % in 2003, and then dropped to 22% in 2006. Though the trend is already on a decline, HIV/AIDS affects economically active population, stagnating economic activities. HIV/AIDS also causes

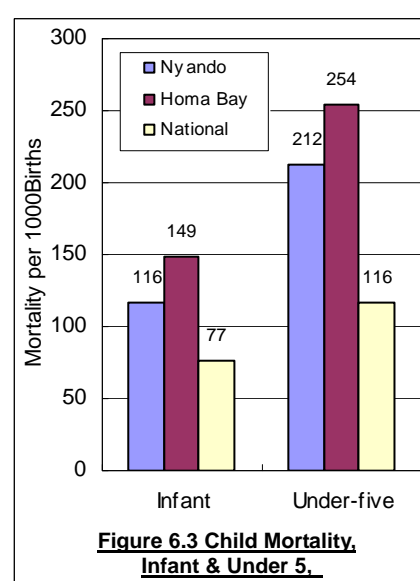


**Figure 6.2 Trend of HIV Positive in Pregnant Women**

opportunistic infections such as TB, pneumonia, URTIs and skin infections, which also create burden on the family as well as on the society by and large. Though there is already a sign of declining for the prevalence rate, the HIV/AIDS is a big challenge in dealing with development of the districts.

6.7 HIV/AIDS has left a lot of orphans. The Ministry of Education carried out a nation wide survey of how many orphans they have in their public schools in July 2005. In Nyando District, total orphans (who have no both parents) are now 12 % and partial ones who do not have one of the parents are 25 %, totaling to 37 %. In Homa Bay, total orphans are 10% and partial orphans are 20% totaling to 30%. Though community initiatives are coming up in many places to take care of the orphans, the issue easily goes beyond what the community members can manage due to the fact that the number of orphans is increasing. In this area, social safety net left out only to the community may not be enough to work out the issue but public assistance by the government and donors must come in. The assistance should be based on development concept but not just on relief concept, but based on development concept, as well. which is a big challenge to development in this area.

6.8 Infant and under-five mortality rates in the Districts are much higher than the national average. High mortality rate of children would not, however, be solely the cause of prevalent diseases. An issue could be the situation of how parents cope with the disease prone to the environment of the Districts. High mortality rate of children might be implicitly influencing the parents in having many children as a measure to it, if cold-heartedly said, though there could be more reasons to have many children. However, to have many children gives heavy burden to mothers in terms of health and time loss from economic activities. The more quantity the parents have (means they have many children), the less they can invest per child, and thus the poverty is inherited from the parents to the less invested children, making them very difficult from getting out of the trap of the poverty vicious circle. High mortality rate should be addressed in dealing with development.



**Figure 6.3 Child Mortality, Infant & Under 5.**

6.9 In nowadays, there are many donors/NGOs who adopt proposal method in implementing



community based projects. Disbursement is in most cases divided, and the latter comes upon the accounting for the earlier ones. Then, problems lie with the accounting of the first disbursement. The accounting problem may date back to the proposal preparation, because the fact is that many proposals are written by someone else who is not the member of the community. It cannot be criticized taking into account the context of the communities who have a difficulty to write up an attractive proposal. 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. 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. Mechanism should always refer to the context wherein the community members make everyday livelihood.

## **7. DEVELOPMENT OPPORTUNITIES**

7.1 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. The Government has discharged many staff especially field officers. However, there are still 48 and 33 agriculture staff for Nyando and Homa Bay Districts respectively at the divisional level including the front line extension workers. Dividing the division area by the respective staff number gives us the average coverage per extension staff, ranging from about 2,000 (say, 5 x 4 km) to 5,000 ha (say, 7 x 7 km). Given the area per staff, which is reachable by even by bicycle, the agriculture extension staff can be said, even after many have been retrenched, that they still have great development opportunity to reach out to the frontline. However, staff reallocation from divisional headquarters to location level may need to be considered.

7.2 In both Districts, there are many stories which in fact are just a tip of huge iceberg to know if one goes in a quest of human resources. Examples are among others; an association of PLWHAs helping not only each other but also doing awareness campaign to community members to help them from preventing the pandemic, an academy for orphans which was put up by a secondary teacher who himself was an orphan and assisted by his community for his university education, a bodaboda group which was started with two bicycles bought by the 16 members' contribution and now has the bicycle for every member, etc. Human capital is the only unlimited and undried resource, which cannot be deprived if committed. The presence of active CBOs and lead local persons is really a strength in pursuing development of the Districts.

7.3 The forest habitats in the Districts have been mostly replaced by savanna, farmland and pasture; the percentage of forest cover has been on serious decline. However, small-scale forestation by villagers is becoming common in the Districts, and some organizations and individuals have started 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 practicing it. The existence of the practice indicates that the people know about the importance of the forest and benefit from it. Therefore, people could accelerate tree planting activities if timely and properly assisted.

7.4 Kano Plain, a part of which falls in Nyando District, is a well known flood prone area. Most of the farmers whose land falls under the flood prone areas are now practicing rice cultivation during the short rainy season. Rice cultivation has already well taken root in these areas, for example even without established diversion weir many farmers especially along Awach Kano River are practicing irrigated rice cultivation by using simple diversion structures made out of locally available materials. The practices are a proof that the farmers have well adopted rice cultivation, which has already

become rice 'culture'. The rice culture is a development strength which has been adapted under inundation condition of the Kano Plain, and also a development opportunity which should be further exploited in terms of expansion and quality improvement.

7.5 As Kisumu, which is the third largest city, gets on development, consequently the surrounding areas including Nyando District will also benefit from the opportunity that will be created by Kisumu. At present, rice is marketed from Nyando to Kisumu City. Rice is milled within Ahero town and in NIB Ahero Pilot Scheme, and then most of the white rice is brought to Kisumu. Apart from rice, little commodities are at present traded to Kisumu. However, given the proximity, which is only 30 minutes driving between Kisumu and Ahero town, there exists the marketing opportunity for Nyando District. As Nyando increases agriculture and livestock production, which are now consumed within the District, they can trade to the third largest city of Kenya; Kisumu.

7.6 Nyanza area is blessed with distinct two rainy seasons; long and short rainy seasons. Though some of the areas cannot have enough rainfall during the short rainy season, for example the lower parts of Nyando District, Homa Bay District can be said to have relatively stable rainfall even during the short rainy season. Maize which is the staple food can be grown even during the short rainy season in Homa Bay District. The rainfall which can enable two cropping seasons is one of the development opportunities in Homa Bay District. The opportunity should be fully utilized to supplement food production to the one harvested from the long rainy season. Also there should be an opportunity to export surplus cereals to some food shortage neighbors, namely, Migori and Suba Districts. The former is a sugarcane production area and the latter is a fisher folk district.

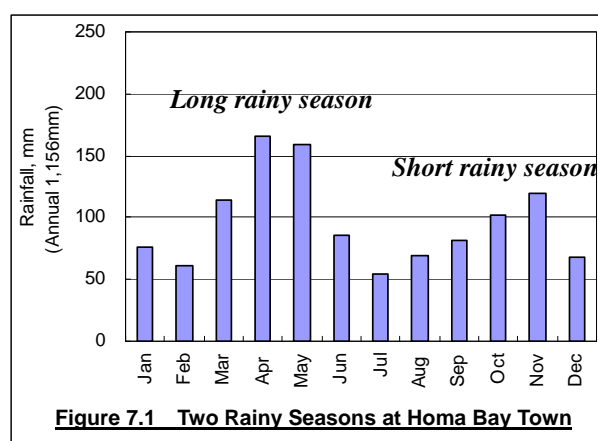


Figure 7.1 Two Rainy Seasons at Homa Bay Town

## 8. MDGs RELEVANT TO DEVELOPMENT PLANNING

8.1 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 (Achieve Universal Primary Education) and Goal 6 (Combat HIV/AIDS, Malaria and Other Diseases). However, for the rest of the goals, the report said that the GOK 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.

8.2 MDGs are composed of eight goals which are summarized in the following Table 8.1. The right side of the table also shows prospects to which extent both district can achieve. The prospect is estimated in a five scale ranging from very high to very low with fair being the center, on condition that the current situation continues up until 2015. In sum, specific efforts addressed below will be required to get the MDGs close to the achievement:

Goal 1 (poverty); Present dominant industry which is agriculture be strengthened and production be increased, and especially in Nyando District value addition also be undertaken. As well income generation be promoted.

- Goal 3 (gender); In Homa Bay District, 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 support be given to these girl pupils.
- Goal 4 (child mortality); Diseases affecting child mortality such as acute respiratory infections, diarrhoea, 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, boreholes and shallow wells be constructed in their vicinity, which will need financial assistance from the Government, donors, NGOs, etc.

**Table 8.1 Millennium Development Goals with Achievement Prospect in Nyando and Homa Bay Districts**

Goal	Target	Prospect	Prospect
		Nyando	Homa Bay
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	Very low
	Halve, between 1990 and 2015, the proportion of who suffer from extreme hunger.	Very high	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.	High	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.	High	Low
4. Reduce child mortality	Reduce by two-thirds between 1990 and 2015, the under five mortality rate.	Very low	Very low
5. Improve maternal health	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.	Low?	Low?
6. Combat HIV/AIDS and other diseases	Have halted by 2015, and begin to reverse the spread of HIV/AIDS.	Done	Done
	Have halted by 2015, and begin to reverse the incidence of malaria and other major diseases.	Very low	Very low
7. Ensure environmental sustainability	Integrate the principles of sustainable development into country policies and reverse the loss of environmental resources.	Fair	Fair
	Halve, by 2015, the proportion of people without sustainable access to safe drinking water.	Low	Low
	Have achieved, by 2020, significant improvement in the lives of at least 100 million slum dwellers.	Not Applicable	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	Fair
	In cooperation with the private sector, make available the benefits of the new technologies, especially information and communication.	Fair	Fair

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

## 9. DEVELOPMENT PLANNING FOR NYANDO DISTRICT

9.1 In Nyando District, we can see diversified economic activities depending on the location from lowland to highland. Some of the lowlands, for example Miwani, Nyando, and Lower Nyakach Divisions, are prone to flood but in turn the areas are given the opportunity of growing rice which is a

very good cash crop. In the northern parts of the District there is another cash crop which is sugarcane. In higher areas such as the north-eastern part of Muhoroni and Upper Nyakach Division, climate tends to be cool and more rainfall can be expected. Therefore these areas are enjoying fruit trees, horticultural crops, and grade cattle have been introduced and doing well. Given these diversified natural conditions and different economic activities already taking place, this Study recommends the development vision of Nyando District as **“A District Enjoying Diversified and Sustainable Socio-economic Development”**.

