

IFAD

K E N Y A

Kwale and Kilifi District
Development Project

IDENTIFICATION REPORT

September 1986

REPORT NO.

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CURRENCY EQUIVALENTS

Currency Unit	=	Kenya Shilling (KSh)
US\$ 1.00	=	KSh 16.00
KSh 1.0	=	US\$ 0.0625

WEIGHTS AND MEASURES

1 kilogramme (kg)	=	2.204 lb
1 000 kg	=	1 metric tonne (mt)
1 quintal (qu)	=	100 kilograms (kg)
1 kilometre (km)	=	0.62 mile
1 metre (m)	=	1.09 yards
1 square metre (m ²)	=	10.76 square feet
1 acre (ac)	=	0.405 hectare (ha)
1 hectare (ha)	=	2.47 acres

FISCAL YEAR

1 July to 30 June

ABBREVIATIONS

ASAL	-	Arid and Semi-Arid Lands
AWP	-	Annual Work Programmes
CBK	-	Co-operative Bank of Kenya
CBS	-	Central Bureau of Statistics
DAO	-	District Agricultural Officers
DC	-	District Commissioner
DCO	-	District Co-operative Officer
DDO	-	District Development Officer
DDC	-	District Development Committee
DEC	-	District Executive Committee
DFP	-	District Focus for Rural Development (District Focus Policy)
DPC	-	District Project Co-ordinator
FB	-	Forward Budget
GTI	-	Government Training Institute, Mombasa
KGCCU	-	Kenya Grain Growers Co-operative Union
KDDP	-	Kilifi District Development Project
KWDP	-	Kwale District Development Project
K-KDP	-	Kwale-Kilifi Development Project
KDCU	-	Kilifi District Co-operative Union
MALD	-	Ministry of Agriculture and Livestock Development
MCD	-	Ministry of Cooperative Development
MOF	-	Ministry of Finance
MPND	-	Ministry of Planning and National Development
NCPB	-	National Cereals and Produce Board
NEP	-	National Agricultural Extension Project
OP	-	Office of the President
PSC	-	Project Steering Committee
RCF	-	Revolving Credit Fund
RSCTU	-	Rural Services Co-ordination and Training Unit

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

EXECUTIVE PROJECT SUMMARY

<u>Country:</u>	The Republic of Kenya
<u>Project Name:</u>	Kwale and Kilifi District Development project
<u>Project Cost:</u>	US\$ 4.1 million
<u>Financing Plan:</u>	To be determined
<u>TRC Review:</u>	7 January 1987
<u>Tentative Appraisal Date:</u>	March 1987
<u>Cooperating Institution:</u>	World Bank
<u>Tentative IFAD Board Date:</u>	December 1987
<u>Previous Assistance to Kenya:</u>	Three projects with a total financial assistance of SDR 18.15 million.

I. PROJECT BACKGROUND

1. The origin of Kwale Kilifi Development project dated back to 1979 when an IFAD project identification mission identified a US\$ 7.0 million project in Kwale and Kilifi districts of the coast province. The preparation of the project was completed in March 1982, with a proposal for a US\$ 69 million five year Integrated Rural Development project in the same two districts. In close collaboration with the World Bank, IFAD convinced the Government of Kenya that the proposed Project did not address the implementation problems that were crippling on-going Projects, particularly the Second Integrated Agricultural Development Project financed by the World Bank and IFAD at that time. IFAD advised that the type of a district project proposed is better implemented following the new District Focus Policy - a policy which aims at beneficiary participation in the process of development through the decentralization of the planning and implementation process. Since this policy was then in its infancy, IFAD suggested that efforts should be directed at effective implementation of this policy which IFAD would actively support.

2. In the wind-down of IADP II, agreed after much discussion with the Government of Kenya in July 1984, IFAD set aside about US\$ 1.0 million from its contribution to IADP II to finance a pilot programme in Kwale and Kilifi districts with the ultimate objective of developing a full scale follow-on project based on tested results. The World Bank was selected as the Cooperating Institution to supervise the Programme.

3. The Kwale Kilifi Pilot project was designed to develop a model for the Government's new District Focus Policy. Although the concept of District Focus had been discussed for many years in Kenya and district development projects existed in several districts (Machakos, Baringo, Turkana and Kitui), reflecting a continuing concern for decentralizing Government operations to the level of the districts, until 1982, financial control, planning and decision-making remained highly concentrated in the Nairobi Headquarters of operational ministries. In 1982, the President decided to make the districts the focus of national development and Plans were made to increase district involvement in two areas: financial control and development training. The District Focus Policy became officially operational on 1 July 1983.

4. Consistent with the official policy to shift the focus of national development to the districts, the pilot was intended to improve the district programming and budgeting capability and to support several small-scale district investments, in addition to the preparation of a follow-on project. Under the pilot' training was undertaken to sensitize officials in Kwale and Kilifi districts to the District Focus Policy. In June 1986, the Government submitted proposals for a follow-on project which covered a range of small investments in agriculture, livestock, cooperative development, fisheries, rural afforestation and water development in the two districts. The poor quality of these proposals reflect the Government's limited capacity for project preparation. An IFAD Identification mission visited the two districts in July 1986 to upgrade the quality of Government's submission, and presented its report in September 1986.

Experience from the Kwale Kilifi Pilot Programme ¹

5. The Kwale Kilifi Pilot Development Programme is designed to:

- (a) develop a model for the strengthening of district planning and management capacity under the new "District Focus for Rural Development Policy";
- (b) test the administrative model in two districts (Kwale and Kilifi);

^{1/} See pages 11 - 15 for overall IFAD's experience in Kenya.

- (c) test the acceptability of relatively new agricultural packages and small-scale off-farm investments;
- (d) develop rural infrastructures through active participation of beneficiaries; and
- (e) identify a follow-up project in Kwale and Kilifi districts.

6. The pilot effort has made slow progress, reflecting slow bureaucratic process for changing government administrative set-up, the weak management capacity of the Ministry of Planning and National Development, and the administration in the two districts. It took almost 18 months to complete the process of strengthening the District Development Office and the Provincial Coordination Office through the provision of additional staff. Training of district staff on the process of rural planning, implementation, and monitoring and evaluation has progressed satisfactorily and about 75% of the district staff have been trained. The accounting offices of the two districts have been strengthened. The pilot agricultural development efforts have proven successful and have provided information on agricultural activities to be promoted in the follow-on project. No infrastructure activities were started indicating lack of planning capability and absorptive capacity within the districts. Poorly prepared proposals for the follow-on project were submitted six months late indicating the weak planning capacity at the district level.

7. The main experiences of the pilot efforts which have influenced the proposed follow-on project are summarized below:

- (a) The Coast Province is a food-deficit province, therefore food production is a priority. The follow-on project should be designed to increase agricultural production and the welfare of the rural population in Kwale-Kilifi districts. Promotion of agricultural activities at the district level should be coordinated with the national agricultural services (extension, marketing, input supply and Research).
- (b) Agricultural activities which have shown potentials at the pilot phase should be promoted. Production and distribution of sorghum, cassava cuttings, budded citrus, coconut tree, grafted mango, banana suckers, and napier grass have confirmed that the demand of farmers for these planting materials is high. Because of administrative and financial capacity of the Government agricultural field services are limited, more reliance should be put in future on farmer-based improved planting material multiplication systems. (In Kilifi district, there is also an opportunity to use Government prisons for producing planting material). The Government should concentrate its activity on planning and organizing the multiplication process on a district-wide scale, selecting, in

coordination with the research establishment, the improved planting material, training of extension staff and of farmers in nursery techniques and supervision of nursery production on farms. Prices for the planting material should be set at an attractive level to encourage multiplication for sale. Although about a third of the two districts are suitable for fruit production, it has been limited by marketing problems. Therefore, the follow-up project would include a market study for fruit and vegetable marketing.

- (c) Livestock pilot efforts concentrated on promotion of poultry production, rabbitry, bee-keeping, sheep and goat, and cattle improvement programme. Bee-keeping has considerable potential as a viable smallholder operation with no marketing problem and therefore would be promoted, the production technique for rabbitry has been tested and can be within the capacity of smallholders, however, acceptability of rabbits in the household diet has not been confirmed, for that reason rabbitry would have modest production promotion coupled with home economics programme. Pilot efforts in respect of poultry, cattle improvement, sheep and goat are not conclusive, therefore, project effort would still be on a pilot basis. The strategy for livestock production would be similar to the one for crop production described above.
- (d) Ox-ploughing is a highly economic development activity eagerly adopted by the farmers in Kwale and Kilifi. The follow-on project should be as extensive as possible in order to satisfy the need for ox-training on a district-wide basis and should also ensure through extension that farmers are trained to use the oxen for planting and for weeding.
- (e) The District Development Offices (DDO), (Kwale and Kilifi) have had initial strengthening during the pilot phase. This constitutes a first and welcome step in strengthening the District Development Office. The position of the offices has been reviewed by the Identification mission which has included a further proposal for strengthening and for the streamlining of their functions (paras 2.42 - 2.44). The requirements of the DDO's office should be further reviewed at appraisal.
- (f) The training activities under the pilot effort were highly appreciated by the Government. The Identification report has reviewed the pilot train effort and has proposed further requirements which the appraisal mission should closely review.
- (g) No infrastructural development activities are foreseen in the follow-on project because of lack of absorptive capacity in the districts concerned.

- (h) Scope of the Project. The experience from the pilot effort has indicated a low pace of institution strengthening and therefore the scope of the project has been limited by implementation capacity rather than the district requirement.

II. PROJECT OBJECTIVES AND RATIONALE

Objectives

8. The Kwale Kilifi Development Project would aim at strengthening the District administrative system in Kwale and Kilifi districts with a View to improving agricultural production and the welfare of the smallholders through:

- (a) strengthening the capacity of the district administrations' planning, coordination and project implementing capacity, including financial management;
- (b) training key district officials; and
- (c) promoting and supporting priority agricultural development activities.

Rationale

9. The District Focus for Rural Development represents one of Kenya's major policy initiatives towards decentralizing economic decisions. The Policy is defined in a paper issued by the Office of the President in June 1984 (sometimes referred to as the "blue book") and is widely reflected in the Fifth Development Plan (1984-1988). The 1986 Sessional Paper on Economic Management for Renewed Growth also refers to the District Focus strategy in its chapter on rural-urban balance. In summary, the expected benefits of the District Focus Policy are:

- (a) to set district rural priorities in accordance with district characteristics and needs;
- (b) to stimulate regional growth and achieve a better rural-urban balance by fostering productive linkages between agriculture and rural area development on the one hand and non-farm activities in nearby urban centres on the other;
- (c) to foster regional equity and ensure that the less advanced districts get a fair share of development resources;
- (d) to improve the integration and coordination of national government programmes and of local initiatives at the level of the district; and

- (e) to increase the efficiency of government financial mechanisms by streamlining procedures between the Pay Master General and the District Treasuries.

10. The objectives of the proposed project would support the above in two districts and would serve as a model and a testing ground for other future district-based development projects. Kwale and Kilifi districts represent one of the poorest areas of Kenya with deficient food supply, reflected in poor nutrition, and high mortality and morbidity rates.

III. PROJECT CONCEPT AND CONTENT

11. As identified and formulated by the recent mission, the Kwale-Kilifi Development project would strengthen district planning, budgeting and implementation capacities and would support district development activities, particularly in agriculture, the dominant economic sector in the two districts. The proposed five-year, US\$ 4.1 million project would include (i) agriculture, livestock and fisheries development (US\$ 0.6 million); (ii) marketing development (US\$ 1.0 million); (iii) institutional development (US\$ 0.9 million); and (iv) training (US\$ 0.5 million). Project costs include US\$ 1.1 million in contingencies. Details appear in the table below:

Summary of project cost estimates
(KE '000)

	<u>Total</u>
Building and Civil Works	44.41
Vehicles, Plant and Equipment	218.55
Salaries, Wages and Allowances	232.03
Vehicle Operating Cost	254.86
General Services Costs	292.16
Credit	600.00
Training	408.45
Technical Services and Studies	<u>302.00</u>
Total Baseline Costs	2352.46
Physical Contingencies	187.11
Price Contingencies	<u>739.06</u>
Total Project Costs	<u>3278.62</u>

12. Agriculture, livestock and fisheries development would include: (i) support to the agricultural and livestock extension services including incremental transport, allowances and operating resources) over and above the resources available from the National Extension Project (IDA Cr. 1387-KE; IFAD Ln. 25-KE); (ii) "bulking" (multiplication) of improved varieties of cassava and sorghum, and tree nurseries for coconut seedlings, banana, citrus, mango and cashew nut trees; (iii) introduction and demonstration of farm storage techniques (iv) promotion of animal traction (v) promotion of pasture development through bulking and distribution of nappier grass; (vi) introduction of Galla stock (improved) goats; (vii) introduction of improved bulls; (viii) modest expansion on rabbit production; and (ix) expansion of the bee-keeping programme. Proposals to support fisheries development remain to be formulated by the Director of Fisheries (Ministry of Environment and Natural Resources).

13. Proposals on marketing include:

- (a) management support to agricultural cooperatives;
- (b) construction of central district stores; and
- (c) establishment of a revolving credit/marketing fund.

14. The Ministry of Cooperative Development would be strengthened to ensure intensive supervision of cooperatives and thereby support and improve their management performance. Improved cooperative management would clear the cooperative backlog of debt and make the cooperatives eligible for further lending. Because the identification mission considered the construction of central district stores for marketing of farm produce and inputs to be critical for co-operative development, the marketing proposals include two centrally located district stores to be established and operated by the National Cereals and Produce Board and two input supply stores to be constructed and managed by the Kenya Grain Growers' Cooperative Union. The revolving fund would finance crop marketing and storage construction.

15. The institutional development component would strengthen the managerial capacity of the two district development offices by (i) the establishment of an improved organizational structure; (ii) the provision during the project period of specialist planning officers; and (iii) the provision of the necessary office facilities, equipment, transport and operating costs. To give initial impetus to the proposed activities, a project Steering Committee composed of district officials from participating ministries would be established in both districts. In addition, a District Project Coordinator would be appointed under the District Commissioner to administer the project and to act as the executive of the Project Steering Committee which would review project activities quarterly. Institutional development would also result from studies including (i) a study to be conducted by internationally recruited consultants to review the district development organization and district financial and administrative procedures in view of establishing a satisfactory and replicable management structure; (ii) a base line economic survey to be carried out by the Central Bureau of Statistics; and (iii) a study on marketing of perishable farm produce, including opportunities for the rationalization of the marketing chain for fresh fruit and the processing or sale of large seasonal surplus.

15. In addition, thirty manmonths of specific professional training would be provided, including:

- (a) twelve man/months (to be integrated with the proposed study of district development management, for personnel of the Ministry of Planning and National Development and of the Office of the President in planning techniques, project preparation, management of public resources and similar disciplines;

- (b) twelve man/months of advanced training in crop development technology/agricultural sector planning for senior professional staff of the Ministry of Agriculture and Livestock Development; and
- (c) six man/months of practical training in the primary agricultural marketing procedures and in the management of both production and crop marketing credit.

IV. PROJECT BENEFITS AND RISKS

16. Project benefits derive principally from the efficient production and distribution of improved planting materials to beneficiaries; mobile agricultural and co-operative extension services with detailed work programmes; and improved crop marketing and financing facilities. Producers contacted, and benefiting from the range of project financed services could expect substantially increased incomes; expressed in terms of a return to a days labour, the increases would be in the order of K.Shs.6 to K.Shs.8, or between 33% and 75% on present estimated levels. At full development, the value of annual incremental production directly attributable to project initiatives would reach about K£ 0.6 million in 1986 prices. The Economic Rate of return (ERR) has been estimated at 19% over a two year period. Total beneficiaries have been estimated at 24 000 farm families.

17. Risk: Project design and structure has relied upon simple and proven production practices and upon present administrative and financial procedures. Potential risks to successful implementation therefore, lie in bureaucratic inertia and poor management, rather than in technical specifications. Three administrative weaknesses identified in the pilot phase programme remain major potential constraints:

- (a) the failure to establish an effective district development administration with authority to assign clear responsibility for action on project components;
- (b) the lack of timely planning and detailed work programmes; and
- (c) the absence of well designed reporting monitoring and evaluation procedures.

18. The organization and management proposed for the project has adequately addressed these issues, however, the appraisal mission will need to discuss these proposals with the Government and the necessary assurances obtained on loan conditions.

- (j) preparation and inclusion of smallscale irrigation rehabilitation and smallholder fisheries component by the Ministry of Agriculture and the Ministry of Wildlife and Tourism respectively. Small-scale irrigation schemes in the project area include: Burangi (150 ha), Chakama (120 ha) and Sabaki Scheme (12 ha) in Kilifi district and Vanga Scheme (68 ha) in Kwale district. None of these schemes are functioning at full capacity. Given that the supervision of irrigation schemes falls under the Ministry of Agriculture and Livestock Development, which would in any case play a leading role in the implementation of the project in the two districts, it is likely to require little additional effort to review the conditions under which the management of the irrigation schemes could be improved.
- (k) Forestry: The IFAD report does not include proposals on Forestry. Although the 1982 preparation report identified the planting of trees for soil conservation purposes and for fuelwood, particularly in the arid and semi-arid lands of the hinterland, to be two important forest requirements in the project area, the 1986 Government proposals for an afforestation component in the two districts, including tree nurseries and Government-managed fuelwood plots, did not quantify the forestry needs in the Project area, nor did it identify the available technical packages or review the past performance of the Forest Department. Given that the forest sector is currently under a national review to define its strategic aims and methods of intervention and given that forest activities would be managed under a separate institution (the Forest Department of the Ministry of Environment and Natural Resources), we recommend leaving this sector aside while the national review exercise continues and until the Forest Department emerges as a strengthened institution capable of effectively handling rural afforestation activities.
- (l) Research. The Government of Kenya is discussing a National Research Programme with a number of donors (World Bank, USAID and EEC). The extent of assistance is not clear. However, the World Bank, one of the potential major donors, has indicated that additional assistance to Katumami and Mtwapa dryland research stations for adaptive trials of drought resistant crops may be required. The situation would need close review at appraisal.
- (m) Extension of the Closing Date of IADP II (Kwale-Kilifi Programme). IFAD has extended the closing date of IADP II to 30 April 1987. In order to avoid an erratus, a further extension by 12 months up to 30 April 1988 will be required.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

I. INTRODUCTION

1.01 The Identification Mission* visited Kenya between July 3 and July 29, 1986. Its objective was to formulate, on the basis of preparation reports compiled by the Ministry of Planning and National Development, separate development projects for Kwale and Kilifi Districts. Both Districts had benefited from the IFAD-financed pilot programme, the Kwale-Kilifi Development Project (IFAD Loan-25KE), the principal aim of which was to establish the institutional and technical framework for a subsequent phase of development.

1.02 During the field work the mission was accompanied by senior staff of the two ministries most involved in the pilot programme, namely the Ministries of Planning and Natural Development, and of Agriculture and Livestock Development. Full discussions were held with the District Commissioners, their staff and with district officials of participating sectoral ministries. On the return of the mission to Nairobi, the districts' proposals were again discussed with the ministries concerned, in order to establish the degree to which agreed components might be accommodated within their development budget ceilings, and to request that provision be made for them in the Forward Budget Estimates for 1987/1988.

1.03 The preliminary findings of the mission were presented in the form of an aide-memoire to meetings of the District Executive Committees in each District, and to Government at a final round-up meeting held under the auspices of the Ministry of Planning and National Development.

* The mission consisted of H. Kelly, Team Leader;
M. Wasonga, Training Specialist; P. V. Byrne, Economist;
K. Awere, Agronomist.
J. Williams, FAO, and Dr S. A. Olowude, IFAD Project Controller,
joined the team on 17 July and 23 July respectively.

II. THE NATIONAL ECONOMY

A. General and Economic Background

Country Background

2.01 Kenya has a land area of 564,162 km² and a population which is estimated at over 20 million. Only 12.7% of land has medium or high potential for agriculture; a further 11.5% is arable but subject to periodic drought. As over 70% of Kenya is arid and semi-arid land (ASAL) so land pressure is correspondingly high (230-400 persons per km) on the limited crop land in the medium and high potential zones. Over 80% of the population depends on agriculture, and with population growth continuing at over 3.9% per annum, the pressure on arable lands and even in the ASAL areas is increasing rapidly.

2.02 Agriculture has consistently contributed over 30% of Kenya's GDP in real terms in the last decade; it is by far the most important sector of the economy, although its share has fallen from 36.0 % in 1978 to 29.6% in 1985. Manufacturing (13%) and Trade, Restaurants and Hotels (11%) are the other major sectors contributing to GDP. The sector comprising Finance, Insurance, Real Estate and Business Services has been growing steadily and now contributes nearly 9% of GDP.

Agriculture

2.03 The dominance of the agricultural sector and the reliance on tea and coffee exports (52% of total export value) are important features of the economy. Kenya's self-reliance in food crops is precarious; droughts in 1973-75, 1980-81, and 1983-84, resulted in heavy imports of maize, wheat and milk powder. Despite major financial assistance from donors, these imports were an unplanned drain on foreign reserves.

Economic Performance

2.04 General. Kenya's economy performed well for most of the 1970's and achieved an annual average growth in GDP of over 5%, but by the end of the decade deteriorating terms of trade, a slowdown in export growth, high inflation rates, a burgeoning population with a high dependancy ratio and rapid growth in Government expenditure in all areas, had brought a turnaround. In addition, drought and vastly increased expenditure on oil imports contributed to the problems of the early 1980's. Wide Government budget deficits coupled with high private expenditure proceeding from record earnings from tea and coffee in 1977 and 1978 created high levels of aggregate demand. As a result inflation accelerated rapidly to peak at 22% in 1982. Growth in real earnings (9% per year between 1980 and 1985) stayed far below the inflation rate (14%).

Gross Domestic Product

2.05 GDP rose by 5.4% per annum from 1976 to 1981 but by only 3.4% per annum from 1980 to 1985. This is less than the corresponding annual population growth rates and has resulted in a decline in real GDP per capita, indicating a reduction in the well-being of Kenyans (Table 1). GDP per capita was higher in 1979 (KE169) than in 1985 (KE158) after adjustment for inflation.

Table 1: GDP Performance and Population Growth: 1980-1985 ^{a/}

<u>Economic Parameters</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Total GDP at 1982 prices(KEm)	2,704	2,851	2,945	3,035	3,063	3,190
GDP per capita-constant(KE'000)	161.86	164.94	163.23	161.86	157.26	157.60
GDP growth-constant (%)	3.4	5.4	3.3	3.1	0.9	4.1
Population growth (%)	3.9	3.9	3.9	4.0	4.1	4.1

2.06 Public debt. At the end of 1985 total public debt stood at KE2.185 million, down from KE2.210 in 1984, the first decline recorded in the 1980's. Public debt had been accelerating and had more than doubled between 1981 and 1984. The reversed trend is due to decreased borrowing from domestic banks, on which the Government had come to heavily rely for financing its deficit position (Table 2), to the detriment of the private sector. Net debt servicing charges increased from KE109 million in 1981 to KE345 million in 1985 and the debt service ratio from 9.1% to 16.0%. This trend is partly explained by variations in the exchange rate and higher interest rates, but overseas borrowing increased by a factor of 2.4 from 1981 to 1985.

Table 2: Government Deficit Position: 1979-1986 ^{b/}

<u>Government Deficit</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>
Gov't deficit(KEm)	-151.2	-250.9	-339.4	-341.9	-319.8	-392.6	-396.9
Proportion of GDP(%)	5.7	9.0	11.7	11.4	10.5	12.6	-

2.07 Gross Investment and Savings. Kenya has been able to save and invest a substantial proportion of its Gross National Product (GNP) since independence. Over the past 15 years about one-quarter of GNP has been invested each year; however, this has been financed increasingly by foreign aid, which rose from 7.5% of GNP in 1970-74 to 9.5% in 1980-84. Since 1980, the Gross National Saving has been falling. Nevertheless, Kenya's rate of investment has been above average for lower-middle-income countries, while saving has been just below the average.

^{a/} CBS, Economic Survey for 1986 and 1983

^{b/} CBS, Economic Survey for 1986 and 1983

Table 3: Investment and Savings Performance since 1965 ^{a/}

Proportion of GNP at current prices	1965-69 (%)	1970-74 (%)	1975-79 (%)	1980-84 (%)
Gross investment	19.7	25.4	23.9	25.6
Foreign saving	3.2	7.5	7.8	9.5
Gross National Saving	16.5	17.9	16.1	16.1
Government saving	-0.2	2.0	2.4	-0.8
Private saving	16.7	15.9	13.7	16.9

2.08 External Trade and Balance of Payments. Following faster growth in imports relative to exports, Kenya's external trade and balance of payments position deteriorated in 1985 after two years of improvement in which positive overall balances were recorded. The peak deficit was recorded in 1982 after a rapid decline from the positive results of the late 1970's. The terms of trade (measuring the movement of export prices relative to import prices) have shown a decline throughout the period, with a brief respite in 1984.

Table 4: Balance of Payments and Terms of Trade
1979-1985 ^{a/}

Economic Parameters	1979	1980	1981	1982	1983	1984	1985
Balance of payments (KEm)	70.6	-72.2	-99.1	-104.8	68.2	39.0	-86.3
Terms of Trade (all items)	133	122	105	100	94	110	92
Balance of Trade (KEm)	-207.4	-443.3	-395.2	-331.7	-253.4	-320.3	-398.8

2.09 The negative balance of trade has been a consistent problem in the balance of payments in Kenya; only in 1977 during the "coffee/tea boom" did the balance of trade almost reach parity. Government's import liberalization policy resulted in a rapid increase of goods and services, but it has not led to strengthening of capital formation in the private sector; this may give cause for re-appraisal of import policies to ensure re-direction of resources to capital stocks and inputs, away from non-essential consumer goods. The private sector's gross fixed capital formation at constant prices has been declining since 1981, although industrial production has grown slightly in the period. This is probably due to increased utilization of existing capacity, but suggests aging of plant and equipment and a lack of diversification of the productive base of the economy.

^{a/} Sessional Paper 1, 1986 - Economic Management for Renewed Growth

^{b/} CBS, Economic Survey for 1986 and 1983

2.10 Inflation, Exchange Control and Interest Rates. The Government successfully brought inflation under control between 1983 and 1984 through tight monetary control. Since 1982 inflation has averaged 11.3% per annum. The recent upward tendency in the rate has been due principally to higher import costs following currency depreciation. A flexible exchange rate has been applied progressively since 1981, with an effective depreciation of over 100% in the period (Table 5).

Table 5: Inflation, Exchange and Interest Rates (1979-1985) ^{a/}

<u>Economic Indicator</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Inflation rate (%)	8.40	12.80	12.60	22.30	14.50	9.10	10.70
Commercial Bank Lending (%)	-	11.00	14.00	16.00	15.00	14.00	14.00
Central Bank discount rate(%)	4.60	6.03	10.12	13.48	15.12	12.50	14.14
Agric. Fin. Corp'n (seasonal crop loans) (%)	9.00	11.00	12.00	14.00	13.00	13.00	13.00
Exchange rate in KE for US\$	7.30	7.60	10.30	12.70	13.80	15.80	16.28

2.11 High commercial bank lending rates and stringent loan conditions (3-5 years, no grace periods) act as disincentives to private investment in agriculture where gestation periods are rarely less than 4-5 years. During the past decade investment in agriculture has not exceeded 10% of the total per annum, despite its importance as the generator of nearly one-third of GDP.

B. Present Policies and Programmes

Economic Management

2.12 In 1983 Government initiated a series of fiscal and monetary measures to improve the economy by reducing public sector expenditure, controlling inflation, restricting money supply, import control, the encouragement of exports, and imposing stricter controls on wages and employment. These policies have met with considerable success and Kenya's short-term prospects have improved under continued tight economic management.

2.13 There is also strict control on the recurrent and development budgets of each ministry and the Government is closely monitoring its foreign debt position and repayment commitments.

2.14 While the national deficit increased by 90% between 1978/79 and 1982/83 it had been contained to a 17% overall growth between 1981/82 and 1985/86. Total deficit as a proportion of current revenue declined from 45.8% in 1984/85 to 34.0% in 1985/86. In addition, the importance of external loans and grants has declined and the proportion of short-term borrowing applied to development expenditure has been reduced at the same

^{a/} CBS, Economic Survey for 1986 and 1983

time. These indicators underline Government's success in devoting domestic resources to development. This objective forms the basis of the current development plan and is expressed as "mobilizing domestic resources for equitable development"^{1/}.

2.15 In spite of its achievements since 1983, Government has continued to have difficulties in two areas: employment and recurrent expenditures. While the private sector has stagnated as a source of new jobs, Government has been under pressure to provide jobs for graduates and school leavers in the public service. There has been a rapid expansion of the public sector staff establishment, (7.4% per annum since 1974), and the increase has been particularly noticeable in the Ministry of Agriculture and Livestock Development, in which salaries expressed as a proportion of the total budget have risen from 39% in 1973/74 to 74% in 1983/84 (in 1984/85 60% of all Ministries' recurrent expenditure went to pay salaries). The burgeoning salaries expenditure has cut deeply into available recurrent budget funds and, as a result, there has been a substantial reduction in the level of statutory and regular field services.

Budget Rationalization

2.16 To address the issue of expenditure management, Government introduced the Budget Rationalization exercise in FY 1984/85. All domestic expenditure and donor support (loans and grants) must come within the Forward Budget (FB) and therefore within the budget ceilings set by the Treasury. The Forward Budget is revised annually and consists of an estimate of expenditure for the current financial year and the subsequent three-year period. Each Ministry is required to submit revised FB figures to Treasury during the first quarter (July-September) of the financial year.^{2/}

2.17 The increase in the aggregate budget ceilings for the three-year period to FY 1988/89 has been limited to 4% gross in real terms, i.e. a little over 1% per annum. Projects or programmes not in the FB will not be included in the draft estimates and the requirement to keep within tight financial limits means that ministries must set clear priorities and prepare detailed budgets for development expenditure. Particular importance^{3/} is placed on:

- the full and detailed costing of projects;
- the careful review of recurrent cost implications, particularly regarding salaries, in development activity;
- the need to complete ongoing projects;

^{1/} Government of Kenya, Development Plan 1948-1988. 1983.

^{2/} Ministry of Finance, Treasury Circular No.5, July 1985.

^{3/} Task Force on Budget Rationalization, Ministry of Finance and Planning, July 1985.

- the concentration of resources on fewer, carefully selected projects; and
- the need to allocate adequate operating expenses for the better use of existing facilities

2.18 Treasury has stipulated however, that FB ceilings can be increased if user charges (included as Appropriations-in-Aid, or AIAs) can be raised under the cost-sharing policy.

National Development Policies

2.19 Government is now placing development emphasis on increasing productivity of existing resources and infrastructure; this is referred to in Kenya as "utilization of existing capacity" and refers as strongly to the performance of civil servants as to land utilization. In particular, agricultural activities are expected to enhance the productivity and stability of small farms.

2.20 In defining its policies, Government has enunciated^{4/} two important principles:

- (a) efficiency within Government for planning and delivering services, and appraising and implementing projects, is to be improved and productivity and discipline of civil servants enhanced; and
- (b) those who benefit from the provision of Government services will be required to share more in the cost of these services through fees and other charges ("cost sharing").

2.21 It is also the policy of the Government that it should reduce the scope of its operations, and to limit its exposure to risks in activities more appropriately undertaken by the private sector. In addition, voluntary agencies, local communities and government capacity at the district level, are to be utilized more intensively in the provision of essential services, through the District Focus process.

District Focus for Rural Development

2.22 The District Focus for Rural Development (DFP) ^{5/} provides the framework in which government programmes in the districts are executed, and the proposed developments for the project area have been identified and formulated within this policy. A major objective is to improve the effectiveness with which the limited resources available for development are utilized and the policy is based upon the principle of ministries and districts having complementary responsibilities. Responsibility for the operational aspects of district-specific rural development projects is delegated to the districts. Responsibility for broad policy and the planning and implementation of multi-district and national projects remains with the ministries.

4/ Development Plan 1984-1988.

5/ District Focus Policy for Rural Development: An Overview (National Training Strategy for District Focus: March 1985).

2.26 Greater emphasis is being placed on the private sector to generate economic growth; interest rate policy and pricing policy are the main measures to be applied to ensure incentives exist to invest in capital formation and production, especially in agriculture. Specific policy instruments, detailed in Sessional Paper No.1 of 1986, cover exchange rate management, farm pricing, import tariffs and licencing, wage guidelines and interest rates.

Agricultural Production

2.27 Based on the assumption of successful implementation of policies contained in the current Development Plan and Sessional Paper No.1 of 1986, the target growth rates for GDP have been set at 4.8% for the period 1986-88 and 5.9% thereafter. The agricultural sector is expected to grow by an average 5% per annum. These targets appear optimistic given Kenya's vulnerability to climate and international commodity prices. Nevertheless, they have been calculated as the levels necessary to meet further basic needs in Kenya.

2.28 Three approaches are being applied to achieve agricultural outputs for cash crops, food crops and livestock products:

- (a) wider availability and increased and more effective use of inputs, especially fertilizer, in convenient packages;
- (b) improved extension services to generate better farming practices; and
- (c) introduction of higher-yielding varieties of crops and livestock, by focusing Kenya's research on breeding and selection.

Arid and Semi-Arid Lands (ASAL)

2.29 The ASAL areas with 30% of the country's land, contain some 5 million people, or about 35% of Kenya's population and more than half its livestock. More intensive development of the ASAL is a prominent Government policy, and strategies identified to make better use of and improve management in these areas cover livestock production, crop research and selection of environmentally suitable varieties, small-scale irrigation and environmental protection through re-afforestation.

2.30 The ASAL's have benefited from a number of agricultural development programmes during the last decade but their effects have been limited. The constraints and problems of establishing viable and replicable programmes in the ASAL areas have been reviewed in detail by the Belgian Survival Fund^{2/}; the project area of the present study is categorized as ASAL and development proposals take cognizance of the review's recommendations.

^{2/} Belgian Survival Fund Programme for ASAL Areas: Planning Team Report, March 1985.

D. Foreign Aid

2.31 Kenya has been a major recipient of foreign assistance through loans and grants. The importance of grants has risen dramatically over the last five years, from 6.7% to 24.9% of development and investment expenditure of the Government. In the same period external loans have declined from 53.7% to 25.0% of development and investment financing.

2.32 The major sources of bilateral loans are USA, West Germany, Japan, The Netherlands and Denmark. Multilateral or institutional funding is provided by IBRD (44% of outstanding multilateral debt in 1985), IDA (44%), IMF (4%), African Development Bank (3%) and EEC (3%).

2.33 Projects which are of relevance to the proposed Kwale Kilifi Development Project include three national projects which will supplement the project efforts and three parallel district-based projects. The National Extension Project and the Animal Health Services Rehabilitation Project (pages 11 & 12), supported by IFAD and the World Bank will provide direct inputs in support of the Crops and Livestock Programme of the proposed project.

2.34 A National Agricultural Research Project is now under appraisal. It will provide the institutional and policy framework for agricultural research in Kenya. The level of funding that will be made available for adaptive research is not clear. It will therefore be important to evaluate this at appraisal. If provision for adaptive research, particularly for dryland farming, is not adequate, supplementary support within the framework of the National Research Programme may be considered for the Katumani National Dryland Farming Research Centre and the Mtwapa Regional Research Station under the proposed Kwale Kilifi Project. Care has been taken to harmonize the activities of these national projects with the proposed project to avoid duplication of effort.

2.35 The district-based projects include:

- (a) South Coast Handpumps Project: Designed to develop the rural water supply, has been supported since 1983 by the Swedish International Development Authority (SIDA), UNDP and the World Bank. Under this project 99 boreholes have been dug and 10 wells up-graded. Two major achievements of the project are:
 - (i) the successful cooperation of the local communities in handpump testing and maintenance (a programme for long-term maintenance of handpumps is now being developed); and
 - (ii) the initiation of handpump manufacture by four different manufacturers, two in Mombasa and two in Nairobi.
- (b) Dairy Development Project: Supported by The Netherlands - operating in the Kilifi district. Farmers are supplied with improved dairy animals on credit and are given intensive training and supervision on zero-grazing management. The project has recorded success but its expansion has been limited by inadequate supply of improved dairy animals. The capital requirement for the unit operation appeared to be beyond the

capacity of poor farmers. Further, the marketing of milk presents some problems in the absence of any effective milk collection programme in the district.

- (c) The Kenya Fisheries Project: Supported by the World Bank since 1980, the project has provided support to the development of coastal fisheries cooperatives, provision of shore facilities (mainly storage facilities and ice), fishing boats and gear, and promotion of fish farming, mainly through research, training and studies.

↑ Closure of this project is scheduled for 30 September 1987. Large sections of the Project, particularly the shore facilities, failed to be implemented and corresponding credit funds (US\$ 3.5 million) were cancelled a year ago. Project implementation suffered from ineffective and untested management arrangements involving several Government ministries and weak cooperative structures. However, the boat-building component of the Project did succeed in introducing improved fishing boats for which there is a strong demand among the coast area fishermen at prices that reflect real production costs. At present the sole builder of boats is the Government boat yard in Mombasa which, partly because of the rigidity of Government regulations on procurement and labour-hiring, is unable to meet demand. However, private companies in Mombasa have expressed interest in undertaking boat construction. Follow-up of the Kenya Fisheries Project could be envisaged under the Kwale Kilifi Development Project.

E. Previous IFAD Assistance to Kenya

2.36 IFAD has financed three previous development projects in Kenya, namely the Second Integrated Agricultural Development project (IADP II), the National Extension Project (NEP) and the Animal Health Services Rehabilitation Programme. IADP II, for which IFAD made a SDR 13 million loan, was initiated by the World Bank with financing of US\$ 46 million. However, the project proved too complex and beyond the Government's implementation capacity. Accordingly, it was decided to break it up into a number of smaller, more manageable programmes. In late 1983, in line with this decision, and at the Government's request, IFAD cancelled SDR 7.7 million of the original loan. Elements of IADP II retained for implementation include: rehabilitation of small-scale irrigation; rural water supply; coconut research; and the strengthening of rural planning and development in Kwale/Kilifi. Fairly satisfactory progress has been made on implementation of the irrigation, although the rural water supply programme has suffered from institutional inertia. The Kwale/Kilifi Programme is being implemented within the framework of the District Focus Policy and it has provided valuable experience at modest cost for district planners to establish both the policy for and structure of local development. In addition, a pilot smallholder credit operation started by IDA funds is progressing well and providing a useful base for the planning of future cooperative credit projects. The T&V system of extension has been introduced under the NEP in all the planned thirty districts ahead of schedule. While technical progress has been satisfactory and project accounting procedures have resulted in accelerated reimbursements, the project has experienced difficulties in procurement due to the complexity of government tendering procedure. The Animal Health Services

- (b) test the administrative model in two districts (Kwale and Kilifi);
- (c) test the acceptability of relatively new agricultural packages and small-scale off-farm investments;
- (d) develop rural infrastructures through active participation of beneficiaries; and
- (e) identify a follow-up project in Kwale and Kilifi districts.

2.40 In the event, the Programme has concentrated principally on agricultural activities and the strengthening of the administration of Kwale and Kilifi districts. It has supported the establishment of bulking plots for tree crops (coconut, mangoes and citrus fruits); food crops (cooking bananas, cassava and sorghum); the training of farmers in ox-plough techniques; and various livestock activities including improved smallstock, poultry, rabbitry, and beekeeping. However, while advantage had been taken of Kwale-Kilifi Pilot Programme funding to establish a number of successful agricultural developments, the pilot programmes had failed to introduce an element of cost sharing^a with the beneficiaries, or to fully involve the farming community in their bulking programme. Although it is appreciated that innovative activities require initial support of subsidy, the recurrent cost burden to Government of bulking planting material, for example, could be readily passed on to farmers without hardship to even the poorest members of the community.