9.2 Time Framework should be defined, composing of short, medium and long terms. This Study proposes; Short-term from 2008 to 2010 (3 years), Mid-term from 2011 to 2015 (5 years) and Long-term from 2016 to 2020 (5 years), namely, totaling to 13 years. This Study presents the final development programme in the mid of year 2007. 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. During the short-term development, urgent and focal programmes/projects are implemented. This is followed by the mid-term timeframe covering the next 5 years, and corresponds to the target year of MDGs. Lastly, the long-term is set for the following 5 years to cover up to year 2020.

9.3 Socio-economic Framework is defined mainly in terms of population projection and economic growth projection. Based on the 1999 Census, 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 is estimated at 2.001 percent per year. With this population growth ratio, the population of Nyando District and its division is projected as shown in Table 9.1. The projected population is to increase to 482,498 in year 2020 which is the end year of the Programme. This means the population is to increase by 26 percent from the onset year of the Programme which is 2008. The population density, which is estimated at 325 persons per km<sup>2</sup> as at year 2008, is projected to increase to 413 persons per km<sup>2</sup> as at the end of year 2020.

**Table 9.1 Population Projection in Nyando District over the Plan Period**

Year		2004	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
District	Population	349,419	357,393	380,279	388,002	395,767	403,687	411,766	420,007	428,412	436,986	445,731	454,652	463,751	473,032	482,498
	Density	299	306	325	332	339	346	352	359	367	374	381	389	397	405	413
	Increment ag/2004	1.00	1.02	1.09	1.11	1.13	1.16	1.18	1.20	1.23	1.25	1.28	1.30	1.33	1.35	1.38
Division	Population	Nyando	75,155	76,871	81,793	83,454	85,124	86,828	88,566	90,338	92,146	93,990	95,871	97,790	99,747	101,743
		L/ Nyakach	57,373	58,682	62,440	63,708	64,983	66,283	67,610	68,963	70,343	71,751	73,187	74,652	76,146	77,669
		Miwani	67,604	69,147	73,575	75,069	76,571	78,103	79,667	81,261	82,887	84,546	86,238	87,964	89,724	91,520
		Muhoroni	73,919	75,606	80,448	82,082	83,724	85,400	87,109	88,852	90,630	92,444	94,294	96,181	98,106	100,070
		U/ Nyakach	75,367	77,087	82,024	83,690	85,364	87,073	88,815	90,593	92,406	94,255	96,141	98,066	100,028	102,030
	Density	Nyando	301	308	328	335	341	348	355	362	370	377	385	392	400	408
		L/ Nyakach	314	321	342	349	356	363	370	378	385	393	401	409	417	425
		Miwani	300	306	326	333	339	346	353	360	367	375	382	390	398	405
		Muhoroni	221	226	240	245	250	255	260	265	271	276	282	287	293	299
		U/ Nyakach	428	438	466	476	485	495	505	515	525	536	546	557	568	580

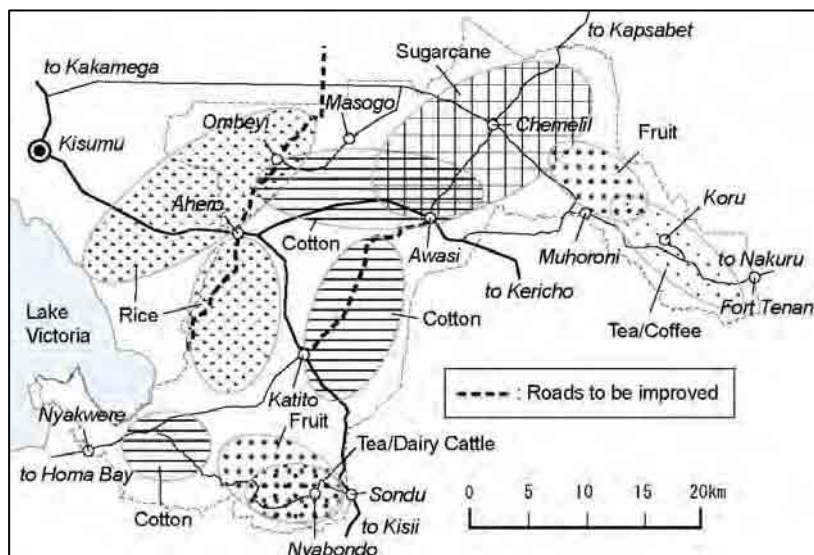
Source: JICA Study Team based on Analytical Report Volume VII of 1999 Census

9.4 Based on the projected population and available data, gross regional income per capita is projected from 2004 to the target year of 2020 (16 years). Estimation of the gross regional income per capita is based on the annual reports of the District Department of Agriculture, Livestock and Fisheries, and the fact sheet of Nyando District Development Plan (2002-2008). The monthly gross incomes per capita of district total, rural and urban populations in 2004 are estimated at Ksh 1,105, Ksh 913, and Ksh 1,680 respectively in Nyando District.

9.5 The target Case sets the growth per capita almost equal to the highest experiences of national level per capita growth ratio. The optimal annual growth of GDP per capita in Kenya for the last two and half decades is around 2 %. Therefore the Target Case sets the annual growth per capita at 2 percent. This translates into about 4 percent growth per annum of gross regional product. The target / projected incomes per capita in 2015 and 2020 are estimated at Ksh1,382 (Ksh1,142 for rural

and Ksh2,100 for urban) and Ksh1,526 (Ksh1,261 for rural and Ksh2,319 for urban) respectively. As the result of examination of several scenarios to achieve the target income, the Study draws a development scenario of “quality development (value adding activities) together with productivity increase of agriculture”. This scenario targets the yield increase of 1.3 to 1.5 times of the present and the annual growth rate of rural self-employment of 8.3%.

9.6 Land use and spatial framework for Nyando District should be examined following the socio-economic framework. As the economic framework is based on agriculture production as the major contributor to the economic growth, the land uses accommodating the strategic crops should therefore be planned in line with the natural environmental condition, present cropping patterns, etc. Another contributor to the economic growth is the increase of rural employment,



**Figure 9.1 Land Use and Spatial Framework for Nyando District**

which means value addition to the primary (agriculture) products. Therefore, this contributor is very closely associated with the strategic crops. Land use for the strategic crops in Nyando District should be; introduction of short maturity variety of sugarcane, increase of cotton fields from the present 324 to 1,620 ha (by 5 times) over the plan period, fruit expansion by 50% in higher lying areas, rice cultivation expansion by 20% in area and by 30% in yield, beef cattle promotion in Miwani, etc.

9.7 As for increase of rural employment being one of the contributors to economic growth, rural centers located in areas where strategic crops especially having potential of processing are to be promoted should be strengthened. Markets located in these centers should be improved, for example putting up of concrete floor, roofing, toilet facilities, information center, etc. For transportation in Nyando District, roads from Ahero Town to northern direction via Ombeyi and going to south should be gravel-paved. This contributes to transporting paddy with less loss.

9.8 In Nyando District, planning workshop at the divisional level was held on September 1 & 2, 2005, and the district level on September 12 & 13, 2005. Both workshops involved representatives from the community workshops carried out prior to the divisional planning workshop; two representatives comprising 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 in Table 9.2:

**Table 9.2 Participants to the Divisional and District Planning Workshops**

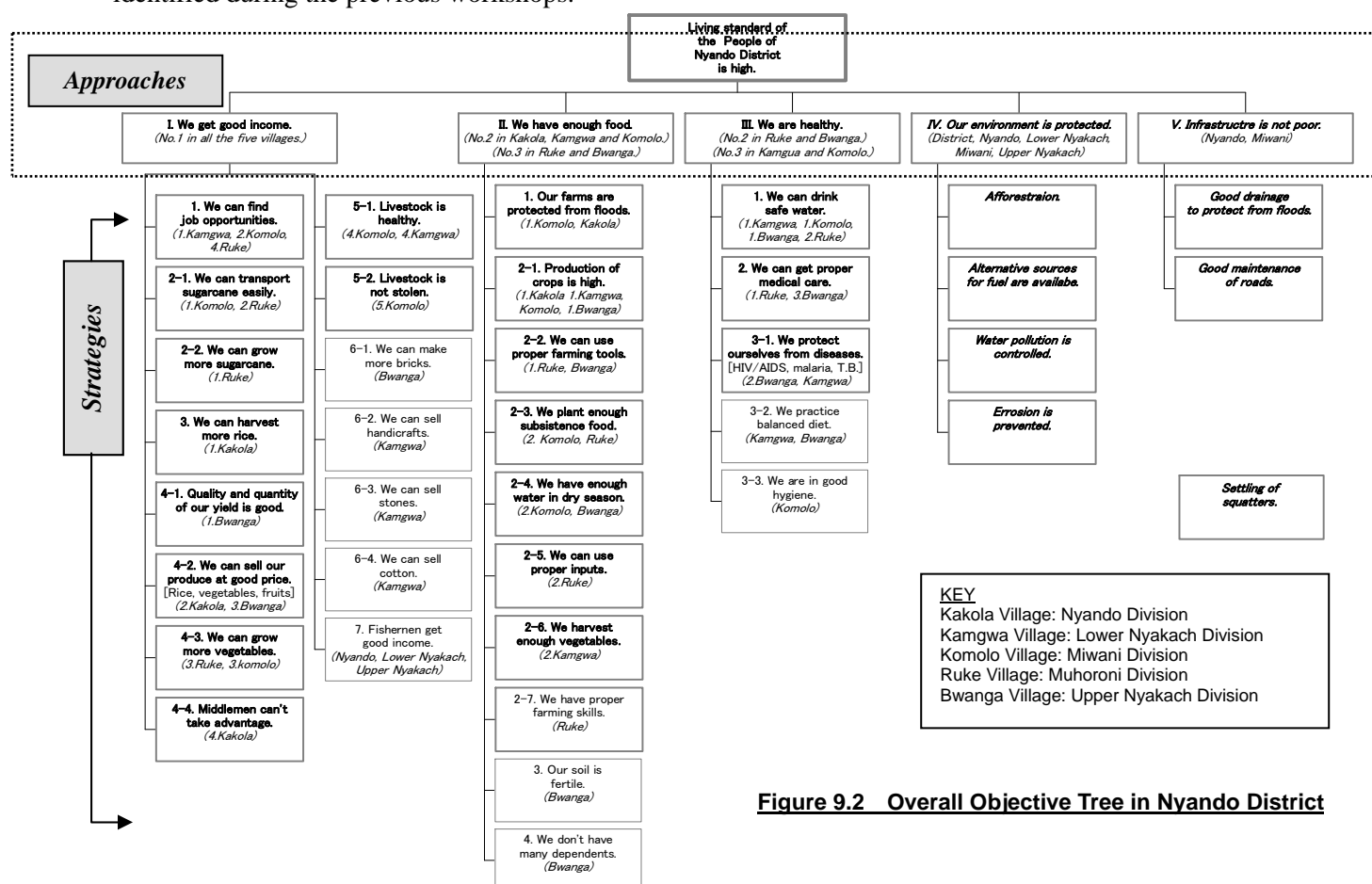
Category	Divisional Workshop	District Workshop	Remarks
District Officer	5	22	
Divisional Officer	25	16	
NGOs	4	6	
CBOs	4	5	
Community	10	6	
Total	48	55	

Source: Workshop supported by JICA Study Team



9.9 The plenary session of the divisional workshop started with presentation of the results of the community workshops: Kakola Village of Nyando Division, Kamgwa Village of Lower Nyakach Division, Komolo Village of Miwani Division, Ruke Village of Muhoroni Division, Bwanga Village of Upper Nyakach Division, which were selected as typical villages representing the divisions in terms of ecological and environmental conditions, economic activities, etc. This was followed by the presentation of an overall objective tree by the Study Team as shown in Figure 9.2.

9.10 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 comprehensive problem tree were converted into positive statements. From these statements, the approaches and strategies, which would contribute to realizing the simplified development objective of 'Living Standard of the People of Nyando District is High', are derived. Here 'Approach' is the statement placed right under the development objective, and 'Strategy' is the statement 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 9.2 Overall Objective Tree in Nyando District**

9.11 With reference to the overall objective tree, the participants reviewed and refined the development approaches, and prioritized them. The prioritized approaches at the divisional level are shown in Table 9.3 as compared to the priorities made at the community level. Some changes in terms of priority came at the divisional level since the participants at the divisional level looked at issues with a broader perspective than the communities.

9.12 Although all the five communities ranked 'income' as the top priority (No.1), the Miwani Division, taking into account the high prevalence of malaria caused by lots of wetlands in the division,

ranked ‘health’ as the top priority despite it was ranked No.3 by the community. As for priorities No.2 and No.3, some changes also took place; for example, Lower Nyakach Division put ‘health’ as the second priority though it had been placed at priority No.3 at the community level. For Muhoroni and Upper Nyakach Divisions, they raised ‘food’ to the second priority level from the third priority set during the community level workshops.

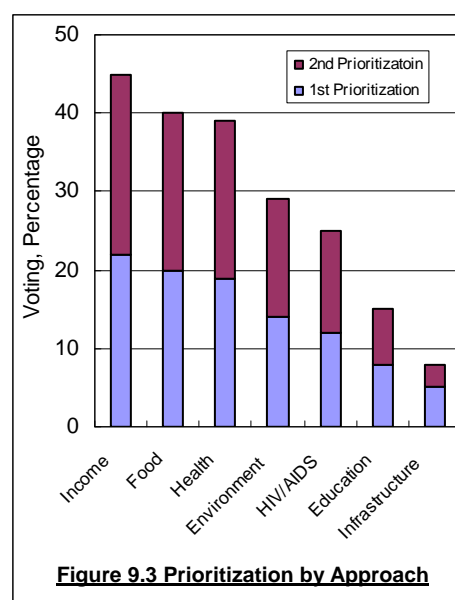
9.13 The priorities ranked at the divisional level were forwarded to the district planning workshop, where all the approaches and strategies under the simplified development objective ‘Living Standard of the People of Nyando District is High’ were once again reviewed and prioritized by approach and strategy, and by division. During the review process, the following modifications were made to the approach level; 1) ‘We control and manage cases of HIV/AIDS’ was carved out from the original ‘We are health’, and 2) ‘We get quality education’ and ‘Good governance’ were added. Since HIV/AIDS was regarded as very critical issue in the district, it was separately set at the approach level. ‘Health’ on the other hand includes water and sanitation in addition to general disease issues.

9.14 The prioritization by approach at the district level was made using 10-seed method by all the participants two times. Figure 9.3 is the excerpt of the approaches arranged in the priority order. It indicates very similar prioritization results between the two 10-seed practices. Approach which came first is related to ‘Income Generation’, followed by ‘Food, or in broader term Agriculture & Livestock’, and then by ‘Health’. These are the top three priorities in terms of development approaches, and in fact the prioritization results in percentage are very similar amongst the top three. ‘Environment’ is ranked fourth, followed by ‘HIV/AIDS’, ‘Education’ and finally by ‘Infrastructure’. It should be noted that since ‘Good Governance’ is a cross cutting issue like gender, it was excluded from the prioritization.

9.15 For the prioritization by strategy at the district level, the participants were divided into groups, each of which was assigned the prioritization of the strategies under a specific approach. The group had each expertise relating to the approach level, say, agriculture officer was included in the group of prioritizing the approach ‘We have enough and nutritious food’. Lastly, prioritization by division was done mainly by divisional officers and organizations of CBOs and NGOs operating in the respective division. The summary of the prioritization by approach, strategy and by division in Nyando District is shown in Figure 9.4.

**Table 9.3 Priorities at Community and Divisional Levels**

Community level WS	Nyando District				
	CC1 & Giko Schemes	Kamgwa Village	Komolo Village	Ruke Village	Bwange Village
Priority No.1	Income	Income	Income	Income	Income
	1.Rice harvest, 2.Market, 3.Middleman	1.Job oppot., 2.Stone/ cotton/ livestock/ sisal	1.Sugarcane, 2.Job, 3.No vegetables	1.Sugarcane, 2.SC transport, 3.No vegetables	1.Yield, 2.Job, 3.Price of products
Priority No.2	Food	Food	Food	Health	Health
	1.Plant subsistence food, 2.Land (floods)	1.Yield, 2.Vegetables	1.Floods, 2.Drought, 3.Weeds	1.Health facility, 2.Clean water	1.Clean water, 2.Prevention, 3.Medical care
Priority No.3	N/A	Health	Health	Food	Food
	N/A	1.Cean water	1.Clean water, 2.Living environment	1.Tools, 2.Inputs	1.Production (tools, land, drought, fertility), 2.Dependants
Divisional level WS	Nyando Division	Lower Nyakach Division	Miwani Division	Muhoroni Division	Upper Nyakach Division
	Income	Income	Health	Income	Income
Priority No.1	1.Rice irrigation, 2.Marketing, 3.Horticulture	1.Rice farming, 2.Horticulture, 3.Agro forestry	1.Malaria, 2.HIV/AIDS, 3.T.B.	1.Sugarcane, 2.Diversification, 3.Job creation	1.Brick industry, 2.Horticulture, 3.Livestock
	Food	Health	Income	Food	Food
Priority No.2	1.Production, 2.Flood protection	1.Clean water, 2.Sanitation, 3.HIV/AIDS mitigation	1.Micro finance, 2.IGA, 3.Sugarcane	1.Storage, 2.Production, 3.Inputs	1.Food crop extension, 2.Upgrading livestock, 3.Disease and pest control
	Infrastructure	Food	Food	Health	Health
Priority No.3	1.Rural access roads	1.Crop diversification	1.Food crop extension, 2.Skill training, 3.Soil and water conservation	1.Clean water, 2.Medical care, 3.Balanced diet	1.Health education, 2.Clean water, 3.HIV/AIDS mitigation



**Figure 9.3 Prioritization by Approach**

9.16 Strategies are, as shown in Figure 9.4, arranged in the priority order under each approach. At every right side of the strategies is the priority marked by symbols ‘● ◎ ○’ across division. Symbol ‘●’ shows the top priority, ‘◎’ shows high priority, and ‘○’ means priority. These symbols indicate 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:

- Divisions except for Muhoroni and Miwani did not give any priority to the strategy of sugarcane under the approach of ‘good income’, while the sugarcane as the strategy was given top priority. The district still thinks sugarcane performs very well as a means of getting good income, which is in fact true at the moment.
- Strategies of ‘rice’, ‘horticulture’, ‘healthy and productive livestock’, and ‘IGAs’ which are all under the approach of ‘good income’ look well correlated with the priority given in the divisions.
- Muhoroni Division gave one of the top priorities, ●, to the strategy of ‘job opportunities’ under the approach of ‘good income’. This is because of squatters residing in the division. Since the problem is limited to the division only, the district gave a low priority.
- Under the approach of ‘enough and nutritious food’, the district gave the top priority to ‘enough and diversified subsistence crops’, and the 2<sup>nd</sup> priority to ‘protected from floods’, while at the divisional level the strategy of ‘production of crops is high’, which is placed as 3<sup>rd</sup> by the district, got 3 top priorities by Lower Nyakach, Miwani, and Upper Nyakach.
- Under the approach of ‘health’, the priorities by strategy and by division are well correlated (sanitation was included in the safe water in the prioritization of the strategy).
- For the approach of ‘HIV/AIDS’, not much correlation is found. However, it may be said that the district puts more emphasis on awareness than facilities as indicated ‘aware of and protect ourselves from HIV/AIDS’ being the 1<sup>st</sup> priority.
- In the approach of ‘environment’, good correlation is found except for erosion. Two divisions, Muhoroni and Lower Nyakach, gave priority to soil erosion while the district placed the issue at priority No.5. Since soil erosion is a local issue as in Lower Nyakach area only, the district may have not given higher priority.
- For the approach of ‘infrastructure’, the district gave the priority No.1 to ‘drainage to protect from floods’, while no priority was given to the drainage by the divisions. Three divisions gave priority to the strategy of ‘access roads and foot bridges’, which is ranked at No.2 by the district. For the divisional people, issues related to ordinary life, for example access road improvement may have higher priority. It should be noted that although Nyando Division did not give any priority to the ‘good drainage’, the division considered the issue in the strategy of ‘our farms are protected from floods’ which was ranked as No.2 priority under the approach of ‘enough and nutritious food’.

9.17 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.

9.18 Figure 9.5 shows the comprehensive development framework of Nyando District. This was finally drafted during the final evaluation/review workshop held on February 13 & 14, 2007. The participants were more or less same as the ones who attended the district planning workshop held on September 12 & 13, 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 as mentioned above. 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 ●, ◎, ○ 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.

9.19 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 VII PROGRAMME/ PROJECT DESCRIPTIONS.

**Figure 9.4 Prioritization of Approaches, Strategies and Divisions of Nyando District**

Living standard of the people of Nyando District is high.

Approaches I-IV		I. We get good income.				II. We have enough and nutritious food.				III. We are healthy.				IV. We control and manage cases of HIV/AIDS.			
		NY	LN	Mt	UN	NY	LN	Mt	UN	NY	LN	Mt	UN	NY	LN	Mt	UN
Strategies	1	I-1. We can grow more sugarcane.			⊗	I-1. We plant enough and diversified subsistence crops.	○	○	⊗	III-1. We can drink safe water.	⊗	○	○	1	IV-1. We are aware of and protect ourselves from HIV and AIDS.		●
		I-1.1. We can transport sugarcane easily.		●		I-2. Our farms are protected from floods.	⊗	○		III-2. We have good sanitation system.		⊗		2	IV-2. We can easily access VCT centers.	○	○
	2	I-2. We can harvest more rice.	●	○	⊗	II-3. Our production of crops is high.		●	●	III-3. We protect ourselves from diseases.		●	○	3	IV-3. We have enough equipped patient support centers.	●	⊗
	3	I-3. We can grow more horticulture.	●	○	⊗	II-3.1. We have enough water in dry season.	⊗	○		III-4. We can get proper medical care.	⊗	○	○	4	IV-4. We have quality home based care facilities.	⊗	○
	4	I-4. We keep healthy and productive livestock.	⊗	⊗	⊗	II-3.2. We can use proper farming tools.				III-5. We practice balanced diet.							
Strategies	5	I-5. We can do I.G.A.s.	○	●	⊗	II-3.3. We can use proper inputs.		○	○	III-5. We have good recreational facilities.							
		I-5.1. We can make and sell more bricks.			⊗	II-3.4. We can use proper farming skills.			○								
		I-5.2. We can grow and sell more cotton.	⊗			* We keep healthy and productive livestock. (See I-4)											
		I-5.3. We practice commercial fish farming.			⊗	II-4. Post harvest management is good.			○								
		I-6. We can find job opportunities.		●		* We can grow more horticulture. (See I-3)											
Approaches V-VIII		I-7. Quality and quantity of our yield is good.		○	○	II-5. We don't have many dependants.											
		I-7.1. We can sell our produce at good price.				II-6. Our soil is fertile.											
		I-8. Livestock is not stolen.															
		I-9. We get more income from fish.															
Approaches V-VIII		V. Our environment is protected.				VI. Infrastructure is improved.				VII. We get quality education.				VIII. Good governance.			
		NY	LN	Mt	UN	NY	LN	Mt	UN	NY	LN	Mt	UN	NY	LN	Mt	UN
Strategies	1	V-1. We do afforestation and reforestation.	⊗	○	●	VI-1. Good drainage to protect from floods.				1	VII-1. We can get good formal education.	⊗	○	1	VIII-1. Good security.		
	2	V-2. We control floods.	○	⊗		VI-2. We have more access roads and foot bridges.	○	⊗		2	VII-2. We can get good informal education.	⊗	○	2	VIII-2. Good project management.		
	3	V-3. We can manage solid and liquid waste.				VI-3. We have good housing.				3	VII-2.1. We are trained on appropriate skills.			3	VIII-3. We form our own community based development groups.	○	
		V-3.1. Water pollution is controlled.				VI-4. Squatters are settled.				4	VII-2.2. We have adult education sessions.			4	VIII-4. We have political will.		
	4	V-4. Alternative sources for fuel are available.				VI-5. Electricity network is good.											
Strategies	5	V-5. Erosion is prevented.	⊗	○		VI-6. Telephone network is good.											
		V-6. We manage air pollution.				VI-7. IT infrastructure is good.											
		V-7. Environmental policies are enforced.															
		V-8. We are aware of environmental protection.															

KEY

- Top priority strategies: ●
- High priority strategies: ⊗
- Priority strategies: ○

NY: Nyando Division, LN: Lower Nyakach Division, Mt: Mtwara Division, UN: Upper Nyakach Division



Priority	Vision	Approaches (Priority)	Priority	Strategies	No.	Programmes/ Projects	Priority Division					Implementing Agency	Collaborators	Implementation Schedule							Project Cost Ksh	Sources							
							NY	LN	MI	MH	UN			2008	2009	2010	2011	2012	2013	2014	2015								
High	A District Enjoying Diversified and Sustainable Socio-economic Development	1. We are food secure and nutritious (1st Priority)	1.1	We can grow more sugarcane.	1	Sugar Industry Strengthening Programme			●	⊗			Ministry of Agriculture	KSR, KSR, KFC										7,000,000	GOK, Donors				
			1.2	We can harvest more rice.	2	Small Holder Rice Irrigation Improvement Programme	●	○	⊗				Ministry of Agriculture	Ministry of Water & Irrigation, NIB, CDF, LBDA											7,000,000	GOK, CDF, NGOs			
			1.3	We can grow more horticulture.	3	Horticultural Crop Improvement Programme	●		○	⊗			Ministry of Agriculture	NGO, Ministry of Water & Irrigation												6,500,000	GOK, CBOs, NGOs, CDF		
			1.4	We keep healthy and productive livestock.	4	Livestock Improvement Programme	⊗	⊗	○	⊗	●		Ministry of Livestock & Fisheries	MoA, CBOs, NGOs												5,890,000	NGOs, CDF, GOK		
			1.5	We can do IGAs.	5	Cottage Industry Development Programme	⊗						Ministry of Agriculture	Min. of Labour-Enterprise Dev., NGOs													500,000	GOK, NGOs	
			1.6	We can grow more cotton (added at the final WS)	7	Cotton Revitalization Programme	⊗						Ministry of Agriculture	CREAM, KARI, Ginneries													3,260,000	GOK/Donors, Self & FCS	
			1.7	We can find job opportunities.	8	Small Scale Entrepreneur Promotion Programme					●		Ministry of Co-operatives	Min. of Labour-Enterprise Dev., NGOs													2,000,000	GOK, NGOs, Donors	
			1.8	Quality and quantity of our yield is good.	9	Appropriate Agro-Technology Programme					○	○	Ministry of Agriculture	CARE-K, PLAN-K, ADP													800,000	GOK, NGOs	
			1.9	Livestock is not stolen.	10	Community Policing Programme							Office of the President	Ministry of Internal Affairs													500,000	GOK	
					11	Livestock Branding & Movement Control Programme							Ministry of Livestock & Fisheries	Provincial Administration													800,000	GOK	
					1.10	We get more income from fish.	12	Sustainable Fishery Management Programme						Ministry of Livestock & Fisheries	MoA, Ministry of Water, NGOs, CBOs												14,587,000	GOK, Community, CDF, NGOs	
			2. We have enough and nutritious food. (2nd Priority)	2.1	We plant enough and diversified subsistence crops.	13	Food Security Enhancement Programme	○		○	⊗			Ministry of Agriculture & Ministry of Livestock	NGOs, CREP, CARE (K)												2,150,000	NGOs & GOK	
		2.2		Our farms are protected from floods.	14	Flood Prevention and Control Programme	⊗	○					Min. of Agriculture & Min. of Water & Irrigation	Min of Special Programmes, NIB, NGOs, RED Cross, VRED												312,623,600	Donors, CDF, GOK		
		2.3		Our production of crops is high.	15	Land Reclamation Programme			●	●		●	Ministry of Water and Irrigation	Ministry of Agriculture													200,000,000	Donors, GOK	
					16	Water Harvesting Programme			●	●		●	Ministry of Agriculture	Ministry of Agriculture													3,400,000	NGOs, GOK	
		2.4		We keep healthy and productive livestock.		included in Strategy No.1.4																							
		2.5		Post harvest management is good.		included in Strategy No.2.1																							
		2.6		We don't have many dependants.	17	Orphanage Support Programme							Ministry of Home Affairs, Children Department	Min. of G.S.C, Min of Education, PA, NGOs													41,800,000	UNICEF, GOK, Donors	
					18	On-farm Soil and Water Conservation Programme							Ministry of Agriculture	SCC-VI-AGRO, WKEIMP & World Neighbour													436,000	GOK & NGOs, Donors	
					19	Soil Fertility Improvement Programme							Ministry of Agriculture	SCC-VI-AGRO, WKEIMP														209,000	MOA & NGOs
		3. We are healthy. (3rd Priority)	3.1	We can drink safe water.	20	Water and Sanitation Programme	⊗	○	●	○	⊗		Ministry of Health	LVS/WSB, CARE K, SANA, World Vision, ICDC													12,167,000	GOK & Donors	
				We have good sanitation system.		included in Strategy No.3.1			⊗																				
			3.3	Promotion of Disease Prevention	21	Primary Health Care Promotion Programme			●	⊗		○	Ministry of Health	NGOs, CBOs & Department of Social Services													2,528,500	GOK & NGOs	
			3.4	We protect ourselves from diseases.	22	Health Services Strengthening Programme	⊗			○	○		Ministry of Health</																