2.41 The main experiences of the pilot efforts which have influenced the proposed follow-on project are summarized below:

- (a) The Coast Province is a food-deficit province, therefore food production is a priority. The follow-on project should be designed to increase agricultural production and the welfare of the rural population in Kwale-Kilifi districts. Promotion of agricultural activities at the district level should be coordinated with the national agricultural services (extension, marketing, input supply and Research).
- (b) Agricultural activities which have shown potentials at the pilot phase should be promoted. Production and distribution of sorghum, cassava cuttings, budded citrus, coconut tree, grafted mango, banana suckers, and napier grass have confirmed that the demand of farmers for these planting materials is high. Because of administrative and financial capacity of the Government agricultural field services are limited, more reliance should be put in future on farmer-based improved planting material multiplication systems. (In Kilifi district, there is also an opportunity to use Government prisons for producing planting material). The Government should concentrate its activity on planning and organizing the multiplication process on a district-wide scale, selecting, in coordination with the research establishment, the improved planting material, training of extension staff and of farmers

in nursery techniques and supervision of nursery production on farms. Prices for the planting material should be set at an attractive level to encourage multiplication for sale. Although about a third of the two districts are suitable for fruit production, it has been limited by marketing problems. Therefore, the follow-up project would include a market study for fruit and vegetable marketing.

- (c) Livestock pilot efforts concentrated on promotion of poultry production, rabbitry, bee-keeping, sheep and goat, and cattle improvement programme. Bee-keeping has considerable potential as a viable smallholder operation with no marketing problem and therefore would be promoted, the production technique for rabbitry has been tested and can be within the capacity of smallholders, however, acceptability of rabbits in the household diet has not been confirmed, for that reason rabbitry would have modest production promotion coupled with home economics programme. Pilot efforts in respect of poultry, cattle improvement, sheep and goat are not conclusive, therefore, project effort would still be on a pilot basis. The strategy for livestock production would be similar to the one for crop production described above.
- (d) Ox-ploughing is a highly economic development activity eagerly adopted by the farmers in Kwale and Kilifi. The follow-on project should be as extensive as possible in order to satisfy the need for ox-training on a district-wide basis and should also ensure through extension that farmers are trained to use the oxen for planting and for weeding.
- (e) The training activities under the pilot effort were highly appreciated by the Government. The Identification report has reviewed the pilot train effort and has proposed further requirements which the appraisal mission should closely review.
- (f) No infrastructural development activities are foreseen in the follow-on project because of lack of absorptive capacity in the districts concerned.
- (g) Scope of the Project. The experience from the pilot effort has indicated a low pace of institution strengthening and therefore the scope of the project has been limited by implementation capacity rather than the district requirement.

2.42 Present Organization. Supervision reports have commented, inter alia, on the lack of well-defined and phased objectives; the absence of integrated district programmes and the failure to strengthen the capacity of the DDO. Such problems stem from a management structure which has not assigned clear responsibility to designated officials for specific action.

2.43 The organization proposed for Kwale-Kilifi Pilot Programme was that it would be managed at provincial level by the Ministry of Planning and National Development (MPND) and administered in the districts by the District Development Officers (DDO), and by district officials of the sectoral Ministries, principally the District Agricultural Officers (DAO). The split-level management structure introduced a division of responsibilities which was not envisaged in the District Focus Policy (DFP). Responsibility for DFP implementation lies solely with the District Development Committee (DDC) of which the District Commissioner is both Chairman and, through his District Development Officer, Chief Executive. Failure to follow the basic DFP structure has given rise to three major problems:

- (a) the relationship of the provincial level coordinator, an MPND official, to the DDO has never been clearly defined. Even when 'district coordinators' were appointed, they were relatively junior officers of the Agricultural Department, not of the office of the DDO. Without a clear definition of duties, contact between the provincial coordinator and DDO has been tenuous; in Kilifi District it has broken down with acrimony and recrimination, while in Kwale misunderstandings have delayed implementation.
- (b) the lack of a disciplined organizational structure is reflected in the absence of reporting procedures. No systematic monitoring of activities has been provided for or carried out. The reports made are generally qualitative and lack firm data on the results of pilot programmes, e.g., area cultivated, survival rate of seedlings. Thus, while a number of developments appear to have proved popular with farmers, there is little hard evidence of their effects; and
- (c) weak district planning capacity has meant that key initiatives such as the pilot development of co-operative marketing, credit, input supply and district level storage, proposed in the Kwale Kilifi Pilot Programme preparation report, have not been implemented.

2.44 It is important therefore to address the present problems of coordination and management during the proposed project, and Government may wish to take advantage of the remaining period of Kwale-Kilifi Pilot Programme to establish a satisfactory project organization. The proposals set out in this report present a standardized structure for both districts and have been specifically designed not only to meet the immediate needs of the project, but also to serve the broader requirements of the District Focus Policy.

III. THE PROJECT AREA

A. Physical Description

3.01 Location. The project area comprises the whole of Kwale and Kilifi Districts in the Coast Province of Kenya. Kwale District occupies an area of 8 257 km²; Kilifi District covers 12 523 km².

3.02 Topography. Three broad topographical features can be distinguished in the project area, and each has distinct geological and soil qualities. These characteristics in association with rainfall, dictate land use potential. Stretching from the coastline to approximately 5-10 km inland is the narrow, low-lying Coastal Plain which is generally no more than 30 m above sea level, except from Malindi northwards where the land rises to 60 m. To the west of this plain, the terrain becomes slightly undulating and forms the Foot Plateau, which is between 60 m and 135 m in altitude. Further inland is the Coastal Range, made up of several sandstone hill masses, and is between 150 m and 450 m above sea level. The Coastal Range includes the Shimba Hills in Kwale District and the Gaabo and Jabana Hills in Kilifi District. Beyond the Coastal Range, the countryside becomes gently rolling in both districts and is at lower elevation than the Coastal Range. This hinterland forms the rangelands of Coast Province.

3.03 Climate. Rainfall is the most important climatic element relevant to agriculture in both districts. The average annual rainfall ranges from 400 mm in the hinterland to over 1 200 mm at the coast except for a narrow belt from Kilifi Town to Malindi along the coast which receives an average of 900-1 000 mm per annum. Rainfall is higher in the south and decreases northwards; this gradation is particularly strong in Kilifi District. Rainfall is bimodal; the long rains fall in the April-June period with a peak in May and the short rains are in October to December. This seasonality is pronounced in the south but barely noticeable in the hinterland and in the north, where the rainfall is unreliable and varies widely from year to year. Rainfall of 750 mm, often cited as the minimum for permanent agriculture, can only be guaranteed in nine out of ten years on a narrow coastal belt south of Malindi in Kilifi District to Shimoni in Kwale District. Temperatures are generally high with only small seasonal variations. Average temperature ranges from 26-30° C on the coast to about 30-34° C in the hinterland. The average relative humidity is about 65% but decreases with distance from the coast.

3.04 Agro-ecological Zones. Five agro-ecological zones have been identified and mapped in the project area. These zones are distinguished by climatic, topographic, soil and other environmental features which dictate the potential for agricultural development. Features of the zones are summarized as follows:

- (a) Zone L2: Lowland Sugarcane Zone. In the project area, this zone occurs only in Kwale District. It has an average annual rainfall of more than 1 200 mm but has poor soils, and therefore has only a medium potential for agricultural use.

- (b) Zone L3: Coconut-Cassava Zone occurs in both Districts and receives over 1,000 mm of annual rainfall. Potential for agricultural production is rated as medium as soils are poor. Nevertheless, it is the major cropping zone in the project area.
- (c) Zone L4: Cashewnut-Cassava Zone. Annual rainfall in this zone is 900-1 000 mm. This zone occurs extensively in both Districts with the greater part in Kilifi District. It has low to medium potential for agricultural crop production.
- (d) Zone L5: Lowland Livestock and Millet Zone. This area receives only 700 to 900 mm of annual rainfall, and is semi-arid to arid in nature and is suitable only for extensive livestock grazing.
- (e) Zone L6: Ranching Zone. The average rainfall in this zone is less than 700 mm per year. This, coupled with poor soils, gives the zone the lowest potential for agricultural land use, and it is classified as arid.

3.05 Soils. Several soil types, differing widely in depth, texture, and physical and chemical properties, occur in the Kwale-Kilifi area. There is a strong correlation between the geology and soils of the project area due to the formation processes. In general, the soils are low in fertility. Coastal Upland soils in Zone L3, the principal cropping area, are of medium to low fertility. Consequently, these soils require rather high fertilizer inputs to produce a good crop. In view of the subsistence level of most farmers in the project area, and the relatively high costs of fertilizer, few inputs are used; soil fertility is a serious constraint to rapid agricultural development in both Kwale and Kilifi Districts.

B. Demographic Characteristics

3.06 Population. Kwale and Kilifi Districts had a total population of nearly 700 000 in 1979; before 1990, the combined population will exceed one million (Table 1).

Table 1: Population Estimates for Kwale and Kilifi Districts

District	Actual	Projections ^{a/}		Growth rates
	1979 b/	1986	1990	1969-1979
Kwale	288 363	391 000	458 000	3.4%
Kilifi	430 986	584 000	684 000	3.5%
Total	719 349	975 000	1 142 000	

a/ CBS projections at constant (1969-1979) fertility and mortality rates.

b/ CBS, 1979 National Census

3.07 Household Size and Distribution. In 1979, family size averaged 5.5 persons in Kwale District. By 1985 this had increased to 6.7 ^{a/}. In Kilifi District, average household size was 5.6 in 1979 and is now thought to be 7 persons. It appears that an increase in household size rather than growth in number of households is mostly responsible for absorbing population increase (AMREF, 1985). The estimates of household size in 1986 assume a small growth in the number of households over the 7 years since 1979 of 4.2% in Kwale and 4.5% in Kilifi District. These data allow estimates of the total households in each district and the proportions which are reliant on agriculture.

3.08 The households engaged mainly in agriculture occupy all five agro-ecological zones and total an estimated 52 500 in Kwale and 71 000 in Kilifi. The approximate number and distribution of households is given in Table 2. The distribution of farm households in each district is based on Census enumeration results and superimposition of administrative boundaries over agro-ecological zone boundaries ^{10/}.

3.09 Sex Distribution. Females outnumber males by nearly 3% in Kwale and 9% in Kilifi. For Kilifi, the statistic probably indicates a higher level of out-migration of males seeking wage employment.

3.10 Age Distribution. Nearly 45% of the rural population is less than 15 years of age and a further 6% is older than 60 years of age ^{11/}. The Districts have a high dependency rate which implies severe constraints to labour availability during the farming season and heavy consumption demands on farm output.

Table 2: Distribution of Agricultural Households: 1979 and 1986

Zone	Rainfall (per annum)	District			
		Kwale		Kilifi	
		1979 ^{a/}	1986 ^{b/}	1979 ^{a/}	1986 ^{b/}
L2	Over 1 400 mm	3 000	3 100	-	-
L3	1,000-1 400 mm	22 300	23 200	11 100	11 600
L4	900-1 000 mm	12 000	12 500	41 400	43 300
L5/L6	Less than 900 mm	13 100	13 600	15 400	16 100
	TOTALS:	<u>50 400</u>	<u>52 500</u>	<u>67 900</u>	<u>71 000</u>

^{9/} Demographic and Socio-Cultural Survey: Consultancy Report to the Swedish International Development Agency. African Medical and Research Foundation (AMREF) August 1985

^{10/} Kwale Kilifi Integrated Development Project, Vol.I, Booker Agriculture International Ltd., March 1982

^{11/} AMREF (1985), op. cit.

^{a/} After Booker Agriculture International Ltd., (1982), and based on 1979 National Census.

^{b/} Consultants' estimates.

3.11 Ethnic Structure. In terms of population distribution, ethnic composition, environment and agricultural activities, Kwale and Kilifi Districts are similar. The population is mainly of the Mijikenda group (over 80%), of which the Giriama, Waduruma and Wadigo are numerically the most important. The Giriama are found mainly in Kilifi District and are traditional agriculturalists/cattle owners with large extended families. The Duruma inhabit the hinterland of Kwale District, and are primarily cattle owners. The Digo are associated with the coastal strip and the southern part of Kwale District; they are crop farmers. In Kwale District, in-migration of Wakamba has led to this ethnic group now comprising nearly 10% of the District population. Other ethnic groups of note in both Districts include Luo, Kikuyu, Taita, Luhya, Swahili and non-Africans (10% of total population).

3.12 Population Density. Overall population density is moderate at 47 persons/km² (the all-Kenya density is 27 persons/km²), but there are wide variations within each District - from as low as 8 persons/km² in the rangelands to over 300 in the coastal strip.

C. Land Use

3.13 Land Use. Despite their relatively large land surfaces, only 1 929 km² (23%) of Kwale and 2,335 km² (19%) of Kilifi District are available to smallholder crop farmers. Thus, the "land pressure index" - the population density on land available to small farmers - is 134/km² in Kwale and 165/km² in Kilifi. For the rangeland areas of Zones L5 and L6, the pastoralist land pressure on group, co-operative, and directed agricultural company ranches is 20/km² in Kwale and 31/km² in Kilifi. These indicative figures suggest that the current farming systems must be intensified in order to sustain at least the present levels of consumption per capita and livestock offtake for cash sales.

3.14 Typical Smallholder Systems. Farming and livestock systems are closely aligned to the agro-ecological zones and typical systems can be described for each:

- (a) Zones L2 and L3: (i) Small-to medium-scale farmer with land areas averaging 5.7 ha; cultivation rarely greater than 2 ha with annual crops, the remainder under tree crops, fallow or pasture for small stock. This group of farm families covers about 10% (7 890) of the total; (ii) small-scale farmer with holding size averaging 2.5 ha, but annual cultivation less than 1 ha and 0.6 ha of tree crops. This type of farmer still practises a form of shifting cultivation. Some 90% (23 630 families) of the farmers in zones L2/L3 are in this category; households rely mainly on mixed crops of maize, cassava, and legumes (cowpeas, beans, grams), interplanted with permanent tree crops of cashew nuts, coconuts, mangoes and citrus, and the semi-permanent banana and papaya;
- (b) Zone L4: The farmer in this area operates a mixed farming system, with greater reliance on small stock. The average holding size is large (22 ha) but the soils are poor and the climate is semi-arid; long dry periods are normal and droughts are frequent. Up to 2.0 ha may be cultivated to annual crops in any season. At least 12 600 families live in this zone;

- (c) Zones L5 and L6: Extensive grazing under traditional pastoralism still predominates in the rangeland areas, although some crops are grown in small areas where rainfall is sufficient. Carrying capacity is about 1 stock unit (SU) per 8 ha in L5 down to 1 SU per 12 ha in zone L6. Mixed herds of cattle, sheep and goats are maintained but the emphasis is on beef cattle.

3.15 Settlement schemes cover 43 km² in Kwale (6 schemes) and 80 km² in Kilifi (7 schemes). Small-scale irrigation amounting to less than 400 ha is presently of minor importance; small-scale irrigation scheme potential is estimated to be about 1 000 ha.

3.16 Large-scale farming in the project area is restricted to the coastal belt. Sugar, sisal, coconut, dairy and tree crops (citrus, mango, cashew) production covers more than 360 km² in both districts. Private or parastatal ranches cover 588 km² in Kwale District and 4,970 km² in Kilifi District.

D. Health and Nutrition

3.17 Vital Rates. The crude birth rate is thought to be 40-45 per 1 000 and the crude death rate 12-15 per 1 000 in Kwale District (AMREF, 1985). It is reasonable to assume similar parameters for Kilifi District, for which no specific data are available.

3.18 The early childhood mortality rate in the two districts is high, and among the highest in Kenya. In Kwale, for example, the rate is 190 per 1 000 and over 64% of deaths occur amongst children less than one year old. Major causes are thought to be malnutrition and malaria coupled with diarrhoeic diseases.

3.19 Health and Nutrition. Stunting is a characteristic of protein-energy malnutrition (PEM). Kwale and Kilifi Districts (and the other coastal areas) have very high levels of stunting, at almost twice the national average. Mortality and morbidity appear to be directly related to malnutrition^{12/}. In the poorer strata of the population, which includes smallholder farmers, agricultural labourers and pastoralists, energy intake only reaches 80% of requirements^{13/}. Anthropometric measurements (weight for age, weight for height, mean arm circumference) show a slight deteriorating trend in Coast Province over the period 1977-1982. The latest Child Nutrition Survey indicated that in 1982 the proportion of children in Coast Province characterised as stunted was 36% and as wasted 5% (CBS, 1982).

3.20 The following diseases and parasitic conditions are the most prevalent: diarrhoeic diseases, acute respiratory infections, measles, malaria, cholera, worm infestation and bilharzia. Malaria and diarrhoea,

12/ CBS - Third Rural Child Nutrition Survey 1982.

13/ Food Nutrition Studies Programme: The Role of Environmental Factors in Cases of Severe Protein-Energy Malnutrition in Coast Province (Research Outline) October 1985.

in combination with malnutrition, account for 61% of deaths in Kwale District. Sanitation-related diseases account for two-thirds of morbidity, while a further 5% is caused by chronic illnesses due by nutritional deficiencies (AMREF, 1985). Major causes of morbidity are preventable.

3.21 Factors contributing to the health status of the community include poor nutrition, lack of and proper use and storage of water, limited acceptance of pit latrines, health education and certain traditional beliefs.

3.22 Seasonality of agricultural production is a very important factor in nutritional condition of farm families. The periods of lowest production - and therefore high vulnerability to malnutrition - are November to March ("long dry") and May to July ("long rains"). During these periods there are no cereal or pulse crops to harvest and on-farm storage and the ability to purchase food staples become most important.^{14/}

3.23 Access to Health Facilities. The target population is not well served with social infrastructure. There are 3 hospitals in each of Kwale and Kilifi Districts, 7 and 5 health centres, and 12 and 40 dispensaries, respectively. The ratio is about 16 000 persons per health facility. A number of the dispensaries were constructed under self-help schemes and are not functioning. Problems at health facilities include lack of water, shortage of essential instruments, drugs and dressings and inadequate staff training and support.

3.24 The distribution of facilities, such as health centres, schools and markets favours the coastal belt where road and transport facilities are better and population density higher. The ASAL areas of the two Districts are particularly disadvantaged; for example there are only one hospital, four health centres, and 7 functioning dispensaries in the ASAL areas of both Kwale and Kilifi Districts (70% of the area and 25% of the population).

14/ Regional and Seasonal Food Problems in Kenya - Food Nutrition Studies Programme T. Kleist, 1985

IV. THE TARGET GROUP

A. Background

4.01 IFAD's Framework and Policy. The strategy adopted by IFAD in Kenya is target group-oriented. Under IFAD's mandate its target group for assistance includes small-holders, landless rural workers, artisanal fishermen, pastoralists, rural women and youth. Project design is to address these particular groups with strategies to arrest the deteriorating trend in per capita production, upgrade and enhance the utilization of existing institutional capacity, infrastructure and public utilities. Emphasis is placed on the production of traditional staple food crops.

4.02 Target Groups: Smallholders and Pastoralists. In Kenya, 85% of the population lives in rural areas. Of this 85%, smallholders represent by far the largest proportion with 73% of total households in the country; pastoralist households represent only 5% of the total; and medium and large scale farm households represent less than 1%. Non-farm households make up the other 21%.

4.03 There are two categories of smallholders which correspond to the country's agro-ecological areas. The first and most numerous are the poor smallholders living in medium-and-high-potential areas with high population densities. This target group accounts for 71% of the poor population in Kenya. The second group includes those families which live in the arid and semi-arid (ASAL) land areas and include 25% of Kenya's poor. Landless farmers, squatters and pastoralists without herds or access to sufficient rangeland form sub-groups in both areas; they are a small proportion at present but will increase under the present population growth conditions. People living in the ASAL areas are at greatest risk and are therefore at the focal point of IFAD's programme of assistance to Kenya.

4.04 Government of Kenya Policy. Government policy is to improve the opportunities and services available to farmers and pastoralists who live in these zones. An area of 75% of Kwale District and 85% of Kilifi is classified as ASAL (agro-ecological zones L4, L5 and L6). Zone L4 is being adjudicated into small-holdings according to traditional occupancy. The rangeland areas have been sub-divided into private, group, co-operative company and directed agricultural company ranches. However, they are occupied and utilized mainly by traditional pastoralists who combine a sedentary and semi-nomadic grazing system for their stock, depending mainly on the availability of water.

4.05 The proposed development comprises district-based projects aimed at specific target groups in Kwale and Kilifi districts. In addition to the ASAL crop farmers and pastoralist/farmers, therefore, target households include: (i) poor smallholders in zones L2/L3, (ii) landless, squatter and migrant farmers; and (iii) traditional fishermen.

B. Target Group Determinants

4.06 Rural poverty is defined as the inability to satisfy those basic needs (food, clothing, shelter, utensils, farm implements) normally supplied from household income or labour. Production of food crops and livestock products under subsistence conditions occupies most members of the households in the project area. The Integrated Rural Survey (CBS 1977, 1981) indicates that at least one-third of the smallholder households in Coast Province are living below the defined poverty level^{15/}. Poor smallholders and pastoralists have less land and fewer livestock, fewer inputs (purchased and generated), lower non-farm incomes, lower education levels, lower subsistence consumption and lower levels of on-farm innovation (as measured by purchased inputs and improved breeding stock) than the average.

4.07 Identification of the size (number of households) of the individual target groups has been imputed from published demographic and socio-economic data to which selection indicators have been applied. (The indicators usually applied include: (i) estimated farm production and income consumption level; (ii) access to adequate arable land; (iii) availability of family labour; (iv) health and nutrition standards expressed in terms of infant mortality, morbidity and incidence of malnutrition; and (v) access to infrastructure, essential services and markets. In this study indicative target group determinants have been applied as there is little baseline data available specifically for Kwale and Kilifi Districts.).

4.08 Crop Farmers. Table 3 summarizes data on rural poverty indices obtained from the literature. Approximately 58% of crop farmers cultivate less than 1 ha of land in the crop production areas and an estimated 55% of farming families rely wholly on their farms for subsistence. In Coast Province over 98% of smallholders have access to only one parcel of land and thus are unable to expand to reduce farming risks. Also, livestock ownership is not widespread in the cropping zone: over 88% have no cattle, 62% no goats and 87% no sheep. Diversity is limited.^{16/}

15/ The subject is thoroughly discussed in the World Bank Staff Working Paper by Collier and Lal - "Poverty and Growth in Kenya", 1980; the ILO documents "Rural Development, Incomes and Employment in Kenya", 1981; "Planning for Basic Needs in Kenya", 1979; and the IFAD General Identification Report of January 1984. The poverty line has been defined as "the level of income required to allow the provision of the minimum daily food requirements (2 250 calories/adult) and some other basic necessities (clothing, shelter, health)". KSh 2 200 per rural household per annum is the estimate of the income required in 1974 prices.

16/ CBS: Integrated Rural Survey

development of the range areas. It can therefore be assumed that traditional production systems and livestock ownership and grazing patterns prevail. Estimates of the size and nature of the target group are based on this assumption.

4.13 In his study de Jong (1977) concluded that 80% of the pastoralists could not obtain their minimum subsistence requirements from livestock alone. The AMREF study (1985) covered one location in the rangeland area of Kwale (zones L5 and L6) and showed that 66% of respondents derived some of their subsistence requirements from crop. This implies that opportunistic crop production in the rangelands remains an important source of subsistence requirements, and supports de Jong's conclusion. Collier and Lal (1980) also estimate that 80% of pastoralists have consumption levels below the poverty line.

4.14 For the purpose of quantifying the size of the target group it can be assumed that 80% of pastoralists fall into the IFAD target group in the ASAL areas of Kwale and Kilifi Districts.

C. Target Group

4.15 The numbers of households in each target group are calculated from earlier estimates of the number of households in each agro-ecological zone (Table 2). The results obtained are presented in Table 4.

4.16 Table 4 also presents the target groups of the Kwale and Kilifi District Development Projects. These estimates are based on the reach of extension and other components of the proposed projects (see para 4.20). At full development, the project is expected to reach nearly one-third of the total number of target group households.

4.17 Women's Groups. The Ministry of Culture and Social Services registers only women's groups that care to make their details available to the Government; official records for 1985 are given below. These groups usually form a specific IFAD target group, and are assumed to fall within the total target group identified in the crop and rangeland areas (Table 4).

<u>District</u>	<u>Number of Groups</u>	<u>Number of Members</u>
Kwale	231	10 000
Kilifi	198	8 775

4.18 Female Heads of Households. The results of the IRS-4 survey (CBS, 1982) indicate that 12.2% of households in Coast Province are headed by women. This implies a total of 17 300 households in Kwale and Kilifi. Many of these families are headed by women because husbands are away in labour employment and do not necessarily enter IFAD's target group. The project would identify and assist those households which do comply with IFAD's criteria for assistance during implementation.

Table 4: Target Groups in each agro-ecological zone of Kwale and Kilifi Districts

Zone	Kwale				District				Kilifi				District			
	Farm Families/		Target Group2/		Farm Families/		Target Group2/		Farm Families/		Target Group2/		Farm Families/		Target Group2/	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
L2	3100	6	1550	5	400	39	0	0	0	0	0	0	0	0	0	0
L3	23200	44	11600	37	4400	38	11600	16	5800	13	2100	36	0	0	0	0
L4	12600	24	7560	24	2500	33	4300	61	25980	58	8400	32	0	0	0	0
L5/L6	13600	26	10880	34	2500	23	16100	23	12880	29	3500	27	0	0	0	0
Totals	52500	100	31590	100	10000	32	71000	100	44680	100	14000	31	0	0	0	0

SOURCE: 1/ Consultants' estimates for 1986.

2/ Estimated as 50% of farm families in Zones L2/L3, 40% in Zone L4 and 80% of pastoralists in Zones L5/L6

3/ As a proportion of target groups.

4.19 Landless Poor^{18/}. The issue of landless poor could not be addressed satisfactorily by the mission because of a lack of basic data; the land adjudication process is incomplete in both Kwale and Kilifi districts. The primary purpose of a number of the coastal settlement schemes has been to settle landless poor. Land pressure has not reached saturation point in the project area, although the better land is occupied. Further settlement could only be achieved on lands with poorer soils in drier areas (zone L4) or through more intensive land use on the settlement schemes and in zone L3.

4.20 Project Implementation Targets. The project is intended to reach 24 000 farm families in Kwale (10 000) and Kilifi (14 000) districts. These estimates are based on delivery of services by front-line extension agents and the areas they are expected to cover. This has been matched to the estimated number of farm families in each zone. The extension coverage is given in Table 5.

Table 5: Projected Target Groups - Farm Families
Incremental Target Achievement

	10	20	20	25	25	Total Target Group
Proportion covered (%)	10	20	20	25	25	100
<u>Kwale District:</u>						
- Zone L2/L3	500	1 000	1 000	1 250	1 250	5 000
- Zone L4	250	500	500	625	625	2 500
- Zone L5/L6	250	500	500	625	625	2 500
TOTAL	1 000	2 000	2 000	2 500	2 500	10 000
<u>Kilifi District:</u>						
- Zone L3	210	420	420	525	525	2 100
- Zone L4	840	1 680	1 680	2 100	2 100	8 400
- Zone L5/L6	350	700	700	875	875	3 500
TOTAL	1 400	2 800	2 800	2 800	3 500	14 000

4.21 Crop Farmers. An estimated 18 000 farm families in zones L2, L3 and L4 will receive technical assistance, access to improved planting materials and crop input packages, agricultural credit and improved marketing services.

4.22 Pastoralists. A total of 6 000 families are to be assisted with enhanced extension services and access to improved breeding stock.

^{18/} A distinction is drawn between landless poor and squatters; the former are defined as those families who would cultivate the land if they could obtain suitable cropland (they usually work as agricultural labourers or in off-farm employment) Squatters actually farm the land but do not have recognized title to the area they utilize.

V. THE PROJECT

A. Project Background

5.01. The origin of Kwale Kilifi Development project dated back to 1979 when an IFAD project identification mission identified a US\$ 7.0 million project in Kwale and Kilifi districts of the coast province. The preparation of the project was completed in March 1982, with a proposal for a US\$ 69 million five year Integrated Rural Development project in the same two districts. In close collaboration with the World Bank, IFAD convinced the Government of Kenya that the proposed Project did not address the implementation problems that were crippling on-going Projects, particularly the Second Integrated Agricultural Development Project financed by the World Bank and IFAD at that time. IFAD advised that the type of a district project proposed is better implemented following the new District Focus Policy - a policy which aims at beneficiary participation in the process of development through the decentralization of the planning and implementation process. Since this policy was then in its infancy, IFAD suggested that efforts should be directed at effective implementation of this policy which IFAD would actively support.

5.02 In the wind-down of IADP II, agreed after much discussion with the Government of Kenya in July 1984, IFAD set aside about US\$ 1.0 million from its contribution to IADP II to finance a pilot programme in Kwale and Kilifi districts with the ultimate objective of developing a full scale follow-on project based on tested results. The World Bank was selected as the Cooperating Institution to supervise the Programme.

5.03 The Kwale Kilifi Pilot project was designed to develop a model for the Government's new District Focus Policy. Although the concept of District Focus had been discussed for many years in Kenya and district development projects existed in several districts (Machakos, Baringo, Turkana and Kitui), reflecting a continuing concern for decentralizing Government operations to the level of the districts, until 1982, financial control, planning and decision-making remained highly concentrated in the Nairobi Headquarters of operational ministries. In 1982, the President decided to make the districts the focus of national development and Plans were made to increase district involvement in two areas: financial control and development training. The District Focus Policy became officially operational on 1 July 1983.

5.04 Consistent with the official policy to shift the focus of national development to the districts, the pilot was intended to improve the district programming and budgeting capability and to support several small-scale district investments, in addition to the preparation of a follow-on project. Under the pilot training was undertaken to sensitize officials in Kwale and Kilifi districts to the District Focus Policy. In June 1986, the Government submitted proposals for a follow-on project which covered a range of small investments in agriculture, livestock, cooperative development, fisheries, rural afforestation and water development in the two districts. The poor quality of these proposals reflect the Government's limited capacity for project preparation. An IFAD Identification mission visited the two districts in July 1986 to upgrade the quality of Government's submission, and presented its report in September 1986.

B. Rationale and Objectives

5.05 The District Focus for rural development represents one of Kenya's major policy initiatives towards decentralizing economic decisions aimed at involving the beneficiaries in the process of planning and implementing development programmes. Benefits expected from this decentralization include: (i) the setting of district of rural priorities in accordance with district characteristics; (ii) stimulation of rural growth and a better rural-urban balance; (iii) greater regional equity benefitting the less advanced districts; (iv) better integration and coordination of the national programmes at district level; and (v) streamlined Government financial procedures. This policy effectively implemented would benefit IFAD's target group in Kenya. However, the Government capacity to translate the landable objectives of the policy into an effective rural development instrument is limited, hence the need for external assistance. The proposed Kwale-Kilifi project has been designed to develop a model for the Government District Focus Policy and to provide a testing ground for other future district-based rural development projects. It would build on the modest achievement and experiences of the pilot effort. If the project effort is successful, it would provide a replicable rural development system with a positive national impact on IFAD's target group.

5.06 The proposed project would have the following objectives:

- (a) strengthen the institutional capacity to plan and execute rural development projects;
- (b) promote food production through the dissemination of tested production packages and the provision of improved planting materials;
- (c) promote livestock production within the technical and financial capacity of the poor smallholders;
- (d) test a new approach for input supply and marketing within the rural community but linked to a national institutional framework; and
- (e) promote beneficiaries participation in the process of planning and implementing rural projects.

C. Summary Description

5.07 The proposed development has been designed as an expansion of the present Kwale-Kilifi Pilot Programme (IFAD Loan 25-KE). Its scope, which reflect the slow pace of institution building during the K-KDP pilot phase, would strengthen development planning and administrative capacity within the districts; expand the range of crop and livestock production activities initiated during the preceding pilot programme; and develop essential crop marketing facilities in support of the crop production programmes. It would be implemented over a five-year period and would include:

(a) Institutional Development

- the appointment of District Project Coordinators and support for the establishment of an effective mechanism for the planning, implementation and monitoring of district level development projects; and
- funding of studies and consultancies, monitoring and evaluation, a new initiative for developing crop marketing/input supply arrangements.

(b) Crop and Livestock Development

- improving input supply for the production of staple crops;
- bulking and distribution of improved planting material for food and tree crops, and for fodder;
- extending the training and distribution scheme for draught animals, improving animal husbandry practices and expanding smallstock, beekeeping, and other minor livestock production;
- carrying out further pilot programmes to test crop varieties, farm systems and farm implements; and
- preparation of a support programme for traditional fishermen.

(c) Infrastructural Support

- strengthening the field services of participating ministries;
- establishing marketing facilities and co-operative input supply services in the districts;
- promoting primary co-operative marketing at village level; and
- establishing a revolving fund for co-operative crop marketing and input supply services.

(d) Training

- providing specialist and longer-term training in institutional development; and
- providing for district, divisional, locational and sub-locational District Focus Policy Training as established by Office of the President.

5.08 In accordance with the provisions of the District Focus for Rural Development (DFP) for the planning and coordination, financial management and implementation of district-specific rural development projects^{19/}, the development has been planned and costed as separate sub-projects: Kwale District Development Project (KWDDP) and Kilifi District Development Project (KDDP). While, therefore, the category and scope of the components are broadly similar for both, the cost estimates have been clearly identified by the individual district vote sub-head in the national accounts.

5.09 A specific feature of the projects would be the establishment of a standard and replicable structure for district-level development administration. To this end, the Ministry of Planning and Economic Development (MPND), within whose portfolio the technical direction of such activities falls, would be the designated coordinating agency.

D. Detailed Features

Institutional Development

5.10 The present district development administration, namely the District Development Committee (DDC) and its executive, the office of the District Development Officer (DDO), would be the focal point for project institutional support. Project initiatives would be directed to the strengthening of DDO's managerial capacity, first by the establishment of a definitive organizational structure in which the lines of authority and the duties and responsibilities of officials were clearly identified; second, by the provision, during the development period, of specialist MPND planning officers to assist with the implementation of DFP in general and to coordinate specific project activities; and third, by the provision of the necessary office facilities, equipment, transport and operating costs to ensure effective implementation. Full details of the proposed organization, management and implementation procedure are set out in Chapter V of this Report.

5.11 Management Studies and Technical Assistance. In discussions with MPND as the sponsoring agency of the project, it was agreed that three aspects of the identified constraints would benefit from more detailed study under MPND direction:

- (a) District Development Management. To assist in the establishment of a satisfactory and replicable management structure, the Project would undertake a detailed review of district development organization, of DFP financial and administrative procedures in general and of project implementation in particular. The revision would be carried out by one or more specialist management consultants who would be charged with training of DPC and DDO in the administrative and financial routines. This training would be 'sandwiched' with formal development administration training at, or conducted by, an agreeable training institute.

^{19/} Development Plan 1984-88 CAP 4, 4.33

- (b) Base Line Survey and Monitoring and Evaluation. The project would fund the incremental costs of a baseline survey which would be carried out by CBS and would rationalize the monitoring and evaluation arrangements in the project area with a view to harmonizing MALD and MPND ongoing monitoring and evaluation programmes. Provision would also be made for the regular periodic assessment of project initiatives to ensure that the thrust of project development was directed to the needs of the farmer rather than to the requirements of technicians.
- (c) Marketing of Perishable Farm Produce. The outstanding issue raised by K-KDP initiatives but unaddressed in the proposed development, is that of the marketing of perishable farm produce and, in particular, the rationalization of the present marketing chain for fresh fruit and the processing or sale of large seasonal surpluses. A 12 man-month study would be carried out by specialized management consultants under MPND.

Crop and Livestock Development (Annex 3)

5.12 Pilot phase initiatives, which supplemented routine MALD district work programmes, included the introduction of improved husbandry practices and increased distribution of improved planting material to smallholders. The type of subsistence crops promoted, namely sorghum, cassava, and cooking bananas, and the technology e.g., animal traction, are of specific importance to target group producers. The proposed programme would expand such proven and accepted developments but with emphasis on the provision of package of inputs and extension services adapted to smallholder needs. The programme would also rely heavily on farmer participation for both planting material production and distribution.

5.13 Food Crops. Food crop development would constitute the major agricultural activity:

- (a) Cassava. The established 2 ha of cassava plot at Kilifi Prison farm would be maintained, and further 3 ha developed at Kwale and Malindi Prison farms as source of mosaic disease-resistant stock. This material would be distributed to interested farmers for bulking and distribution under MALD technical supervision.
- (b) Bananas. Existing MALD plots (3.5 ha) would be maintained and about 6 000 suckers per year distributed to about 50 selected farmers for multiplication and distribution under technical supervision of MALD.
- (c) Sorghum. 3.0 ha of sorghum plots would provide a source of improved seed for production in the L 4 and L 5 zones. The programme would be complemented by home economics extension to promote the use of sorghum in the family diet.

5.14 Tree Crops. Pilot phase tree crop development would be continued as follows:

- (a) Coconuts. The production and distribution of coconut seedlings (2.0 ha), started during the pilot phase, would be maintained in the first year and would be gradually reduced as technologies for seedling production are transferred to the farmers. It is expected that by the end of the project 80% of the seedling production will be by the farmers under the technical guidance of the MALD extension staff. Selection of seed would be carried out by district MALD technicians in cooperation with the research authorities.
- (b) Cashew Nuts. MALD would discontinue cashewnut seedling production; selected seed would be supplied on demand to chiefs who would establish locational nurseries. MALD would concentrate its extension activities on improving cultural practices.
- (c) Citrus and Mangoes. MALD would be assisted to expand its central nurseries at Msambweni and Sabaki to meet projected demand for citrus and mangoes seedlings.

5.15 Animal Traction. The K-KDP ox-plough programme has established the demand for animal traction in smallholder cultivation throughout the area. The programme would be expanded by separate packages for interested smallholders already owning oxen and those who would need to purchase draught animals would be developed. MALD would also introduce and demonstrate the full range of cultural operations which could be carried out by simple tool bar attachments.

5.16 Livestock Development. Pilot phase experience clearly indicates that the viability of improved livestock production by smallholders has yet to be fully established. In particular, the problems of maintaining improved stock brought from tse-tse free areas into project area range lands which are under heavy tse-tse challenge are well recognized by the traditional livestock owners. Galla goats and Boran cattle have good potentials for development within the smallholder operations and their quality is well appreciated by the smallholders. Because of the risks involved, the introduction of these improved stocks would be gradual..

5.17 Project support therefore would be continued through farmer-based demonstration, including the expansion of the fodder production programme, aimed at developing a suitable animal health and feeding regime which would be both sustainable and acceptable to the typical target group livestock producer.

- (a) Goats. About 40 selected farmers or womens groups would be supplied with Galla stock which would be maintained in accordance with a regulated and supervised regime set by the divisional Animal Husbandry Officer. In addition about 20 interested and competent stockmen would be encouraged to establish small herds of pure bred Galla, again with MALD support and supervision. There is a heavy demand nationally for Galla and a condition of MALD services would be that the project would have first call on the off-take for sale to local producers.