## 10. DEVELOPMENT PLANNING FOR HOMA BAY DISTRICT

10.1 In Homa Bay District, major challenges may be said to originate in high rate of HIV prevalence, still over 20% in economically active generation. 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, this Study recommends the development vision of Homa Bay District as **"A Highly Productive, Healthy and Secure District"**.

10.2 On the basis of 1999 Census, the population projection up to year 2010 has been made (Analytical Report Volume VII). The population growth ratio by year 2010 is estimated at 1.46 percent per year. With this population growth ratio, the population projections for Homa Bay District and by division are as shown in Table 10.1. The projected population is to increase to 413,626 in year 2020 which is the last 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 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). The population density is estimated at 299 persons per km<sup>2</sup> by year 2008, and projected to increase to 356 persons per km<sup>2</sup> by end of year 2020.

**Table 10.1 Population Projection in Homa Bay District over the Plan Period**

		Table 10.1: Population Projection in Hema Bay District over the Plan Period															
District	Year	2004	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
	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

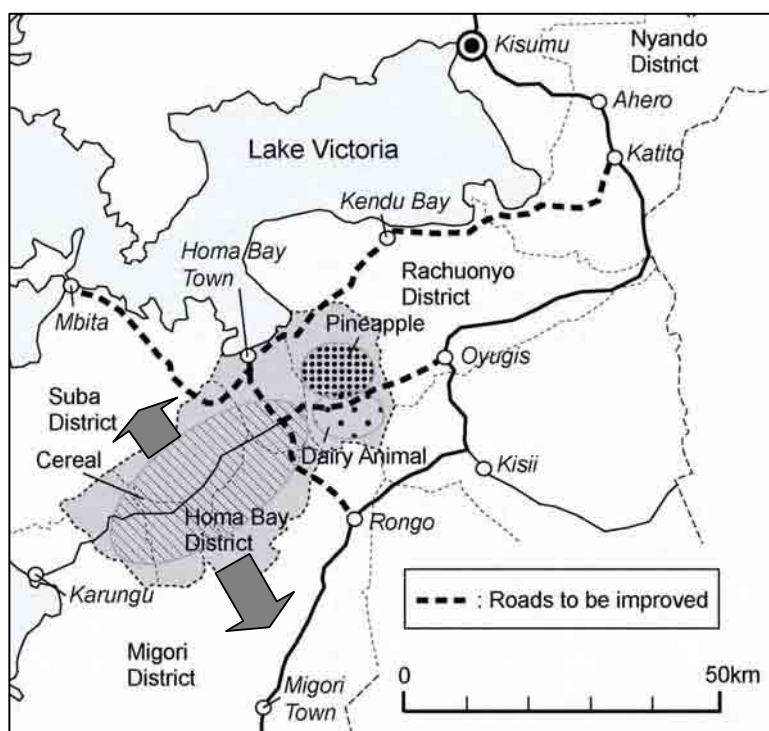
Source: JICA Study Team based on Analytical Report Volume VII of Census 1999

10.3 Based on the projected population and available data, gross regional income per capita is projected from 2004 to the target year of 2020 (16 years). The monthly gross incomes per capita of district total, rural and urban populations in 2004 are estimated at Ksh1,083, Ksh907, and Ksh1,787 respectively in Homa Bay District. The Target Case sets the annual growth per capita at two percent, which is almost equal to the highest experiences of national level per capita growth ratio. This translates into about four percent growth per annum of gross regional product.

10.4 The target/projected incomes per capita in 2015 and 2020 are estimated at Ksh1,345 (Ksh1,126 for rural and Ksh2,219 for urban) and Ksh1,485 (Ksh1,244 for rural and Ksh2,450 for urban) respectively. On examination of several scenarios that would lead to achieving the target income, the Study arrives at a development scenario of "quality development (value adding activities) together with productivity increase of agriculture". This scenario targets the yield increase of 1.0 to 1.3 times and the annual growth rate of rural self-employment of 5.2%.

10.5 With regard to land use in Homa Bay District, it is advocated to increase the area under most crops in keeping with the population growth which is equivalent to an increase of 21 % over the plan period. Fruit trees and pineapples should be increased by 50%. Pineapples found in Rangwe

Division are good cash crop, which should be promoted further. Yield of maize is targeted to increase by 50% over the plan period, so that the district is expected to export maize to the neighboring districts. Paddy is planned to increase by 7 times in terms of area, which is realized upon the completion of Oluch River Irrigation System to be funded by ADB. 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.



**Figure 10.1 Land Use and Spatial Framework for Homa Bay**

10.6 In Homa Bay District, the road network in the north-eastern part of Rangwe Division should be improved to facilitate transportation to Oyugis Town. The existing road to Rongo Town from Homa Bay Municipality as well as the road to Mbita should also be improved. To increase rural employment as one of the contributors to economic growth, rural centers located in areas where strategic crops, especially those with potential from processing, are grown should be strengthened. Markets located in these centers should be improved, for example by putting up concrete floor, roofing, toilet facilities, information center, etc.

10.7 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. Participants to these planning workshops are summarized in Table 10.2 below:

**Table 10.2 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

10.8 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 ecological and environmental conditions, economic activities, etc. This was followed by the presentation of an overall objective tree by the Study Team as shown in Figure 10.2. 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.

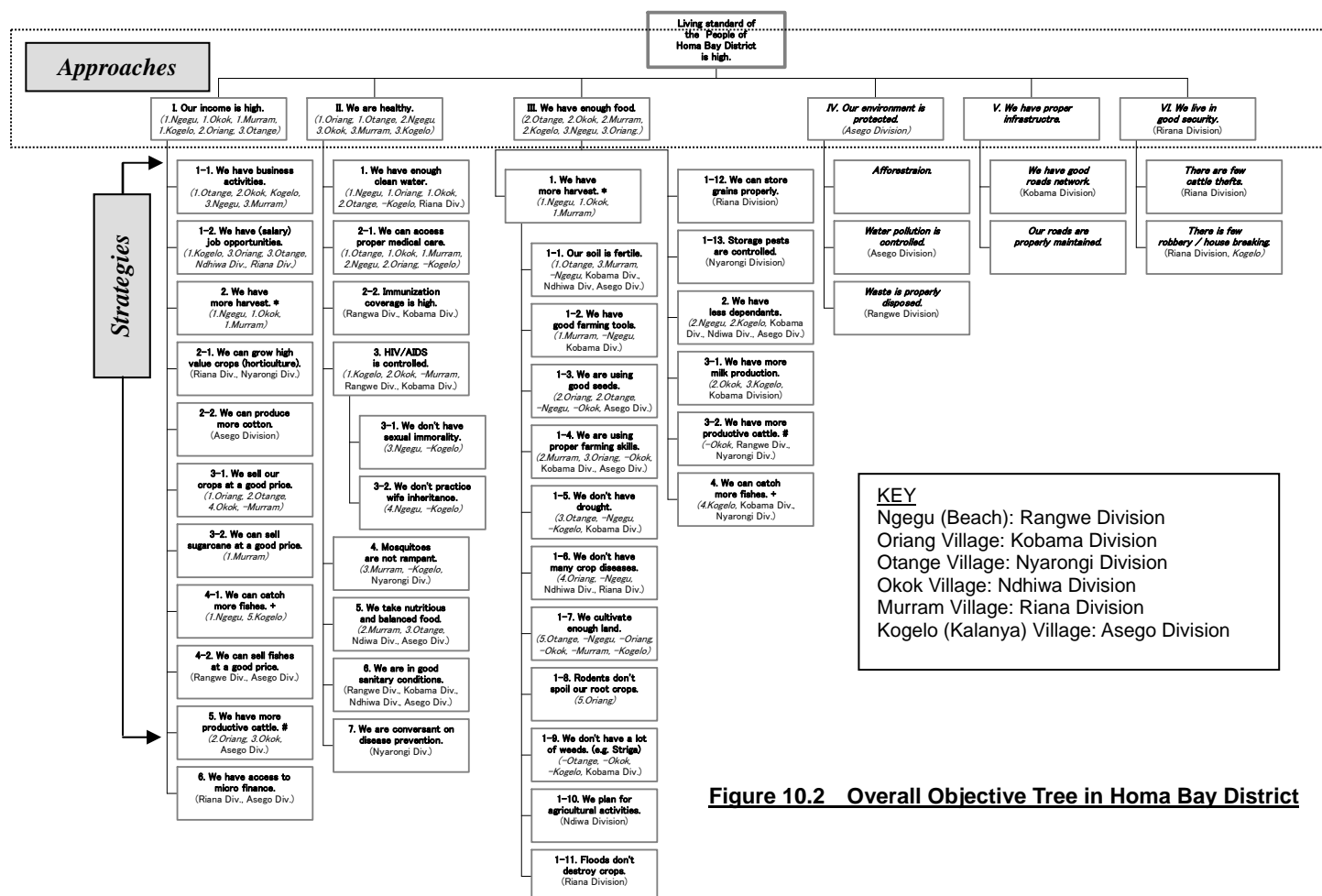


Figure 10.2 Overall Objective Tree in Homa Bay District

10.9 With reference to the overall objective tree, the participants reviewed and refined the development approaches in the objective tree, and prioritized them. The prioritized approaches at the divisional level are shown in Table 10.3 as compared to the priorities made at the community level. Some changes in terms of priority came at the divisional level since the participants at the divisional level looked at issues with a broader perspective than the communities. Although Ngegu Beach put 'income' as their top priority, Rangwe Division taking into account food deficit in the area chose 'food' as the top priority, which was ranked at No.2 priority at the community level. Apart from Rangwe Division, no change for the top priority was made. As for priorities