- (b) Cattle. Herd improvement through the distribution of bulls to interested groups or families would be undertaken in a similar manner and with close supervision. The programme would commence in the areas of minimum disease challenge and about 5 such groups per annum would be assisted in each district.
- (c) Rabbit Production. Problems of dry season feed for stock and the acceptability of rabbit meat generally have yet to be fully resolved and established. MALD would therefore continue the pilot field programme with technical and home economics support.
- (d) Bee-keeping. The successful bee-keeping programme would be expanded and approved hives manufactured locally, initially by the Kilifi District Co-operative Union workshops. MALD would assign an officer in each district specifically for the expansion of honey production. Demand for honey is very high and bee-keeping fits into the smallholder's operation and within its capital limitation.

Traditional Fisheries Development

5.18 At time of project formulation, proposals for fisheries development had not been cleared with the Director of Fisheries, MTWL. It was agreed, therefore, that definitive proposals would be inappropriate until a full evaluation of the districts' bids had been made. This would be carried out prior to appraisal by the Fisheries Department; a nominal base line amount of KSh170 000 has been included in project costs for fisheries investment and related surveys.

Co-operative Development (Annex 5)

5.19 Co-operative activity throughout the project area is presently constrained, despite sole buying rights of scheduled crops granted by the Government to the Coop movement, by the inability of the primary societies, to fulfill their major function, i.e., the efficient marketing of their members' produce. As a result, membership loyalty and involvement in co-operative affairs is minimal. Project support would be directed therefore to the causes of the present malaise: indebtedness, lack of finance and poor management. It would aim to establish, on a pilot scale, a viable network of village level marketing societies linked with NCPB district transit stores and the provision of crop marketing credit.

5.20 Selection of a village co-operative or co-operative branch for inclusion in the development would be based on the size of the group, its past performance, its catchment area and potential turnover. A participating society would be required to:

- (a) construct a simple store from its own resources, or where it already had had a store built by Government, increase its share capital per member to an equivalent level; and
- (b) agree to provide a roster of members to operate the store throughout the harvest season.

5.21 On this basis, MCD would prepare an evaluation of the enterprise with detailed cash flow projections based on projected turnover, and an estimate of direct operating expenses.

5.22 Co-operative Indebtedness There is a legacy of co-operative indebtedness, principally in Kilifi, for credit disbursed under IADP II which would debar defaulters from receipt of further loans. A selected co-operative therefore would be free from debt or be required to clear any outstanding loan balances with CBK, with its parent society or, in the case of Kilifi, with the Kilifi District Co-operative Union (KDCU). The Kilifi debt presently stands at KE71 800, equivalent to 6% of 1984/85 KDCU turnover. This is not onerous and MCD would initiate exemplary action under its own powers to effect recovery. In Kwale, only one society is recorded as a CBK debtor and, again MCD would take debt recovery proceedings.

5.23 Loans would be made directly by CBK to the society i.e., in the case of Kilifi, KDCU would be by-passed. The success of the development would depend on direct lending by CBK to small societies or branches; by avoiding aggregate loans, the failure of one group would not damage the creditworthiness of the scheme as a whole.

5.24 Where the selected group was not a registered society, but the branch of a primary society, present practice would require the loan to be made to the society. It, in turn, would make a subsidiary loan to the group members for which they would be jointly and severally responsible. The Commissioner for Co-operative Development therefore would review the position with the general Manager CBK, to establish whether a direct lending mechanism for such groups was feasible.

5.25 Co-operative Management. Turnover in the typical primary would not permit the immediate employment of experienced management. Accordingly, MCD would exercise intensive supervision over the operation. In each district an Assistant Co-operative Officer (ACO) or a Co-operative Assistant (CA) would be assigned to the Project. His duties would include supervision of all co-operative crop marketing within his area of jurisdiction, but in the case of the selected marketing groups he would be responsible for:

- (a) group selection and loan appraisal and preparation;
- (b) the training of members and elected officials;
- (c) the write-up of the cash book and ledger of the society or branch; and
- (d) supervision of bank withdrawals and payments to members.

5.26 Under the programme, each district project would establish a minimum of five village level marketing co-operatives or co-operative branches per annum. By the end of the development period, 25 such co-operatives with about 3 000 members and a turnover of about 50 000 bags of produce (including that of non-members) would have benefited from project investments and would lay the basis for a rational and replicable expansion of co-operative marketing.

5.31 The extent to which primary societies would stock inputs would depend upon their financial status; KGGCU would not be a source of trade credit. Societies would either purchase from their own funds or, if creditworthy, obtain the necessary inventory financing from CBK.

5.32 Co-operative Bank of Kenya (CBK). Crop marketing development embraces both crop marketing finance (para 5.23) and the provision of the necessary NCPB district storage facilities. Adequate finance for these purposes would be established in a Revolving Credit Fund (RCF) which would provide both long term financing for storage (NCPB and KGGCU) construction and seasonal crop buying advances within the project area. Lack of NCPB liquidity delays payment to producers for up to three months, and RCF would have the capacity to cover such a contingency.

5.33 To provide the necessary CBK district services, RCF would finance the capital and operating costs of a mobile banking unit. While intensive supervision would reduce the lending risks to an acceptable level, the development costs of the system would exceed those which CBK would undertake in the normal course of its business. RCF would be administered therefore by CBK on an agency basis, i.e., RCF would not constitute a part of CBK capital; and Government would be requested either: (a) to permit an interest spread on the RCF transactions which would cover CBK's operating costs; or (b), to permit CBK to charge its full operating costs to RCF in lieu of an interest spread.

Training (Annex 8)

5.34 The pilot-phase development has highlighted the need for training in management, administration and financial planning at all levels in the districts. Government has categorized such training as 'of the highest priority in the operational procedures being instituted for the District Focus'^{20/} and the primary objective of the proposed training component would be to implement the required formal training programme for this purpose in Kwale and Kilifi.

5.35 The programme would be conducted at four administrative levels:

- (a) district: training in administrative skills, adult education, project planning and control. The programme would be aimed principally at DEC members;
- (b) division: the training components would be the same as for district level courses but the target group would be composed mainly of divisional heads of departments, and heads of secondary schools;
- (c) location: training in community leadership and management would be aimed at chiefs, area councillors, locational KANU officials, primary school headmasters and social development workers; and

^{20/} National Training Strategy for District Focus:
Office of the President, March 1985.

- (d) sub-location: training in community leadership and in project related development and skills would be directed at sub-chiefs and at sub-locational officials, communities leaders, co-operative workers and similar groups.

5.36 The project would finance the costs of training the three higher administrative echelons, involving an estimated 2 000 man-days per annum per district over the five year development period. Full details of the programme are contained in Annex 8. The organization and content of training would build on the experience of the training carried out under the pilot phase and the ongoing training programme of the Siaya District under the Farmers' Groups and Community Support Project.

5.37 The project would also provide 30 man-months of specific professional training:

- (a) twelve man-months of specialist training for MPND/OP personnel in planning techniques, project preparation, the management of public resources and similar disciplines. Such training would be integrated with the proposed study of district development management;
- (b) twelve man-months of advanced training in crop development technology/agricultural sector planning for senior MALD professional staff; and
- (c) six man-months of practical training in the primary agricultural marketing procedures, and in the management of both production and crop marketing credit. This training would be provided by attachment of technical staff to a well managed national or internationally funded credit programme.

5.38 The complementary nature of the professional training to that for DFP is clearly recognized and care would be taken to ensure that professional training curricula took full account of detailed DFP requirements.

5.39 In accordance with present procedures ^{21/} DFP training cost would be channelled through the budget of the Director of Personnel Management (Office of the President). Professional training costs have been allocated to MPND and the participating sectoral ministries.

E. Project Costs

Total Project Costs

5.40 The total cost of the Kwale and Kilifi District Development Projects over the five-year implementation period is estimated at KSh3.28 million (US\$ 4.10 million), of which foreign costs would account for KSh0.70 million (US\$ 0.87 million). If taxes and duties are excluded, total costs would be KSh2.98 million (US\$ 3.72 million). Detailed phased project costs by cost category are given in Table 1 of Annex 1, and are summarized in Table 6 overleaf.

^{21/} Op cit: Funding of the Training Programme for District Focus.

5.41 Contingency allowances. All costs used in the study are in constant and prevailing prices as at June 30, 1986. To adjust for increases in the intervening period to the anticipated commencement date of July 1, 1987 and thereafter, price contingencies have been calculated at the following rates:

Financial years	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
International	7	7	8	8	7	7
Domestic	11	10	9	9	8	8

5.42 For physical contingencies, 10% has been added to the base cost of capital items and recurrent expenditure. No physical contingencies have been included for the credit element. Total physical contingencies amount to 8% over base costs; price contingencies, taken over base costs plus physical contingencies, are 23% of total project costs and 31% of base costs.

5.43 Foreign Exchange Component. The foreign exchange component of all project costs has been derived by disaggregating local inputs, value added, duty and tax components. Details of the foreign content of each cost are given in Annex I, Tables 4-11 inclusive (unit costs for project components); in Table 12 for the fisheries component; and Annex 7, in Table 7 for the overseas training, studies and project monitoring.

5.44 Customs Duties and taxes. All capital and recurrent cost items are available locally and have been costed inclusive of duties and taxes with the exception of vehicles. Although assembled locally, arrangements may be made for these to be supplied free of duty and tax. Details of duty and tax components of each item are given in Annex I, Tables 4-11 inclusive (unit costs for project components).

Kwale District Development Project Costs

5.45 Approximately 32% of the total project cost would be for development activities in Kwale District (Annex I, Table 2). The total cost of the project over the five-year period is estimated at KSh1.05 million (US\$ 1.31 million), of which the foreign cost component would be KSh0.26 million (US\$ 0.33 million), or 25% of the total project costs. Without taxes and duties, the Kwale Project would be KSh0.94 million (US\$ 1.08 million).

Kilifi District Development Project Costs

5.46 The Kilifi Project component activities account for KSh0.97 million (US\$ 1.21 million), or 30% of total project costs (Annex I, Table 3). The foreign cost element is estimated at KSh0.25 million (US\$ 0.31 million). Without taxes and duties, the Kilifi Project would amount to KSh0.86 million (US\$ 1.08 million).

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Kwale and Kilifi District Development Projects

Table 6 - Summary of Total Project Costs

Component	Kwale District			Kilifi District			-----Total Project Costs----- (KSh'000)			-----Total Project Costs----- (US\$'000)		
	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total
A. Management and Organization												
1. Project co-ordination, monitoring and evaluation	9.00	1.00	10.00	9.00	1.00	10.00	18.00	2.00	20.00	22.50	2.50	25.00
3. Studies	50.40	5.60	56.00	50.40	5.60	56.00	100.80	11.20	112.00	126.00	14.00	140.00
Sub-Total	59.40	6.60	66.00	59.40	6.60	66.00	118.80	13.20	132.00	148.50	16.50	165.00
B. Crop and Livestock Production												
1. Crop development & marketing credit	333.70	16.30	350.00	238.35	11.65	250.00	572.05	27.95	600.00	715.06	34.94	750.00
Sub-Total	333.70	16.30	350.00	238.35	11.65	250.00	572.05	27.95	600.00	715.06	34.94	750.00
C. Institutional Support												
1. OP technical services	29.96	15.93	45.89	34.52	16.93	51.45	64.48	32.86	97.34	80.60	41.08	121.68
2. MPND technical services	119.05	20.26	139.31	123.22	21.19	144.41	242.27	41.47	283.74	302.34	51.84	354.68
3. MALD technical services	189.47	82.74	272.21	148.08	69.76	217.84	337.55	152.50	490.05	421.94	190.63	612.56
4. MOCD technical services	70.37	28.82	99.19	47.85	23.87	71.72	118.22	52.69	170.91	147.78	65.36	213.64
5. MDTM technical services	59.50	25.50	85.00	59.50	25.50	85.00	119.00	51.00	170.00	148.75	63.75	212.50
Sub-Total	468.35	173.27	641.62	413.17	157.25	570.42	881.52	330.52	1212.04	1101.90	413.15	1515.05
D. Training												
1. Technical (advanced) training	33.75	33.75	67.50	33.75	33.75	67.50	67.50	67.50	135.00	84.38	84.38	168.75
2. District Focus Policy training	102.08	26.70	128.78	114.54	30.11	144.65	216.62	56.81	273.43	270.79	71.01	341.79
Sub-Total	135.83	60.45	196.28	148.29	63.86	212.15	284.12	124.31	408.43	355.15	155.39	510.54
E. Baseline Costs (A+B+C+D)												
	997.28	256.62	1253.90	659.21	239.36	898.57	1656.49	495.98	2352.47	2320.51	619.98	2940.59
Total physical contingencies	69.42	26.90	96.32	65.20	25.59	90.79	134.62	52.49	187.11	168.28	65.61	233.89
Total price contingencies	316.56	62.31	378.87	301.53	58.65	360.18	618.09	120.96	739.05	772.61	151.20	923.81
F. TOTAL PROJECT COSTS	1383.26	345.83	1729.09	1225.94	323.60	1549.54	2609.20	669.43	3278.63	3261.50	836.79	4098.29

VI. ORGANIZATION MANAGEMENT AND IMPLEMENTATION

A. Background

6.01 The implementation of the preparatory phase, the Kwale-Kilifi Development Project (K-KDP), has been constrained by a number of structural and procedural weaknesses in its management and organization. The introduction of a two-tier managerial structure at provincial and district level resulted in a division of responsibilities not envisaged in the District Focus Policy. Without a clearly defined, disciplined organizational structure, little progress has been made in strengthening district planning capacity; reporting procedures are weak; no systematic monitoring of activities has been provided or carried out; and key initiatives in marketing input supply and storage proposed for pilot development, have not been implemented.^{22/}

6.02 Management proposals, therefore, which conform to the prescribed structure for District Focus Policy implementation, have been proposed and are directed to the specific needs and in particular, to the bureaucratic procedures of project implementation.

B. Policy Formulation and Coordination

6.03 The policy-making body for a district-level project is already in place in the District Development Committee. DDC has the necessary authority to ensure that participating agencies carry out their agreed commitments and its technical committee, the District Executive Committee (DEC), composed of the senior officers of all sectoral ministries in the districts, would provide the direction required for orderly implementation. However, to give initial impetus to proposed activities, a Project Steering Committee (PSC) composed of district officials of participating ministries would be established as a sub-committee of DEC. DDC and DEC are legally constituted and operating in both districts. No impediment to the power of DEC to establish a Project Steering Committee is foreseen. It would be convened quarterly and at such other times as deemed necessary by the District Commissioner, to consider the report of the District Project Coordinator (para 6.04), and its principal responsibilities would be:

- (a) to coordinate project activities throughout the district;
- (b) to scrutinize and approve on technical grounds all developments;
- (c) to ensure that project developments complied with government policy for their respective sectors;
- (d) to approve annual project work plans; and
- (e) to scrutinize and recommend for DDC approval the annual project budget (para 6.11 et seq.).

^{22/} Para 2.37 et seq.

C. Project Organization and Management

6.04 In accordance with established practice, the projects would be implemented by participating ministries through existing financial and administrative mechanisms rather than through a separate executive, which would duplicate present services. The principal task of the DDO's Office management therefore, would be to ensure the coordination of project activities. While the mechanism for this requirement already exists (para 6.03) in the office of the District Development Officer (DDO), it has yet to acquire the professional capacity necessary for rapid implementation. MPND would therefore appoint a senior officer as District Project Coordinator (DPC) to each district who would be directly responsible to the District Commissioner for the project administration and who would act as the executive of the PSC. His duties would not call for a substantial executive capacity and he would work through the office of the DDO, the facilities of which would be strengthened under the project. However, to ensure the effective and timely preparation of reimbursement claims, he would be provided with the services of an Accounts Assistant. In this manner, the project would aim to create a competent structure within the district administration for the planning and execution of a second phase development. Although the initial activities of the Coordinating Office would be limited to the project related activities, it is envisaged that this Unit would be developed into Project Implementation Coordinating Unit for the district. A chart of the proposed Project Organization is attached as Chart I.

D. Implementation

Smallholder Crop and Livestock Production

6.05 The District Agricultural Officer (DAO) would have direct responsibility for the promotion of project-sponsored developments and technical services, which would be fully integrated into the overall pattern of agricultural and livestock development within the district. He would also coordinate and encourage the development of input supply, marketing and credit services required in support of his planned production programmes. Project proposals emphasise the need for the development of production packages which would take account of the full range of services which the smallholder may require to improve production; the success of such a policy would depend directly upon the full involvement of the DAO in its implementation (Annex 4).

Cooperative Services

6.06 The District Co-operative Officer (DCO) would be responsible for the key peripheral service for agricultural production, namely the expansion of village level crop marketing. He would work closely with the Co-operative Bank of Kenya (CBK) in ensuring the regular provision of crop marketing credit throughout the marketing season; and he would coordinate the activities of the Kenya Grain Growers Co-operative Union (KGGCU) and primary societies in ensuring the availability of farm inputs (Annex 5).

Secondary Crop Marketing Services

6.07 Consequent upon its appointment of co-operatives as sole buying agents for scheduled crops, the National Cereals and Produce Board (NCPB) would operate transit stores in both districts. Directly managed by NCPB, they would be rented from co-operative agencies (Annex 6).

Wholesale Input Supply

6.08 KGGCU would establish a central branch in each district both for direct retail and for wholesale supply to member primary co-operatives. It would operate on a cash basis; credit facilities would be available to approved societies through CBK. (Annex 6).

Credit

6.09 Project credit facilities would be channeled through CBK. A Revolving Credit Fund (RCF) for crop purchase would be established and operated by CBK on an agency basis. Until the turnover justified the establishment of a district branch, CBK would operate through a mobile unit. (Annex 6).

Training

6.10 The Government Training Institute (GTI) Mombasa would have prime responsibility for the training programme. It would use the services of the Rural Services Coordination and Training Unit (RSCTU) of MPND to organize and coordinate the training within the districts. It would conduct courses through its own facilities, or in collaboration with other district, provincial or National institutions (Annex 8).

E. Accounts, Audit and Programming

General

6.11 Project costs for each district would be included in the 1987/88 Forward Budget (FB) in accordance with Treasury and MPND^{23/} provisions. FB is the formal link between planning and finance and it is revised annually for the ensuing three year period. No expenditure, recurrent or development, may be considered for inclusion in the draft annual estimates^{24/} unless provision has been previously made for it in FB expenditure ceilings. At the time of project formulation, definitive provision had yet to be made for the 1987/88 FB submission due 30 August 1986. Formulation costs have therefore been based upon indicative cost ceilings which remain to be confirmed by participating ministries prior to project appraisal.

6.12 At time of project formulation, no firm decision had been made upon the budgetary mechanism for the proposed project; the final format would depend upon the size and number of its components. For formulation purposes, therefore, it has been assumed that costs would be allocated individually to each participating Ministry and would be identified in the national accounts by a development vote head and district sub-head. MPND (Head 210) and MALD (Head 241) already incur expenditure under the current IFAD-financed pilot phase (K-KPD) and would retain these account identifications.

23/ MPND 'Guidelines for the Preparation of the 1986/87 District Annexes' (EPD/SC/237/016, 14 April 1986) sets out minimum standards of preparation.

24/ Treasury Circular No. 3 of 18 February 1986

Project Expenditure and Accounts

6.13 Project accounts would be prepared by each DPC from the machine ledger statements of the participating ministries which would constitute the Project Ledger. The accounts would be forwarded quarterly to MPND which would submit a consolidated biannual cost report to IFAD. The provision of accountancy assistance to DPC (para 6.04) would ensure that there was adequate capacity at district level for the preparation of the necessary documentation.

6.14 Reimbursement. Government has experienced considerable past difficulty in claiming reimbursement of authorized expenditure from donors. However, IFAD has agreed (Siaya Farmer Group and Community Support Project : BG-1-KE) that copies of the vouchers submitted to province and included in the machine ledger statements would provide the necessary and sufficient basis for reimbursement claims. Reimbursement procedures established for the Siaya project would be adequate for the Kwale and Kilifi developments.

Audit

6.15 The project accounts would be made up of abstracts from the reconciled machine ledger statements of each participating ministry and would be readily identifiable from the designated vote heads (para 6.12). They would be subject to statutory audit by the office of the Auditor General and would be included in the Appropriation Accounts (national audited accounts) which form part of the Auditor General's annual report to Parliament. The Appropriation Accounts are rigorously prepared and would meet IFAD requirements, but they would be available only some twelve to fourteen months in arrears. However, as the ledger statement from which the Appropriation Accounts are prepared is reconciled monthly, the delay would be acceptable to IFAD. The External Aid Office of the Treasury would certify that the previously submitted unaudited figures were in agreement with the Appropriation Accounts.

Annual Work Programme

6.16 The preparation of Annual Work Programmes (AWP) would provide the basis for project implementation. AWP would be prepared in conjunction with the annual budget estimates. However, in order to tie in the physical programmes and objectives to budgetary allocation, both AWP and financial estimates would require more detailed preparation than is presently the case, and would need to comply with District Focus Policy procedures.

6.17 To meet loan conditions, it would also be necessary for the AWP and project estimates, which form an integral part of AWP, to be submitted to IFAD for comment prior to their inclusion in the draft annual estimates, i.e., by 21 March. Accordingly, the following timetable would be followed in AWP preparation:

30 October	:	District preparation of AWP and project estimates cleared by DDC and submitted to Accounting Officers of respective ministries for review.
1 December	:	Submission of AWP by DPC to IFAD for comment.
1 January	:	Accounting Officers inform district officers of allocations.
1 Jan. - 21 March	:	DPC coordinates timely submission of revised AWP and draft budget to participating Ministries and to IFAD.

F. Financial Reports

Quarterly Reports

6.18 Each DPC would submit a quarterly financial report to MPND. It would be prepared from the separate budget heads for incremental expenditure in the Project Ledger (para 6.13). The reporting format would be based on that drawn up for the IFAD-assisted NEP and would show expenditure by disbursement category for each AIE-holder; it would give the budget allocation, expenditure to the beginning of the reporting period, quarterly expenditure, total expenditure and balance.

Six-monthly Reports

6.19 MPND would submit a six-monthly financial report as an integral part of project progress reports. It would consolidate the quarterly district financial reports prepared by the DPC and would be set out in similar format. In addition and in cooperation with Treasury, MPND would compile a biannual statement of payment claims and reimbursement submissions. It would list the qualifying expenditure incurred, the claims submitted by disbursement category balances in each category and briefly detail the progress of the documentation.

Annual Reports

6.20 The annual financial report for each Project would be prepared by MPND and submitted within four months of the end of the financial year. The report format would be in a similar format to the quarterly report and would be supported by a copy of the Project Ledger. It would be accompanied by a detailed and reconciled statement of reimbursement and payment claims for the period under review.

G. Project Procurement

6.21 The principal categories of procurement would be vehicles, consisting of 2 trucks, 5 four-wheel drive vehicles and cars, and motorcycles; and about KE100 000 in miscellaneous items of equipment and supplies. As incremental project funding would be budgeted under the separate vote heads of the several participating ministries, each would undertake its own procurement. Acceptable procedures for procurement have

been reached in on-going IFAD-assisted projects in Kenya, and, where applicable, they would be followed. Where bids exceeded KES 50 000, they would be procured through International Competitive bidding procedures acceptable to IFAD. For the procurement of vehicles, present regulations which require the procurement of in-country assembled four-wheel drive vehicles and pick-up trucks would not apply, and relaxation of the relevant Treasury orders would be requested.

6.22 In view of their small size and scattered locations, contracts for minor works would be awarded on the basis of local competitive bidding in accordance with District Tender Board procedures which are acceptable to IFAD.

H. Monitoring and Evaluation

6.23 The absence of regular reporting and monitoring routines under the pilot phase programme emphasises the need for the immediate institution of an effective system for monitoring project activities. This would be established by a reporting framework for each participating ministry or agency of annual work plans, budget estimates, financial reporting and by technical reporting and audit of physical progress as against planned and budgeted targets. The report formats and reporting procedures would be drawn up as a working manual by the specialised consultants engaged to undertake the development management study (para. 5.05). DPC would be responsible to the District Commissioner and DOC for the overall implementation of the monitoring programme, and for the regular and timely submission of financial and progress reports by participating agencies.

6.24 To secure impartial evaluation of the effects of project initiatives, it would be preferable for the regular review to be carried out by an agency not directly engaged in project implementation. CBS, which would carry out the initial baseline survey (para 5.05), has both the technical competence and experience to undertake this task. CBS would be able to call upon substantial evaluation expertise within MALD and the academic institutions. Continuity, however, is critical to good evaluation and this would be secured by using CBS as the lead agency. The costs of evaluation have been included with those of the base line survey.

VII. FINANCIAL ANALYSIS

A. Financial Implications to the Farmers

7.01 Producers' incomes have been estimated from farm models representing the average smallholder units, for agro-ecological Zones 2/3 and 4/5 at pre-project and improved levels of husbandry. Sources for farm size, cropping areas, improved and existing yields, and for overall labour requirements, were drawn from existing literature and MALD reports (Annex 12). Typical farms have some pure crop stands, but most consist of areas of multiple cropping with a wide range of different combinations. To obtain an assessment of farm income, it has been necessary first to construct sole crop models which lend themselves to more precise projection for the principal smallholder crops. The following table summarizes the parameters for the single crop enterprise using either current crop farmgate prices for scheduled crops, or local market prices.

Table 1: Crop Models. Summary of Net Revenues
based on Pure Stands (per ha. and per man-day)
(KSh)

Crop	Zone	<u>Unimproved</u>		<u>Improved</u>	
		per hectare	per man-day	per hectare	per man-day
Maize	L2/L3	1 190	15.3	2 531	20.3
	L4/L5	580	8.3	1 072	11.3
Cassava	L2/L3	2 700	27.0	5 950	39.1
	L4/L5	1 800	22.5	3 550	29.5
Banana	L2/L3	3 000	14.0	4 866	21.2
Cowpea	L2/L3	684	9.8	1 024	12.5
	L4/L5	504	7.5	664	9.0
Sorghum	L4/L5	432	6.6	1 042	13.9
Green Gram	L2/L3	1 140	17.2	1 508	21.5
	L4/L5	1 140	17.2	-	-
Sesame	L2/L3	725	11.7	960	14.5
	L4/L5	725	11.7	-	-
Sweet Potato	L2/L3	3 000	31.5	6 000	36.4
Cotton	L4/L5	735	11.3	1 285	18.3
Ground nuts	L4/L5	1 540	20.0	3 185	35.4

Table 3: Project Impact on Government Cash Flows ^{a/}
(KE'000)

	- - - Inflows - - -		- -Outflows- - -	
<u>Project</u>	<u>Cost</u>	<u>Taxes,</u>	<u>Project</u>	<u>NET</u>
<u>Year</u>	<u>Sharing</u>	<u>duties</u>	<u>Expenditures</u>	<u>IMPACT</u>
	<u>b/</u>	<u>c/</u>		
1	6	126	1 026	(894)
2	11	74	419	(334)
3	17	52	364	(295)
4	23	52	281	(206)
5	30	52	263	(181)
6	-	42	210	(168)
7	-	31	158	(127)
8	-	21	105	(84)
9	-	10	53	(43)
10-20	-	5	26	(21)

7.04 Some additional indirect public revenue generation can be expected as project beneficiaries spend part of any increased crop surplus revenues on consumer goods which carry duty and tax. However, this is of minor importance.

7.05 The foreign exchange flows under the project are expected to favour Kenya in the long term as a result of import substitution. The economic values of incremental production of maize, cotton and sesame can be regarded as a net foreign exchange benefit as Kenya is an importer of these products. The approximate foreign exchange flows are summarized in the following table:

a/ See Annex 9 for details; all figures rounded to nearest £1 000.
Excludes the co-operative credit component and financing flows.

b/ Cost recovery through sale of planting material.

c/ On total project costs and incremental crop inputs.

Table 4: Project Impact on Government's Foreign Exchange Position ^{a/}
(KE'000)

<u>Project Year</u>	<u>-Movements^{b/}-</u>				<u>Net Effect Pre-financing</u>
	<u>Import Substitution</u>	<u>Project Costs</u>	<u>Incremental Inputs</u>		
1	40	347	1		- 308
2	122	89	3		30
3	198	75	5		118
4	296	102	7		187
5	413	86	10		317
6	413	69	10		334
7	413	551	10		352
8	413	34	10		369
9	413	17	10		386
10-20	413	9	10		394

C. Cost Recovery

7.06 Government would collect revenues from the project in two forms:

- (a) direct cost recovery via cost sharing on technical services (mainly through sale of improved planting material); and
- (b) taxes and duties on purchased goods and services required under the project.

7.07 Cost sharing under the project would exist only for sale of coconut seedlings, cassava cuttings, banana suckers and sorghum seed; purchased inputs such as fertilizers and pesticides are not taxed or subsidized at point of sale in Kenya. Livestock inputs and veterinary services are subsidized; artificial insemination, vaccination and dipping charges recover only a very small proportion of user costs. Similarly, fruit tree and forestry seedlings are priced well below full cost recovery levels to encourage greater adoption by farmers. Cost recovery levels from planting materials bulked and sold under the project are given in Table 3 (coconuts, cassava, banana, sorghum): the bulking programme is assumed to cease after PY-5.

^{a/} See Annex 9 for details.

^{b/} Foreign exchange inflows and outflows; rounded to nearest £1 000 (excluding contingencies).

VIII. ECONOMIC BENEFITS, JUSTIFICATION AND RISKS

A. Project Benefits

8.01 Project benefits would include additional output from field and tree crops, livestock and fisheries. However, in this study only incremental field crop production has been estimated, priced and costed in full. Projections for tree crops cannot be made accurately until reliable marketing information is generated (an in-depth study is recommended and costed). In view of the indeterminate results of the pilot phase improved livestock programmes, only limited breeding stock multiplication and demonstration activities have been included in the projects. While incremental expenditure on fisheries has been budgeted under the project (KE170 000 - US\$ 212 500), activities have yet to be fully identified by the Fisheries department. Accordingly, no incremental benefits are claimed for these components.

8.02 While the project, through its support for marketing and input supply services, would assist production of all typical smallholder crops, (maize, cassava, cowpeas, banana, green grams, sesame, sorghum, cotton, groundnuts and sweet potato), it would have a direct impact only on the production of cassava, bananas and sorghum; the first two are important food crops and it is GOK policy to promote sorghum as a staple food crop in the project area. Accordingly, only the incremental annual production of these crops, estimated at full development at 12 800 tonnes with a value of KE550 000 in 1985/86 prices, has been used in the calculation of project economic benefits.

8.03 The target group of the project includes 24 000 farmers in the project area, or nearly one-third of the defined IFAD target group (Cap III). The number of farmers affected by the project would increase each year over a five-year period, at moderate rates of growth which, with incremental financing under the project, would be well within the capacity of the extension services.

8.04 Strengthening of the district-level administration, planning and management capabilities, would be a major objective of the project. Project organization would integrate and strengthen existing institutions and, in particular, would improve district co-operative activities in input supply and marketing of agricultural surpluses.

B. Economic Analysis

8.05 The economic rate of return (ERR) for the project, determined for direct project benefits, (incremental cassava, banana and sorghum production), and corresponding technical services costs, is estimated at 19%. The net present value (NPV) is KE0.68 million (US\$ 0.85 million), discounted at 12%. The basis for estimation is a project period of 20 years.

8.06 For the calculation of project costs, farm inputs were included at full economic costs (see Annex 9, Tables 4 - 13 inclusive); on-farm labour has been included at Ksh 13.2 per man-day. This is the minimum wage available in alternative employment and is equivalent to the daily income needed to obtain a satisfactory diet; and it can therefore be regarded as the minimum "living wage".

8.07 Foreign exchange has been valued at 1.15 times the official exchange rate to reflect relative scarcity. Taxes and duties on all inputs have been removed to obtain real values.

8.08 For valuing incremental crop production the prices used in the economic analysis are the local market prices (for non-internationally traded commodities), or international parity prices (in the case of sorghum).

8.09 Sensitivity analysis. Project benefits and costs have been varied to obtain some measure of the sensitivity of the project to changes in basic parameters. If incremental production falls short of expectation by as much as 25% the ERR falls to 12%. If all project costs are taken into account as economic costs, and benefits maintained at projected incremental production (cassava, bananas and sorghum only), the ERR is 10%. Should project costs overall rise to 30% above July 1986 levels, without any corresponding increase in crop prices and incremental returns, the ERR will fall to around 13%. An increase in project benefits of 10% would lead to improvement of the ERR to 21%.

8.10 If it is assumed that the minimum acceptable level of ERR is 12%, then incremental crop benefits would have to fall by 28% from expected levels, or prices would have to rise by 39% over the levels used in the analysis (or an equivalent combination of reduced benefit and increased real costs) in order to reduce ERR to 12%. This analysis demonstrates that the project can tolerate a high degree of variation in the production benefits or in economic costs. However, the viability estimates are contingent upon successful bulking and delivery of improved planting material and effective, intensive agricultural extension services.

C. Risks

8.11 The major risks to the orderly implementation of the Projects are managerial and are those identified in the pilot phase programme, i.e., failure to establish an effective district development administration with authority to assign clear responsibility for action on project components; lack of timely planning and work programmes; and the absence of well designed reporting, monitoring and evaluation procedures.

8.12 Project benefits derive principally from the efficient production and distribution of improved planting materials to beneficiaries; mobile agricultural and co-operative extension services with detailed work programmes; and improved crop marketing and financing facilities. Unless co-ordination of these activities, which are the responsibility of different government departments and other agencies, is well managed and supervised, the full impact of project investments will not be achieved.

8.13 Project formulation has assumed a given level of investment in agricultural extension facilities and vehicles under the National Agricultural Extension programme. Care has been taken not to duplicate this financing, and delay in the allocation of budgeted capital and recurrent cost allocations to MALD district services would, therefore, affect the planned rate of implementation of the agricultural component.

8.14 Project design relies fully on the expansion or full use of the services of existing Government organizations, agencies and parastatals in the project area. No new bureaucratic, financial or operational procedures are proposed, and recommendations made are in full accord with the declared policy of Government, and of its institutions. Implementation, however, does depend on the timely investment in facilities and services by participating organizations, and the absence of one element could adversely affect the planned development as a whole. Government, however, is fully aware of the problems of an unco-ordinated approach; resolution of the issues listed in Chapter IX of this Report would ensure a well integrated programme. No further major risks are foreseen.

IX. ISSUES

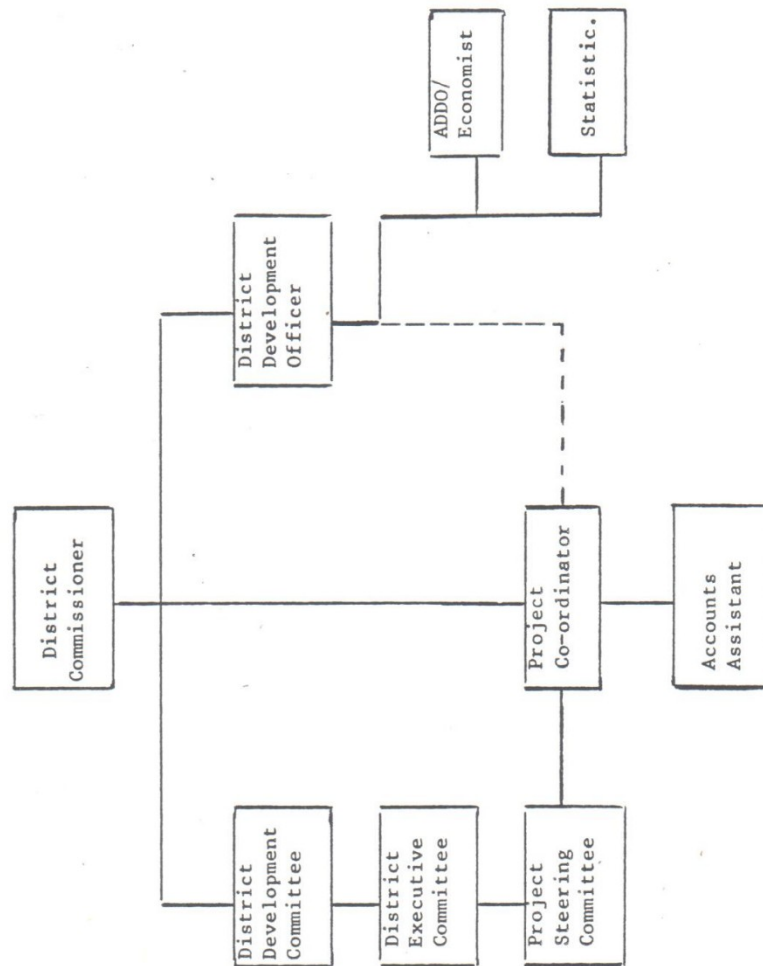
9.01 During the mission a number of issues were raised upon which the firm decision of Government or further action would be advantageous by appraisal:

- (a) establishment of the proposed district development organization (para 6.03);
- (b) commencement of recovery of co-operative IADP II debt (para. 5.16);
- (c) agreement on establishment of a Revolving Credit Fund in the Co-operative Bank (para. 5.27);
- (d) conditions of Co-operative Bank management of RCF (para. 5.28);
- (e) direct lending by the Co-operative Bank to co-operative societies in Kilifi District (para. 5.18);
- (f) feasibility of direct lending by the Co-operative Bank to branches of recognised Co-operative Societies (para. 5.19);
- (g) agreement of National Cereals and Produce Board to operate transit stores in both Districts (para. 5.27);
- (h) agreement of Kenya Grain Growers Co-operative Union to operate branches in both Districts (para. 5.26);
- (i) co-operative construction and rental of district premises to NCPB and KGGCU (paras. 5.25 and 5.26);
- (j) establishment of District Project Steering Committees (para. 6.03);
- (k) inclusion of PY 1 estimates in 1987/88 Forward Budget Estimates (para. 6.11);
- (l) confirmation of Projects' budgetary mechanism (para. 6.12).
- (m) preparation and inclusion of smallscale irrigation rehabilitation and smallholder fisheries component by the Ministry of Agriculture and the Ministry of Wildlife and Tourism respectively. Small-scale irrigation schemes in the project area include: Burangi (150 ha), Chakama (120 ha) and Sabaki Scheme (12 ha) in Kilifi district and Vanga Scheme (68 ha) in Kwale district. None of these schemes are functioning at full capacity. Given that the supervision of irrigation schemes falls under the Ministry of Agriculture and Livestock Development, which would in any case play a leading role in the implementation of the project in the two districts, it is likely to require little additional effort to review the conditions under which the management of the irrigation schemes could be improved.

- (n) Forestry: The IFAD report does not include proposals on Forestry. Although the 1982 preparation report identified the planting of trees for soil conservation purposes and for fuelwood, particularly in the arid and semi-arid lands of the hinterland, to be two important forest requirements in the project area, the 1986 Government proposals for an afforestation component in the two districts, including tree nurseries and Government-managed fuelwood plots, did not quantify the forestry needs in the Project area, nor did it identify the available technical packages or review the past performance of the Forest Department. Given that the forest sector is currently under a national review to define its strategic aims and methods of intervention and given that forest activities would be managed under a separate institution (the Forest Department of the Ministry of Environment and Natural Resources), we recommend leaving this sector aside while the national review exercise continues and until the Forest Department emerges as a strengthened institution capable of effectively handling rural afforestation activities.
- (o) Research. The Government of Kenya is discussing a National Research Programme with a number of donors (World Bank, USAID and EEC). The extent of assistance is not clear. However, the World Bank, one of the potential major donors, has indicated that additional assistance to Katumami and Mtwapa dryland research stations for adaptive trials of drought resistant crops may be required. The situation would need close review at appraisal.