Table 10.3 Priorities at Community and Divisional Levels

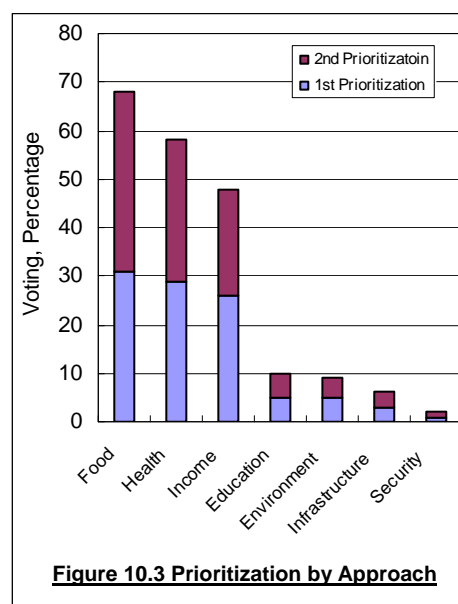
Community level WS	Homa Bay District					
	Ngegu Beach	Kogelo Kalanya Village	Murram Village	Okok Village	Oriang Village	Otange Village
Priority No.1	Income	Income	Income	Income	Health	Health
	1.Fish catch, 2.Harvest, 3.IGA	1.Job, 2.IGA, 3.Harvest	1.Harvest, 2.Sugarcane price, 3.IGA	1.Harvest, 2.IGA,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



No.2 and No.3, some changes also took place; for example, Asego Division put ‘health’ as the second priority although 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.

10.10 The priorities ranked at the divisional level were 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 approach and strategy, and by division. During the review process, a modification was made to the approach level, with an addition of ‘We get good education’.

9.20 Figure 10.3 is the excerpt of the approaches arranged in the priority order. The figure 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. ‘Education’ is ranked as the fourth priority, followed by ‘Environment’, ‘Infrastructure’ and finally by ‘Security’.



**Figure 10.3 Prioritization by Approach**

10.11 Strategies are, as shown in Figure 10.4, arranged in the priority order under each approach. At every right side of the strategies is the priority marked by symbols ‘●’ ‘◎’ ‘○’ across 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. 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 first strategy of ‘proper crop and animal husbandry’ is given two top priorities by Riana and Ndhiwa Divisions, and second 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 animal keeping’ ranked at 9<sup>th</sup> 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 as 8<sup>th</sup>, 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 first priority to it. This is because divisions gave more priority to facilities while district thought awareness is more important than facilities. Strategy given second priority by district was ‘have enough clean water’, which was also given four 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', first strategy is 'have access to micro finance' and second is 'have business activities', which were also given top and high priorities by divisions. Therefore it can be said that priority areas between divisional level and district level are more or less correlated. Strategies ranked at fourth to sixth 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 fourth to sixth 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. The most important issue is afforestation.
- For the approach of 'have proper infrastructure', district ranked 'rural electrification' as the first position while only Asego division gave priority to that issue. Four divisions gave priority with Kobama giving high priority to 'good road network' which was ranked as second by district. From the viewpoint of people who are in rural areas, road network is more important to their life while for the district officers electrification sounds more important.

10.12 Figure 10.5 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 the same as the ones who attended the district planning workshop held on October 17 & 18, 2005. The framework flows from left to right, and the structure is the same as the one of Nyando District. Project descriptions, simplified project design matrix, are attached in the Appendix VII PROGRAMME/ PROJECT DESCRIPTIONS.

Figure 10.4 Prioritization of Approaches, Strategies and Divisions of Homa Bay District

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

Approaches I-III	III. We have enough food.		● 38/439 (8.4%) ● 69/469 (14.8%)					II. We are healthy.					● 25/439 (5.8%) ● 131/469 (28.2%)					I. We get good income.					● 112/439 (25.5%) ● 99/459 (21.6%)					
			RA	AS	RI	ND	KO	NY			RA	AS	RI	ND	KO	NY			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 storage.																										
	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 )																											
15	Refer I-9																											
16	III-15. We have less dependants.																							●				
Approaches IV-VII	VI. We get good education.		● 23/439 (5.2%) ● 24/469 (5.2%)					V. Our environment is protected.					● 21/439 (4.8%) ● 19/469 (4.1%)					IV. We have proper infrastructure.					● 15/439 (3.4%) ● 14/469 (3.1%)					
			RA	AS	RI	ND	KO	NY			RA	AS	RI	ND	KO	NY			RA	AS	RI	ND	KO	NY				
	1	VI-2. We can acquire appropriate skills.																										
	2	VI-1. We can get good formal education.																										
	3	VI-3. All the adults can read and write.																										
			(New for district-level workshop)																									
	1	IV-3. Rural electrification. (Diversification)																										
	2	IV-1. We have good road network.																										
	3	IV-2. Our roads are properly maintained.																							⊙			

RA: Rangwe Division, AS: Asego Division, RI: Riama Division, ND: Nethwa Division, KO: Kobama Division, NY: Nyarongi Division

Figure 10.5 Comprehensive Development Framework, Homa Bay District

Priority	Vision	Approaches (Priority)	Priority	Strategies	No.	Programmes/ Projects	Priority Division						Implementing Agency	Collaborators	Implementation Schedule								Project Cost Ksh	Sources				
							RA	AS	RI	ND	KO	NY			2008	2009	2010	2011	2012	2013	2014	2015						
High	A Highly Productive, Healthy and Secure District	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	60K , Donors		
			1.2	Our soil is fertile.	2	Land Management Programme							Ministry of Agriculture	MLFD, MWI, MSS, CMAD, AEP, KARI, ICIPE												4,575,000	60K, Donors	
			1.3	We plan for agricultural activities.		included in Strategy No.1.1																						
			1.4	We have proper and adequate faming implements.	3	Appropriate Agro-technology Programme							Ministry of Agriculture	CARE-K, AEP, CMAD, PLAN-K, ADP, MLED													2,661,600	60K, KARI, ICIPE, AEP
			1.5	We have enough water for faming.	4	Small Scale Irrigation and Drainage Programme							Ministry of Water and Irigation	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													3,466,000	60K, 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	60K, 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	60K, CDF, NGOs
Medium	A Highly Productive, Healthy and Secure District	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	NERESA, AMREF, PLAN-KACOM-K, KEMRI, CDC												48,000,000	60K, FBOs, NGOs	
			2.2	We have enough clean water.	9	Water Supply and Sanitation Programme							Ministry of Water and Irrigation	MOH, NGOs, CBOs, CDF												194,700,000	60K, 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, MILDWAY, CRS, CACC, CARE												16,000,000	CBOs, FBOs, 60K, NGOs	
			2.6	Endemic diseases are controlled.	11	Endemic Diseases Control Programme							Ministry of Health	PLAN-K, APHIA-NYANZA, CARE, PSI												233,625,000	60K, NGOs, FBO	
			2.7	HIV/AIDS is controlled.	12	HIWAIDS Control Programme							Ministry of Health	NACC, NASCOP												231,600,000	60K, CDF, FBO, NGOs	
			2.8	We can access proper medical care.	13	Medical Care Strengthening Programme							Ministry of Health	POPWF, FCI, APHIA-NYZ, Essential Health											120,000,000	60K, CDF, FBO, NGOs		
Medium	A Highly Productive, Healthy and Secure District	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	60K	
			3.2	We have business activities.	15	Local Entrepreneurs Development Programme							Ministry of Trade and Industry	Min. of Labour-Enterprise Dev., KIWFT, AEP												1,200,000	60K	
					16	Market Centre Improvement/Establishment Programme							Ministry of Local Government	Ministry of Trade-Enterprise & Dev.												1,600,000	60K	
			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	60K, 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	60K	
			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	60K	
3.8	We can produce more cotton.	20	Cotton Revitalization Programme							Ministry of Agriculture	Min of Coop, Min of SQ Agro Chemicals/meries												5,257,720	60K				
Medium	A Highly Productive, Healthy and Secure District	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, CDF, MSRT, NGOs												122,700,000	CDF, 60K, Donors	
			4.2	We can get good fomal education.	22	OVCs FE Support Programme (Bursary, etc.)							Ministry of Education	MOH, CACC, FBOs, NGOs												8,100,000	60K, 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	60K, CDF, LATF, Donors	
Medium	A Highly Productive, Healthy and Secure District	5. Our environment is protected. (5th Priority)	5.1	Afforestation.	24	Community Based Afforestation Programme							Ministry of Environment & Natural Resources	MOA, MOH, MOE, MOA, MSS, JICA, MORINGA R. AGENCY, ICIPE												5,680,000	60K, Donors	
			5.2	Our rivers are protected.	25	Rivers Protection Programme							Ministry of Environment & Natural Resources	MOA, MOH, C-MAD, PLAN-K, MORINGA R. AGENCY												1,900,000	60K, Donors	
			5.3	Waste is properly disposed.	26	Solid Waste Management Programme							Ministry of Health	H&M Municipal Council, County Councils, CBOs												58,800,000	60K, 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	60K, CDF, Donors		
Medium	A Highly Productive, Healthy and Secure District	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	60K, 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	60K, 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	<i>*Italic number: Development (per year)</i>	
Low	A Highly Productive, Healthy and Secure District	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	<i>Total Development (per year)</i>	
			7.2	There is few robbery / house breaking.		included in Strategy No.7.1																					<i>Total Recurrent Development (per year)</i>	

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

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

\*Italic number: Development Cost

## 11. THE PILOT PROGRAMME IMPLEMENTATION

11.1 During the district level planning workshop held in late 2005, the participants identified some programmes/ projects which had higher priority, could be implemented without much input from outside and therefore could be undertaken as short-term development programmes. Given some ideas from JICA Team, they agreed that some of the programmes would be tried as pilot programmes. The pilot programmes were officially presented to the Steering Committee in December 5, 2005. Then, the Study Team started consensus making with the district respective officials, concerned CBOs, etc. from January to March 2006. The consensus making process entailed planning workshops during which activities, outputs, objectives, inputs, budget, time schedule, etc. were agreed in a participatory manner.