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

PROPOSED ORGANIZATION AND MANAGEMENT



KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSPROJECT COSTSTable of Contentspage

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSPROJECT COSTSI. PROJECT COSTSA. Total Project Costs

1.01 The total cost of the Kwale and Kilifi District Development Projects over the five-year implementation period is estimated at KE 3.28 million (US\$ 4.10 million), of which foreign costs would account for KE 0.70 million (US\$ 0.87 million), or 21% of the total. If taxes and duties are excluded, total costs would be KE 2.98 million (US\$ 3.72 million). Detailed project costs by category are given in Table 1.

1.02 The costs shown in Table 1 will be incremental, covering those investments and operational costs over and above present recurrent expenditures of the line ministries and the lending activities of the Co-operative Bank of Kenya. In the Tables, the costs have been allocated to GOK budget codes for line items in order to correspond with the budgetary system and adhere to FB ceilings for each line ministry in Kwale and Kilifi Districts. Costings have been based on the assumption that 1986/87 levels of recurrent GOK expenditure would be maintained in real terms throughout the project period.

1.03 For annual farm inputs used by MALD (fertilizers, chemicals, planting materials) the cost table includes the quantities that are incremental to the present levels of use, and are fully costed (there are no subsidies on these inputs in Kenya). Veterinary inputs are subsidized under the present user cost structure and full costs are taken into account in the economic analysis.

1.04 Contingency allowances. All prices used in the study are quoted at June 30, 1986 levels. Therefore, prices are escalated for the 1986/87 financial years, and thereafter, at the following rates:

Financial years	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u>	<u>1990/91</u>	<u>1991/92</u>
International	7	7	8	8	7	7
Domestic	11	10	9	9	8	8

FY 1987/88 corresponds to PY 1. For physical contingencies, 10% has been added to the base cost of capital items and recurrent expenditure. No physical contingencies have been included for the credit element, although

some costs under the credit component (mobile bank purchase and operation), have been costed inclusive of all contingencies. Total physical contingencies amount to 8% over base costs; price contingencies, taken over base cost plus physical contingencies, are 23% of total project costs and 32% of base costs.

1.05 Foreign Exchange Component. The indirect foreign exchange component of all project costs has been derived by disaggregating local inputs, value added, duty and tax components. Details of the foreign content of each cost are given in Tables 4-11 inclusive (unit costs for project components), and in Table 12 for the fisheries component, and Annex 7 Table 7 for the overseas training, studies and project monitoring.

1.06 Customs Duties and taxes. All capital and recurrent cost items are available locally and have been costed inclusive of duties and taxes with the exception of vehicles. Although assembled locally, arrangements can be made for these to be supplied free of duty and tax. Details of duty and tax components of each item are given in Tables 4-11 inclusive (unit costs for project components).

B. Kwale District Development Project Costs

1.07 Approximately 34% of the total project cost would be for development activities in Kwale District (Table 2). The total cost of the project over the five-year period is estimated at KSh 1.05 million (US\$ 1.31 million), of which the foreign cost component would be KSh 0.26 million (US\$ 0.33 million), or 25% of the total project costs. Without taxes and duties, the Kwale Project cost would be KSh 0.94 million (US\$ 1.08 million).

C. Kilifi District Development Project Costs

1.08 The Kilifi Project component activities account for KSh 0.97 million (US\$ 1.21 million), or 30% of total project costs (Table 3). The foreign cost element is estimated at KSh 0.25 million (US\$ 0.31 million). Without taxes and duties, the Kilifi Project cost would amount to KSh 0.86 million (US\$ 1.08 million).

D. Ministry of Planning and National Development -
Headquarters: Project Costs

1.09 MPND, which would be responsible for project coordination, would also administer three professional studies: (a) district development organisation, financial and administrative procedures and project implementation; (b) base line survey of project area target group; and (c) marketing of perishable farm produce. Professional training at the DDO and project co-ordinator level would be provided to strengthen project implementation and management. Total costs of these activities would be KSh 186,000 (US\$ 232,500) with a foreign cost component of KSh 67,200 (US\$ 84,000). Taxes and duties amount to KSh 42,240 (US\$ 52 800) or 23% of the total, levied on indirect costs of the studies and collected as corporate and income taxes (Table 1, Line G).

KENYA

Kwale and Kilifi District Development Projects

Total Phased Project Costs by Cost Category

(K.Pounds'000)

ANNEX 1
Table 1
cont'd

Category	Year 1		Year 2		Year 3		Year 4		Year 5		Totals				
	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total
E.General Services costs															
1.Office of the President	3.20	.50	3.70	3.20	.50	3.70	3.20	.50	3.70	3.20	.50	3.70	16.00	2.50	18.50
2.Min.of Plan.& Nat'l Dev.	7.82	1.26	9.08	7.82	1.26	9.08	7.82	1.26	9.08	7.82	1.26	9.08	39.10	6.30	45.40
3.Min.of Agric.& L'st.Dev.	34.08	6.18	40.26	32.53	8.12	40.65	30.97	8.06	39.03	29.41	7.99	37.40	27.84	7.93	35.77
4.Min.of Co-operative Dev.	5.73	.90	6.63	5.73	.90	6.63	5.73	.90	6.63	5.73	.90	6.63	28.65	4.50	33.15
Sub-Total	50.83	10.84	61.67	49.28	10.78	60.06	47.72	10.72	58.44	46.16	10.65	56.81	44.59	10.59	55.18
add : Physical contingencies	10	5.08	1.08	6.17	4.93	1.08	6.01	4.77	1.07	5.84	4.62	1.07	5.68	4.46	1.06
Price contingencies	1/	9.25	1.28	10.53	14.84	2.32	16.96	20.21	3.44	23.65	25.13	4.48	29.61	30.17	5.58
Total		65.17	13.20	78.37	68.84	14.16	83.03	72.70	15.24	87.94	75.91	16.19	92.10	79.21	17.23
F.Training costs															
1.Office of the President	43.33	11.36	54.69	43.33	11.36	54.69	43.33	11.36	54.69	43.33	11.36	54.69	216.65	56.80	273.45
2.Min.of Plan.& Nat'l Dev.	.00	54.00	54.00			.00			.00			.00	.00	54.00	54.00
3.Min.of Agric.& L'st.Dev.	27.00	27.00	54.00			.00			.00			.00	27.00	27.00	54.00
4.Min.of Co-operative Dev.	13.50	13.50	27.00			.00			.00			.00	13.50	13.50	27.00
Sub-Total	83.83	105.86	189.69	43.33	11.36	54.69	43.33	11.36	54.69	43.33	11.36	54.69	257.15	151.30	408.45
add : Physical contingencies	10	8.38	10.59	18.97	4.33	1.14	5.47	4.33	1.14	5.47	4.33	1.14	5.47	25.72	15.13
Price contingencies	1/	15.25	12.46	27.72	12.87	2.45	15.32	18.35	3.65	22.00	23.59	4.77	28.37	29.31	5.99
Total		107.47	128.91	236.38	60.53	14.95	75.48	66.01	16.14	82.16	71.26	17.27	88.53	76.98	16.48
G.Technical services & studies															
1.Min.of Plan.& Nat'l Dev.	100.80	11.20	112.00	4.50	.50	5.00	4.50	.50	5.00	4.50	.50	5.00	4.50	.50	5.00
2.Min.of Tourism & Wildl.	35.00	15.00	50.00	21.00	9.00	30.00	21.00	9.00	30.00	21.00	9.00	30.00	21.00	9.00	30.00
Sub-Total	135.80	26.20	162.00	25.50	9.50	35.00	25.50	9.50	35.00	25.50	9.50	35.00	25.50	9.50	35.00
add : Physical contingencies	10	13.58	2.62	16.20	2.55	.95	3.50	2.55	.95	3.50	2.55	.95	3.50	2.55	.95
Price contingencies	1/	24.72	3.08	27.81	7.57	2.05	9.62	10.80	3.05	13.85	13.88	3.99	17.88	17.25	5.01
Total		174.10	31.90	206.01	35.62	12.50	48.12	39.85	13.50	52.35	41.93	14.44	56.38	45.30	15.46
H.Credit															
1.Co-operative Bank of Kenya	280.01	19.99	300.00	148.01	1.99	150.00	112.57	1.99	114.56	15.73	1.99	17.72	15.73	1.99	17.72
Sub-Total	280.01	19.99	300.00	148.01	1.99	150.00	112.57	1.99	114.56	15.73	1.99	17.72	15.73	1.99	17.72
add : Physical contingencies	10	2.77	2.00	4.77	1.57	.20	1.77	1.57	.20	1.77	1.57	.20	1.77	1.57	.20
Price contingencies	1/	46.80	2.35	49.15	40.39	.43	40.82	43.95	.64	44.58	8.56	.84	9.40	10.64	1.05
Total		329.58	24.34	353.93	189.97	2.62	192.59	158.09	2.83	160.92	25.87	3.03	28.89	27.94	3.24
Total baseline costs		741.39	284.92	1026.31	351.60	67.28	418.88	310.73	52.82	363.55	213.70	67.13	280.83	210.23	52.66
Total physical contingencies		48.91	26.49	75.40	21.93	6.73	28.66	21.39	5.28	26.67	21.37	6.71	28.08	21.02	5.27
Total price contingencies		130.79	33.54	164.33	100.85	14.51	115.36	127.87	16.97	144.83	116.36	28.21	144.57	142.22	27.75
TOTAL PROJECT COSTS		921.10	346.95	1268.04	474.39	88.51	562.90	459.98	75.07	535.05	351.43	102.05	453.48	373.47	85.67

Kwale District Development Project

Total Phased Project Costs by Cost Category

(Kpounds'000)

Category	Year 1		Year 2		Year 3		Year 4		Year 5		Totals					
	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	
A. Buildings & civil works																
1. Office of the President			.00			.00			.00			.00	.00	.00	.00	
2. Min. of Plan. & Nat'l Dev.	2.28	.50	2.78			.00			.00			.00	2.28	.50	2.78	
3. Min. of Agric. & L'st. Dev.	1.64	.22	1.86			.00			.00			.00	1.64	.22	1.86	
4. Min. of Co-operative Dev.	20.47	4.49	24.96			.00			.00			.00	20.47	4.49	24.96	
Sub-Total	24.39	5.21	29.60	.00	.00	.00	.00	.00	.00	.00	.00	.00	24.39	5.21	29.60	
add : Physical contingencies	10	2.44	.52	2.96	.00	.00	.00	.00	.00	.00	.00	.00	2.44	.52	2.96	
Price contingencies	1/	4.44	.61	5.05	.00	.00	.00	.00	.00	.00	.00	.00	4.44	.61	5.05	
Total		31.27	6.34	37.61	.00	.00	.00	.00	.00	.00	.00	.00	31.27	6.34	37.61	
B. Vehicles, plant & equipment																
1. Office of the President		5.05	8.39	13.44			.00			.00			.00	5.05	8.39	13.44
2. Min. of Plan. & Nat'l Dev.		11.28	10.31	21.59			.00			.00			.00	11.28	10.31	21.59
3. Min. of Agric. & L'st. Dev.		16.95	20.44	37.39	2.57	7.63	10.20	.76	.43	1.19	1.15	4.02	5.17	.73	.41	1.14
4. Min. of Co-operative Dev.		6.17	10.02	16.19			.00			.00	.40	3.60	4.00			.00
Sub-Total		39.45	49.16	88.61	2.57	7.63	10.20	.76	.43	1.19	1.55	7.62	9.17	.73	.41	1.14
add : Physical contingencies	10	3.95	4.92	8.86	.26	.76	1.02	.08	.04	.12	.16	.76	.92	.07	.04	.11
Price contingencies	1/	7.18	5.79	12.97	.76	1.65	2.41	.32	.14	.46	.84	3.20	4.05	.49	.22	.71
Total		50.58	59.86	110.44	3.59	10.04	13.63	1.16	.61	1.77	2.55	11.58	14.13	1.30	.67	1.96
C. Salaries, wages & allowances																
1. Office of the President		.83	.00	.83	.83	.00	.83	.83	.00	.83	.83	.00	.83	.83	.00	.83
2. Min. of Plan. & Nat'l Dev.		14.65	.00	14.65	14.65	.00	14.65	14.65	.00	14.65	14.65	.00	14.65	14.65	.00	14.65
3. Min. of Agric. & L'st. Dev.		6.81	.00	6.81	6.69	.00	6.69	6.57	.00	6.57	6.45	.00	6.45	6.33	.00	6.33
4. Min. of Co-operative Dev.		2.20	.00	2.20	2.20	.00	2.20	2.20	.00	2.20	2.20	.00	2.20	2.20	.00	2.20
Sub-Total		24.49	.00	24.49	24.37	.00	24.37	24.25	.00	24.25	24.13	.00	24.13	24.01	.00	24.01
add : Physical contingencies	10	2.45	.00	2.45	2.44	.00	2.44	2.43	.00	2.43	2.41	.00	2.41	2.40	.00	2.40
Price contingencies	1/	4.46	.00	4.46	7.24	.00	7.24	10.27	.00	10.27	13.14	.00	13.14	16.24	.00	16.24
Total		31.40	.00	31.40	34.04	.00	34.04	36.94	.00	36.94	39.68	.00	39.68	42.65	.00	42.65
D. Vehicle operating costs																
1. Office of the President		2.56	1.26	3.82	2.56	1.26	3.82	2.56	1.26	3.82	2.56	1.26	3.82	2.56	1.26	3.82
2. Min. of Plan. & Nat'l Dev.		2.58	1.27	3.85	2.58	1.27	3.85	2.58	1.27	3.85	2.58	1.27	3.85	2.58	1.27	3.85
3. Min. of Agric. & L'st. Dev.		5.84	3.88	9.72	8.44	5.10	13.54	8.44	5.10	13.54	8.44	5.10	13.54	8.44	5.10	13.54
4. Min. of Co-operative Dev.		3.40	1.64	5.04	3.40	1.64	5.04	3.40	1.64	5.04	3.40	1.64	5.04	3.40	1.64	5.04
Sub-Total		14.38	8.05	22.43	16.98	9.27	26.25	16.98	9.27	26.25	16.98	9.27	26.25	16.98	9.27	26.25
add : Physical contingencies	10	1.44	.81	2.24	1.70	.93	2.63	1.70	.93	2.63	1.70	.93	2.63	1.70	.93	2.63
Price contingencies	1/	2.62	.95	3.57	5.04	2.00	7.04	7.19	2.98	10.17	9.25	3.90	13.14	11.49	4.88	16.37
Total		18.44	9.80	28.24	23.72	12.20	35.92	25.87	13.17	39.04	27.92	14.09	42.02	30.16	15.08	45.25

KENYA

Kwale District Development Project

Total Phased Project Costs by Cost Category

(KilPounds '000)

ANNEX 1
Table 2
cont'd

Category	Year 1		Year 2		Year 3		Year 4		Year 5		Totals				
	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total	Local	For.Ex.	Total
General Services costs															
1.Office of the President	1.60	.25	1.85	1.60	.25	1.85	1.60	.25	1.85	1.60	.25	1.85	8.00	1.25	9.25
2.Min.of Plan.& Nat'l Dev.	3.87	.62	4.49	3.87	.62	4.49	3.87	.62	4.49	3.87	.62	4.49	19.35	3.10	22.45
3.Min.of Agric. & L'st.Dev.	19.92	5.35	25.27	19.16	5.33	24.49	18.40	5.30	23.70	17.63	5.27	22.90	16.86	5.24	22.10
4.Min.of Co-operative Dev.	3.07	.50	3.57	3.07	.50	3.57	3.07	.50	3.57	3.07	.50	3.57	15.35	2.50	17.85
Sub-Total	28.46	6.72	35.18	27.70	6.70	34.40	26.94	6.67	33.61	26.17	6.64	32.81	25.40	6.61	32.01
dd : Physical contingencies	10	2.85	.67	3.52	2.77	.67	3.44	2.69	.67	3.36	2.62	.66	3.28	2.54	.66
Price contingencies	1/	5.18	.79	5.97	8.23	1.44	9.67	11.41	2.14	13.55	14.25	2.79	17.04	17.18	3.48
Total		36.49	8.18	44.67	38.70	8.81	47.51	41.04	9.48	50.52	43.04	10.09	53.13	45.12	10.75
		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
F.Training costs															
1.Office of the President		20.42	5.34	25.76	20.42	5.34	25.76	20.42	5.34	25.76	20.42	5.34	25.76	102.10	26.70
2.Min.of Plan.& Nat'l Dev.			.00		.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3.Min.of Agric. & L'st.Dev.		13.50	13.50	27.00		.00		.00		.00		.00	13.50	13.50	27.00
4.Min.of Co-operative Dev.		6.75	6.75	13.50		.00		.00		.00		.00	6.75	6.75	13.50
Sub-Total		40.67	25.59	66.26	20.42	5.34	25.76	20.42	5.34	25.76	20.42	5.34	25.76	122.35	46.95
dd : Physical contingencies	10	4.07	2.56	6.63	2.04	.53	2.58	2.04	.53	2.58	2.04	.53	2.58	12.24	4.70
Price contingencies	1/	7.40	3.01	10.42	6.06	1.15	7.22	8.65	1.72	10.36	11.12	2.24	13.36	13.81	2.81
Total		52.14	31.16	83.30	28.53	7.03	35.55	31.11	7.59	38.70	33.58	8.12	41.70	36.28	8.69
		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
total baseline costs		171.84	94.73	266.57	92.04	28.94	120.98	89.35	21.71	111.06	89.25	28.87	118.12	87.54	21.63
total physical contingencies		17.18	9.47	26.66	9.20	2.89	12.10	8.94	2.17	11.11	8.93	2.89	11.81	8.75	2.16
total price contingencies		31.28	11.15	42.43	27.34	6.24	33.58	37.84	6.97	44.81	48.60	12.13	60.73	59.22	11.40
TOTAL PROJECT COSTS		220.31	115.35	335.66	129.58	38.07	166.65	136.12	30.85	166.98	146.77	43.89	190.66	155.51	35.19
		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
total baseline costs		171.84	94.73	266.57	92.04	28.94	120.98	89.35	21.71	111.11	89.3	2.89	11.81	8.75	2.16
total physical contingencies		17.18	9.47	26.66	9.20	2.89	12.10	8.94	2.17	11.11	8.93	2.89	11.81	8.75	2.16
total price contingencies		31.28	11.15	42.43	27.34	6.24	33.58	37.84	6.97	44.81	48.60	12.13	60.73	59.22	11.40
TOTAL PROJECT COSTS		220.31	115.35	335.66	129.58	38.07	166.65	136.12	30.85	166.98	146.77	43.89	190.66	155.51	35.19

KKST3

KENYA

ANNEX 1
Table 3

Kilifi District Development Project

Total Phased Project Costs by Cost Category

(Kfounds'000)

Category	Year 1		Year 2		Year 3		Year 4		Year 5		Totals		
	Local For.Ex.		Local For.Ex.		Local For.Ex.		Local For.Ex.		Local For.Ex.		Local For.Ex.		Total
A. Buildings & civil works													
1. Office of the President	4.55	1.00	5.55		.00		.00		.00		.00	4.55	1.00
2. Min. of Plan. & Nat'l Dev.	6.07	1.33	7.40		.00		.00		.00		.00	6.07	1.33
3. Min. of Agric. & L'st. Dev.	1.84	.22	1.86		.00		.00		.00		.00	1.84	.22
4. Min. of Co-operative Dev.			.00		.00		.00		.00		.00	.00	.00
Sub-Total	12.26	2.55	14.81	.00	.00	.00	.00	.00	.00	.00	.00	12.26	2.55
add : Physical contingencies 10	1.23	.26	1.48	.00	.00	.00	.00	.00	.00	.00	.00	1.23	.26
Price contingencies 1/	2.23	.30	2.53	.00	.00	.00	.00	.00	.00	.00	.00	2.23	.30
Total	15.72	3.11	18.82	.00	.00	.00	.00	.00	.00	.00	.00	15.72	3.11
B. Vehicles, plant & equipment													
1. Office of the President	5.05	8.39	13.44		.00		.00		.00		.00	5.05	8.39
2. Min. of Plan. & Nat'l Dev.	11.28	10.31	21.59		.00		.00		.00		.00	11.28	10.31
3. Min. of Agric. & L'st. Dev.	16.68	20.29	36.97	2.31	7.48	9.79	.49	.28	.77	.82	3.87	4.75	.47
4. Min. of Co-operative Dev.	6.17	10.02	16.19		.00		.00		.40	3.60	4.00		
Sub-Total	39.18	49.01	88.19	2.31	7.48	9.79	.49	.28	.77	1.28	7.47	8.75	.47
add : Physical contingencies 10	3.92	4.90	8.82	.23	.75	.98	.05	.03	.08	.13	.75	.88	.05
Price contingencies 1/	7.13	5.77	12.90	.69	1.61	2.30	.21	.09	.30	.70	3.14	3.84	.32
Total	50.23	59.68	109.91	3.23	9.84	13.07	.75	.40	1.14	2.10	11.36	13.46	.83
C. Salaries, wages & allowances													
1. Office of the President	.83	.00	.83	.83	.00	.83	.83	.00	.83	.83	.00	.83	.83
2. Min. of Plan. & Nat'l Dev.	14.65	.00	14.65	14.65	.00	14.65	14.65	.00	14.65	14.65	.00	14.65	14.65
3. Min. of Agric. & L'st. Dev.	4.71	.00	4.71	4.59	.00	4.59	4.47	.00	4.47	4.38	.00	4.38	4.23
4. Min. of Co-operative Dev.	2.20	.00	2.20	2.20	.00	2.20	2.20	.00	2.20	2.20	.00	2.20	2.20
Sub-Total	22.39	.00	22.39	22.27	.00	22.27	22.15	.00	22.15	22.06	.00	22.06	21.91
add : Physical contingencies 10	2.24	.00	2.24	2.23	.00	2.23	2.22	.00	2.22	2.21	.00	2.21	2.19
Price contingencies 1/	4.08	.00	4.08	6.61	.00	6.61	9.38	.00	9.38	12.01	.00	12.01	14.82
Total	28.71	.00	28.71	31.11	.00	31.11	33.75	.00	33.75	36.28	.00	36.28	38.92

KRST3

KENYA
Kilifi District Development Project

ANNEX 1
Table 3
cont'd

Total Phased Project Costs by Cost Category

(K'Pounds'000)

Category	Year 1		Year 2		Year 3		Year 4		Year 5		Totals	
	Local For.Ex.	Total Local For.Ex.	Local For.Ex.	Total Local For.Ex.	Local For.Ex.	Total Local For.Ex.	Local For.Ex.	Total Local For.Ex.	Local For.Ex.	Total Local For.Ex.	Local For.Ex.	Total
D. Vehicle operating costs												
1. Office of the President	2.56	1.26	3.82	2.56	1.26	3.82	2.56	1.26	3.82	2.56	1.26	19.10
2. Min. of Plan. & Nat'l Dev.	2.58	1.27	3.85	2.58	1.27	3.85	2.58	1.27	3.85	2.58	1.27	19.25
3. Min. of Agric. & L'st. Dev.	5.84	3.88	9.72	8.44	5.10	13.54	8.44	5.10	13.54	8.44	5.10	63.86
4. Min. of Co-operative Dev.	3.40	1.64	5.04	3.40	1.64	5.04	3.40	1.64	5.04	3.40	1.64	25.20
Sub-Total	14.38	8.05	22.43	16.98	9.27	26.25	16.98	9.27	26.25	16.98	9.27	127.43
add: Physical contingencies	10 1.44	.81	2.24	1.70	.93	2.63	1.70	.93	2.63	1.70	.93	12.74
Price contingencies	1/ 2.62	.95	3.57	5.04	2.00	7.04	7.19	2.98	10.17	9.25	3.70	50.29
Total	18.44	9.80	28.24	23.72	12.20	35.92	25.87	13.17	39.04	27.92	14.09	190.46
E. General Services costs												
1. Office of the President	1.60	.25	1.85	1.60	.25	1.85	1.60	.25	1.85	1.60	.25	9.25
2. Min. of Plan. & Nat'l Dev.	3.95	.64	4.59	3.95	.64	4.59	3.95	.64	4.59	3.95	.64	22.95
3. Min. of Agric. & L'st. Dev.	14.16	2.83	16.99	13.37	2.79	16.16	12.57	2.76	15.33	11.78	2.72	76.65
4. Min. of Co-operative Dev.	2.65	.40	3.06	2.66	.40	3.06	2.66	.40	3.06	2.66	.40	15.30
Sub-Total	22.37	4.12	26.49	21.58	4.08	25.66	20.78	4.05	24.83	19.99	4.01	124.15
add: Physical contingencies	10 2.24	.41	2.65	2.16	.41	2.57	2.08	.41	2.48	2.00	.40	12.42
Price contingencies	1/ 4.07	.48	4.56	6.41	.86	7.29	8.80	1.30	10.10	10.68	1.69	49.60
Total	28.68	5.02	33.70	30.15	5.37	35.51	31.66	5.76	37.41	32.87	6.10	186.16
F. Training costs												
1. Office of the President	22.91	6.02	28.93	22.91	6.02	28.93	22.91	6.02	28.93	22.91	6.02	144.65
2. Min. of Plan. & Nat'l Dev.		.00			.00			.00			.00	.00
3. Min. of Agric. & L'st. Dev.	13.50	13.50	27.00		.00			.00			.00	27.00
4. Min. of Co-operative Dev.	6.75	6.75	13.50		.00			.00			.00	13.50
Sub-Total	43.16	26.27	69.43	22.91	6.02	28.93	22.91	6.02	28.93	22.91	6.02	185.15
add: Physical contingencies	10 4.32	2.63	6.94	2.29	.60	2.89	2.29	.60	2.89	2.29	.60	18.52
Price contingencies	1/ 7.86	3.09	10.95	6.80	1.30	8.10	9.70	1.93	11.84	12.47	2.53	64.36
Total	55.33	31.99	87.32	32.01	7.92	39.93	34.90	8.56	43.46	37.68	9.15	268.03
Total baseline costs												
	153.74	90.00	243.74	86.05	26.85	112.90	83.31	19.62	102.93	83.22	26.77	670.56
Total physical contingencies												
	15.37	9.00	24.37	8.61	2.69	11.29	8.33	1.96	10.29	8.32	2.68	67.06
Total price contingencies												
	27.99	10.59	38.58	25.56	5.79	31.35	35.28	6.30	41.58	45.31	11.25	233.48
TOTAL PROJECT COSTS												
	197.10	109.59	306.70	120.21	35.32	155.54	126.92	27.68	154.81	136.86	40.70	971.09

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Building and Civil Works Costs ^{a/}
(Unit Rates)

<u>Building Component</u>	<u>Unit</u>	<u>Building Type</u>		<u>Store</u> (KSh)
		<u>Housing</u> (KSh)	<u>Office</u> (KSh)	
Excavation and drainage	m2	28	28	28
Substructure	"	522	765	565
External walling	"	218	84	84
Internal walling	"	134	246	-
Windows, doors	"	352	65	65
Internal Wall finish	"	112	39	-
Ceiling finish	"	562	-	-
Floor finish	"	111	32	32
Roofing	"	474	584	176
Water supply		7	7	-
Total Cost per m2		2 520	1 850	950
Of which:				
- Local content		1 760	1 300	710
- Foreign content		450	330	130
- Taxes, duties		310	220	110

^{a/} Based on current building costs in Kwale and Kilifi districts per unit area (m2) of building floor space for buildings specified by Ministry of Works tenders (July, 1986).

-KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Vehicle Purchase and Operating Costs
(Unit rates)

Parameters	Unit	Vehicle type			
		Short Wheel base, 4WD	Long Wheel base, 4WD	One ton Pickup	Lorry (7 tons)
Purchase price a/	K£	8 200	9 000	5 500	17 000
Life	km	130 000	130 000	90 000	160 000
Usage/Annum	km	25 000	20 000	20 000	20 000
Repairs, maintenance b/	%	15	15	15	15
Fuel cost/litre c/	KSh	8.3	8.3	6.3	6.3
Fuel consumption	km/l	5.0	4.5	9.0	3.5
Life	years	5	6.5	4.5	8
<u>Costs per Km</u>					
Fuel	KSh	1.66	1.84	0.70	1.80
Lubricants	KSh	0.11	0.18	0.24	0.18
Repairs, maintenance	KSh	0.98	1.35	0.83	2.55
Accident repairs d/	KSh	0.33	0.45	0.27	0.85
Total cost per Km		3.08	3.82	2.04	5.38
Of which:					
- Local content		0.94	1.24	0.73	1.04
- Foreign content		1.01	1.25	0.66	2.30
- Taxes, duties		1.13	1.33	0.65	2.04

- a/ Excluding duty and sales tax, but inclusive of licensing
b/ As proportion of purchase price per annum
c/ Average prices in rural areas (i.e. including transport)
d/ Included as 5 % of purchase price (includes damage caused by driver neglect).

ANNEX 1
Table 5

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Office Establishment Costs
(Unit rates)

<u>Furniture/ Equipment</u>	<u>Unit cost (KSh)</u>	<u>Module cost</u>		
		<u>Units (No.1)</u>	<u>Cost (KSh)</u>	
A) <u>General Office Module</u>				
Desk	2 500	2	5 000	
Typing table	1 800	1	1 800	
Chairs	400	4	1 600	
Filing Cabinet	2 000	1	2 000	
Cupboard	2 400	1	2 400	
Typewriter	11 000	1	11 000	
Adding machine	1 600	1	1 600	
Total cost per module			<u>25 400</u>	
Of which:				
- Local content			13 800	
- Foreign content			4 700	
- Taxes, duties			6 900	
B) <u>Special facilities</u>	<u>Unit Cost (KSh)</u>	<u>Local Content (KSh)</u>	<u>Foreign Content (KSh)</u>	<u>taxes duties (KSh)</u>
Photocopier	38 000	12 300	14 000	11 700
Duplicator	28 000	9 200	10 000	8 800
Air Conditioner	13 000	3 300	6 000	3 700
Micro-computer	142 000	35 000	40 000	67 000
Computer software	24 000	9 000	7 000	8 000
Heavy duty safe	45 000	14 400	16 600	14 000

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Schedule of Salaries, Wages and Allowances a/
(Unit rates)

Job Group	Salary <u>b/</u> p.a.	Housing <u>c/</u> Allowance	Nights <u>d/</u> out	Field <u>e/</u> Allowance	Bicycle <u>f/</u> Allowance
	K£	K£	K£	K£	K£
A	450	87	150	45	36
B	540	87	150	45	36
C	650	321	150	45	36
D	790	321	150	45	36
E	950	429	225	60	-
F	1 150	429	225	60	-
G	1 650	582	225	60	-
H	1 970	822	263	98	-
J	2 380	822	263	98	-
K	2 870	993	300	113	-
L	3 470	1 248	300	113	-
M	4 200	1 248	300	113	-

a/ Source: Personal Circular No.2 1985 (DPM/SAL/COM/13/20A); Allowances other than those detailed (special accommodation, medical) are allowed for in physical contingencies.

b/ Salaries rounded to mid point of middle segment in each job group.

c/ Allowance per annum.

d/ per 30 nights out.

e/ per 30 nights out.

f/ at rural rate per annum (assumed to apply to groups A-D only).

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Training Costs a/
(unit rates)

<u>Cost Components</u>	<u>District</u> (KSh)	<u>Course Level</u>		<u>Sub-location</u> (KSh)
		<u>Division</u> (KSh)	<u>Location</u> (KSh)	
Travel and transport	25	47	56	83
Accommodation and food	120	120	100	100
Training materials	40	40	40	40
Consultancy	30	30	-	-
Total cost per man day	<u>215</u>	<u>237</u>	<u>196</u>	<u>223</u>
Of which:				
- Local content	157	173	143	163
- Foreign content	32	35	29	33
- Taxes, duties	26	29	24	27

a/ Source: Annex 8, Volume II.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Nursery Establishment Costs ^{a/}
(unit rates)

<u>Cost item</u>	<u>Units</u>	<u>Unit Cost (KSh)</u>	<u>Local Content (KSh)</u>	<u>Foreign Content (KSh)</u>	<u>Taxes Duties (KSh)</u>
A. <u>Building ^{b/}</u>					
Shed/store	20 m ²	9 000	6 750	1 260	990
Storage tank	50 000 l	12 500	11 200	600	700
Wire netting	20 rolls	14 000	8 400	2 500	3 100
Hardwood poles	40 N°	1 800	1 800	-	-
Sub total		<u>37 300</u>	<u>28 150</u>	<u>4 360</u>	<u>4 790</u>
B. <u>Equipment ^{c/}</u>					
Water pump(5 h.p)	1 N°	7 500	1 870	3 055	2 575
GI pipes (3/4 inch)	100 m	2 400	1 720	440	240
Pipe fittings	quantity	400	290	70	40
Intake pipe(1.5 inch)	10 m	700	175	287	238
Sub-total	-	<u>11 000</u>	<u>4 055</u>	<u>3 852</u>	<u>3 093</u>
Total		<u>48 300</u>	<u>32 205</u>	<u>8 212</u>	<u>7 883</u>

a/ Standard cost per nursery for central nurseries.

b/ Cost Planning Unit, Ministry of Works and Housing.

c/ Supplier quotations.

ANNEX 1
Table 10
cont'd

<u>Cost Component</u>	<u>Units</u>	<u>Unit cost (KSh)</u>	<u>Local content (KSh)</u>	<u>Foreign content (KSh)</u>	<u>Taxes duties (KSh)</u>
<u>Planting material</u>					
Coconut Seedlings <u>c/</u>	N°	2.5	2.33	0.12	0.05
Cassava cuttings <u>c/</u>	N°	0.5	0.47	0.03	-
Banana suckers <u>d/</u>	N°	-	-	-	-
Citrus root stock <u>d/</u>	N°	-	-	-	-
Citrus seeds <u>d/</u>	N°	-	-	-	-
Sorghum seed <u>c/</u>	kg.	15	12	2	1
 <u>C. Ox-Ploughing</u>					
Hire of unit <u>e/</u>	KSh/ha	800	800	30	20
 <u>F. Miscellaneous</u>					
First aid kit <u>f/</u>	N°	400	120	160	120

Note: a/ Based on current prices at the Kenya Grain Growers Co-operative Union (KGCCU) retail shop in Mombasa.

b/ MOALD "Yields, Costs, Prices 1985"; prices escalated for 1986 parity.

c/ Current purchase prices from approved commercial sources

d/ Bulk on-station; costs included under labour and inputs

e/ Commercial hire rate for ox-ploughing (includes an element of subsidy on veterinary drugs and services).

f/ Retail pharmacy cost for standard first aid kit

ANNEX 1
Table 11

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Demonstration Materials
(Unit Rates)

<u>Item</u>	<u>Units</u>	<u>Unit Cost</u> (KSh)	<u>Total Cost</u> (KSh)
Improved hand tools <u>a/</u>	Qty	-	20 000
Hand-propelled planter	8	1 600	12 800
Hand-propelled weeder	8	1 600	12 800
Hand-operated maize sheller	8	1 200	9 600
Knapsack sprayer	8	1 600	12 800
Lightweight plough	12	3 000	36 000
Multi-purpose plough	12	3 000	36 000
Harrow	12	2 000	24 000
Ridger/cultivator	12	3 000	36 000
Ox-drawn cart	12	1 200	14 400
Storage cribs <u>b/</u>	qty	-	20 000
Accessories <u>c/</u>	qty	-	20 000
Total cost per district			<u>254 400</u>
Of which:			
- Local content			190 800
- Foreign content			38 200
- Taxes, duties			25 400

-
- a/ Includes long-handled hoes, fork jembes and hoes (lump-sum cost per district).
- b/ Cost of roofing materials and nails; hardwood poles and struts; and labour, to be provided by participating farmers (lump-sum cost per district).
- c/ Consists of yokes and harnesses for ox-drawn implements.

KKDP14

KENYA

Kwale and Kilifi District Development Projects

Ministry of Tourism and Wildlife (Fisheries Department/Headquarters - 60K Treasury Account Code 000

Incremental Technical Services

(Kfounds'000)

Category	Item code	Unit	Year 1 Cost No.	Year 2 Cost No.	Year 3 Cost No.	Year 4 Cost No.	Year 5 Cost No.	Totals	Local Costs	For.Exch.	Taxes,duties
									(%) Amount	(%) Amount	(%) Amount
I Capital											
II Operating costs											
III Training costs											
IV Technical Services & Studies											
A.Studies											
1.Project identification and Implementation 1/	184	lusp p.a.	50.00	30.00	30.00	30.00	30.00	170.00	55	93.50	30 51.00 15 25.50
Total			50.00	30.00	30.00	30.00	30.00	170.00	93.50	51.00	25.50
of which: Local content			35.00	21.00	21.00	21.00	21.00	119.00			
Foreign content			15.00	9.00	9.00	9.00	9.00	51.00			
TOTAL TECHNICAL COSTS			50.00	30.00	30.00	30.00	30.00	170.00	93.50	51.00	25.50
TOTAL MINISTRY COSTS			50.00	30.00	30.00	30.00	30.00	170.00	93.50	51.00	25.50

NOTE : Small rounding errors arise due to the use of units of Kfounds'000.
Sources : 1/ The fisheries component costs were unavailable at the time of project
formulation; provides for nominal FB cost ceiling.Fisheries Department
to prepare detailed requirements and costings for Appraisal

KENYA

KWALE AND KILIFE DISTRICT DEVELOPMENT PROJECTSTHE PROJECT AREATable of Contentspage

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KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

THE PROJECT AREA

I. PHYSICAL BACKGROUND

Location

1.01 The project area comprises the whole of Kwale and Kilifi districts in the Coast Province of Kenya (see Map 1). The Coast Province, covering a total of 83 280 km² lies in the East of Kenya between the Equator and 40°50' south and 37°30' East and the Indian Ocean. Administratively, the province is divided into 6 districts: Taita/Taveta, Tana River, Lamu, Kilifi, Mombasa and Kwale. The two Districts of Kwale and Kilifi lie to the South and North of Mombasa respectively.

Geology

1.02 The Kwale-Kilifi area belongs to a system of sedimentary and basement rocks which characterise the Coast Province with a general north-south pattern parallel to the coastline. The basement system rocks occur in the hinterland and constitute about 20% of the project area. They are mainly grits, sandstones, shales, metamorphosed limestone, gneisses and schists. The sedimentary rocks constituting about 80% of the project area consist of the following types:

- (a) triassic rocks. These are the so-called Mazeras and Mariakani sandstones. The Mazeras sandstones are coarse-grained and were deposited under continental lacustrine and deltaic conditions. They overlay the fine-grained Mariakani sandstones. Together they constitute about 50% of the geology of the area;
- (b) jurassic rocks show either as limestone capped by reddish clay sands, or as eroded/heavily dissected shales, and constitute about 10% of the project area;
- (c) tertiary sediments of marine-deltaic origin which consist mainly of marls, limestone and other conglomerates;
- (d) quaternary sediments. These are of recent deposits and occupy a very narrow belt along the coastline.

Topography

1.03 Three broad topographical zones can be distinguished in the project area. Each of these zones runs in a north-south direction and has distinct geological and soil qualities. These characteristics, together

with rainfall, dictate land use potential. Stretching from the coastline to approximately 5-10 km wide is the narrow, low lying Coastal Plain which is generally under 30 m above sea level, except from Malindi northwards where the land rises to 60 m in some places. This belt is made of coral, wind-blown sand and alluvial deposits. To the west of this plain, the landscape becomes slightly undulating and forms the Foot Plateau, which is between 60 and 135 m in altitude. The Foot Plateau is a mixture of limestones, sandstones and shale. Further inland is the Coastal Range made up of several sandstone hills, which lie between 150 m and 450 m above sea level. The Coastal Range includes the Shimba Hills in Kwale District and the Gaabo and Jabana hills in Kilifi. Beyond the Coastal range, the landscape becomes gently rolling in both districts and is at a slightly lower elevation than the Coastal Range. This area forms part of the erosional plains of Coast Province.

Drainage

1.04 The Kwale-Kilifi area is drained by eight river systems into the Indian Ocean. These are the Uмба, Mwena, Ramisi and Pamba rivers in Kwale District and the Sabaki, Rare, Ndovuni rivers in Kilifi District. The Mwangounde river drains both districts and enters the Indian Ocean at Mombasa. The Sabaki river is the largest in the project area. It rises from the Aberdare Mountains, where it starts as the Galana, flows through Maasailand as the Athi river and enters the sea north of Malindi as the Sabaki. The Sabaki, Uмба and Pamba rivers are perennial but with low dry season flows. The other rivers dry up in their upper stretches during the dry season and are perennial only in their lower reaches.

Climate

1.05 The climatic conditions at the Kenyan coast are largely controlled by the monsoon air currents from the Indian Ocean, modified by the orographic effects of the coastal ranges and the continental currents over the hot, dry hinterland. The north-south movement of the Intertropical Convergence Zone (ITCZ) gives the rainfall a bimodal pattern and determines the rainy seasons.

Rainfall

1.06 Rainfall is the most important climatic element relevant to agriculture in both districts. Temperatures are generally high with very little seasonal variation. The average annual rainfall ranges from 400 mm in the hinterland to over 1 200 mm at the coast except for a narrow belt stretching from Kilifi Town to Malindi along the coast which receives an average of about 900-1 000 mm per annum (see Map 2). Rainfall is higher in the south and decreases northwards; this pattern is particularly strong in Kilifi District. End Tables 1 and 2 give the rainfall figures from various recording stations in Kwale and Kilifi. The rainfall is bimodal. The long rains fall in the April-June period with a peak in May. The short rains are in October to December. This seasonality in the rainfall period is rather pronounced in the south, but barely noticeable in the hinterland and in the north, where the rainfall is very unreliable with large variations from year to year. Rainfall of 750 mm, often cited as

the minimum for permanent agriculture, can be guaranteed in 9 out of 10 years only on a narrow coastal belt south of Malindi in Kilifi District to Shimoni in Kwale District.

1.07 End Table 3 shows the climatic conditions in each of the agro-ecological zones^{1/}. Zones L2 and L3 are the wettest zones with a growing period ranging from 175 to 270 days (based on 60% reliability). The growing period during the second rains is short, averaging 50 days. This implies that only very early maturing crops or drought resistant crops can be grown during the second rains. The total amount and reliability of rainfall decreases from Zone L4 to Zone L6. It is estimated that rainfall decreases rapidly at a rate of 100 mm per 3 km from the coast to the hinterland.

Agro-ecological Zones

1.08 Five agro-ecological zones have been identified and mapped in the project area (see Map 3)^{2/}. Each of these zones has a different potential for agriculture development. The key aspects of the zones are summarized below.

- (i) Zone L2: Lowland sugarcane zone. In the project area, this zone occurs only in Kwale District. It receives an average rainfall of above 1 200 mm but has poor soils and as such has only a medium potential for agricultural purposes. It has a long-to-medium cropping season (about 280 days) and covers an area of 235 km² (1.1% of the project area).
- (ii) Zone L3: Coconut-cassava zone. It occurs in both districts and even though receives over 1 000 mm of rainfall per annum, it has a medium potential for agricultural crop production on account of its poor soils. It is however the dominant crop producing zone in the two Districts. The growing period ranges between 210 and 280 days. This zone covers 1 449 km² (7%) of the project area.
- (iii) Zone L4: Cashewnut-cassava zone. The rainfall in this zone is between 900-1 000 mm. It occurs in both Districts with the greater part in Kilifi District. As a result of low, relatively unreliable rainfall and poor soils, the L4 zone has a low to medium potential for rainfed crop production with a growing period ranging from 88-155 days. The total land coverage of the L4 zone in the project area is 2 942 km² (14%).

^{1/} See paragraph 1.8 for definitions.

^{2/} Details are contained in The Farm Management Handbook, Volume II, Part C, Eastern Kenya, by Jaetzold R. and Schmidt H. 1983.

- (iv) Zone L5: Lowland livestock and millet zone. It receives only 700 to 900 mm of rainfall, and is semi-arid in nature. With an unreliable rainfall, poor soils and a short growing period averaging 75 days, it is only marginally suitable for rainfed crop production.
- (v) Zone L6: Ranching zone. The average rainfall in this zone is less than 700 mm per year. This coupled with poor soils gives the zone the lowest potential for agricultural development. With a growing period of only 30-40 days, it is classified as arid and is an area for extensive livestock grazing.

Together, the L5 and L6 zones occupy 13 810 km² or 66.5% of the project area. Cropping is basically possible in zones L2 and L3 without serious climatic problems. In zones L4 and L5, however, successful cropping depends largely on the ability of farmers to conserve water and the timing of field operations.

Vegetation.

1.09 Human activity has greatly reduced the natural vegetation in the project area. Four broad vegetation types are identified: These are:

- (a) Lowland forests. Both dry and moist lowland forests occur, but only remnants of the indigenous forests survive, as the area has been extensively cultivated. The lowland forests have such species as: Albezia anthelmintica, Hyphaene compressa, Brachystegia spiciformis and Azelia quanzensis. These species occur mostly in the L2/L3 zones;
- (b) lowland woodlands. These occur mostly on the drier parts of Mazeras and Mariakani. The dominant trees are B. spiciformis and A. quanzensis. Much of these woodlands have been cleared for charcoal burning and for cultivation in the L4 zone;
- (c) acacia bushlands occur in the dry L4 and L5/6 zones and are dominant below the 600 mm isohyet. The important tree species include Acacia senegal, A. zanzibarica, Euphorbia tirucalli and Adenia globosa;
- (d) mangroves and swamps occur in various creeks along the coastal belt. One of the mangrove species of economic importance in the region is Bruguiera gummorrhia which is used for timber. Other mangrove species are also used for building poles and fuel wood.

Soils

1.10 Several soil types, differing widely in depth, texture, physical and chemical properties occur in the Kwale-Kilifi area. There is a strong relationship between the soils and the geology. The soils can be grouped broadly into:

- (a) coastal plain soils which have been developed on coral limestone and coastal sands. They are well drained, deep and loamy sand to sandy clay in texture;
- (b) coastal upland soils which are derived from various parent materials and are therefore variable in nature and property. They range from deep loamy soils which are well drained to impervious clays which support only stunted trees and elephant grass;
- (c) erosional plain soils which are derived from erosional sediments and are sandy to clayey in texture. The clay textured soils often occur on riverine flood plains in the area.

1.11 The entire project area has been mapped at reconnaissance level by the Kenya Soil Survey (KSS)^{3/}. The soils of the project area are shown in Map 4 based on the KSS Exploratory Soil Map (1980). The details of the three broad soil groups mentioned above are given in the subsequent paragraphs^{4/}.

- (a) Coastal plain. The plain is built up in a number of marine terraces, the lower being developed on coral limestone with overlying or admixed sand and the upper on marls. They are generally well drained, reddish loamy sand to sandy clay. A transition towards the foothills comprises soils formed from lagoon or marine deposits originally overlain with sandy deposits (Kilindini sands) and these are mainly moderately/well drained sands to well drained sands/loamy sands.
- (b) Coastal uplands:
 - (i) Magarini sands: The foothills are characterized by a strip of very deep well drained dusky red sandy clay loam to sandy clay overlain by 20-40 cm of loamy sand/sandy loam;
 - (ii) jurassic shales: Well drained to imperfectly drained, shallow to moderately deep, firm clay, sometimes with sodic sub-soil. They occur in a good rainfall zone and are intensively cultivated and capable of providing good grazing, but are not suited to coconut and cashewnut;
 - (iii) Kambe limestone: Well drained, deep, dark red to brown friable sandy clays, developed on oolitic limestone or calcitic mudstone;

3/ Kenya Soil Survey, 1980. Report N° E.1 and Soils of the Kwale-Mombasa-Lunga Lungu Area, KSS Report N° R.3, 1978

4/ Details summarized from Kwale-Kilifi Integrated Development Project, Preparation Report. Booker Agriculture International Limited, 1982.

(iv) Mazeras sandstones and Shimba grits: Mainly well to excessively drained, very deep, yellowish-red to brown friable sand/loamy sand to sandy clay, developed on coarse grained sandstones. They occur in medium to marginal rainfall zones and together with Kambe limestones, they are thus liable to drought, although good rooting depth would be a mitigating factor. They should be well suited to cashewnut production and to most annual crops at reduced high yield levels

(v) Mariakani sandstones and upper Maji-ya-Chumvi beds: These soils span a wide complex variation of soil types, and are generally well drained, brown to yellowish-brown, very fine sandy clay loam to clay, with a fine loamy sand top-soil, in places with an abrupt transition and a sodic sub-soil. They occur in a low rainfall zone and are unsuitable for cashew trees where sodic or heavy-textured sub-soils occur, but are suited to a wide range of annual crops at reduced yield levels. Shallow soils and soils with impeded drainage developed from the same parent material occur in Kwale District and have very limited cropping potential;

(c) Erosional plains

(i) Lower Maji-ya-Chumvi beds: Well to imperfectly drained, shallow to deep, dark brown, sandy clay loam to clay, developed on silt stones and shales occurring in low rainfall marginal cropping to ranching zone;

(ii) Taru grits: Well to imperfectly drained, deep, dark brown to black, sand clay loam to clay underlying loamy sands. Developed on felspathic sandstones and carbonaceous shales. Occuring in western low rainfall ranching zones;

(iii) Plio-or Pleistocene sediments: Imperfectly drained, deep, brown, calcareous, moderately sodic clay loam (hardpan) with a thin top-soil of sealing sandy loam;

(iv) Higher level plains: Well to imperfectly drained, deep, red to reddish brown, sandy loam to sandy clay. Developed on sheetwash or aeolian sediments from Basement System or sedimentary rocks. Occuring mainly in low rainfall ranching zone of Kilifi District.

1.12 In general, the soils are poor in fertility (see Maps 5 and 6). The soils in Zone L3 are of medium to low fertility. Consequently, to produce a good crop, these soils require rather high fertilizer inputs. In view of the subsistence nature of farmers in the project area, and the relatively high prices of fertilizer, soil fertility will remain a major draw-back to rapid agricultural development in both Kwale and Kilifi Districts for some time. Appendix I gives a detailed description of soils in the project area.

II. SOCIAL INFRASTRUCTURE

Demography

2.01 Population. Kwale and Kilifi Districts had a total population of nearly 719 349 in 1979. Table 1 gives the population projections for the area. Before 1990, the combined districts' population will exceed one million.

Table 1: Population Estimate for Kwale and Kilifi Districts

<u>District</u>	<u>Actual</u>	<u>Projections a/</u>		<u>Growth rates</u>
	<u>1979 b/</u>	<u>1986</u>	<u>1990</u>	<u>1969-1979</u>
Kwale	288 363	391 000	458 000	3.4%
Kilifi	430 986	584 000	684 000	3.5%

Sources: a/ CBS projections at constant (1969-1979) fertility and mortality rates.

b/ CBS, 1979 National Census.

2.02 The 1979 population consisted of 52 261 households for Kwale District and 76 741 households for Kilifi District. About 95% and 88% of the households for Kwale and Kilifi respectively were agricultural (see Table 2 b/) with an average of 5.5 persons per household in both districts. These are thought to have increased to 6.7 for Kwale District and to 7.0 in Kilifi District^{2/}. It appears that an increase in household size rather than growth in number of households is mostly responsible for absorbing population increase^{2/}. Estimates of household size in 1986 assume a small growth in the number of households over the 7 years since 1979 of 4.2% in Kwale and 4.5% in Kilifi District are presented in Table 2 below.

Table 2: Estimated Number of Agricultural Households (farm families)

<u>District</u>	<u>Actual 1979 a/</u>			<u>Estimated 1986 b/</u>		
	<u>District pop'n</u>	<u>Total h'holds</u>	<u>Agric. h'holds</u>	<u>District pop'n</u>	<u>Total h'holds</u>	<u>Agric. h'holds</u>
Kwale	288 363	52 261	50 384	391 000	58 358	52 522
Kilifi	430 986	76 741	67 868	584 000	83 429	70 914
Total	719 349	129 002	118 252	975 000	138 787	123 436

Source: a/ CBS, 1979 National Census

b/ Consultant's estimates based on CBS population projections, household sizes of 6.7 for Kwale and 7.0 for Kilifi, and proportion of agricultural households as 90% for Kwale and 85% for Kilifi.

^{2/} African Medical and Research Foundation (AMREF) Demographic and Socio-Cultural Survey, Consultancy Report to the Swedish International Development Agency, August 1985.

2.06 However, these figures should be further adjusted to arrive at adult equivalents, as children are not capable of sustaining farm work over long periods during peak season operations (e.g. land preparation). If the available labour in the 10-15 years age group is arbitrarily halved to give adult equivalents, the results are (children 5-10 are excluded):

- Kwale District: 3.69 persons
- Kilifi District: 3.82 persons.

2.07 Ethnic Structure. In terms of population distribution, ethnic composition, environment and agricultural activities, Kwale and Kilifi Districts are similar. The population comprises Mijikenda (over 80%), of which the Giriama, Waduruma and Wadigo are numerically the most important. The Giriama are mainly found in Kilifi District and are traditional agriculturalists/cattle owners with large extended families. The Duruma mainly inhabit the hinterland of Kwale District, and are primarily cattle owners. The Digo are associated with the coastal strip and the southern part of Kwale District; they are agriculturalists. In Kwale District, in-migration of Wakamba has led to this ethnic group now comprising nearly 10% of the District's population. Other ethnic groups of note in both Districts include Luo, Kikuyu, Taita, Luhya, Swahili and non-Africans.

2.08 Population Density. Overall population density is moderate (average national density is 27 persons/km²), but there are wide variations within each District - from as low as 8 persons/km² to over 300. The average population densities are presented in Table 5 for both districts. Between 1979 and 1986, there have been significant increases in the average densities.

Table 6: Population Density in Kwale and Kilifi Districts

<u>District</u>	<u>Land area</u> (km ²)	<u>Population</u> (1979)	<u>Density a/</u>	<u>Estimated</u> <u>population</u> (1986)	<u>Density b/</u>
Kwale	8 257	288 363	35	376 000	45
Kilifi	12 414	430 986	33	561 000	45

Source: a/ CBS, Statistical Abstract 1985, Table 12.
b/ Consultant's estimates based on CBS population projections.

2.09 Population Pressure. A more meaningful measure of population density is the "land pressure index" - the population density calculated on land available to small farmers. For Kwale the density is 134, for Kilifi 165 persons/km² on crop land and 20 and 31 persons/km² respectively on range land (see Table 7).

2.10 Land Use. The major land use and tenure types in the project area are summarized in Table 6. About 61% of the land in the two districts is classified as Trust Land. The rest are either Government land or

freehold. Agriculture, crop and livestock production are the dominant land uses and together occupy 67% of the total land area. Farm families are basically smallholders and together with the pastoralists constitute about 89% of the number of households in the project area. There are 452 km² of forests in the two districts (417 km² in Kilifi District). In addition, 192 km² of Kwale District are reserved as a National Park.

Table 7: Estimation of Land Use and Land Pressure

<u>Land Category</u>	<u>Land area</u>	
	<u>Kwale</u>	<u>Kilifi</u>
A. <u>Overall a/</u>		
a. Total area of district	8 322	12 523
b. Open water	65	109
Total land	8 257	12 414
B. <u>Of which a/</u>		
a. Government land	2 696	4 934
b. Freehold land	34	233
c. Trust land	5 517	7 247
Total land	8 257	12 414
C. <u>Land Use</u>		
a. Township reserves, forests, parks etc a/	944	1 291
b. Large-scale farming b/	156	206
c. Small-scale farming b/	1 929	2 335
d. Ranches, pastoral b/	5 228	8 582
Total land	8 527	12 414
D. <u>Population c/</u>		
a. Farmers (Zones II, III, IV)	258 000	384 300
b. Pastoralists (Zones V, VI)	91 000	112 700
E. <u>Density on Land Used c/</u>		
a. Zones II, III, IV d/	134	165
b. Zones V, VI d/	20	31

Source: a/ CBS: Statistical Abstract 1985 (data as at 31.12.1983).
b/ Includes private and parastatal ranches which total 588 km² in Kwale and 4,970 km² in Kilifi.
c/ Consultant's estimate (see Table 3 b).
d/ Excluding company and private ranch areas not available to traditional pastoralists.

Health and Nutrition

2.11 Vital Rates. The crude birth rate is thought to be 40-45 per 1 000 and the crude death rate 12-15 per 1 000 in Kwale District^{1/}. It is reasonable to assume similar parameters for Kilifi District, for which no

7/ AMREF, op.cit.

specific data are available. The early childhood mortality rate in the two districts is very high, and among the highest in Kenya. In Kwale, for example, the rate is 190 per 1,000 and over 64% of deaths occur amongst children less than one year old. Major causes are thought to be malnutrition and malaria coupled with diarrhoeal diseases.

2.12 Kwale and Kilifi Districts (and the other coastal areas) have the highest level of stunting in Kenya, at almost twice the national average. Mortality and morbidity appear to be directly related to malnutrition^{8/}. The latest CBS Child Nutrition Survey indicated that in 1982 the proportion of children in Coast Province characterised as stunted was 36% and wasted 5% (see Table 8). Kilifi ranks as one of the five districts of Kenya with the highest protein-energy malnutrition (PEM). Among the poorer strata of the population, which includes smallholder farmers, agricultural labourers and pastoralists, energy intake only reaches 80% of requirements^{9/}. Anthropometric measurements (weight for age, weight for height, mean arm circumference) show a slight deteriorating trend in Coast Province over the period 1977-1982.

Table 8: Indicators of Nutritional Status and
Socio-economic Conditions

<u>Indicator</u>	<u>Kwale</u>	<u>Kilifi</u>
Percent stunted	38.5	42.1
Percent wasted	4.9	5.1
Mortality		
- 1979 census (per 1 000)	190	206
- CBS survey (%)	19.4	15.7
Percent sick	43.4	64.1
Proportion of illness malaria	23.8	25.8
Proportion of children with mothers		
having no education	83.0	85.8
Proportion without piped water	86.0	74.7
Proportion without sewage facilities	81.5	64.9
Population density on arable land		
(per km ²)	100.0	70.0
Child population (0-4 years) x 1,000	51	81
Number of children stunted x 1,000	20	34

Source: CBS, Third Rural Child Nutrition Survey, 1982.

2.13 The following diseases and parasitic conditions are the most prevalent: diarrhoeal diseases, acute respiratory infections, measles, malaria, cholera, worm infestations and bilharzia. Malaria and diarrhoea,

8/ CBS, Results of Child Nutrition Survey, 1982.

9/ Food Nutrition Studies Programme: The Role of Environmental Factors in Cases of Severe Protein-Energy Malnutrition in Coast Province (Research Outline), October 1985.

in combination with malnutrition, account for 61% of deaths in Kwale District^{10/}. Sanitation-related diseases account for two-thirds of morbidity, while a further 5% is caused by chronic illnesses resulting from nutritional deficiencies.

2.14 Factors contributing to the health status of the community include poor nutrition, lack of and proper use and storage of water, limited acceptance of pit latrines, health education standards and traditional beliefs and practices.

2.15 Seasonality of agricultural production is a very important factor in nutritional condition of farm families. The periods of lowest production - and therefore high vulnerability to malnutrition - are November to March ("long dry") and May to July ("long rains"). During these periods there are no cereal or pulse crops to harvest and on-farm storage and the ability to purchase food staples become most important.

2.16 Access to social and economic amenities. The project area is not well served with social infrastructure. There are 3 hospitals in each of Kwale and Kilifi Districts, 7 and 5 health centres, and 12 and 40 dispensaries, respectively. The ratio is about 16 000 persons per health facility. A number of the dispensaries were constructed under self-help schemes and are not functioning. Problems at health facilities include lack of water, shortage of essential instruments, drugs and dressings and inadequate staff training and support.

2.17 The distribution of facilities, such as health centres, schools and markets, favours the coastal belt where road and transport facilities are better and population density higher. The ASAL areas of the two Districts are particularly disadvantaged; for example there are only one hospital, four health centres, and 7 functioning dispensaries in the ASAL areas of both Kwale and Kilifi Districts (70% of the area and 25% of the population).

10/ AMREF, op.cit.

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT

ANNEX 2
Table 1

Kwale District
Rainfall Figures From Various Stations

No. and altitude	Name of Station	Years of rec.	Kind of rec.	Ann. rainf. mm.	Monthly rainfall in mm.											
					Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9339006 279 m	Samburu Station	42	Average 60 % rel. ¹⁾	616 538	26 11	24 7	57 29	82 62	88 56	26 9	22 19	29 17	41 13	62 21	85 45	75 50
9439001 393 m	Kwale, Agric. Department	64	Av. 60 %	1 151 1 025	36 16	14 1	67 46	164 100	213 188	112 75	88 69	74 45	74 36	125 66	114 44	71 55
9439003 15 m	Assoc. Sugar Works Ltd.	43	Av. 60 %	1 426 1 116	23 6	18 2	78 32	271 206	359 211	155 135	121 115	82 44	61 24	84 20	103 40	71 31
9439004 46 m	Gazi, Kenya Sugar Co. Ltd.	54	Av. 60 %	1 349 976	23 4	24 0	70 35	256 172	347 213	150 145	100 93	86 33	68 39	79 53	89 32	58 39
9439013 12 m	Vanga, Mudir's Office	40	Av. 60 %	1 109 989	36 8	19 0	86 48	193 165	294 153	38 30	79 69	67 55	51 23	86 51	98 85	62 47
9439014 6 m	Gazi, Mudir's Office	39	Av. 60 %	1 408 1 223	21 6	18 0	69 29	275 194	397 229	133 115	108 80	81 60	66 42	86 44	104 54	50 28
9439015 305 m	Mudir of Kinango	31	Av. 60 %	841 670	20 11	33 10	52 15	146 90	150 108	55 25	58 32	49 26	39 15	84 37	105 45	50 50
9439017 9 m	Msambweni, Tiwi Disp.	29	Av. 60 %	1 289 1 004	25 6	17 0	58 19	259 129	327 221	98 93	95 64	82 43	86 25	81 42	93 33	69 33
9439021 56 m	Mombasa, Port Reitz Aerodrome	30	Av. 60 %	1 050 915	34 8	19 2	63 15	167 82	227 177	70 61	65 44	67 40	78 24	94 56	97 47	69 33
9439027 122 m	Mwangulu	21	Av. 60 %	739 661	24 2	27 10	74 41	112 65	135 69	48 35	54 32	59 30	47 27	70 28	22 20	67 30
9439030 60 m	Muhaka	23	Av. 60 %	1 129 984	23 0	19 0	50 9	204 140	260 175	104 85	93 75	79 39	59 29	93 54	105 31	40 26
9439031 407 m	Simba Hills, Mrore No. 1	26	Av. 60 %	984 839	34 3	19 6	48 18	150 79	195 155	76 54	63 53	73 43	52 22	87 37	117 21	70 41
9439038 31 m	Msambweni, Waa Disp.	22	Av. 60 %	1 069 961	24 7	15 0	42 18	191 113	266 214	107 77	79 53	62 47	60 30	80 30	99 17	45 20
9439043 244 m	Simba Hills, Dev. Sch.	23	Av. 60 %	1 290 1 134	40 13	13 0	71 34	223 151	290 224	106 78	104 79	81 62	66 35	127 78	122 38	63 34
9439044 152 m	Gazi, Kikoneni	20	Av. 60 %	1 236 1 063	25 0	14 0	92 22	209 150	234 160	112 81	107 88	89 55	70 42	84 44	124 97	77 33
9439046 61 m	Vanga, Lunga Lunga School	24	Av. 60 %	912 796	31 17	21 6	77 24	146 90	176 124	61 35	51 40	44 26	38 17	72 48	123 82	71 34

¹⁾ These figures of rainfall reliability should be exceeded normally in 6 out of 10 years.

Source: Ministry of Agriculture. Farm Management Handbook of Kenya. Vol. II c. by R. Jaetzold and H. Schmidt. 1983

KILIFI DISTRICT

KWALE AND KILIFI DEVELOPMENT PROJECT
RAINFALL FIGURES FROM VARIOUS STATIONS

ANNEX 2
Table 2

No. and altitude	Name of Station	Years of rec.	Kind of rec.	Ann. rainf. mm	Monthly rainfall in mm											
					Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9239000 120 m	Adu Location	11	Average 60 % rel. ¹⁾	931 656	17 0	14 4	44 3	124 93	164 137	93 48	67 31	63 31	58 22	78 24	137 53	72 20
9339004 8 m	Kilifi, D.O.	53	Av. 60 %	954 819	18 0	15 0	38 11	122 90	268 201	117 72	78 61	56 38	56 28	71 28	73 41	43 16
9339010 61 m	Marafa, Dispensary	38	Av. 60 %	887 792	14 2	24 1	51 17	100 53	184 118	86 76	74 55	53 27	63 21	77 13	80 59	83 65
9339012 183 m	Ganze, Dispensary	25	Av. 60 %	831 603	25 14	14 0	48 14	97 47	187 103	56 39	42 23	44 22	54 17	84 44	103 73	78 36
9339013 256 m	Chonyi	33	Av. 60 %	1 150 1 029	21 0	19 0	51 37	147 37	271 162	99 86	89 72	76 51	97 39	96 90	109 105	75 36
9339016 244 m	Bamba	18	Av.	677	10	15	53	104	137	29	27	31	46	74	78	74
9339017 204 m	Mariakani Vet. St.	34	Av. 60 %	856 778	32 16	18 6	56 15	108 69	130 109	60 38	37 28	53 31	69 14	82 23	126 85	87 33
9339027 67 m	Baricho	24	Av. 60 %	724 650	33 11	18 3	58 39	98 88	91 77	44 35	30 21	27 15	47 10	77 20	113 56	89 76
9339030 152 m	Jibana Disp.	20	Av. 60 %	1 094 977	16 2	15 1	57 13	150 62	250 188	109 90	70 49	71 53	58 18	126 69	124 88	49 15
9339034 91 m	Chakama	16	Av. 60 %	539 481	42 19	16 0	41 24	97 87	27 25	31 21	26 13	18 8	45 9	34 16	169 80	54 52
9339038 226 m	Kaloleni, Boma	15	Av. 60 %	1 090 772	31 8	25 2	43 8	121 67	176 159	103 56	77 50	82 51	96 35	141 44	134 66	62 39
9339039 171 m	Ruruma, Chief's Camp	14	Av. 60 %	1 058 860	27 0	21 0	70 7	123 25	167 120	91 65	27 25	72 35	99 40	137 32	153 60	71 31
9340000 3 m	Malindi, D.O.	78	Av. 60 %	1 050 905	9 0	7 0	34 10	158 112	336 245	163 113	90 71	56 37	53 25	64 26	51 29	29 11
9340001 15 m	Malindi, Gongoni Fundisha Saltworks	36	Av. 60 %	930 795	4 0	5 0	40 12	145 103	273 194	126 91	82 63	44 25	46 23	65 27	62 30	38 15
9340005 46 m	Malindi, Water Supply	22	Av. 60 %	1 087 940	14 2	8 0	49 19	174 132	243 172	163 115	96 78	57 38	64 29	84 43	89 49	46 26
9340006 15 m	Malindi, Kisima Farm Ltd.	17	Av.	1 049	6	9	42	188	255	162	91	74	55	65	76	26
9340007 91 m	Malindi, Gedde Cotton Research St.	19	Av.	1 211	18	12	54	187	273	171	113	69	80	80	105	51
9340009 20 m	Malindi, Met. Station	14	Av.	1 091	11	15	42	186	313	160	74	64	46	71	79	30
9340010 18 m	Ganda	10	Av.	1 055	19	29	60	140	265	197	85	52	30	63	111	9
9340011 31 m	Magarini	13	Av.	979	4	15	16	155	259	145	81	63	40	67	105	29

¹⁾ These figures of rainfall reliability should be exceeded normally in 6 out of 10 years

Source: Op. Cit.

KWALE AND KILIFI DEVELOPMENT PROJECT

ANNEX 2
Table 3

Kwale District: Climate in the Agro-Ecological Zones

Agro-Ecological Zone	Altitude in m	Annual mean temperature in °C	Annual av. rainfall in mm	60 % reliability of rainfall ¹⁾		60 % reliability of growing period		
				1st rains in mm	2nd rains in mm	1st rains in days	2nd rains in days	Total ²⁾ in days ³⁾
L 2 (-3) Lowland Marginal Sugarcane Zone	1-60	26.6-26.3	1 200-1 400	750-900	80-150	175-195	< 45	-
L 3 Coconut-Cassava Zone	1-450	26.6-24.0	1 050-1 250 1 000-1 350 1 000-1 300 1 000-1 300 970-1 050	600-750 500-800 500-800 500-800 380-680	170-200 100-180 170-200 100-160 160-200	175-195 155-175 155-175 155-175 135-155	55-75 < 40 40-55 < 40 40-55	210-270 - 195-230 - 175-210
L 4 Cashewnut-Cassava Zone	1-250	26.6-25.0	1 050-1 200 980-1 050 980-1 020 950-1 050 900-1 000 850- 930 850- 900	500-600 400-500 400-450 400-500 320-400 280-350 230-280	80-150 170-200 170-180 120-150 140-190 140-180 140-170	135-155 135-155 135-155 135-155 115-135 105-115 85-105	< 40 55-75 40-55 < 40 40-55 40-55 40-55	- 190-230 175-210 - 155-190 145-170 125-160
L 5 Lowland Livestock-Millet Zone	120-650	27.3-24.3	850- 900 800- 850 750- 800 600- 780 650- 750 600- 700	230-280 210-270 180-250 180-210 150-200 150-200	140-170 130-160 130-150 125-140 120-130 50-120	85-105 75- 85 55- 75 55- 75 40-55 40- 55	40-55 40-55 40-55 40-55 35-50 < 40	125-160 115-140 - - - -
L 6 Lowland Ranching Zone	120-600	27.5-24.6	500- 600	100-150	50-120	30-40	20-30	-

KILIFI DISTRICT

CLIMATE IN THE AGRO-ECOLOGICAL ZONES

Agro-Ecological Zone	Altitude in m	Annual mean temperature in °C	Annual av. rainfall in mm	60 % reliability of rainfall ¹⁾		60 % reliability of growing period		
				1st rains in mm	2nd rains in mm	1st rains in days	2nd rains in days	Total ²⁾ in days ³⁾
L 3 Coconut-Cassava Zone	1-450	26.6-24.0	1 100-1 200 1 000-1 150 1 050-1 230	480-700 400-650 400-800	200-250 170-220 50-130	155-175 135-155 155-175	85-105 75- 85 < 40	240-280 210-240 -
L 4 Cashewnut-Cassava Zone	1-300	26.6-24.9	850-1 100 940-1 100 900-1 100 920-1 000 850-1 000 850-1 100 780- 950 800- 950	320-600 300-650 320-620 250-380 300-500 270-600 200-350 200-350	50-130 150-200 90-200 140-180 50-140 80-140 130-150 150-180	135-155 135-155 135-155 115-135 115-135 115-135 105-115 85-105	< 40 55-75 40-55 40-55 < 30 < 40 40-55 40-55	- 190-230 175-210 155-190 - - 145-170 125-160
L 5 Lowland Livestock-Millet Zone	1-300	26.6-24.9	820-1 000 800-1 000 760- 880 800- 900 700- 880 700- 750 750- 820	220-500 220-500 220-320 250-350 170-270 180-200 220-260	50-160 60-160 150-180 50-130 150-170 150-160 100-130	105-105 105-115 85-105 85-105 75- 85 75- 85 75- 85	< 40 < 40 40-55 < 30 40-55 40-55 40-55	- - 125-160 - 115-140 - -
L 6 Lowland Ranching Zone	90-300	27.5-24.9	380- 700	100-150	50-130	30- 40	20-30	-

1) Amounts surpassed normally in 6 out of 10 years, falling during the agro-humid period which allows growing of most cultivated plants

2) Only added if rainfall continuous at least for survival (> 0.2 E₀) of most long term crops

3) Intermediate rains follow immediately after first rains. Second rains insignificant

Source: Op. Cit.

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON NON-DISSECTED EROSIONAL PLAINS</u>		
<u>Soils developed on Basement System rocks rich in ferromagnesian minerals</u>		
228 Pn h	well drained, deep to very deep, dusky red to dark red, friable sandy clay	rhodic FERRALSOLS
<u>Soils developed on undifferentiated Basement System rocks</u>		
234 Pn h	well drained, deep to very deep, dark red to strong brown, friable, sandy clay to clay	rhodic and orthic FERRALSOLS
<u>Soils developed on siltstones and shales (Lower Maji-vu-Chuvu beds), slightly dissected</u>		
246 Pn m-h	well drained, shallow, dark reddish brown to very dark brown, firm, fine sandy clay loam to clay	eutric CAMBISOLS lithic phase; with LITHOSOLS
<u>Soils developed on Basement System rocks rich in ferromagnesian minerals</u>		
228 P h	well drained, deep to very deep, dusky red to dark red, friable sandy clay	rhodic FERRALSOLS
<u>Soils developed on siltstones and shales (Lower Maji-vu-Chuvu beds), slightly dissected</u>		
246 P m-h	well drained, shallow, dark reddish brown to very dark brown, firm, fine sandy clay loam to clay	eutric CAMBISOLS, lithic phase; with LITHOSOLS
<u>Soils developed on fine sandstones and siltstones (Merikani sandstone), slightly dissected</u>		
247 P l-m, m-h	well drained, very deep, brown, friable to firm, sandy clay loam to clay, with sodic deeper sub-soil; in places with a very thick top-soil of loamy sand to sandy loam	orthic LUVISOLS, sodic phase
<u>Soils developed on shales (Lower Maji-vu-Chuvu beds and Taru carbonaceous shales)</u>		
248 P h	imperfectly drained, moderately deep to deep, dark greyish brown, very firm, cracking fine sandy clay to clay; with a strongly calcareous and moderately sodic deeper sub-soil	luvic PHAEZEMs, sodic phase
249 Pn h	imperfectly drained, very deep, very dark grey to black, very firm, strongly calcareous, moderately saline and sodic, cracking clay	pellic VERTISOLS, saline-sodic phase
<u>Soil developed on gritty sandstones</u>		
252 Pn l-m, m-h	well drained, deep, strong brown to dark brown, firm, sandy clay loam to clay, with a top-soil of loamy sand to sandy loam	orthic LUVISOLS; with orthic ACRISOLS
253 Pn	well drained, deep, red, firm, sandy clay loam to clay	chromic LUVISOLS
<u>SOILS ON DISSECTED EROSIONAL PLAINS</u>		
<u>Soils developed on undifferentiated Basement System rocks</u>		
254 P x, m	complex of well drained, shallow to moderately deep, dark red to yellowish brown, non to moderately calcareous, stony sandy clay loam, over petrocalcic material or quartz gravel	calcic CAMBISOLS, lithic or petrocalcic phase; with chromic LUVISOLS, petric phase
<u>Soils developed on undifferentiated sedimentary rocks</u>		
257 P x, m	complex of well drained, shallow, dark reddish brown to strong brown, non to moderately calcareous, firm, gravelly and stony loam to sandy clay loam, partly over petrocalcic material	chromic CAMBISOLS to orthic LUVISOLS, lithic or paralithic phase; with calcic CAMBISOLS, petrocalcic phase

Appendix 1

Map unit suffix

h = heavy soil
l = light soil
m = medium soil
x = stony or bouldery soil
v = soil with varying texture

Map unit	Description	FAO classification
<u>SOILS ON HILLS AND MINOR SCARPS</u>		
<u>Soils developed on undifferentiated Basement System rocks, predominantly gneisses</u>		
26 H x, m	somewhat excessively drained, shallow, reddish brown, friable, rocky or stony, sandy clay loam	eutric REGOSOLS; with rocky outcrops and calcic CAMBISOLS
<u>Soils developed on Jurassic sandstones, grits and conglomerates</u>		
30 H x, m	well drained, shallow, brown, friable, rocky and stony, sandy clay loam (on hills and plateau tops)	eutric REGOSOLS
<u>Soils developed on crystalline limestone</u>		
34 H x, h	somewhat excessively drained, shallow, dark grey, firm, moderately calcareous, stoney clay	KENDZINAS
<u>SOILS ON COASTAL PLATEAU</u>		
<u>Soils developed on Pliocene sandstones (Magarini sands)</u>		
68 L m-h	well drained, extremely deep, red to dusky red, very friable, sandy clay loam to clay	acric to rhodic FERRALSOLS
<u>Soils developed on cover sands (mainly derived from Magarini sands)</u>		
69 L l-m	excessively drained, very deep, yellowish red to pale yellow, loose, loamy sand to sandy loam	ferralic ARENOSOLS; with albic
<u>Soils developed on limestones (Kashe limestones)</u>		
70 L h	well drained, deep, dark reddish brown, friable, fine sandy clay	eutric NITOSOLS
<u>SOILS ON FOOT SLOPES</u>		
<u>Soils developed on colluvium from crystalline limestone</u>		
93 F h	well drained, very deep, dark reddish brown, firm, slightly calcareous, slightly cracking clay, with a slightly sodic deeper sub-soil	chromic LUVISOLS, sodic phase
<u>Soils developed on colluvium from undifferentiated Basement System rocks</u>		
97 F l-m	well drained, very deep, dark red, friable, coarse loamy sand to sandy clay loam	rhodic FERRALSOLS; with ferralic ARENOSOLS and ferralo-chromic LUVISOLS
<u>Soils developed on colluvium from sandstones, grits and conglomerates (Taru, Maseras)</u>		
101 F l	excessively drained, very deep, reddish yellow, loose, sand to loamy sand	luvic ARENOSOLS; with ferralic and albic ARENOSOLS
<u>Soils on Foot Slopes and Piedmont Plains Undifferentiated</u>		
<u>Soils developed on colluvium and alluvium from crystalline limestones</u>		
103 F m-h	well drained, deep to very deep, dark brown, friable to firm, clay loam to sandy clay; in places calcareous	chromic LUVISOLS and haplic KASTANOKHIMS

Source: Op. Cit.