11.2 As shown in Table 11.1 below, 9 major pilot programmes were finally agreed through the participatory workshops. As indicated, most pilot programmes are placing much emphasis on livelihood improvement sector and health improvement sector. Poverty is prevalent in the Study District, which could be tackled by livelihood improvement. Health indicators such as child mortality and HIV/prevalence are very bad, deepening the poverty. Health improvement should therefore be emphasized in addition to the livelihood improvement. Under this pilot implementation, the centre based extension approach tried under No.1 Centre Based Livelihood Improvement Programme is carried out with the Outreach Oriented Community Health Improvement Programme (See No.2 in the table below) hand in hand in order to create synergy effect.

**Table 11.1 Pilot Programmes Identified, Places and Batches To be Carried out**

	Pilot Programme	Nyando (places/ batches)	Homa Bay (places/ batches)	Location in Nyando District
				Location in Homa Bay District
Centre Based	<b>1. Centre Based Livelihood Improvement Programme</b>			
	1.1 Orphanage Annexed Livelihood Improvement Programme	○ (1 place)	○ (2 places)	Tonde S/L, God Nyithindo L., Muhoroni Div. N. Kaganda S/L, S. Kaganda S/L, C. Kanyadoto L., Nyarongi
	1.2 VCT Annexed Livelihood (& Nutrition) Improvement Programme	○ (1 place)	○ (1 place)	Wangaya II S/L, North East Kano L., Miwani Div. Konyango S/L, Central Kabuoch L., Riana Div.
Outreach Oriented	<b>2. Outreach Oriented Community Health Improvement Programme</b>			
	2.1 Primary Health Care Promotion Programme	○ (3 batches)	○ (4 batches)	at same places of above 1.1 & 1.2 at same places of above 1.1 & 1.2
	2.2 Essential Drug Management Programme	○ (1 batch)	○ (1 batch)	Tonde S/L, God Nyithindo L., Muhoroni Div. South Kaganda S/L, Central Kanyadoto, Nyarongi Div.
	2.3 Community Based (Health) Information Sharing Programme	○ (2 batches)	○ (3 batches)	at same places of above 1.1 & 1.2 at same places of above 1.1 & 1.2
	2.4 PLWHA Targeting Home Based Care Programme	○ (3 batches)	○ (4 batches)	at same places of above 1.1 & 1.2 at same places of above 1.1 & 1.2
	<b>3. Livelihood Improvement Oriented Forestry Programme (Neem &amp; Moringa)</b>	○ (3 places)	○ (5 places)	Upper Nyakach Div. Rangwe Div., Asego Div., Ndhiwa Div.
	<b>4. Human Resource-led Cottage Industry Programme (Training Provision)</b>	○ (5 places)	○ (6 places)	4 reps. of one community each for all the 5 divisions 4 reps. of one community each for all the 6 divisions
	<b>5. Local Key Farmer-led Paddy Cultivation Extension Programme</b>	○ (3 places)		Nyando Div., Lower Nyakach Div.
	<b>6. Local Cotton Industry Promotion Programme (hand weaving &amp; spinning)</b>	○ (1 place)		Ahero town, Nyando Div.
	<b>7. Ecological Farming Promotion Programme (push-pull, etc)</b>		○ (6 places)	all the 6 divisions in Homa Bay
	<b>8. Pro-poor Non-tillage Improvement Programme</b>		○ (6 places)	all the 6 divisions in Homa Bay
	<b>9. Youth Polytechnics Strengthening Programme</b>		○ (3 places)	Homa Bay YP, Sero YP, Langi YP
	Pilot Programme	Nyando (23)	Homa Bay (41)	Location in Nyando District Location in Homa Bay District

11.3 Activities under the pilot programmes should be completed sometime before the Study completion, which is specified in the Scope of Work agreed upon between the two governments. The schedule of the pilot implementation including mobilization was therefore set from June 2006 to February 2007, a total 9 months. The pilot implementation period may not be long enough to see some of the real impacts on the ground. However, the process of implementing the pilot programmes would definitely contribute to refining the district development programme drafted in late 2005 into the final version.

11.4 JICA Study Team started mobilization and procurement of necessary equipment and tools in late May 2006, and established relevant working groups in charge. All the pilot programmes included training sessions, and trainers were recruited from the locality except for No.6 Local Cotton Industry Promotion Programme (trainers were from Nairobi). The trainers available from the locality are, for example, government extension officers, health officers, local lead farmers, local institutions, etc. It is noted that the local lead farmers engaged in the pilot programmes of No.1, No.4 and No.5 played a very good trainer based on what they have experienced.

11.5 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 159 training days done in 5 target sub-locations
- Total 4,162 participant-day (1,312M, 2,849F) training done

*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

*No.3 Livelihood Improvement Oriented Forestry Programme:*

- Tree nurseries at target 8 CBOs strengthened, with necessary materials provided
- Total 15 training days done at the target 8 CBOs
- Total 240 participant-day (130M, 110F) training done
- 18,030 tree seedlings produced (8,130 Moringa, 5,450 Neem, and 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 in classroom-type training on new rice cultivation technology



- Total 30 demonstrations in 3 demo conducted (on average 25 farmers per demonstration)
- 255 farmers out of 1,067 or 24% of the target farmers adopted line transplanting
- 46 farmers out of 70 farmers (66% ) increased yield from last crop season by adopting new technology (12 farmers or 17% of surveyed farmers increased the yield by 150% to 200% and 13 farmers or 19% of surveyed farmers by more than double)
- 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

11.6 A series of evaluation workshops were held in February 2007. The evaluation was firstly held at sites by the implementers such as committee members in charge, local leaders such as area chief, government officers who participated as trainer, and then the results were forwarded to a district evaluation workshop. In this regard, it may be said that the evaluation done at the sites was in terms of project performance, and the one done at the district level was of programme appraisal.

11.7 The evaluation / appraisal was conducted from the five aspects: efficiency, effectiveness, impact, relevance and sustainability and the workshop participants voted for marking in a range of 5 as the highest to 1 as the lowest. After the appraisal sessions in Nyando and Homa Bay Districts, the Study Team also rated the programmes in the same manner. Tables 11.2 and 11.3 below show the comparison of the programme appraisal marks between the two Districts and the Study Team.

**Table 11.2 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 11.3 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.

11.8 The Study Team marked more severely than the districts and Homa Bay District gave relatively higher marks compared to Nyando District. Common practices given by the two districts are the very high marks for relevance of the programmes and relatively low marks for sustainability, which may indicate the anxiety of the districts to extend the programmes without assistances from donors.

11.9 For Local Key Farmer-led Paddy Cultivation Extension Programme (Pilot No.5), the Study Team gave higher marks in three aspects, namely efficiency, effectiveness, and sustainability than those given by district workshop participants. The Study Team considered that with minimum external input the programme succeeded in achieving high project performance and also the Team counts high commitment of the stakeholders for extension of the programme.

11.10 For Youth Polytechnics Strengthening Programme (No.9), the district workshop participants in Homa Bay District gave very high marks 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 which was assumed with the input provided by JICA.

11.11 Implementation of the pilot programmes gave JICA Study Team and also government officers lots of lessons. Lessons which should be referred to when implementing district development programme are summarized in the last section that is Recommendations. Following lessons are particular ones pertinent to each pilot programme, and hence can be referred to in implementing similar projects:

*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 training given was seen across almost all the training sessions. 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 comment may hinder us from further trying to improve the training.

*No.2 Outreach Oriented Health Improvement Programme:*

- Difficulties pertinent to health related 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. By doing this, they are recognized by the community members, contributing to reducing the drop-out.

- 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 HIV positive person fear to know his/her status.

*No.3 Livelihood Improvement Oriented Forestry Programme:*

- Tree nurseries should be located near perennial water source because tree seedlings need a period longer than the period of rainy season in the Study Districts, otherwise the nursery will face water shortage and hence survival rate of the seedlings would decline sharply. Locations near river, spring, wells, etc are recommended to establish the tree nurseries.
- Most community members cannot easily access to the tree nurseries of the Government, which are located in the centers of divisions. Nurseries of the CBOs scattered are therefore very important tree seedling sources for the people in most rural areas. It is recommended to support potential CBOs to be the centers of tree seedling. Regarding the limited human and financial resources of the Forestry Department, it is recommended for the department to strengthen the collaboration with other ministries such as agriculture and NGOs which have field staff.

*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 conventional system such as 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 examine the contents of trainings if they are possible to implement for the community people with their financial capacity and also explore 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:*

- Continuous extension activities more than one crop season would be effective, because 1) some farmers have attitude of wait and see as their risk management, 2) new technologies cannot always ensure 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. Also children are found majority of transplanting workers. Extension officers should therefore consider teaching at school on new rice cultivation technologies.
- 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 to tenants.