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON COASTAL UPLANDS</u>		
<u>Soils developed on fine sandstones and siltstones (Mariakani sandstone and Upper Matli-vu-Chuwa beds)</u>		
200 Dc 1-m, m-h	imperfectly drained, deep to very deep, yellowish brown, mottled, firm, fine sandy clay loam to clay, abruptly underlying 20-100 cm of fine sand to fine sandy loam; with sodic deeper sub-soils	solodic PLANOSOLS
201 Dc 1	well drained, deep to very deep, pinkish grey to brown, very friable, fine sand to loamy fine sand	albic to luvic ARENOSOLS
202 Dc x, m-h	well drained, shallow, dark brown to dark yellowish brown, fairly stony, fairly rocky, fine sandy clay loam to clay	eutric CAMBISOLS, lithic phase; with orthic LUVI
203 Dc 1-m, m-h	well drained to imperfectly drained, deep, yellowish red to dark brown, friable, fine sandy clay loam to fine sandy clay, with a top-soil of loamy fine sand to fine sandy loam	orthic ACRISOLS
204 Dc 1-m, m-h	well drained, deep, dark brown to yellowish brown, firm, very fine sandy clay loam to clay, with top-soil of loamy very fine sand to very fine sandy loam; in places with abrupt transition and sodic deeper sub-soil	orthic LUVISOLS; with s PLANOSOLS
<u>Soils developed on coarse sandstones and grits (Mazeras sandstone and Shimba grit)</u>		
205 Dc 1-m, h	complex of: well drained to imperfectly drained, very deep, dark red to dark greyish brown, friable to firm, sandy clay to clay, with top-soil of loamy sandy to sandy loam	orthic ACRISOLS; with g LUVISOLS
	excessively drained to imperfectly drained, very deep, red to light yellowish brown, loose, sand to loamy sand	ferralic to luvic ARENOS
206 Dc 1-m, m-h	well drained, very deep, red to dark red and strong brown, friable, sandy clay loam to sandy clay, with top-soil of loamy sand to sandy loam	rhodic and orthic FERRAL
<u>Soils developed on shales</u>		
207 Dc h	association of: well drained to imperfectly drained, shallow to moderately deep, yellowish brown to very dark grey, firm to very firm clay; in dissected parts	eutric CAMBISOLS, partly lithic phase
	imperfectly drained, deep, dark grey to olive grey, very firm clay, with humic top-soil, and sodic deeper sub-soil	vertic-luic PRAEZEIMS, sc phase, with vertic CAMBISODIC phase
<u>Soils developed on Plio-Pleistocene bay sediments (Marafa beds)</u>		
208 U h	imperfectly drained to poorly drained, moderately deep, dark yellowish brown to light olive brown, moderately calcareous, firm to very firm, sandy clay to clay, with humic top-soils; in places saline and sodic	mollic SOLONCHETS; with RENDEZINAS and luvic PEA
<u>Soils developed on intermediate igneous rocks in ferro-magnesian minerals (intrusives)</u>		
209 Dc	well drained, extremely deep, dark red to yellowish red, friable clay	eutric NITOSOLS
<u>Soils developed on undifferentiated sedimentary rocks (Mazeras and Mariakani sandstones and beds)</u>		
210 U m	complex of well drained to moderately well drained, moderately deep, reddish brown, friable to very firm, sandy loam to clay loam; partly with humic top-soil and/or sodic sub-soil	undifferentiated LUVISOL with luic PRAEZEIMS

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON COASTAL UPLANDS</u>		
<u>Soils developed on fine sandstones and siltstones (Marikani sandstone and Upper Matjwa-Chut beds)</u>		
200 Dc 1-a, w-h	imperfectly drained, deep to very deep; yellowish brown, mottled, firm, fine sandy clay loam to clay, abruptly underlying 20-100 cm of fine sand to fine sandy loam; with sodic deeper sub-soils	solodic PLANOSOLS
201 Dc 1	well drained, deep to very deep, pinkish grey to brown, very friable, fine sand to loamy fine sand	albic to luvic ARENOSOLS
202 Dc w, w-h	well drained, shallow, dark brown to dark yellowish brown, fairly stony, fairly rocky, fine sandy clay loam to clay	eutric CAMBISOLS, lithic phase; with orthic LUVISOLS
203 Dc 1-a, w-h	well drained to imperfectly drained, deep, yellowish red to dark brown, friable, fine sandy clay loam to fine sandy clay, with a top-soil of loamy fine sand to fine sandy loam	orthic ACRISOLS
204 Dc 1-a, w-h	well drained, deep, dark brown to yellowish brown, firm, very fine sandy clay loam to clay, with top-soil of loamy very fine sand to very fine sandy loam; in places with abrupt transition and sodic deeper sub-soil	orthic LUVISOLS; with PLANOSOLS
<u>Soils developed on coarse sandstones and grits (Mazars sandstone and Shamba grit)</u>		
205 Dc 1-a, h	complex of: well drained to imperfectly drained, very deep, dark red to dark greyish brown, friable to firm, sandy clay to clay, with top-soil of loamy sandy to sandy loam	orthic ACRISOLS; with LUVISOLS
	excessively drained to imperfectly drained, very deep, red to light yellowish brown, loose, sand to loamy sand	ferralic to luvic ARENOSOLS
206 Dc 1-a, w-h	well drained, very deep, red to dark red and strong brown, friable, sandy clay loam to sandy clay, with top-soil of loamy sand to sandy loam	rhodic and orthic FERRISOLS
<u>Soils developed on shales</u>		
207 Dc h	association of: well drained to imperfectly drained, shallow to moderately deep, yellowish brown to very dark grey, firm to very firm clay; in dissected parts	eutric CAMBISOLS, part; lithic phase
	imperfectly drained, deep, dark grey to olive grey, very firm clay, with humic top-soil, and sodic deeper sub-soil	vertic LUVISOLS, phase, with vertic CAMBISOLS
<u>Soils developed on Plioc-Pleistocene bay sediments (Marsfa beds)</u>		
208 D h	imperfectly drained to poorly drained, moderately deep, dark yellowish brown to light olive brown, moderately calcareous, firm to very firm, sandy clay to clay, with humic top-soils; in places saline and sodic	mollic SOLONCHKS; with KENDZINAS and luvic PERISOLS
<u>Soils developed on intermediate igneous rocks in ferro-magnesian minerals (intrusives)</u>		
209 Dc	well drained, extremely deep, dark red to yellowish red, friable clay	eutric WITOSOLS
<u>Soils developed on undifferentiated sedimentary rocks (Mazars and Marikani sandstones and beds)</u>		
210 D w	complex of well drained to moderately well drained, moderately deep, reddish brown, friable to very firm, sandy loam to clay loam; partly with humic top-soil and/or sodic sub-soil	undifferentiated LUVISOLS with luvic PERISOLS

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON BOTTOMLANDS</u>		
<u>Soils developed on infill from Taru sandstones</u>		
342 B h	imperfectly drained to poorly drained, very deep, dark brown to dark grey, firm to very firm, sodic clay, with a calcareous and saline deeper sub-soil	luvo-orthic SOLONETZ
<u>Soils developed on infill lagoonal deposits (Kilindini sands)</u>		
343 B h	imperfectly drained to poorly drained, very deep, light brownish grey to brown, mottled, firm to very firm, clay; in places sodic and cracking (higher-level depressions)	gleyic PRAECIZEMS; with luvis PRAECIZEMS and pellic VERTISOLS, sodic phase
<u>Soils developed on infill mainly from undifferentiated Basement System rocks</u>		
349 B h	imperfectly drained to poorly drained, very deep, brown to dark brown, very firm, slightly calcareous, strongly sodic clay	orthic SOLONETZ
<u>SOILS ON FLOODPLAINS</u>		
<u>Soils developed on sediments mainly from crystalline Basement System rocks</u>		
356 A h	well drained to imperfectly drained, very deep, brown to dark brown, friable, slightly calcareous, micaceous, sandy loam to clay loam; in places with a saline-sodic deeper sub-soil	eutric FLUVISOLS
<u>Soils developed on sediments from various sources (recent floodplains)</u>		
357 A h	well drained to imperfectly drained, very deep, dark brown to yellowish brown, stratified, strongly calcareous, micaceous, predominantly loamy soils	calcaric FLUVISOLS
359 A h	imperfectly drained to poorly drained, very deep, dark reddish brown to dark greyish brown, firm to very firm, cracking clay; in many places mottled and with a calcareous, saline and sodic deeper sub-soil	chromic VERTISOLS, saline-sodic phase
364 A h	poorly drained, very deep, very dark grey, very firm, moderately calcareous, slightly saline and slightly to moderately sodic, cracking clay	pellic VERTISOLS, saline-sodic phase
<u>DUNES</u>		
373 D 1	Excessively drained, very deep, brown to pale brown, loose, sand to loamy sand	cambic ARENOSOLS
<u>SOILS ON BADLANDS</u>		
<u>Badlands developed on Plio-Pleistocene bay sediments (Maraia beds)</u>		
377 W x, w-h	excessively drained, brown, very firm, strongly sodic, gravelly clay loam to sandy clay of varying depth; strongly eroding and strongly sealed	SOLONETZ, undifferentiated

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON COASTAL OR LAKE-SIDE BEACH RIDGES</u>		
<u>Soils developed on older coastal beach ridges</u>		
379 I M	well drained, very deep, red, very friable, sandy clay loam	rhodic FERRALOSOLS
<u>Soils developed on younger coastal beach ridges often covering coral rock</u>		
380 I L, M	moderately well drained, very deep, dark brown to reddish brown, firm to very firm, often moderately sodic, sandy clay loam, underlying a thick top-soil of friable loamy sand, in places shallow over coral rock	orthic ACRISOLS, sodic phase; with sodic PLANOSOLS
<u>MANGROVE SWAMPS</u>		
382 T M-b	very poorly drained, very deep, olive to greenish grey, soft (unripe), excessively saline and moderately to strongly sodic, loam to clay, often with sulfidic material	thionic FLUVISOLS and gleyic SOLOMCHAKS

Appendix 1

Map unit suffix

h = heavy soil
l = light soil
m = medium soil
s = stony or bouldery soil
v = soil with varying texture

Map unit	Description	FAO classification
<u>SOILS ON HILLS AND MINOR SCARPS</u>		
<u>Soils developed on undifferentiated Basement System rocks, predominantly gneisses</u>		
26 E x, m	somewhat excessively drained, shallow, reddish brown, friable, rocky or stony, sandy clay loam	eutric REGOSOLS; with rocky outcrops and calcic CAMBISOLS
<u>Soils developed on Jurassic sandstones, grits and conglomerates</u>		
30 E x, m	well drained, shallow, brown, friable, rocky and stony, sandy clay loam (on hills and plateau, pests)	eutric REGOSOLS
<u>Soils developed on crystalline limestone</u>		
34 E x, h	somewhat excessively drained, shallow, dark grey, firm, moderately calcareous, stoney clay	KENDZINAS
<u>SOILS ON COASTAL PLATEAU</u>		
<u>Soils developed on Pliocene sandstones (Magarini sands)</u>		
68 L m-h	well drained, extremely deep, red to dusky red, very friable, sandy clay loam to clay	acidic to rhodic FERRALSOLS
<u>Soils developed on cover sands (mainly derived from Magarini sands)</u>		
69 L l-m	excessively drained, very deep, yellowish red to pale yellow, loose, loamy sand to sandy loam	ferralic ARENOSOLS; with albic
<u>Soils developed on limestones (Kasbe limestone)</u>		
70 L h	well drained, deep, dark reddish brown, friable, fine sandy clay	eutric NITOSOLS
<u>SOILS ON FOOT SLOPES</u>		
<u>Soils developed on colluvium from crystalline limestone</u>		
93 F h	well drained, very deep, dark reddish brown, firm, slightly calcareous, slightly cracking clay, with a slightly sodic deeper sub-soil	chromic LUVISOLS, sodic phase
<u>Soils developed on colluvium from undifferentiated Basement System rocks</u>		
97 F l-m	well drained, very deep, dark red, friable, coarse loamy sand to sandy clay loam	rhodic FERRALSOLS; with ferralic ARENOSOLS and ferralo-chromic LUVISOLS
<u>Soils developed on colluvium from sandstones, grits and conglomerates (Taru, Maseras)</u>		
101 F l	excessively drained, very deep, reddish yellow, loose, sand to loamy sand	luvic ARENOSOLS; with ferralic and albic ARENOSOLS
<u>Soils on Foot Slopes and Piedmont Plains Undifferentiated</u>		
<u>Soils developed on colluvium and alluvium from crystalline limestones</u>		
103 F m-h	well drained, deep to very deep, dark brown, friable to firm, clay loam to sandy clay; in places calcareous	chromic LUVISOLS and haplic KASTANOCHMS)

Source: Op. Cit.

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON NON-DISSECTED EROSIONAL PLAINS</u>		
<u>Soils developed on Basement System rocks rich in ferromagnesian minerals</u>		
228 Pn h	well drained, deep to very deep, dusky red to dark red, friable sandy clay	rhodic FERRALSOLS
<u>Soils developed on undifferentiated Basement System rocks</u>		
234 Pn h	well drained, deep to very deep, dark red to strong brown, friable, sandy clay to clay	rhodic and orthic FERRALSOLS
<u>Soils developed on siltstones and shales (Lower Maji-ya-Chumvi beds), slightly dissected</u>		
246 Pn m-h	well drained, shallow, dark reddish brown to very dark brown, firm, fine sandy clay loam to clay	eutric CAMBISOLS lithic phase; with LITHOSOLS
<u>Soils developed on Basement System rocks rich in ferromagnesian minerals</u>		
228 P h	well drained, deep to very deep, dusky red to dark red, friable sandy clay	rhodic FERRALSOLS
<u>Soils developed on siltstones and shales (Lower Maji-ya-Chumvi beds), slightly dissected</u>		
246 P m-h	well drained, shallow, dark reddish brown to very dark brown, firm, fine sandy clay loam to clay	eutric CAMBISOLS, lithic phase; with LITHOSOLS
<u>Soils developed on fine sandstones and siltstones (Mariakani sandstone), slightly dissected</u>		
247 P l-m, m-h	well drained, very deep, brown, friable to firm, sandy clay loam to clay, with sodic deeper sub-soil; in places with a very thick top-soil of loamy sand to sandy loam	orthic LUVISOLS, sodic phase
<u>Soils developed on shales (Lower Maji-ya-Chumvi beds and Taro carbonaceous shales)</u>		
248 P h	imperfectly drained, moderately deep to deep, dark greyish brown, very firm, cracking fine sandy clay to clay; with a strongly calcareous and moderately sodic deeper sub-soil	luvic PHAEZEMS, sodic phase
249 Pn h	imperfectly drained, very deep, very dark grey to black, very firm, strongly calcareous, moderately saline and sodic, cracking clay	pellic VERTISOLS, saline-sodic phase
<u>Soil developed on gritty sandstones</u>		
252 Pn l-m, m-h	well drained, deep, strong brown to dark brown, firm, sandy clay loam to clay, with a top-soil of loamy sand to sandy loam	orthic LUVISOLS; with orthic ACRISOLS
253 Pn	well drained, deep, red, firm, sandy clay loam to clay	chromic LUVISOLS
<u>SOILS ON DISSECTED EROSIONAL PLAINS</u>		
<u>Soils developed on undifferentiated Basement System rocks</u>		
254 P x, s	complex of well drained, shallow to moderately deep, dark red to yellowish brown, non to moderately calcareous, stony sandy clay loam, over petrocalcic material or quartz gravel	calic CAMBISOLS, lithic or petrocalcic phase; with chromic LUVISOLS, petric phase
<u>Soils developed on undifferentiated sedimentary rocks</u>		
257 P x, s	complex of well drained, shallow, dark reddish brown to strong brown, non to moderately calcareous, firm, gravelly and stony loam to sandy clay loam, partly over petrocalcic material	chromic CAMBISOLS to orthic LUVISOLS, lithic or paralithic phase; with calic CAMBISOLS, petrocalcic phase

Appendix 1

Map unit	Description	FAD classification
SOILS ON COASTAL UPLANDS		
<u>Soils developed on fine sandstones and siltstones (Mariakani sandstone and Upper Maji-va-Chumbe beds)</u>		
200 Dc 1-a, 2-b	imperfectly drained, deep to very deep, yellowish brown, mottled, firm, fine sandy clay loam to clay, abruptly underlying 20-100 cm of fine sand to fine sandy loam; with sodic deeper sub-soils	solodic PLANOSOLS
201 Dc 1	well drained, deep to very deep, pinkish grey to brown, very friable, fine sand to loamy fine sand	albic to luvic AEROSOLS
202 Dc 2, 2-b	well drained, shallow, dark brown to dark yellowish brown, fairly stony, fairly rocky, fine sandy clay loam to clay	eutric CAMBISOLS, lithic phase; with orthic LUVIS
203 Dc 1-a, 2-b	well drained to imperfectly drained, deep, yellowish red to dark brown, friable, fine sandy clay loam to fine sandy clay, with a top-soil of loamy fine sand to fine sandy loam	orthic ACRISOLS
204 Dc 1-a, 2-b	well drained, deep, dark brown to yellowish brown, firm, very fine sandy clay loam to clay, with top-soil of loamy very fine sand to very fine sandy loam; in places with abrupt transition and sodic deeper sub-soil	orthic LUVISOLS; with sol PLANOSOLS
<u>Soils developed on coarse sandstones and grits (Mazeras sandstone and Shimba grit)</u>		
205 Dc 1-a, b	complex of: well drained to imperfectly drained, very deep, dark red to dark greyish brown, friable to firm, sandy clay to clay, with top-soil of loamy sandy to sandy loam	orthic ACRISOLS; with gl. LUVISOLS
	excessively drained to imperfectly drained, very deep, red to light yellowish brown, loose, sand to loamy sand	ferralic to luvic AEROSOLS
206 Dc 1-a, 2-b	well drained, very deep, red to dark red and strong brown, friable, sandy clay loam to sandy clay, with top-soil of loamy sand to sandy loam	rhodic and orthic FERRALS
<u>Soils developed on shales</u>		
207 Dc b	association of: well drained to imperfectly drained, shallow to moderately deep, yellowish brown to very dark grey, firm to very firm clay; in dissected parts imperfectly drained, deep, dark grey to olive grey, very firm clay, with humic top-soil, and sodic deeper sub-soil	eutric CAMBISOLS, partly lithic phase verto-luic PEAKISOLS, sod phase, with vertic CAMBIS sodic phase
<u>Soils developed on Plio-Pleistocene bay sediments (Marafa beds)</u>		
208 U b	imperfectly drained to poorly drained, moderately deep, dark yellowish brown to light olive brown, moderately calcareous, firm to very firm, sandy clay to clay, with humic top-soils; in places saline and sodic	mollic SOLONCHES; with KENDIINAS and luvic PEAKIS
<u>Soils developed on intermediate igneous rocks in ferro-magnesian minerals (intrusives)</u>		
209 Dc	well drained, extremely deep, dark red to yellowish red, friable clay	eutric WITOSOLS
<u>Soils developed on undifferentiated sedimentary rocks (Mazeras and Mariakani sandstones and M beds)</u>		
210 U a	complex of well drained to moderately well drained, moderately deep, reddish brown, friable to very firm, sandy loam to clay loam; partly with humic top-soil and/or sodic sub-soil	undifferentiated LUVISOLS with luvic PEAKIS

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON RISING-LEVEL PLAIN ('RED SAND' PLAIN)</u>		
<u>Soils developed on sheetwash and aeolian deposits from undifferentiated Basement System rocks</u>		
262 P a	as 260 P = well drained, deep to very deep, dark red to dusky red, friable, sandy loam to sandy clay loam	ferralo-chromic LUVISOLS; with ferralitic ARENOSOLS, but predominantly more acid (ferralo-chromic ACRISOLS; with ferralitic ARENOSOLS and ferric LUVISOLS)
<u>Soils developed on sheetwash and aeolian deposits from fine sandstones, siltstones and sandy limestones</u>		
265 P 1, b	imperfectly drained, very deep, red to reddish brown, firm, slightly calcareous, moderately saline and moderately sodic sandy clay, abruptly underlying a top-soil of loamy sand (mainly on sediments from Mariakani sandstone)	solodic PLANOSOLS and luvo-orthic SOLONETZ, saline phase
<u>SOILS ON MIDDLE-LEVEL PLAINS ('ENCLOSED' PLAINS)</u>		
<u>Soils developed on sediments from Basement System rocks rich in ferromagnesian minerals</u>		
268 P b	well drained, very deep, dark reddish brown to dark red, friable to firm sandy clay; in places moderately calcareous	chromic LUVISOLS; with calcic LUVISOLS
<u>Soils developed on sheetwash sediments from Taru grits and coarse to fine grained sandstone</u>		
269 P b	moderately well drained, deep, dark reddish brown, firm, slightly calcareous, sandy clay to clay, over pisocalcic material	calcic LUVISOLS, pisocalcic phase
<u>SOILS ON 'SEALING LOAM' PLAIN</u>		
<u>Soils developed on Plio-Pleistocene bay sediments (Marafa beds) (little or not remodelled; flat surface, dot pattern)</u>		
275 P a	imperfectly drained, moderately deep, brown, extremely firm, moderately calcareous, non-saline but moderately sodic clay loam (hardpan), with a thin top-soil of sealing sandy loam	luvo-orthic SOLONETZ
278 P a, b	imperfectly to poorly drained, deep, greyish brown, extremely firm, slightly calcareous, moderately sodic and moderately saline, slightly cracking clay, with a very thin top-soil of sandy clay loam	gleyic SOLONETZ, saline phase
<u>Soils developed on sheetwash sediments from Plio-Pleistocene bay sediments (Marafa beds)</u>		
280 P a	imperfectly drained, deep, brown, extremely firm, slightly calcareous, non saline but slightly sodic, clay loam (hardpan), abruptly underlying a thick top-soil of sealing sandy loam (gently sloping parallel drainage)	solodic PLANOSOLS
<u>Soils developed on remodelled Plio-Pleistocene bay sediments (Marafa beds)</u>		
282 P a	imperfectly drained, deep, brown, very firm, moderately calcareous, moderately saline and moderately sodic clay loam (hardpan), with a thin top-soil of strongly sealing sandy clay loam	luvo-orthic SOLONETZ, saline phase
283 P b	imperfectly drained to poorly drained, very deep, dark greyish brown, very firm, slightly calcareous, moderately to strongly saline and predominantly strongly sodic clay (hardpan); in places strongly calcareous and/or gypsic	orthic SOLONETZ, saline phase and gypsic/calcic phase

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON COASTAL PLAINS</u>		
<u>Soils developed on higher-level lagoonal deposits (Kilindini sands)</u>		
303 P 1	excessively drained to well drained, very deep, reddish yellow to white, loose, sand to loamy sand	albic and ferralic ARENOSOLS
304 P b	imperfectly drained, deep to very deep, very dark greyish brown to olive brown, mottled, firm to very firm, sandy clay to clay; moderately calcareous and moderately saline/sodic throughout or in deeper sub-soil	ortho-luvic SOLONCH and vertic, LUVISOLS, saline-sodic phase
<u>Soils developed on lower-level lagoonal deposits (Kilindini sands)</u>		
306 P v	complex of very deep soils of varying drainage condition, colour, consistence, texture and salinity	albic ARENOSOLS, orthic FERRALSOLS, gleyic LUVISOLS, solodic PLANOSOLS, pellic VERTISOLS
307 P b	imperfectly to poorly drained, very deep, grey to brown, mottled, very firm clay (hardpan) slightly calcareous and strongly saline and sodic throughout or in deeper sub-soil	gleyic SOLONCH; with gleyic or verto-luvic PHAEZENS, saline-sodic phase
<u>Soils developed on aeolian deposits (reworked) (lagoonal deposits)</u>		
309 P a	well drained, very deep, yellowish red, very friable, fine sandy loam to fine sandy clay loam	orthic FERRALSOLS
<u>Soils developed on raised-coral-reef limestone, with admixture of lagoonal deposits</u>		
310 P 1, a-b	well drained, deep, dark red to reddish brown, friable, sandy clay loam to sandy clay, with a top-soil of loamy sand	rhodic FERRALSOLS
312 P a, a-b	well drained, shallow, dark brown to dark reddish brown, rocky, sandy clay loam to sandy clay	LITHOSOLS; with ferralic CAMBISOLS, lithic phase
<u>Soils on Older Fans</u>		
311 P 1	complex of well drained to imperfectly drained, very deep, reddish brown to grey, firm clay soils of varying calcareousness, salinity and sodicity, in many places with strongly scaling top-soil; with inclusions of well drained, very deep, brown, loose loamy sand	luvo-orthic SOLONCH, saline phase, chromic VERTISOLS, saline-sodic phase and cambic ARENOSOLS
<u>Soils developed on lower-level lagoonal deposits (Kilindini sands)</u>		
306 Pc v	complex of very deep soils of varying drainage condition, colour, texture and salinity	albic ARENOSOLS, orthic FERRALSOLS, gleyic LUVISOLS, solodic PLANOSOLS, pellic VERTISOLS
<u>Soils developed on raised-coral-reef limestone, with admixture of lagoonal deposits</u>		
310 Pc 1, a-b	well drained, deep, dark red to reddish brown, friable, sandy clay loam to sandy clay, with top-soil of loamy sand	rhodic FERRALSOLS
312 Pc a, a-b	well drained, shallow, dark brown to dark reddish brown, rocky, sandy clay loam to sandy clay	LITHOSOLS; with ferralic CAMBISOLS, lithic phase

Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON BOTTOMLANDS</u>		
<u>Soils developed on infill from Taru sandstones</u>		
342 B b	imperfectly drained to poorly drained, very deep, dark brown to dark grey, firm to very firm, sodic clay, with a calcareous and saline deeper sub-soil	luvo-orthic SOLONCH
<u>Soils developed on infill lagoonal deposits (Kilindini sands)</u>		
343 B b	imperfectly drained to poorly drained, very deep, light brownish grey to brown, mottled, firm to very firm, clay; in places sodic and cracking (higher-level depressions)	gleyic PHAEOMIS, with levic PHAEOMIS and pellic VERTISOLS, sodic phase
<u>Soils developed on infill mainly from undifferentiated Basement System rocks</u>		
349 B b	imperfectly drained to poorly drained, very deep, brown to dark brown, very firm, slightly calcareous, strongly sodic clay	orthic SOLONCH
<u>SOILS ON FLOODPLAINS</u>		
<u>Soils developed on sediments mainly from crystalline Basement System rocks</u>		
356 A a	well drained to imperfectly drained, very deep, brown to dark brown, friable, slightly calcareous, micaceous, sandy loam to clay loam; in places with a saline-sodic deeper sub-soil	eutric FLUVISOLS
<u>Soils developed on sediments from various sources (recent floodplains)</u>		
357 A a	well drained to imperfectly drained, very deep, dark brown to yellowish brown, stratified, strongly calcareous, micaceous, predominantly loamy soils	calcaric FLUVISOLS
359 A b	imperfectly drained to poorly drained, very deep, dark reddish brown to dark greyish brown, firm to very firm, cracking clay; in many places mottled and with a calcareous, saline and sodic deeper sub-soil	chromic VERTISOLS, saline-sodic phase
364 A b	poorly drained, very deep, very dark grey, very firm, moderately calcareous, slightly saline and slightly to moderately sodic, cracking clay	pellic VERTISOLS, saline-sodic phase
<u>DUNES</u>		
373 D 1	Excessively drained, very deep, brown to pale brown, loose, sand to loamy sand	cambic ARENOSOLS
<u>SOILS ON BADLANDS</u>		
<u>Badlands developed on Plio-Pleistocene bay sediments (Marafa beds)</u>		
377 M x, m-h	excessively drained, brown, very firm, strongly sodic, gravelly clay loam to sandy clay of varying depth; strongly eroding and strongly sealed	SOLONCH, undifferentiated

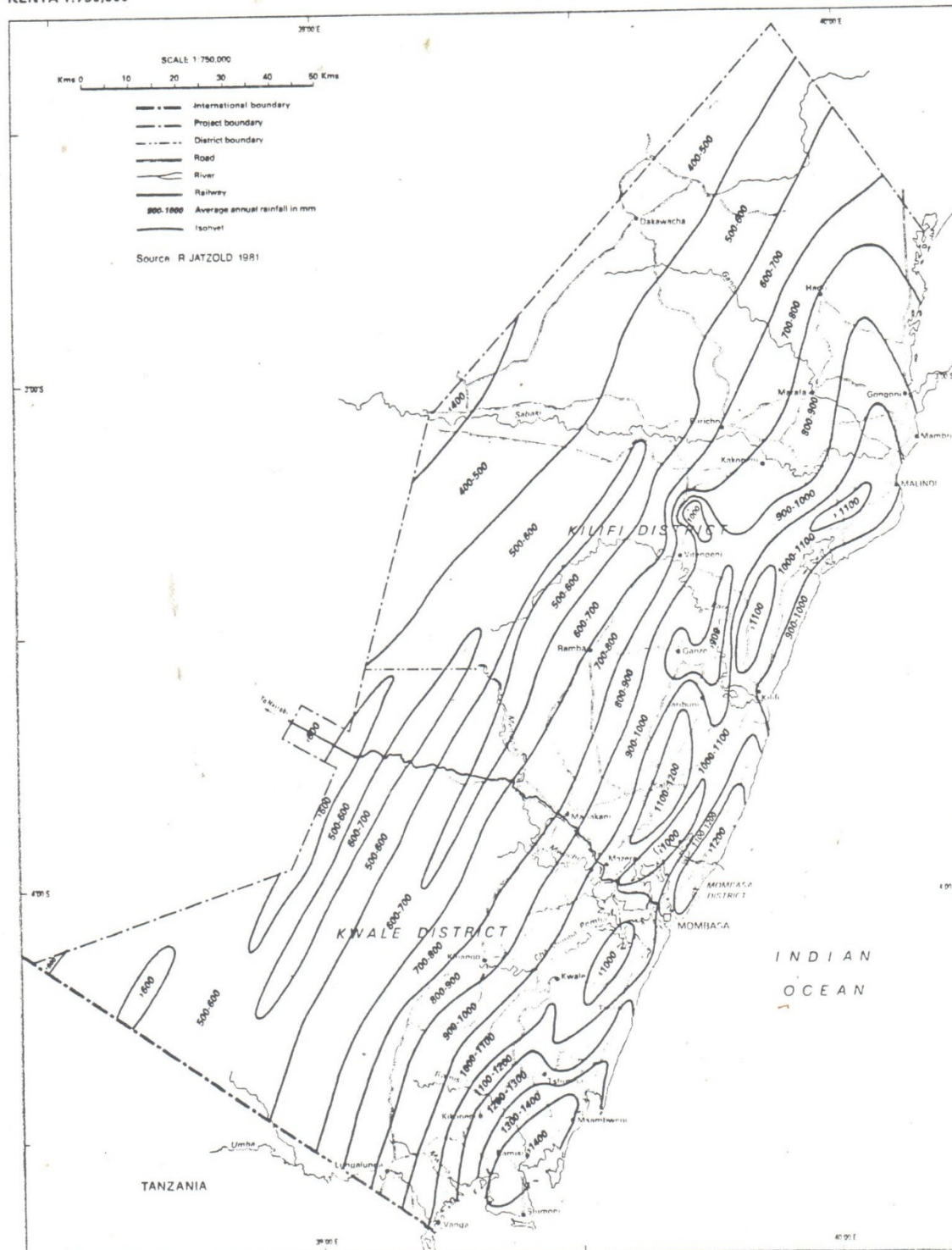
Appendix 1

Map unit	Description	FAO classification
<u>SOILS ON COASTAL OR LAKE-SIDE BEACH RIDGES</u>		
<u>Soils developed on older coastal beach ridges</u>		
379 I m	well drained, very deep, red, very friable, sandy clay loam	rhodic FERRALSOLS
<u>Soils developed on younger coastal beach ridges often covering coral rock</u>		
380 I 1. m	moderately well drained, very deep, dark brown to reddish brown, firm to very firm, often moderately sodic, sandy clay loam, underlying a thick top-soil of friable loamy sand, in places shallow over coral rock	orthic ACRISOLS, sodic phase; with sodic PLANOSOLS
<u>MANGROVE SWAMPS</u>		
382 T m-h	very poorly drained, very deep, olive to greenish grey, soft (unripe), excessively saline and moderately to strongly sodic, loam to clay, often with sulfidic material	thionic FLUVISOLS and gleyic SOLOCHCHAKS

KENYA



AVERAGE RAINFALL



KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT

Map 4

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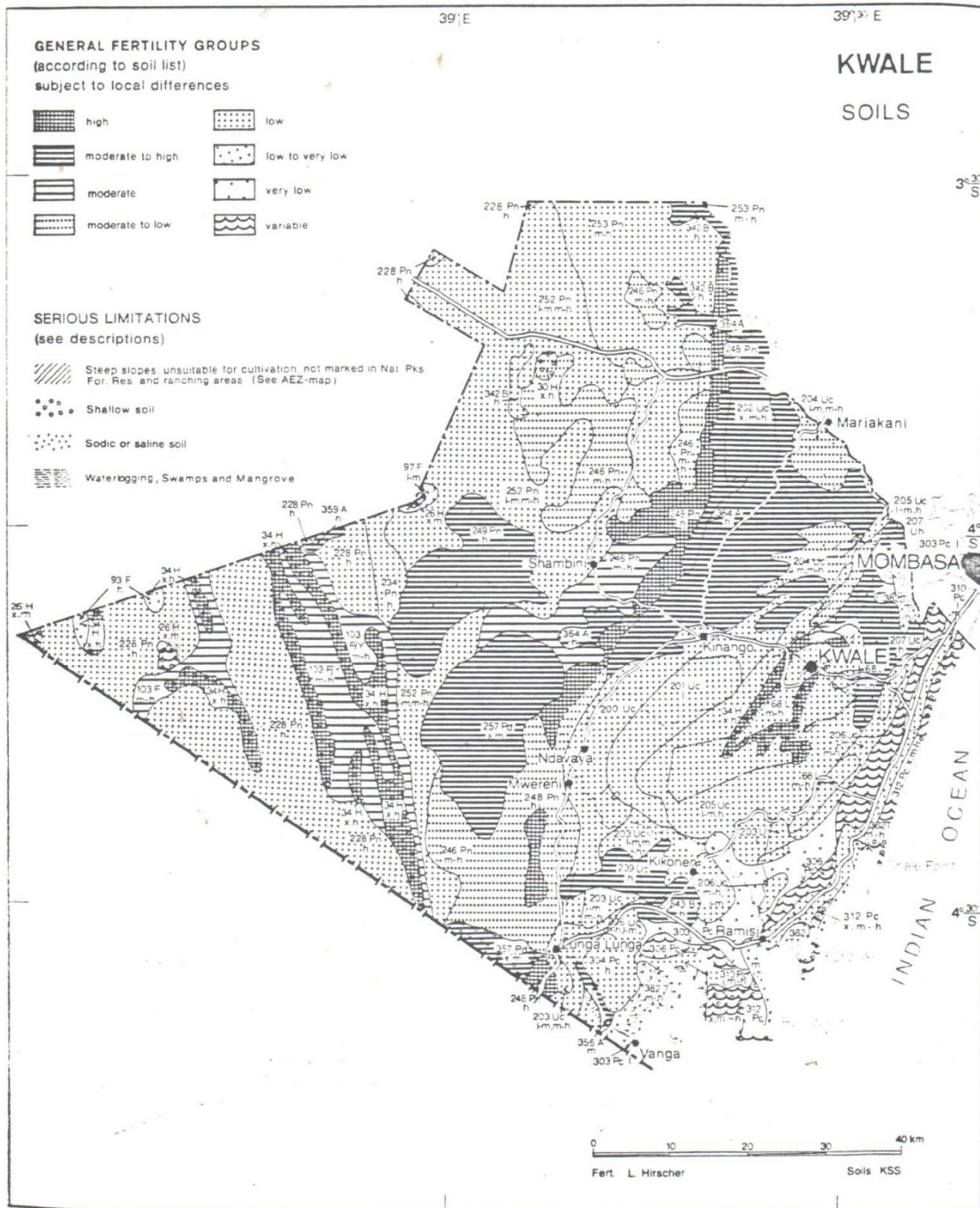
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SOILS



KWALE AND KILIFI DEVELOPMENT PROJECT

Soil Fertility Group



Source: Op. Cit.



Source: Op.Cit.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSFARM DEVELOPMENT

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTFARM DEVELOPMENTI. AGRICULTURAL CROPSA. Introduction

1.01 The majority of the rural population, an estimated 123 456 farm families, or 89% of the total number of households in the project area, is engaged in agricultural production. Crop production is presently concentrated in agro-ecological Zones L2 and L3.^{1/} However, due to population pressure and the lack of high potential agricultural land (End Table 1), an increasing proportion of Zone L4 is cropped, particularly in Kilifi District. Some cultivation is also done in Zone L5, but because of the unreliable nature of rainfall it is limited. It is estimated that of the total land area of 20 671 km² in the project area, only about 21% (or 4 264 km²) is available to small-scale farmers (End Table 2). A further 67% (or 13 810 km²) is rangeland, the rest being government land or open water. Large-scale farms occupy only 362 km² (or 1.8%). The population density on the total arable land (Zones L2, L3 and L4) is 134 persons/km² for Kwale District and 165 persons/km² in Kilifi District (Table 2.) This is high, considering that farming is the main activity of the majority of the people; and it suggests that farming systems must be intensified if production is to match the rate of population growth.

1.02 Crop and livestock productions are carried out as separate enterprises in Zones L2 and L3. In Zone L4 the two enterprises are generally integrated as a mixed farming system. Husbandry is largely traditional and dominated by smallholders who cultivate an average of less than 2.0 ha. Information on the smallholder farmer is generally lacking. Estimates of average holding sizes in the various agro-ecological zones in the project area are given below:^{1/}.

Table 1 : Average Size of Smallholdings by Agro-sociological Zone

<u>Kwale District</u>			<u>Kilifi District</u>		
	<u>Zone</u>	<u>ha.</u>		<u>Zone</u>	<u>ha.</u>
Coastal Belt	L3	3 - 4	Coastal Belt	L3	3 - 4
Kwale cropland	L3/L4	4 - 8	Kaloleni shales	L4	8 - 9
Kikoeni cropland	L3	4 - 5	Kaloleni cropland	L3	4 - 5
Kinango cropland	L4	20 -30	Kaloleni marginal	L4/L5	15 -30

^{1/} Booker Agriculture International Ltd., 1982:
Integrated Development Project Vol.II Annexes 1 - 5

1.03 The distribution of farm families in each agro-ecological zone is given in Table 2 for the project area. These are households engaged mainly in agriculture and are estimated at 52 500 in Kwale District and 71 000 in Kilifi District.

Table 2 Distribution of Agricultural Households - 1979 and 1986

Zone	Rainfall (per annum)	District				Consolidated	
		Kwale	Kilifi				
		1971	1986	1972	1986	1972	1986
L2	over 1 400 mm	3 000	3 100	-	-	3 000	3 100
L3	1000-1 400 mm	22 300	23 200	11 100	11 600	33 400	34 800
L4	900-1 000 mm	12 000	12 500	41 400	43 300	53 400	55 800
L5/6	less than 900	13 100	13 600	15 400	16 100	28 500	29 700
TOTALS:		50 400	52 400	67 900	71 000	118 300	123 400

Source: Booker Agriculture International Ltd., (1982); 1979 National Census; and Consultants' estimates.

1.04 There are two broad categories of smallholders in Zones L2 and L3. First, the small to medium scale farmer whose average holding is about 5.7 ha and who cultivates less than 2 ha with annual crops, the rest of the holding being under tree crops and/or fallow. About 10% or 3 800 families are in this category. The second small scale farmer has a holding size of about 2.5 ha, cultivating less than 1.0 ha with annual crops and has about 0.6 ha of tree crops. The rest of the land is usually under fallow. This second type of farmer still practises some form of shifting cultivation. About 90% or 31 000 farm families in Zone L3 are in this category.

1.05 The farmer in Zone L4 is basically a smallholder mixed farmer. The average holding size in this zone is about 22 ha, but due to the semi-arid nature of the area, less than 10% or about 2.0 ha is cultivated at any one time - about 70% or 1.4 ha of which is for annual crops and the rest for tree crops. The number of farm families in this category is estimated at 55 800 in the project area.

1.06 A number of settlement schemes have been established in the area. (See Appendix 2). Holding sizes in these schemes are on the average larger than for the small scale indigenous farmer.

1.07 Medium to large scale commercial farming in the area is limited to the coastal belt and together forms an area of about 35 375 ha. These large scale farms produce mainly industrial crops and include:

- Associated Sugar Industries Ltd. Ramisi	4 800 ha
- Msambweni Development Company Ltd.	1 320 ha
- Vipingo Estates Ltd	10 000 ha
- Kilifi Plantations Ltd	2 600 ha
- Nyarii Estates Ltd. Samburu North	16 655 ha

Both Vipingo and Nyari Estates are engaged in sisal production. In Ramisi the concentration is on sugar cane; while in Msambweni production of the traditional tree crops, cashewnut and coconut, is dominant. Kilifi Plantations Ltd concentrates mainly on dairying but also has some sisal farms.

Farming Systems

1.08 Four main types of land utilization have been identified within the category of the small scale farmer in the Kwale/Kilifi area. These are:

- (i) smallholder rainfed arable farming (I) (with traditional technology): it is associated with the medium potential L2 and L3 zone; livestock is not integrated in the farming system though the average household has a few stock;
- (ii) smallholder rainfed arable farming (II) (with traditional technology): this system is found mostly in the hinterland of Zone L3 and parts of Zone 4. Even though the farmer sometimes uses ox-ploughing for land preparation, livestock does not form an integral part of the farming system in the real sense;
- (iii) smallholder mixed farming (with traditional technology): in Zone L4 and part of L5; livestock is an integral part of the farming system, but the farmer does not necessarily use animal traction;
- (iv) smallholder irrigation; these are minor schemes covering limited areas in the two districts mostly in L4^{2/}.

Mixed cropping is practised in all the systems with the exception of small scale irrigation. Combinations include both tree and annual food crops^{3/}. The crop combinations, however, vary from place to place and there is a general decrease in the ratio of tree crops to annual food crops from the coastal belt to the hinterland in the west. The production estimates for the most commonly grown crops are given in End Table 1 and End Table 2.

1.9 The most commonly grown annual crops are maize, cassava, cowpeas, green grams and simsim. A number of other crops are also grown, but are normally treated as minor. These include pigeon peas, food beans, sweet potatoes and a variety of vegetables. Maize is the main staple. Cassava is the subsidiary staple. Small areas of simsim are relay planted in maize as a cash crop. Cowpeas and green grams are usually intercropped in maize and sometimes grown in pure stands in the short rains. Intercropping

2/ Small-scale irrigation schemes in the project area include: Sabaki Scheme (12 ha); Burangi (150 ha); Chakama (120 ha) in Kilifi District, none of which are functioning at full capacity. In Kwale District there is the Vanga Scheme (68 ha).

3/ With the exception of smallholder irrigation schemes which produce annual crops only.

is generally in food crop cultivation crops are also planted under coconut. Cropping under cashewnut is not generally feasible once the cashew canopy is well developed. Cotton is grown mainly in the Kilifi-Malindi area.

1.10 The traditional hoe (or jembe) is the major tool for all farm operations, except harvesting, however, due to the light nature of the jembe, the seed bed is poorly prepared and weed control is rarely efficient. Few farmers use ox-ploughs, although under the pilot phase of the present project, about 500 farmers and their pairs of oxen have been trained in land preparation using the "victory" ox-plough.

1.11 The main crops are randomly planted on the flat. Few farmers plant in rows; those who prepare their land with ox-ploughs follow the furrows left by the plough; these are the contact farmers for the National Extension Programme (T&V). Dry planting is rarely done because of the unreliability of the rainfall in the area. The first crop, usually maize, is planted with the first rains. This is followed with cassava. Filling-in and even replanting is done in most cases because of uneven germination due either to pest damage or failure of the first rains.

1.12 Fertilizers and other agro-chemicals and improved seeds are rarely used. Most farmers cannot afford them, but even for the few farmers who can, such inputs are only available in Mombasa. Efforts to encourage farmers to use improved and recommended farm inputs are also constrained by the lack of an organized supply system. Most farmers keep their own planting material for all crops. A few purchase some of their requirements from neighbours, but such transactions are rarely paid for in cash. Cassava cuttings are usually taken from previous crops and no selection for disease free material is done. As a result, cassava mosaic disease is rampant in the area. Disease and pest infestation is also common in maize and in almost all the other crops.

1.13 Weed control is a major problem for farmers in the area. The weed growth and density in the arable croplands is high and where family labour is not adequate^{4/}, the weeding operations may be continuous. Weeding is done two to three times per cropping season. The weeding also serve as land preparation for crops that are relay planted, particularly the grain legumes. Weeding starts about 15 days after the germination of maize. Filling-in and replanting is done in some cases and cowpeas are planted at the same time (see Appendix 1 for details of agricultural crops and operations calendar).

1.14 Serious yield reductions as a result of weed and pest infestation and crop diseases have been reported in the area. Up to an average of 50% reduction in yields is quite common. Crop yields on typical farms in the various agro-ecological zones are given in End Tables 8-13.

^{4/} The average family size is estimated as 7 and available family labour is approximately 4.0 man-equivalents.

1.15 Discussions with farmers and frontline extension officers of the Ministry of Agriculture and Livestock Development (MALD) show that labour is available for hiring. The rate for a day's work varies from KSh. 15-20. Many farmers are not able to afford this rate and therefore, depend on family labour for almost all farm operations. The average labour available per household is about 4.0 man-equivalents. There is a clear division of labour between males and females on the farm, with men often performing the heavy tasks, e.g. land clearing. Almost all other farm activities from planting to harvesting are performed by women and children. Sometimes, men assist in weeding.

1.16 There is a large variation in average farm income in the project area. It is determined by a number of factors including the size of holding, type of crops, size of available family labour and sale of livestock and livestock produce. There are insufficient data on which to base firm estimates of farm family total incomes, but notional crop income estimates based on the different farm models in the area are presented in End Tables 10-13. These give gross values from annual crops and tree crops at farmgate prices. Livestock and livestock produce are not included. The estimates are summarized below:

Average holding size (ha)	Annual Cropping Area (ha)	Tree crop Area (ha)	Agro-ecological zone	Gross Value (KSh.)
5.7	1.7	2.0	L2/L3	6 149
2.5	0.9	0.6	L2/L3	2 574
22.0	1.4	0.6	L4/L5	1 684

Tree crops contribute over 65% of the above value of farm produce in Zone L2/L3, while in Zone L4, about 60% of the estimate is from annual crops. This trend follows the pattern of decrease in the ratio of tree crops to annual crops in the various farming systems from the coast to the west. Cotton contributes about 10% of the gross revenue estimated for Zone L4.

B. Farm Systems Improvement

Farm Models

1.17 The available literature and field discussions indicate the dominance of two systems of target group smallholder production in the project area, small scale irrigation being limited. Based on the characteristics of the systems, two illustrative farm models have been developed for the project. These are:

- (a) Smallholder rainfed arable farming using traditional technology, with an average holding size of less than 3 ha of which about 0.9 is cultivated annually for food crops, about 0.6 ha is under tree crops and about 1 ha is fallow land. This model is representative of about 31 100 farm families in the L3 Zone.
- (b) Smallholder mixed farming using traditional technology, with an average holding size of about 22 ha, but due to the semi-arid/arid nature of the environment no more than 2 ha is cultivated. About 70% of the cultivated area is for annual crops, and the remaining 30% is under tree crops. The rest of the 'holding' is rangeland which is often treated as communally-owned livestock grazing land. The smallholdings of about 55 800 farm families in the L4/L5 Zones are represented by this model.

1.18 The gross value of the farmer's produce in each model has been estimated at current farmgate prices. Incremental benefits resulting from improvements due to the project have also been estimated from the crop budgets and are presented in End Tables 8 to 13. Individual crop budgets are appended (End Tables 14 - 28) on pure stand basis as supporting schedules to the models.

1.19 Due to high population densities and the ecological state of the project area, there is little scope for expansion in farm sizes, particularly in the L2/L3 Zones. In estimating the production and returns from improved farms the current farm sizes and the proportions under each component crop were assumed to remain unchanged. An exception was made in the case of L4/5 zone farmers, however, where the area under sorghum has been increased at the expense of maize (End Table 13) on the improved farm; the rationale being that sorghum thrives better in the drier zones than does maize. Even though the same total amount of grain would be produced (in quantitative terms) under the proposed schedule as would have been produced for the existing maize area, the risk of a complete crop failure in bad years, which is more likely with maize in Zones L4/L5, is reduced under the proposed schedule.

1.24 Cowpeas. Insect control through the spraying of a synthetic pyrethroid at the rate of 1 litre/ha, or any other recommended chemical, is the main proposal for improvement of cowpeas. Better husbandry practices, as defined in para 1.54, are recommended.

1.25 Sorghum. As a drought resistant crop, sorghum can be grown in areas where the rainfall is as low as 250 mm during the growing season.^{5/} MALD has developed suitable varieties for the semi-arid regions. These include the Ex-Mtwapa and Serena varieties. The yield potential of the improved sorghum in the semi-arid areas is high, an average of 1 500 kg/ha. Recent research shows that the yield is higher under drought conditions than maize. Two main groups of sorghum are available in Kenya. These are:

- (a) The red-brown type which contains a considerable amount of tannings in the testa and has a bitter taste and colour, and is therefore disliked by many people.
- (b) The white tanning-free type. Meals prepared from this type closely resemble, at least in colour, those prepared from maize. These varieties, which include Serena and ex-Mtwapa, are susceptible to bird damage which causes serious yield losses.

On account of eating habits, the red-brown varieties are not popular with the people of the project area; nor are the Serena and ex-Mtwapa varieties popular because of the damage caused by quelea birds. Consequently, there is very little incentive to cultivate sorghum.

^{5/} The Coast Agricultural Research Stations - Mtwapa
Supplementary Newsletter, Issue No. 29, August 1984.

1.26. The proposed improvement in sorghum production is based on intensive promotional work in the L4/L5 Zones. This would basically take the form of extension and home economics. An agricultural Officer (AO II) would be posted to Kinango in Kwale District, and another to Ganze in Kilifi District, under the existing establishment, and both would be assisted through the project to promote sorghum in the area. Their duties and responsibilities would include:

- (a) bulking of approved and recommended seed for distribution to local farmers;
- (b) extension of simple but improved agronomic and farming system practices to sorghum farmers, through on-farm demonstrations, field days, etc.
- (c) promotion, through the Home Economics Unit, of the inclusion of sorghum in family diets;
- (d) provision of technical supervision to interested selected farmers, to encourage the bulking of approved sorghum seeds for sale to local farms, thus gradually phasing out the responsibility of seed bulking from MALD to the farm families themselves;
- (e) serving as the linkage between research stations and farmers;
- (f) carrying out monitoring and evaluation of response by farmers to sorghum production. This would include preparation of records concerning the number of farmers growing sorghum, the area planted, yields, etc.;
- (g) advising the Project Coordinator on achievements, and on strategies to be adopted from time to time.

1.27. In order to sustain farmers' interest in sorghum, it would be introduced as a mixed cropping package. Farmers would be encouraged to replace maize with sorghum in the short rains. Better husbandry practices would be promoted through the regular extension services, to include better tillage (possibly with the ox plough); increase in plant numbers; and bird control through scaring. Labour requirements would, therefore, increase tremendously, but most of the bird control could be done by children and by older people who are less actively engaged in farm work. It is expected that a total of 3 813 ha of sorghum would be cultivated by Project Year 5, of which 2 938 ha in Kilifi District and 875 ha in Kwale District, with a total production of 2 287 tons, a more than tenfold increase in current production levels. This would not be easy to achieve particularly because farmers already are showing some reluctance especially in Kwale District), and intensive extension efforts are required.

1.28 Simsim is a traditional crop in the coastal area, where only two local varieties, black and white, are grown. Present yields are low (see para 1.24) and simsim as a pure crop could hardly be justified. However, the crop is always grown interplanted with maize and other crops. This

practice would continue under the project. The principal proposal for improvement is early weeding, and timely harvest to avoid losses in the field, which occur when the pods shatter if the crop is left to stand after maturity.

1.29 Green gram is grown by almost every farmer in the project area but on a very small scale. Only unimproved local varieties are used. Like other legumes it is affected by several insects., e.g aphid, thrip, bod borers, etc. Under the project green gram would benefit from insect control using chemical sprays, particularly in the L3 Zone, where crop damage is severe. Dede vap or synthetic pyrethroid at 2 litres per hectare would be applied. The short growing period of green gram makes it a suitable crop for the drier L4/L5 Zone, and the extension service would be required to promote good husbandry for the production of the crop in these areas.

1.30 Bananas. Most of the bananas currently growing in the project area are the sweet varieties. Under the project the high yielding cooking bananas would be promoted through bulking and distributing planting material to farmers. Six bulking plots totalling 3.5 ha have already been established under the pilot programme. Maintenance of these plots would be supported under the project, and the MALD would encourage and select interested farmers to bulk more of approved material under MALD technical supervision, for sale to other farmers in the area. Control of the banana weevil (see para 1.26) through the application of dieldrin dust or other recommended chemical would be encouraged. The farmer would be assisted by the extension staff to apply better husbandry and to increase field hygiene.

1.31 Sweet Potato. Under the project the crop would be improved basically through extension activities on seed bed preparation, increased plant population and weed control. The area under sweet potato would not increase but production would be intensified on the current 1 318 ha under the crop.

1.32 Cotton. Correct cultivation methods could increase cotton yield by more than 1 000 kg/ha in the L4 Zone of the project area. However, cotton yield in the past have been consistently low, averaging about 300 kg/ha mainly because farmers neglect both weeding in the early stages of growth and pest control. Under the project, farmers would be encouraged and assisted through the extension services to control bollworm and other insects by spraying with 1 litre per hectare Polytrin or other recommended chemicals, in addition to better husbandry.

1.33 Groundnuts. The crop would be promoted in the L4/L5 Zones, where it is more suitable and is currently being produced through the Extension Services. The main proposals for improvement are better husbandry practices and increased plant population.

Participating farmers

1.34 The project target group has been defined in Chapter IV of the main report. The total number of participants in the project would be 24 000 farm families, selected from amongst the target group (10 000 from Kwale District and 14 000 from Kilifi District). The phased entry of participating farmers into the project is given in End Tables 28 and 29.

C. Crop Production Estimates

1.35 Crop production estimates for the two districts of Kwale and Kilifi have been given in End Tables 3-9. The pre-project figures for both area and tonnage have been derived from MALD statistics. As these figures do not differentiate between 'unimproved' and 'improved' production, they are average for both districts. Clearly, many better farmers will have improved their production as result of NEP services. The 'improved' projections therefore, relate only to improved production target group small holdings. The potential for improvement is related to farming systems and models for these systems are described in Section B of this report. The existing crop yields and potential for yield increase using simple but improved husbandry and inputs are described in the following paragraphs.

Maize

1.36 This is the most important annual crop and staple food, although agro-ecologically it is not well suited for the area because of the low yield potential of short duration types at low altitudes. MALD estimates for the area of maize for 1985 are 20 600 ha for Kwale District and 36 500 ha for Kilifi District. These areas may be overstated as most of the crop is interplanted and therefore the land equivalent ratio of maize may be less than the given estimates. This is so for all crop estimates in the area.

1.37 Current maize yields in Zones L2/L3 are estimated at 600 kg/ha. This may be reduced to almost 300 kg/ha in the short rains. These yields can be increased to 1 500kg/ha by using improved seeds (e.g. Coast Composite), increasing plant population per hectare, timely weeding and control of stalk borer^{2/}. These husbandry practices should be administered as a package to realise the full benefits expected. The best results would be achieved by the application of simple rates of fertilizer in addition to the above mentioned package (see End Tables 14 and 15). At present prices, net returns/manday/ha would be KShs. 20.3 when the full recommended practices were applied as against the present net revenue of KShs. 15.3/manday/ha, an overall increase of 25%.

1.38 In the L4/L5 Zone, the current yields are estimated at 300 kg/ha, and by the progressive introduction of better husbandry, improved seeds, higher plant population and pest control, the yields can be doubled to 600 kg/ha. Fertilizer usage on maize is not recommended in this zone; instead, good crop rotation with legumes and the use of animal manure is

recommended whenever possible. This practice is seen as more economical than fertilizer use. The net returns/manday/ha would increase by about 30% from the present KShs. 8.3 to KShs. 11.3.

Cassava

1.39 Cassava. MALD estimated the area of cassava at 15 000 ha in Kwale District and 8 753 ha in Kilifi District for the 1985 season. Current yields in the L2/L3 Zones are estimated at 4 500 kg/ha/year and 3 000 kg/ha/year in the L4/L5 Zones. Almost all cassava in the area is infested with mosaic disease. It is estimated that the yields in both Zones L2/L3 and L4/L5 could be more than doubled by the introduction of CMD-free cuttings to farmers, combined with improved husbandry and crop hygiene. Under the pilot programme of the K-KDP, CMD-free cassava was bulked in several areas for distribution to farmers. There is no quantitative data, however, on the yields and farmers' acceptance of the improved material. Intensive extension programmes would be required for the promotion and success of this programme. It is estimated that the introduction of this improved system would raise the net returns/manday/ha from the current KShs. 27.0 to KShs. 39.1 in Zones L2/L3 and from KSh. 22.50 to KShs. 29.50 in Zones L4/L5.

Cowpeas

1.40 Cowpeas. MALD estimated the area under cowpea for 1985 to be 1 912 ha in Kwale District and 5 500 ha in Kilifi District. In the L2/L3 Zone, current yields are estimated at 400 kg/ha and in the L4/L5 Zone at 300 kg/ha. Cowpeas are mostly affected by many insect species both in the field and when under storage. Yield losses in the order of 40% occur². It is estimated therefore that yields of cowpeas could be raised to 600 kg/ha in the L2/L3 Zones through better husbandry (including the control of insects by spraying insecticides). In the L4/L5 Zones, the combined incremental benefits from improved cultivation and husbandry practices on the other crops and control of insects would help raise cowpea yields to about 400 kg/ha. The overall effect of the improvement would increase in net returns/manday per hectare from the current KShs. 9.8 to KShs. 12.5 and from KShs. 7.5 to KShs. 9.0 in Zones L3/L4 and L4/L5 respectively.

1.41 Sorghum is only grown by a few smallholders in the L4/L5 Zone. Although it is ecologically a more suitable crop than maize for the area, it has not been popular with the farmers. MALD estimates for 1985 are 245 ha for Kwale District and 405 kg/ha for Kilifi District. The crop, however, has great potential in the L4 Zone and with successful promotional work, it would perform better than maize in the area. Current yields are estimated at 250 kg/ha. The yield per hectare could be progressively increased to 600 kg/ha or more through effective, promotional and educational programmes, use of improved seeds and increase in plant population, timeliness of weeding and proper crop rotations. The combination of these in addition to spray of insecticides would further raise the yields to about 1 000 kg/ha. The net returns/manday per hectare would increase from the present KShs. 6.6 to KShs. 13.9.

1.42 Simsim. MALD estimated a total of 5 390 ha for simsim production in 1985. Of this, 1 490 ha were in Kwale District and 3 900 ha in Kilifi District. The yield of simsim is estimated at 150 kg/ha in the area. Presently there is hardly any yield difference within the zones, because the crop is relay planted and is not given any particular attention. Early planted crops suffer yield losses from aphids and other sucking insects. It is estimated that an increase in the present plant population and better husbandry practices, particularly in the L3 Zone, would increase yields to about 200 kg/ha, without any additional input. In the L4/L5 Zone yields cannot be increased much from the present levels without the application of fertilizers and other agro-chemical inputs. This however is not attractive at current prices. It is estimated that the introduction of better husbandry and increase in plant population would increase the net returns/manday/ha from the present KShs. 11.5 to KShs. 14.5, or an increase of about 25%.

1.43 Green grams. The area under green grams was estimated at 743 ha in Kwale District and 1 867 ha in Kilifi District for the 1985 season. In the L3/L4 Zones, current yields are estimated at 300 kg/ha. Like cowpeas, green grams are seriously affected by many species of aphids, thrips, leafhoppers and pod borers. It is expected that the yields would be increased from the present levels to 500 kg/ha in the L3 Zone by the use of insecticide sprays at flowering. This would increase the returns/manday/ha from the current level of KSh 17.5 to KSh 21.5, a 20% increase. In the L4/L5 Zone, however, yields could not increase without the use of fertilizers. The incremental benefits from fertilizers are not however sufficiently attractive to farmers to encourage their use.

1.44 Banana. The 1985 MALD estimates for bananas in the project area was 3 930 ha in Kwale District. From previous MALD records, the production in Kilifi District was estimated at 576 ha ^{2/}. Current yields of banana (grown mainly in the L2/L3 Zones) are estimated at 3 000 kg/ha. Serious damage to the crop is caused by the banana weevil (*Cosmopoliles sordidus*) which feeds on the stems, particularly at soil level. It is anticipated that a simple application of Dieldrin dust - an insecticide - around the base of the stem and at cuts after pruning will control this pest. It is estimated that banana yields could be improved through the combined effort of increase in plant population and a better husbandry. The net returns per manday/ha would increase to KShs. 21.2 from the current level of KShs. 14.0.

7/ Consultant's own estimate based on 1977-1984 MALD production figures.

1.45 Sweet potato is grown mainly in the L3 Zone. The 1985 MALD estimates are 100 ha for Kilifi District and 1 218 ha for Kwale District. The current yield of the crop is estimated at 3 000 kg/ha. It is anticipated that yields could be doubled through better husbandry and increase in plant population. The returns per manday/ha would, as a result, increase by 15% from KShs. 31.5 to KSh. 36.4.

1.46 Cotton. The bulk of the crop in the project area is grown in Kilifi District where the MALD estimated an area of 3 662 ha of cotton in 1985. In Kwale District, MALD estimate is 170 ha. The L4 Zone is the main cotton growing zone and yields are estimated at 300 kg/ha. Yields could be increased through a spray programme to control the bollworm and cotton strainer. The use of fertilizers on cotton is not attractive to farmers. The net returns per manday/ha would increase from the present KShs. 11.3 to KShs. 18.6 through the spray programme.

1.47 Groundnut. Only small quantities of groundnuts are produced in the project area. In 1985, MALD estimated a total of 184 ha with 163 ha in Kilifi District and only 21 ha in Kwale District. Present yields are estimated at 250 kg/ha and would increase to 500 kg/ha through better husbandry and increased plant population. There will be a net return of KShs. 35.0/manday/ha, a 70% increase from the present level of KShs. 20.0. An intensive extension effort would, however, be required to achieve any significant increase in groundnut cultivation.

1.48 Tree crops. The most important tree crops in the project area are coconut, cashewnut and bixa (which is only grown in Kwale District). The 1985 MALD estimates for these crops are 18 232 ha and 15 800 ha of cashewnut and coconut respectively, and 2 820 ha for Bixa in Kwale District. The estimates for Kilifi District in 1985 are not available, but were recorded as 18 447 ha for coconut and 16 797 ha for cashewnut in 1981. The present yields for coconut are estimated at 450 kg of copra per hectare and for cashewnut at 350 kg/ha. Both coconut and cashewnut suffer serious losses from pests. The rhinoceros beetle and the coreid bug are common pests on coconut and cashewnut respectively. These pests feed on the growing points thus causing die-back of shoots. To control these major pests, an intensive programme of field hygiene is required. Dead and rotting materials need to be removed and burnt. Field hygiene and better husbandry (pruning of cashew, etc.) would increase yields to about 600 kg/ha of copra and 500 kg/ha of cashewnuts. Yields can be doubled in the long term through the provision of improved seeds from selected high yielding trees in combination with improved husbandry practices.

II. LIVESTOCK PRODUCTION^{8/}

A. Background

2.01 Livestock production is an integral part of smallholder farming throughout the project area; it is important both in its contribution to the family diet and income. Recorded information on traditional husbandry is sparse but despite important disease constraints, the dry hinterland is heavily stocked with indigenous cattle, sheep, and goats. Estimates prepared for the recent IFAD-financed Animal Health Services Rehabilitation Project put the livestock population at 122 000 head of cattle and 230 000 sheep and goats for Kwale District, and 180 000 head of cattle and 216,000 sheep and goats for Kilifi District.

Cattle

2.02 Cattle breeds of the project area are mostly of the small East African Zebu type maintained under traditional rangeland husbandry systems. An important attribute is their ability to resist or tolerate enzootic diseases, particularly East Coast Fever and trypanosomiasis. Other specialised milk production systems, particularly in the Kilifi coastal strip utilise a variety of crossbred and purebred European and Indian Sahiwal cattle types. These include Ayrshire-Sahiwal crosses and some Jersey cattle together with local Zebu cattle crosses.

Goats

2.03 The goats in Kwale and Kilifi Districts are Dwarf East African types with an average mature weight of 25 kg. The breed is well adapted to the seasonally harsh nutritional environment of the dry hinterland and to enzootic diseases such as trypanosomiasis. Matuga Sheep and Goat Research Station has breeds that include Galla (indigenous to the North of Coast Province) and Toggenburg goats. However, these breeds and crossbreeds are susceptible to trypanosomiasis and severe parasitism in the Matuga environment. Given the current status of disease and animal nutrition, the distribution of improved animals to traditional livestock owners must be undertaken with extreme care.

Sheep

2.04 Red Masai sheep are indigenous to the dry hinterland of Kwale and Kilifi Districts. Animals are fat-tailed with a mature weight of 25 kg. Fat-rumped sheep of the Black Head Somali type with a mature weight of about 30 kg also occur in the Northern Kilifi dry hinterland. Introduced breeds at Matuga sheep and goat research station include Dorper and Black Head Persian.

^{8/} Details drawn principally from Kwale-Kilifi Integrated Development Project: BAI Ltd 1982.

Rabbits

2.05 Small numbers of rabbits are available from Mtwapa and Mariakani Research Stations and from breeders supported under the K-KDP pilot programme. Currently the productivity and survival of these rabbits is low and commercial feeds are expensive. As the research stations do not maintain production data, the economics of rabbit production have not been clearly demonstrated (para 2.12).

Bee-keeping

2.06 Bee-keeping is a traditional activity throughout the project area and the substantial demand for improved hives under K-KDP indicates the potential for expansion in the industry.

Kwale-Kilifi Development Project (K-KDP)

2.07 Livestock development under the pilot phase of the K-KDP programme was aimed at the introduction of improved goats to the poorer farmers and traditional livestock owners of the hinterland (Zones L4 and L6); at the expansion of rabbit production; at improved smallholder poultry production; and at improved bee-keeping. With the exception of bee-keeping however, the livestock initiatives have been constrained by problems of disease control and feed.

2.08 Animal Diseases. The trypanosomiasis challenge presents the major disease problem for cattle and small stock, whether indigenous or crossbred, throughout the project area. The only areas free from some degree of tsetse infestation are Mombasa city and the open areas on the shales where tree cover is sparse. Indigenous East African Zebu cattle appear to exhibit tolerance to trypanosomiasis in areas of constant tsetse challenge although the exact degree and nature of genetic and acquired resistance is still to be determined. However, the degree of tolerance in Galla goats brought in from tsetse free areas is low, and the viability of the widespread use of the breed has yet to be established.

2.09 In areas of low trypanosomiasis challenge the disease may be controlled by treatment with trypanocidal drugs. However, such control methods used in more extensive production environments would result in substantially increased administrative costs and would require a high standard of disease control management, if potential problems of drug resistance are to be minimised.

2.10 Other diseases including the major tick-borne diseases of East Coast Fever, Anaplasmosis, Piroplasmosis and Heartwater are endemic throughout the project area but they are readily controllable, and with the anticipated improvement in veterinary services, under the IFAD-financed Animal Health Services Rehabilitation Project, represent no major constraint to the development of smallholders' indigenous stock.

2.11 Animal feed. Although forage production has been widely promoted under the pilot-phase, adequate feed to maintain stock throughout the year is a major constraint to smallholder investment in high cost improved stock. This is particularly so in the hinterland and until the problems of forage production in this harsh environment have been overcome, distribution of improved stock must be carefully controlled.

2.12 A similar caveat may be applied to rabbit production where availability of dry season green matter has limited production amongst pilot-phase producers. In addition, the programme has yet to establish the acceptability of rabbit meat amongst the population at large. If the demand for rabbit meat was present, then it might justify the use of purchased feeds in production; this is not yet the case.

2.13 The pilot-phase distribution of improved poultry stock to womens' groups has proved popular, which is understandable as the groups were also supplied with free poultry rations. The problems of control of disease in exotic poultry and the economics of smallholder poultry production are already well known and established. With adequate support available under the National Poultry Development Project, no further investment in this area is contemplated under the proposed project.

B. Proposed Development

Rationale

2.14 The constraints to improved livestock production outlined above are particularly acute at the smallholder level. Unlike agricultural production in which standards rise gradually from subsistence to commercial levels, livestock production systems are either "scavenging" with little or no costed inputs, or they are commercial, requiring the following components:

- (a) suitable genetic material;
- (b) comprehensive animal health services;
- (c) a good standard of animal husbandry;
- (d) regular supplies of forage and balanced feeds;
- (e) secure marketing; and
- (f) credit.

The pilot phase programme has clearly shown the problems which occur when improved production is not undertaken as a 'package'. However, the introduction of improved Animal Health Services (para 2.10) would provide the basis for an orderly programme of development, and give grounds for continued project support for smallholder livestock.

Project Development

2.15 Given the underlying problem of disease control in general and of trypanosomiasis in particular, project intervention in livestock production would be continued through a demonstration programme, including the expansion of the fodder production programme, aimed at developing a suitable animal health and feeding regime which would be both sustainable and acceptable to the typical target group livestock producer.

2.16 In order to gain maximum coverage and reduce the costs to MALD the programme would be implemented through individual stockmen or groups of farmers chosen for their ability and good husbandry skills:

- (a) Goats. About 40 selected farmers or womens' groups would be supplied with Galla stock which would be maintained in accordance with a regulated and supervised regime set by the divisional Animal Husbandry Officer. In addition about 20 interested and competent stockmen would be encouraged to establish small herds of pure bred Galla, again with MALD support and supervision. There is a heavy demand nationally for Galla and a condition of MALD services would be that the project would have first call on the off-take for sale to local producers.
- (b) Cattle. Herd improvement through the distribution of bulls to interested groups or families would be undertaken in a similar manner and with close supervision. The programme would commence in the areas of minimum disease challenge and about 5 such groups per annum would be assisted in each district.

2.17 In addition, cattle and small stock production support would be provided for the expansion of two further pilot phase initiatives:

- (a) Rabbit production. Problems of dry season feed for stock and the acceptability of rabbit meat generally have yet to be resolved and established. MALD would therefore continue the pilot field programme with technical and home economics support.
- (b) Bee-keeping. The successful bee-keeping programme would be expanded and approved hives manufactured locally, initially by the Kilifi District Cooperative Union workshops. MALD would assign an officer in each district specifically for the expansion of honey production.

2.18 The costs of the proposed programmes would be shared by MALD which provide the stock, technical services, and drugs, sera and vaccines. The participating producers would provide stock handling and watering facilities to approved demonstration standards; stock shelter; and adequate forage which would also be available for distribution, as cuttings, to interested farmers. Detailed MALD costs are set out in End Tables 2 and 3 to Annex 4.

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Agricultural Crop and Operations Calendar (cont.d)

Month	Activity
October	<ul style="list-style-type: none">- Short rainy season planting- Harvesting of early planted simsim- Off-farm activities
November	<ul style="list-style-type: none">- Harvesting of citrus (oranges), mangoes- Harvesting of coconut products- Cashewnut collection- Simsim harvesting and threshing- Isolated weeding of cassava fields- Off-farm activities
December	<ul style="list-style-type: none">- Harvesting of tree crop products- Simsim threshing and sale- Harvesting of short rainy season crops- Off-farm activities

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Settlement schemes in Kwale district

<u>Name of Scheme</u>	<u>Starting Date</u>	<u>Size (ha)</u>	<u>No. of Plots</u>	<u>Plot Size</u>	<u>Type Settler</u>	<u>A.E Zone</u>	<u>Average Rainfall</u>	<u>Soils</u>	<u>Cropping Pattern</u>	<u>Remarks</u>
1. Diani	1978	728	446	2.0	Digo/ mixed	L3	1200/ 1300	shallow /deep	local food crops cashewnuts vegetables	ex-farm employment possibilities in beach hotel zone
2. Golini	1985	290	102	2.0	Digo	L3	1000/ 1100	deep	local food crops coconut	proposal scheme reallocation of land amongst squatters
3. Mbuguni	1978	2 400	787	2.4	Digo/ Duruma/ Kikuyu	L4	900/ 1000	deep	local food crops, bananas	majority of the plots deserted
4. Sabharwal	1968	120	20	4.8	-	L3	1100/ 1200	shallow /deep	-	small scheme
5. Tembo Springs	1968	202	26	4.8	-	L4	1000	shallow /deep	-	small scheme
6. Ukunda	1968	607	123	4.8	Digo	L3	1200/ 1300	deep	local food crops, coconuts, cashewnuts	ex-farm employment possibilities in beach hotel zone
		4 347	1 504							

Source: Food and Nutrition Planning Unit, Ministry of Planning and National Development.

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Settlement Schemes in Kilifi District

<u>Name of Scheme</u>	<u>Starting Date</u>	<u>Size (ha)</u>	<u>No. of Plots</u>	<u>Plot Size</u>	<u>Type Settler</u>	<u>A.E. Zone</u>	<u>Average Rainfall</u>	<u>Soils</u>	<u>Cropping Pattern</u>	<u>Remarks</u>
1. Kigipwa	1982	350	350	1.0	-	L4	1100/ 1200	shallow	local food crops, tree crops	recent scheme; large parts unoccupied
2. Magarini	1978	60 000	4 000	12.0 6.0	mostly Giriama	L4	900/ 1000	deep	local food crops, tree crops	scheme not yet completed
3. Mtondia	1962	3 000	235	4.8	Giriama	L3/ L4	900/ 1100	shallow/ deep	local food crops cashewnuts	
4. Mtwapa	1969	3 986	607	4.8	mixed/ Giriama dominant	L3	1200	deep	local food crops, vegetables cashewnuts	commercial vegetable production off-farm employment possible.
5. Ngerenyi	1968	5 236	950	4.8	Giriama	L3/ L4	1000/ 1100	deep	local food crops cashewnuts	
6. Tezo/Roka	1962	6 500	1 357	4.8	Giriama	L4	900/ 1000	shallow deep	local food crops coconuts cashewnuts	
7. Vipingo	1974	1 052	260	4.0	Giriama	L4	900/ 1000	deep	local food crops, cashewnuts bananas	
		<u>80 124</u>	<u>7 759</u>							

Source: Food and Nutrition Planning Unit, Ministry of Planning and National Development.

KENYA
KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS
LAND AREAS AND POPULATIONS OF KWALE AND KILIFI DISTRICTS

Zone	Kwale				Kilifi			
	Area 1/ (km ²)	(%)	Rural ('000)	Pop'n 2/ (%)	Area 1/ (km ²)	(%)	Rural ('000)	Pop'n (%)
Non-agric. land (swamps, etc.)	944	11.34	0	.00	1291	10.31	0	.00
L2-Med. potential	235	2.82	20770	5.96	0	.00	0	.00
L3-Med. potential	953	11.45	153430	44.04	496	3.96	81200	16.34
L4-Low to med.	897	10.78	83750	24.04	2045	16.33	303100	60.99
L5/L6-Low pot.	5228	62.82	90450	25.96	8582	68.53	112700	22.68
Water	65	.78	0	.00	109	.87	0	.00
Totals	8322	88.66	348400	100.00	12523	89.69	497000	100.00

SOURCES: 1/ Farm Management Handbook of Kenya, Vol. 11, Part C.

2/ Consultants' estimates of 1986 population and distribution.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECT

Estimate of Land Use and Land Pressure

<u>Land Category</u>	<u>Land area</u>	
	<u>Kwale</u>	<u>Kilifi</u>
	(km ²)	(km ²)
A. <u>Total Area a/</u>		
a. Total area of district	8 322	12 523
b. Open water	65	109
Total land	8 257	12 414
B. <u>Of which a/</u>		
a. Government land	2 696	4 934
b. Freehold land	34	233
c. Trust land	5 517	7 247
Total land	8 257	12 414
C. <u>Land Use</u>		
a. Township reserves, forests, parks a/	944	1 291
b. Large-scale farming a/	156	206
c. Small-scale farming b/	1,929	2 335
d. Ranches, pastoral b/	5,228	8 582
Total land	8,257	12 414
<u>Population c/</u>		
a. Farmers (Zones L1, L2, L3 L4)	258,000	384,300
b. Pastoralists (Zones L5, L6)	91,000	112,700
E. <u>Density on Land Used c/</u>		
a. Zones L1, L2, L3 L4 d/ person/km ²	134	165
b. Zones L5, L6 d/ " "	20	31

Sources:

- a/ CBS, Statistical Abstract 1985 (data as at 31.12.1983)
- b/ Includes private and parastatal regions which total 588 km² in Kwale District and 4 970 km² in Kilifi District
- c/ Consultant's estimate (see Annex I)
- d/ Excluding company and private ranch areas not available to traditional pastoralists.

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KWALE DISTRICT DEVELOPMENT PROJECT
Estimates of Crop Production (in hectares)

	1977	1978	1979	1980	1981	1982	1983	1984	1985
A. Food crops									
Maize	13575	7871	1977	6278	6750	na	13656	28198	20600
Cassava	1580	2981	1381	1386	1993	na	2282	20317	15000
Banana	231	153	1320	2710	2852	na	-	3593	3930
Sorghum	27	5	8	24	139	na	49	198	245
Beans	508	339	218	85	260	na	336	902	1573
Cowpeas	1572	820	617	569	1017	na	912	2137	1912
Green grams	6401	383	30	42	247	na	421	705	743
Pigeon peas	18	34	40	45	56	na	109	72	371
Rice	690	286	229	184	139	na	520	752	1051
Sweet potato	874	229	63	114	74	na	276	290	1218
Groundnuts	63	70	42	21	25	na	9	86	21
B. Industrial Crops									
Simsim	1982	642	694	2383	114	na	874	3953	1490
Cotton	273	153	83	314	346	na	104	213	170
Pineapple	105	126	30	25	35	na	na	55	81
Sunflower	422	73	7	6	8	na	na	na	na
Sugar cane	497	404	8406	6200	6260	na	na	9573	15500
C. Tree crops									
Coconut	9182	9589	10135	10144	10212	14650	na	15140	15800
Cashewnut	8902	9083	9083	9227	9289	18406	18429	18536	18232
Bixa	400	1410	1548	2027	2268	na	2457	2805	2820
Mango	102	45	54	884	965	na	na	3891	4278
Citrus	170	236	114	2500	2784	na	na	3890	4246

Source: Ministry of Agriculture, Annual Reports, BAI Report, 1982

KENYA

ANNEX 3
Table 4

KILIFI DISTRICT DEVELOPMENT PROJECT

Estimates of Crop Production (in hectares)

	1977	1978	1979	1980	1981	1982	1983	1984	1985
A. Food crops									
Maize	39383	25000	20194	26209	35659	na	na	37241	36500
Cassava	5170	4000	3068	2942	5721	na	na	6512	8753
Sorghum	100	60	17	12	59	na	na	383	405
Beans	11	32	17	35	24	na	na	526	500
Cowpeas	4794	3442	1528	3821	2770	na	na	5778	5500
Green grams	1664	1084	332	453	724	na	na	1230	1867
Pigeon peas	15	24	36	30	18	na	na	na	na
Rice	627	222	132	645	962	na	na	2703	2267
Sweet potato	69	36	28	21	141	na	na	139	100
Groundnuts	30	23	58	21	185	na	na	66	163
Banana	47	334	129	2925	2718	na	na	496	576*
B. Industrial crops									
Simsim	3458	3246	3862	3912	1614	na	na	1395	3900
Cotton	7442	4559	1430	3778	5808	na	na	3456	3662
Pineapple	146	84	130	580	587	na	na	na	na
Sunflower	147	16	2	4	6	na	na	na	na
C. Tree crops									
Coconut	17020	17669	17959	18262	18447	na	na	367	300
Cashewnut	16325	16515	1611	16628	16797	na	na	79	na
Mango	49	91	45	2660	2315	na	na	84	70
Citrus	87	28	57	1690	1755	na	na	87	70

* / Consultant's estimate based on 1984 production.