- Negative impacts should be kept in mind: 1) push-weeder in accompany with line transplanting can drastically reduce weeding labor, but weeding worker (mostly women) may lose job opportunity, 2) threshing-stand 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. While seeking productivity increase of rice cultivation, an area-wise development programme may be necessary to create job opportunities for such people.

*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 established 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 (Also for No.8 Pro-poor Non-tillage Improvement):*

- 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 should 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 aimed at extending in large scale, 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 farmers and stakeholders including the Ministry of Agriculture and Ministry of Livestock and Fisheries will be necessary.

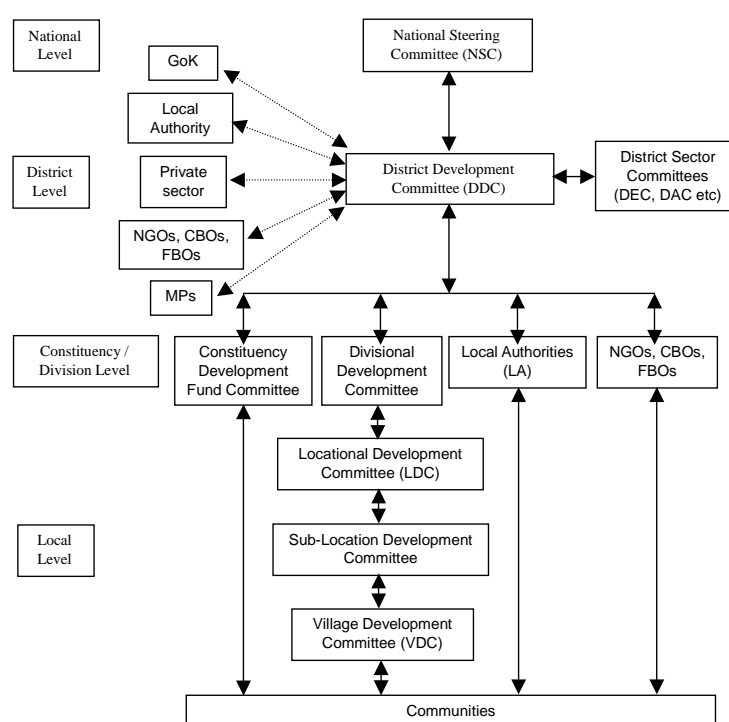
*No.9 Youth Polytechnics (YPs) Strengthening Programme:*

- Subsidies of instructors' salary from the government are very often delayed for several months. That affects the morale of the instructors and they become more dependent on external resources such as sales from 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 the polytechnics including occupational health & safety. That is why District Employment Officer and the Study Team decided to have one-week management training. The level of management and occupational health & safety needs to be monitored periodically.
- There are inconsistencies and unrealistic figures in orders to and income from the production units. It is impossible to practice efficient and effective production without proper bookkeeping. All the instructors need to have appropriate business skills and also mind, ensuring the right bookkeeping.

## 12. IMPLEMENTATION ARRANGEMENT

12.1 wing discussion centres on the implementation arrangements of the District Development Programme prepared under this Study assuming that the present administrations and institutional arrangement will prevail during the proposed plan period. 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).

12.2 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 12.1). 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 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 12.1 Proposed DDP Implementation Arrangement**

12.3 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. 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.

12.4 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

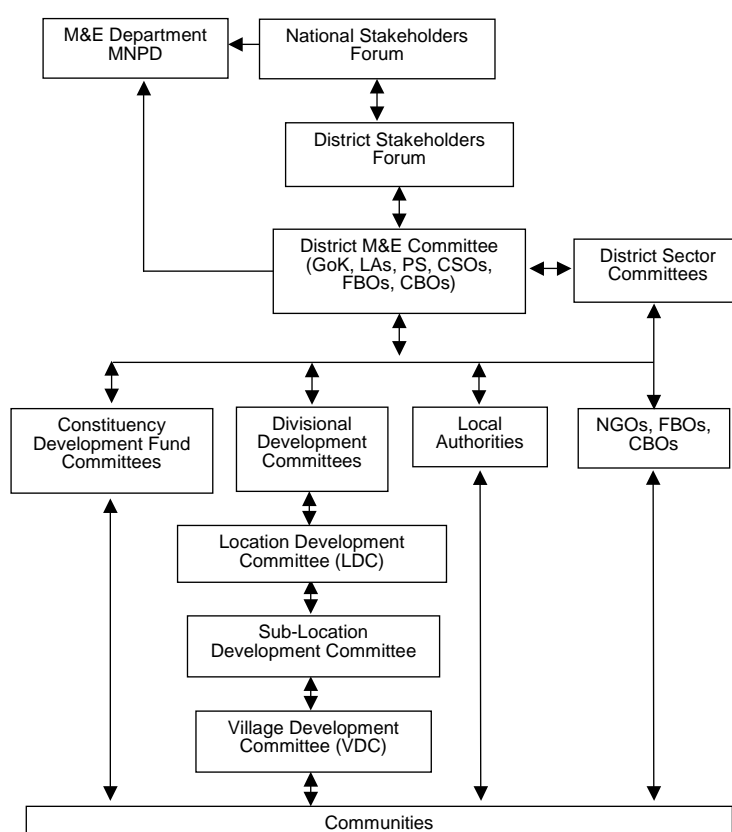


funds from cess and general rate fund), CDF, development partners, non-governmental organizations (NGOs) and faith-based organizations (FBOs). Each source of funds has its own procedures and conditions, which complicates financial management and accounting at district level. This also leads to duplication of efforts and sometimes overlaps and opens avenues for resource misallocation.

12.5 The present 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 prioritisation of activities not all activities receive adequate budgetary allocations for implementation because finances are limited. 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 harmonisation 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 prioritised within the development plan by the stakeholders as in the framework piloted in this Study (see Figures 9.5 & 10.5).

12.6 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 for the Study 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 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 be able to some extent to respond to the district priority.

12.7 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 12.2 shows the organizations which will be included in M&E structure at the district level (referred to the Annex-2, National M&E System Guideline).

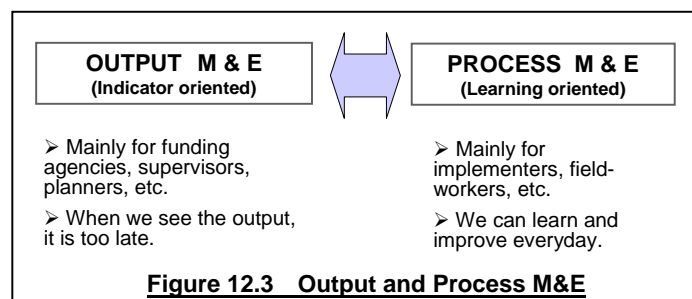


**Figure 12.2 M&E Institutional Setting-up at District  
(from National M&E System Guideline)**

12.8 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. Most of the districts have adopted or are adopting the proposed national M&E system, which is output based and indicator oriented. In this Study, 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 typically learning oriented.

12.9 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 that at the district level more emphasis be placed on output based (indicator oriented) M&E while at the divisional level and below more emphasis be placed on learning oriented process M&E.



12.10 Output indicator oriented M&E is summarised in Table 12.1 as relation to the indicator level presented in the national M&E system.

**Table 12.1 Different Levels and Types of M&E Systems, Indicators and Clientele**

Development Objective Level <sup>6</sup>	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	<ul style="list-style-type: none"> <li>• Policy makers</li> <li>• Planners</li> <li>• Funding agencies</li> <li>• Managers &amp; Supervisors</li> </ul>
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	<ul style="list-style-type: none"> <li>• Policy makers</li> <li>• Planners</li> <li>• Funding agencies</li> <li>• Managers &amp; Supervisors</li> </ul>
Output (Immediate results to be achieved by specific project)	Output based M&E for individual Programme / Project	Output indicators e.g. Number of farmers using new technology	Divisional	<ul style="list-style-type: none"> <li>• Implementers</li> <li>• Field supervisors</li> <li>• Beneficiaries</li> </ul>
Project activities (Inputs the projects must undertake)	Performance based M&E for individual Programme / Project	Performance indicators e.g. No. of farmers who attended training	Divisional Community	<ul style="list-style-type: none"> <li>• Implementers</li> <li>• Field Supervisors</li> <li>• Beneficiaries</li> </ul>

12.11 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 what they want to study. Whereas indicator oriented M&E emphasizes on the objectives (outputs and outcomes) of the projects, learning oriented M&E emphasizes on the development of organizations and individuals. To start learning oriented M&E is not difficult, and the essence is; 1) observe the people and listen to the people in the training or in the workshop, 2) if you notice something, react immediately and do not do just as scheduled, and 3) incorporate the results of learning oriented M&E in the M&E system as a district so that all the stakeholders can share.

<sup>6</sup> The development objectives referred to here corresponds to the levels used in the Development Framework of the pilot districts; Nyando and Homa Bay Districts.

### 13. CONCLUSION AND RECOMMENDATIONS

13.1 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 across the sectors as well as within a sector 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.

13.2 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 conditions. Nevertheless, it is believed that the ones covered here constitute a broader spectrum capable of fitting in most conditions reflected in the 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 conventional 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 depends 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 is 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 be organized into 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 they tend to think much of development in an exogenous way. One example is that chiefs tend 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 possibility of 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 notices on the livelihood improvement training to nearby villagers, 2) trained community health workers made villagers 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 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 established 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 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<sup>2</sup>, namely 4 x 5 km, and involves about 10 natural villages. As we continued the livelihood improvement training, we observed that most of the participants had become regular. 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 gardening was 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 knowledge 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 dropout 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. The 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 training 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 trainers 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 a 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 for 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.