Source: Ministry of Agriculture, Annual Reports, BAI, Report 1982.

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ANNEX 3
Table 5

KWALE DISTRICT DEVELOPMENT PROJECT

<u>Crop Development Projections - All Zones (in hectares)</u>						
<u>Crop</u>	<u>Pre- Project</u>	<u>Y 1</u>	<u>Y 2</u>	<u>Y 3</u>	<u>Y 4</u>	<u>Y 5</u>
<u>Maize</u>						
Average ^{a/}	20 600	20 100	19 100	18 100	16 850	15 600
Improved	-	500	1 500	2 500	3 750	5 000
Total	20 600	20 600	20 600	20 600	20 600	20 600
<u>Cassava</u>						
Average	14 950	14 850	14 650	14 450	14 200	13 950
Improved	50	150	350	550	800	1 050
Total	15 000	15 000	15 000	15 000	15 000	15 000
<u>Banana</u>						
Average	3 930	3 905	3 855	3 805	3 742	3 680
Improved	-	25	75	125	188	250
Total	3 930	3 930	3 930	3 930	3 930	3 930
<u>Cowpeas</u>						
Average	1 912	1 812	1 612	1 412	1 162	912
Improved	-	100	300	500	750	1 000
Total	1 912	1 912	1 912	1 912	1 912	1 912
<u>Sorghum^{b/}</u>						
Average	245	157	-	-	-	-
Improved	-	88	263	438	656	875
Total	245	245	263	438	656	875
<u>Green grams</u>						
Average	743	693	593	493	368	243
Improved	-	50	150	250	375	500
Total	743	743	743	743	743	743
<u>Simsim</u>						
Average	1 490	1 440	1 340	1 240	1 125	990
Improved	-	50	150	250	375	500
Total	1 490	1 490	1 490	1 490	1 490	1 490
<u>Sweet potato</u>						
Average	1 218	1 193	1 143	1 093	1 030	968
Improved	-	25	75	125	188	250
Total	1 218	1 218	1 218	1 218	1 218	1 218

a/ See text for details

b/ 50% take-up rate, see text for details

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT

Crop Development Projections - All Zones (in hectares)

Crop	Pre- Project	Y 1	Y 2	Y 3	Y 4	Y 5
<u>Maize</u>						
Average	36 500	35 800	34 400	33 000	31 250	29 500
Improved	-	700	2 100	3 500	5 250	7 000
Total	36 500	36 500	36 500	36 500	36 500	36 500
<u>Cassava</u>						
Average	8 753	8 613	8 333	8 053	7 703	7 353
Improved	-	140	8 420	700	1 050	1 400
Total	8 753	8 753	8 753	8 753	8 753	8 753
<u>Cowpeas</u>						
Average	5 500	5 360	5 080	4 800	4 450	4 100
Improved	-	140	420	700	1 050	1 400
Total	5 500	5 500	5 500	5 500	5 500	5 500
<u>Banana</u>						
Average	576	565	544	523	497	471
Improved	-	11	32	53	79	105
Total	576	576	576	576	576	576
<u>Green gram</u>						
Average	1 867	1 797	1 657	1 517	1 342	1 167
Improved	-	70	210	350	525	700
Total	1867	1867	1867	1867	1867	1867
<u>Simsim</u>						
Average	3 900	3 830	3 690	3 550	3 375	3 200
Improved	-	70	210	350	525	700
Total	3900	3900	3900	3900	3900	3900
<u>Sorghum</u>						
Average	405	-	-	-	-	-
Improved	-	416	1 250	2 083	3 124	4 165
Total	405	416	1 250	2 083	3 124	4 165
<u>Sweet potato</u>						
Unimproved	100	89	68	47	21	-
Improved	-	11	32	53	79	105
Total	100	100	100	100	100	105

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KILIFI DISTRICT DEVELOPMENT PROJECT

Crop Development Projections - All Zones (cont.d)

Crop	Pre- Project	Y 1	Y 2	Y 3	Y 4	Y 5
<u>Cotton</u>						
Unimproved	3662	3424	2912	2472	1877	1282
Improved	-	238	750	1 190	1 785	2 380
Total	3 662	3 662	3 662	3 662	3 662	3 662
<u>Groundnuts</u>						
Unimproved	163	103	-	-	-	-
Improved	-	60	179	297	446	595
Total	163	163	179	297	446	595

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Consolidated Crop Production Projections
(tonnes)

	Pre- Project	Y1	Y2	Y3	Y4	Y5	Cumulative Incremental Production (Y5)	Value of Y5 Incremental Production ^{1/}	Annual Increase in Production
Maize									
Kwale	9 270	9 570	10 170	10 770	11 521	12 270	3 000	310.5	
Kilifi	8 250	18 415	18 744	19 073	19 484	20 075	1 825	188.9	
Total	27 620	27 985	28 914	29 843	31 005	32 345	4 825	499.4	3.3%
Cassava									
Kwale	56 517	56 675	57 525	58 375	59 438	60 500	3 983	119.5	
Kilifi	32 823	33 223	34 021	34 819	35 816	36 813	3 990	119.7	
Total	89 340	89 898	91 546	93 194	95 254	97 313	7 973	239.2	1.7%
Banana									
Kwale	11 790	11 865	12 015	12 165	12 351	12 540	750	37.5	
Kilifi	1 728	1 758	1 821	1 884	1 965	2 043	315	15.8	
Total	13 518	13 628	13 836	14 049	14 316	14 583	1 065	53.3	1.5%
Cowpea									
Kwale	669	684	714	744	781	819	150	13.5	
Kilifi	2 018	2 028	2 045	2 063	2 085	2 106	88	7.9	
Total	2 687	2 712	2 759	2 807	2 866	2 925	238	21.4	1.8%
Sorghum									
Kwale	61	92	158	263	394	525	464	41.8	
Kilifi	101	299	750	1 250	1 874	2 499	2 398	215.8	
Total	162	369	908	1 513	2 268	3 024	2 862	257.6	77%.2/
Green gram									
Kwale	223	226	231	236	241	248	25	5.0	
Kilifi	570	561	564	565	569	571	11	2.1	
Total	783	787	795	801	810	819	36	7.2	0.9%
Simsim									
Kwale	224	225	227	230	235	237	13	3.3	
Kilifi	585	586	587	588	589	590	5	1.3	
Total	809	811	814	818	824	827	18	4.6	0.5%
Sweet Potato									
Kwale	4 568	4 624	4 736	4 849	4 988	5 130	562	28.1	
Kilifi	375	397	444	491	553	630	255	12.8	
Total	4 943	5 021	5 180	5 340	5 541	5 760	817	40.9	3.3%
Ground nuts									
Kwale	-	-	-	-	-	-	-	-	
Kilifi	40	56	89	149	223	298	258	90.3	
Total	40	56	89	149	223	298	258	90.3	45%.3/
Cotton									
Kwale	-	-	-	-	-	-	-	-	
Kilifi	1 098	1 179	1 324	1 426	1 634	1 813	715	87.6	10.5%
Total	1 098	1 179	1 324	1 426	1 634	1 813	715	87.6	

1/ At 1986/87 producer prices (scheduled price or local market)

2/ Assume high substitution rate for maize in Zone L4/5 in Kilifi

3/ Less current production expected to recover in response to better prices.

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KILIFI DISTRICT DEVELOPMENT PROJECT

Crop Production Projections - All Zones (tons)

Crop	Pre- Project	Y 1	Y 2	Y 3	Y 4	Y 5
<u>Maize</u>						
Improved	18 250	17 900	17 200	16 500	15 625	14 750
Improved	-	515	1 544	2 573	3 859	5 325
Total	18 250	18 415	18 744	19 073	19 484	20 075
<u>Cassava</u>						
Unimproved	32 823	32 299	31 249	30 199	28 886	27 573
Improved	-	924	2 772	4 620	6 930	9 240
Total	32 823	33 223	34 021	34 819	35 816	36 813
<u>Cowpea</u>						
Unimproved	2 018	1 967	1 864	1 762	1 633	1 504
Improved	-	61	181	301	452	602
Total	2 018	2 028	2 045	2 063	2 085	2 106
<u>Banana</u>						
Unimproved	1 728	1 695	1 632	1 569	1 491	1 413
Improved	-	63	189	315	474	630
Total	1 728	1 758	1 821	1 884	1 965	2 043
<u>Green gram</u>						
Unimproved	560	539	497	455	403	350
Improved	-	22	67	110	166	221
Total	560	561	564	565	569	571
<u>Simsim</u>						
Unimproved	585	575	554	532	506	480
Improved	-	11	33	56	83	110
Total	585	586	587	588	589	590
<u>Sorghum</u>						
Unimproved	101	27	-	-	-	-
Improved	-	250	750	1 250	1 874	2 499
Total	101	277	750	1 250	1 874	2 499
<u>Sweet potato</u>						
Unimproved	375	334	255	176	79	-
Improved	-	63	189	315	474	630
Total	375	397	444	491	553	630

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KILIFI DISTRICT DEVELOPMENT PROJECT

Crop Production Projections - All Zones (tons) (cont'd)

Crop	Pre- Project	Y 1	Y 2	Y 3	Y 4	Y 5
<u>Cotton</u>						
Unimproved	1098	1027	874	742	563	385
Improved	-	143	450	714	1 071	1 428
Total	1 098	1 170	1 324	1 456	1 634	1 813
<u>Groundnuts</u>						
Unimproved	40	26	-	-	-	-
Improved	-	30	89	149	223	298
Total	40	56	89	149	223	298

ANNEX 3
Table 10

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Farm Model - Zone L2/3

(Target group farmer: unimproved)

Average holding size: 2.5 ha 1/

Crop	Area (ha)	Yield/ha (kg)	Production (kg)	Unit price (KSh)	Farmgate price (KSh)
<u>1. Annual Crops: 0.90 ha</u>					
Maize	0.50	600	300	1.90	570.0
Cassava	0.10	4 500	450	0.60	270.0
Cowpeas	0.10	400	40	1.35	54.0
Green grams	0.05	300	15	3.80	57.0
Simsim	0.05	150	7.5	4.60	34.0
Banana	0.05	3 000	150	1.00	150.0
Sweet potato	<u>0.05</u>	3 000	150	1.00	<u>150.0</u>
Sub-total	0.90				1 285.5
<u>2. Tree crops: 2.0 ha</u>					
Cashewnut	0.3	350	105	3.50	367.5
Coconut	0.2	450	98	4.50	441.0
Mango	0.05	4 000	200	0.90	180.0
Citrus	<u>0.05</u>	6 000	300	1.00	<u>300.0</u>
Sub-total	0.60		1 288.5		
Gross revenue					<u>2 574.0</u>

1/ Fallow land (for grazing): 1 ha

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Farm Model - Zone L2/3

(Target group farmer: improved)

Average holding size: 2.5 ha

Crop	Area (ha)	Yield/ha (kg)	Production (kg)	Unit price (KSh)	Farmgate price (KSh)
1. <u>Annual Crops: 0.90 ha</u>					
Maize	0.50	1 500	750	1.90	1 425.0
Cassava	0.10	10 000	1 000	0.60	600.0
Cowpeas	0.10	600	60	1.35	81.0
Greengrams	0.05	400	20	3.80	76.0
Simsim	0.05	200	10	4.60	46.0
Banana	0.05	6 000	300	1.00	300.0
Sweet potato	0.05	6 000	300	1.00	300.0
Sub-total	0.90				2 828.0
2. <u>Tree crops: .60 ha</u>					
Cashewnut	0.3	500	150	3.50	525.0
Coconut	0.2	600	120	4.50	540.0
Mango	0.05	4 500	225	0.90	202.5
Citrus	0.05	6 600	330	1.00	330.0
Sub-total	0.60				1 597.5
Gross value					<u>4 425.5</u>

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KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Farm Model - Zone L/4 (+ part of 5)

(Target group farmer: unimproved)

Average holding size: 22 ha a/

Crop	Area (ha)	Yield/ha (kg)	Production (kg)	Unit price (KSh)	Farmgate price (KSh)
<u>1. Annual Crops: 1.40 ha</u>					
Maize	0.75	300	225.0	1.90	427.5
Cassava	0.10	3 000	300	0.60	180.0
Cowpeas	0.10	300	30	1.35	40.5
Greengrams	0.05	300	15	3.80	57.0
Simsim	0.05	150	7.5	4.60	34.5
Sorghum	0.10	250	25	1.80	45.0
Cotton	0.20	300	60.0	2.45 <u>b/</u>	147.0
Groundnuts	<u>0.05</u>	250	13.0	5.30	<u>68.9</u>
Sub-total	1.40				1 000.4
<u>2. Tree crops: .60 ha</u>					
Cashewnut	0.42	300	126	3.50	441.0
Coconut	<u>0.18</u>	300	54	4.50	<u>243.0</u>
Sub-total	0.60				684.0
Gross value					<u>1 684.0</u>

a/ Total cultivated area: 2.0 ha
Rangelands (communally owned): 20.0 ha

b/ 'B' rating cotton. 'A' rating cotton = KSh 5.50/kg

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Farm Model - Zone L/4 (+ part of 5)

(Target group farmer: improved)

Average holding size: 22 ha/

Crop	Area (ha)	Yield/ha (kg)	Production (kg)	Unit price (KSh)	Farmgate price (KSh)
1. <u>Annual Crops: 1.40 ha</u>					
Maize	0.50	600	300	1.90	570.0
Cassava	0.10	6 000	600	0.60	360.0
Cowpeas	0.10	400	40	1.35	54.0
Greengrams	0.05	300	15	3.80	57.0
Simsim	0.05	150	7.5	4.60	34.5
Sorghum	0.35	600	210	1.80	378.0
Cotton	0.20	600	120	2.45	294.0
Groundnuts	0.05	500	25	5.30	132.5
Sub-total	1.4				1 880.0
2. <u>Tree crops: .60 ha</u>					
Cashewnut	0.42	450	189	3.50	661.5
Coconut	0.18	450	81	4.50	364.5
Sub-total	0.60				1 026.0
Gross value					<u>2 906.0</u>

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT
Illustrative Crop Budget (per ha)

MAIZE (Zone L/2 and 3)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material	2.07		520	7.20	25	180.0
Fertilizer - SSP	-	-	-	2.48	50	124.2
- CAN	-	-	-	3.24	75	243.0
Insecticide	-	-	-	5.28	5	26.4
Cost	-	-	<u>520</u>			<u>573.6</u>
Labour						
- Land prep.		25	-		30	-
- Planting	-	7	-	-	12	-
- Weeding (x2)	-	30	-	-	42	-
- Fertiliser appl.	-	-	-	-	4	-
- Pest control	-	-	-	-	2	-
- Harvesting	-	10	-	-	20	-
- Shelling	-	6	-	-	15	-
Total mandays		78	-		125	-
Output	2.07	600	1242	2.07	1500	3150
Net value	-	-	1190			2531.4
Net return/manday			<u>15.3</u>			<u>20.3</u>

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT
Illustrative Crop Budget (per ha)

MAIZE (Zone L/4 and 5)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material	2.07	20	41.4	7.20	20	144
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide	-	-	-	5.28	5	26.4
Cost	-	-	<u>41.4-</u>	-	-	<u>170.4</u>
Labour						
- Land prep.		30	-	-	30	-
- Planting	-	6	-	-	6	-
- Weeding (x2)	-	26	-	-	30	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	2	-
- Harvesting	-	5	-	-	6	-
- Shelling	-	3	-	-	6	-
Total mandays		<u>70</u>	-	-	<u>78</u>	-
Output	2.07	300	621.0	1.90	600	1242.0
Net value	-	-	579.6			1071.6
Net return/manday			<u>8.3</u>			<u>11.3</u>

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Crop Budget (per ha)

CASSAVA (Zone L/2 and 3)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material ^{a/}	-	5 000	-	0.01	5 000	50.0
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide	-	-	-	-	-	-
Cost	-	-	-	-	-	50.0
Labour						
- Land prep.		25	-	-	30	-
- Planting	-	5	-	-	15	-
- Weeding (x3)	-	45	-	-	55	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	2	-
- Harvesting	-	25	-	-	50	-
Total mandays		100	-	-	152	-
Output	0.60	4 500	2 700	0.60	10 000	6 000
Net value	-	-	2 700			5 950
Net return/manday			<u>27.0</u>			<u>39.1</u>

^{a/} No cost imputed to unimproved planting material

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Crop Budget (per ha)

CASSAVA (Zone L4 and 5)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material ^{a/}	-	-	-	0.01	5 000	50.0
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide	-	-	-	-	-	-
Cost	-	-	-	-	-	50.0
Labour						
- Land prep.		25	-	-	30	-
- Planting	-	5	-	-	15	-
- Weeding (x3)	-	35	-	-	45	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	2	-
- Harvesting	-	15	-	-	30	-
Total mandays		80	-	-	120	-
Output	0.60	3 000	1 800	0.60	6 000	3 600
Net value	-	-	1 800			3 550
Net return/manday			<u>22.5</u>			<u>29.5</u>

^{a/} No cost imputed to improved planting material

ANNEX 3
Table 18

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT
Illustrative Crop Budget (per ha)

BANANA (Zone L/2 and 3)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material ^{a/}	-	-	-	1.50	600	900.0
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide ^{b/}	-	-	-	5.85	40.kg	234 0
Cost	-	-	-	-	-	1134.0
Labour						
- Land prep.		45	-		45	-
- Planting	-	50	-	-	55	-
- Weeding ^{c/}	-	100	-	-	100	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	5	-
- Prunning & support	-	5	-	-	5	-
- Harvesting		15	-		20	-
Total mandays		215	-		230	-
Output	1.00	3 000	3 000	1.00	6 000	6 000
Net value	-	-	3 000			4 866
Net return/manday			<u>14.0</u>			<u>21.2</u>

^{a/} No cost imputed to unimproved planting material

^{b/} 5% Dieldrin

^{c/} 1st/2nd year

ANNEX 3
Table 20

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT
Illustrative Crop Budget (per ha)

COWPEA (Zone L/4 and 5)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material	1.80	20	36.0	1.80	20	36
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide <u>b/</u>	-	-	-	20.0	1 1	20.0
Cost	-	-	36.0	-	-	56.0
Labour						
- Land prep.		25	-		25	-
- Planting	-	5	-	-	6	-
- Weeding (x2)	-	27	-	-	30	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	2	-
- Shelling	-	5	-	-	6	-
- Harvesting	-	5	-	-	5	-
Total mandays		67	-	-	74	-
Output	1.80	300	540	1.35	400	720
Net value	-	-	504			664
Net return/manday			7.5			9.0

a/ Retained seed at selling price

b/ Synthetic pyrethoroid

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Crop Budget (per ha)

GREEN GRAM (Zone L/2 and 3)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material	4.0	20	80.0	4.0	20	80
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide <u>a/</u>	-	-	-	5.90	2 litres	11.8
Cost	-	-	80.0	-	-	91.8
Labour						
- Land prep.		27	-		28	-
- Planting	-	5	-	-	5	-
- Weeding (x2)	-	30	-	-	33	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	1	-
- Shelling	-	2	-	-	2	-
- Harvesting	-	1	-	-	1	-
Total mandays		65	-		70	-
Output	4.0	300	1 200	4.0	400	1 600
Net value	-	-	1 140			1 508.2
Net return/manday			17.2			21.5

a/ Retained seed at selling price

b/ Dedevap

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Crop Budget (per ha)

GREEN GRAM (Zone L/3 and 4)

	UNIMPROVED		
	Unit Cost	Quantity	Value KSh
Planting material			
Fertilizer - SSP	-	-	--
- CAN	-	-	--
Insecticide	-	-	--
Cost	-	-	--
Labour			
- Land prep.		27	--
- Planting	-	5	--
- Weeding (x 2)	-	30	--
- Fertiliser appl.	-	-	--
- Pest control	-	-	--
- Shelling	-	2	--
- Harvesting	-	1	--
Total mandays		65	--
Output	3.80	300	1 140
Net value	-	-	1 140
Net return/manday.			<u>17.5</u>

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT
Illustrative Crop Budget (per ha)

SIMSIM (Zone L/4 and 5)

	UNIMPROVED		
	Unit Cost	Quantity	Value KSh
Planting material ^{a/}	5	5	25.0
Fertilizer - SSP	-	-	-
- CAN	-	-	-
Insecticide	-	-	-
Cost	-	-	25.0
Labour			
- Land prep.		27	-
- Planting	-	5	-
- Weeding (x2)	-	28	-
- Fertiliser appl.	-	-	-
- Pest control	-	-	-
- Harvesting	-	2	-
Total mandays		62	-
Output	5.0	150	750
Net value	-	-	725
Net return/manday			11.7

a/ Retained Seed at selling price

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Crop Budget (per ha)

SWEET POTATO (Zone L/2 and 3)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material ^{a/}	-	-	-	-	-	-
Fertilizer - SSP	-	-	-	-	-	-
- CAN	-	-	-	-	-	-
Insecticide	-	-	-	-	-	-
Cost	-	-	-	-	-	-
Labour						
- Land prep.		30	-		50	-
- Planting	-	15	-	-	25	-
- Weeding (x2)	-	30	-	-	45	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	-	-
- Harvesting	-	20	-	-	45	-
Total mandays		95	-		165	-
Output	1.00	3 000	3 000	1.00	6 000	6 000
Net value	-	-	3 000			6 000
Net return/manday			<u>31.5</u>			<u>36.4</u>

a/ No value imputed to unimproved planting material

KENYA

KWALE AND KILIFI DEVELOPMENT PROJECT

Illustrative Crop Budget (per ha)

COTTON (Zone L/4 and 5)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material	-	free	-	-	free	-
Fertilizer 20-20-0	-	-	-	-	-	-
Insecticide <u>a/</u>	-	-	-	185	1.0	185
Cost	-	-	-	-	-	185
Labour						
- Land prep.		25	-		25	-
- Planting	-	4	-	-	4	-
- Weeding (x2)	-	28	-	-	28	-
- Fertiliser appl.	-	-	-	-	-	-
- Pest control	-	-	-	-	3	-
- Harvesting	-	8	-	-	10	-
Total mandays		65	-		70	-
Output	2.45	300	735	2.45	600	1 470
Net value	-	-	735			1 285
Net return/manday			<u>11.3</u>			<u>18.3</u>

ANNEX 3
Table 28

KENYA
KWALE AND KILIFI DEVELOPMENT PROJECT
Illustrative Crop Budget (per ha)

GROUNDNUT (Zone L/4 and 5)

	----- Unimproved -----			----- Improved -----		
	Unit Cost	Quantity	Value KSh	Unit Cost	Quantity	Value KSh
Planting material ^{a/}	-7.0	-30	-210.0	-7.0	-45	315.0
Fertilizer 20-20-0	-	-	-	-	-	-
Insecticide	-	-	-	-	-	-
Cost -	-	-	<u>-210.0</u>	-	-	<u>315.0</u>
Labour						
-Land prep.		30	-		30	-
-Planting	-	10	-	-	15	-
-Weeding		30	-		30	-
-Fertilizer	-	-	-	-	-	-
-Pest Control	-	-	-	-	-	-
-Harvesting	-	5	-	-	10	-
-Shelling	-	2	-	-	5	-
Total mandays	-	<u>77</u>	-	-	<u>90</u>	-
Output	7.0	250	1 750	7.0	500	3 500.0
Net value	-	-	1 540			3 185
Net return/manday			<u>20.0</u>			<u>35.4</u>

^{a/} Retained Seed at selling price

KENYA

Kwale and Kilifi District Development Project

Kwale District Development Project - Improved Crop Area Projections

	Farm Area (ha)	Year 1			Year 2		
		Total Farmers	Total (ha)	Prod'n Tonnes/ha	Total Farmers	Total (ha)	Prod'n Tonnes/ha
Maize							
Zones II & III	.50	500	250	1.5	1 500	750	1.5
Zones IV & V	.50	500	250	.6	1 500	750	.6
Total		1 000	500		3 000	1 500	
Cassava							
Zone II & III	.10	500	50	10.0	1 500	150	10.0
Zone IV & V	.10	500	50	6.0	1 500	150	6.0
Total		1 000	100		3 000	300	
Banana							
Zones II & III	0.5	500	25	6.0	1 500	75	6.0
Zones IV & V							
Total		500	25		1 500	75	
Coconuts							
Zones II & III	.10	500	50	.6	1 500	150	.6
Zones IV & V	.10	500	50	.4	1 500	150	.4
Total		1 000	100		3 000	300	
Greengrams							
Zones II & III	.05	500	25	.4	1 500	75	.4
Zones IV & V	.05	500	25	.3	1 500	75	.3
Total		1 000	50		3 000	150	
Sorghum^{A/}							
Zones II & III	.35	250	87.5	.6	750	262.5	.6
Zones IV & V		250	37.5		750	262.5	
Total		500	125		1 500	525	
Sim Sim							
Zones II & III	.05	500	25	.2	1 500	75	.2
Zones IV & V	.05	500	25	.15	1 500	75	.15
Total		1 000	50		3 000	150	
Sweet Potatoes							
Zones II & III	.05	500	25	6.0	1 500	75	6.0
Zones IV & V							
Total		500	25		1 500	75	
		===	==		===	==	

A/ 50% take up rate

KENYA

Kwale and Kilifi District Development Project

Kwale District Development Project - Improved Crop Area Projections

Farm Area (ha)	Year 3			Year 4			Year 5		
	Total Farmers	Total (ha)	Prod'n Tonnes/ha	Total Farmers	Total (ha)	Prod'n Tonnes/ha	Total Farmers	Total (ha)	Prod'n Tonnes/ha
Maize									
Zones II & III	2 500	1 250	1.5	3 750	1 875	1.5	5 000	2 500	1.5
Zones IV & V	2 500	1 250	.6	3 750	1 875	.6	5 000	2 500	.6
Total	5 000	2 500		7 500	3 750		10 000	5 000	
Cassava									
Zone II & III	2 500	250	10.0	3 750	375	10.0	5 000	500	10.0
Zone IV & V	2 500	250	6.0	3 750	375	6.0	5 000	500	6.0
Total	5 000	500		7 500	750		10 000	1 000	
Banana									
Zones II & III	2 500	125	6.0	3 750	87.5	6.0	5 000	250	6.0
Zones IV & V	2 500	125	-	3 750	-	-	5 000	250	-
Total	5 000	250		7 500	187.5		10 000	500	
Coconuts									
Zones II & III	2 500	250	.6	3 750	375	.6	5 000	500	.6
Zones IV & V	2 500	250	.4	3 750	375	.4	5 000	500	.4
Total	5 000	500		7 500	750		10 000	1 000	
Greengrams									
Zones II & III	2 500	125	.4	3 750	187.5	.4	5 000	250	.4
Zones IV & V	2 500	125	.3	3 750	187.5	.3	5 000	250	.3
Total	5 000	250		7 500	375		10 000	500	
Sorghum									
Zones II & III	1 250	437.5	.6	1 875	656	.6	2 500	875	.6
Zones IV & V	1 250	437.5		1 875	656		2 500	875	
Total	2 500	875		3 750	1 312		5 000	1 750	
Sim Sim									
Zones II & III	2 500	125	.2	3 750	187.5	.2	5 000	250	.2
Zones IV & V	2 500	125	.15	3 750	187.5	.15	5 000	250	.15
Total	5 000	250		7 500	375		10 000	500	
Sweet Potatoes									
Zones II & III	2 500	125	6.0	3 750	187.5	6.0	5 000	250	6.0
Zones IV & V	2 500	125		3 750	187.5		5 000	250	
Total	5 000	250		7 500	375		10 000	500	

a/ 50% take up rate

ANNEX 3
Table 29 cont'd

KENYA

Kwale and Kilifi District Development Project
Kilifi District Development Project - Improved Crop Area Projections

	Farm Area (ha)	Year 1			Year 2		
		Total Farmers	Total (ha)	Prod'n Tonnes/Ha	Total Farmers	Total (ha)	Prod'n Tonnes/Ha
Maize							
Zones II & III	.50	210	105	1.5	630	315	1.5
Zones IV & V	.50	1 190	595	.6	3 570	1 785	.6
Total		1 400	700		4 200	2 100	
Cassava							
Zones II & III	.10	210	21	10.0	630	63	10.0
Zones IV & V	.10	1 190	112	6.0	3 570	357	6.0
Total		1 400	140		4 200	420	
Banana							
Zones II & III	.05	210	10.5	6.0	630	31.5	6.0
Zones IV & V							
Total		210	10.5		630	31.5	
Compeas							
Zones II & III	.10	210	21	.6	630	63	.6
Zones IV & V	.10	1 190	112	.4	3 570	357	.4
Total		1 400	140		4 200	420	
Greengrams							
Zones II & III	.05	210	10.5	.4	630	31.5	.4
Zones IV & V	.05	1 190	59.5	.3	3 570	178.5	.3
Total		1 400	70.0		4 200	210.0	
Sorghum							
Zones II & III							
Zones IV & V	.35	1 190	416.5	.6	3 570	1 249.5	.6
Total		1 190	416.5		3 570	1 249.5	
Sim Sim							
Zones II & III	.05	210	10.5	.2	630	31.5	.2
Zones IV & V	.05	1 190	59.5	.15	3 570	178.5	.15
Total		1 400	70.0		4 200	210	
Sweet Potatoes							
Zones II & III	.05	210	10.5	6.0	630		6.0
Zones IV & V							
Total		210	10.5		630		
Cotton							
Zones II & III							
Zones IV & V	.20	1 190	238	.6	3 570	750	.6
Total		1 190	238		3 570	750	
Groundnuts							
Zones II & III							
Zones IV & V	.05	1 190	59.5	.5	3 570	178.5	.5
Total		1 190	59.5		3 570	178.5	

KENYA

Kwale and Kilifi District Development Project

Kilifi District Development Project - Improved Crop Area Projections

Farm Area (ha)	Year 3			Year 4			Year 5		
	Total Farmers	Total (ha)	Prod'n Tonnes/ha	Total Farmers	Total (ha)	Prod'n Tonnes/ha	Total Farmers	Total (ha)	Prod'n Tonnes/ha
Maize									
Zones II & III	1 050	525	1.5	1 575	787.5	1.5	2 100	1 050	1.5
Zones IV & V	5 950	2 975	.6	8 925	4 462.5	.6	11 900	5 950	.6
Total	7 000	3 500		10 500	5 250		14 000	7 000	
Cassava									
Zones II & III	1 050	105	10.0	1 575	157.5	10.0	2 100	210	10.0
Zones IV & V	5 950	595	6.0	8 925	892.5	6.0	11 900	1 190	6.0
Total	7 000	700		10 500	1 050		14 000	1 400	
Banana									
Zones II & III	1 050	52.5	6.0	1 575	79	6.0	2 100	105	6.0
Zones IV & V	-	-	-	-	-	-	-	-	-
Total	1 050	52.5		1 575	79		2 100	105	
Cowpeas									
Zones II & III	1 050	105	.6	1 575	157.5	.6	2 100	210	.6
Zones IV & V	5 950	595	.4	8 925	892.5	.4	11 900	1 190	.4
Total	7 000	700		10 500	1 050		14 000	1 400	
Groundnuts									
Zones II & III	1 050	52.5	.4	1 575	79	.4	2 100	105	.4
Zones IV & V	5 950	297.5	.3	8 925	446	.3	11 900	595	.3
Total	7 000	350		10 500	525		14 000	700	
Sorghum									
Zones II & III	-	-	-	-	-	-	-	-	-
Zones IV & V	5 950	2 083	.6	8 925	3 124	.6	11 900	4 165	.6
Total	5 950	2 083		8 925	3 124		11 900	4 165	
Slim Slim									
Zones II & III	1 050	52.5	.2	1 575	79	.2	2 100	105	.2
Zones IV & V	5 950	297.5	.15	8 925	446	.15	11 900	595	.15
Total	7 000	350		10 500	525		14 000	700	
Sweet Potatoes									
Zones II & III	1 050	52.5	6.0	1 575	79	6.0	2 100	105	6.0
Zones IV & V	-	-	-	-	-	-	-	-	-
Total	1 050	52.5		1 575	79		2 100	105	
Cotton									
Zones II & III	-	-	-	-	-	-	-	-	-
Zones IV & V	5 950	1 190	.6	8 925	1 785	.6	11 900	2 380	.6
Total	5 950	1 190		8 925	1 785		11 900	2 380	
Groundnuts									
Zones II & III	-	-	-	-	-	-	-	-	-
Zones IV & V	5 950	297.5		8 925	446		11 900	595	
Total	5 950	297.5		8 925	446		11 900	595	

P/

KENYA

Kwale and Kilifi District Development Project

Kilifi District Development Project - Improved Crop Area Projections

Farm Area (ha)	Year 3			Year 4			Year 5		
	Total Farmers	Total (ha)	Prod'n (tonnes/ha)	Total Farmers	Total (ha)	Prod'n (tonnes/ha)	Total Farmers	Total (ha)	Prod'n (tonnes/ha)
Maize									
Zones II & III	1 050	525	1.5	1 575	787.5	1.5	2 100	1 050	1.5
Zones IV & V	5 950	2 975	.6	8 925	4 462.5	.6	11 900	5 950	.6
Total	7 000	3 500		10 500	5 250		14 000	7 000	
Cassava									
Zone II & III	1 050	105	10.0	1 575	157.5	10.0	2 100	210	10.0
Zone IV & V	5 950	595	6.0	8 925	892.5	6.0	11 900	1 190	6.0
Total	7 000	700		10 500	1 050		14 000	1 400	
Banana									
Zones II & III	1 050	52.5	6.0	1 575	79	6.0	2 100	105	6.0
Zones IV & V	-	-	-	-	-	-	-	-	-
Total	1 050	52.5		1 575	79		2 100	105	
Coconuts									
Zones II & III	1 050	105	.6	1 575	157.5	.6	2 100	210	.6
Zones IV & V	5 950	595	.4	8 925	892.5	.4	11 900	1 190	.4
Total	7 000	700		10 500	1 050		14 000	1 400	
Green grams									
Zones II & III	1 050	52.5	.4	1 575	79	.4	2 100	105	.4
Zones IV & V	5 950	297.5	.3	8 925	446	.3	11 900	595	.3
Total	7 000	350		10 500	525		14 000	700	
Sorghum									
Zones II & III	-	-	-	-	-	-	-	-	-
Zones IV & V	5 950	2 083	.6	8 925	3 124	.6	11 900	4 165	.6
Total	5 950	2 083		8 925	3 124		11 900	4 165	
Slim Slim									
Zones II & III	1 050	52.5	.2	1 575	79	.2	2 100	105	.2
Zones IV & V	5 950	297.5	.15	8 925	446	.15	11 900	595	.15
Total	7 000	350		10 500	525		14 000	700	
Sweet Potatoes									
Zones II & III	1 050	52.5	6.0	1 575	79	6.0	2 100	105	6.0
Zones IV & V	-	-	-	-	-	-	-	-	-
Total	1 050	52.5		1 575	79		2 100	105	
Cotton									
Zones II & III	-	-	-	-	-	-	-	-	-
Zones IV & V	5 950	1 190	.6	8 925	1 785	.6	11 900	2 380	.6
Total	5 950	1 190		8 925	1 785		11 900	2 380	
Groundnuts									
Zones II & III	-	-	-	-	-	-	-	-	-
Zones IV & V	5 950	297.5		8 925	446		11 900	595	
Total	5 950	297.5		8 925	446		11 900	595	

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KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSMinistry of Agriculture and Livestock Development:Incremental Technical Services

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSMinistry of Agriculture & Livestock Development:Incremental Technical Services^{1/}I. INTRODUCTION

1.01 The Ministry of Agriculture and Livestock Development (MALD), formed from the merger of the former separate Ministries of Agriculture and Livestock Development, is organized into two principal technical service departments: the Department of Agriculture (DOA) and the Department of Veterinary Services (DVS). The DOA and DVS are each headed by a Director who reports to the Permanent Secretary through the Deputy Permanent Secretary. The Permanent Secretary is the Accounting Officer of the ministry and is responsible to the Minister. Since the merger, the administrative structure has been reorganized but the new organizational chart is under review and has not been finalized. However, significant changes are not expected within the two principal departments. This Annex sets out the MALD project area services in the context of the overall ministerial organization in Sections II and III. Details of project support of these services are given in Section IV.

II. DEPARTMENT OF AGRICULTUREA. Organization

2.01 National level. The organizational chart of the DOA is shown in Fig. 1. The DOA is managed by the Director of Agriculture, assisted by the Senior Deputy Director of Agriculture (SDDA) and provides services through six main technical divisions:

- The Land Resources & Development Division
- The Project Management & Evaluation Division
- Crop Production Divisions
- Livestock Production Division
- Extension and Manpower Development Division
- Research Division

2.02 With the exception of the Research Division which is headed by a Director and reports directly to the Director of Agriculture, the rest

^{1/} This Chapter draws heavily upon the work done by Booker Agriculture International Ltd. 1982, on Kwale Kilifi Integrated Development Project Vol.II Annexes 3 & 4 and: Kenya Animal Health Services Rehabilitation Programme Vol.II Annex 1, by IFAD, 1986.

are each headed by a Chief of Division who is responsible to the Director of Agriculture through the SDDA. The Chiefs of Division are supported by a number of subject matter specialists at the national level (see Figures 2 - 5).

2.03 Project Area. At the Provincial level there is a Provincial Director of Agriculture (PDA) who is responsible for administering agricultural services and development in the six districts of the province, two of which, Kwale and Kilifi, constitute the project area. In the case of Coast Province the PDA is based in Mombasa. He is assisted by provincial representatives of the main ministerial divisions and branches of the DOA, which in turn are supported by a number of subject matter specialists. The PDA also operates an agricultural machinery unit and workshop at Mariakani. The unit includes a tractor hire service, the operation of which is restricted by lack of serviceable vehicles. Also under the PDA is a Provincial Irrigation Unit (PIU) which is responsible for small scale irrigation planning and development in the province.

2.04 Agricultural activities at the district level are the responsibility of the District Agricultural Officer (DAO). The DAO is assisted by a team of subject matter specialists and other officers based at the district headquarters. Each district is divided into divisions, each under a Division Extension Officer (DEO), and each division comprises a number of locations under a Location Extension Officer (LEO). Locations are further divided into sub-locations and in each of these a number of field extension staff is posted. These are either well trained (certificate level) Technical Assistants (TA), or less well trained but programme oriented Junior Technical Assistants (JTA) and Junior Agricultural Assistants (JAA). The government has embarked on a programme of training and upgrading of the JTA and JAA to the TA level. When this is done locations and sub-locations will be staffed with fully trained TAs.

2.05 It is the front line extension agents (TA, JTA/JAA) who are directly in contact with the small and peasant farmers. They are responsible for giving advice; assisting farmers to obtain services; for the implementation of government agricultural improvement programmes; and for projects such as the K-KDP which are funded by international agencies and organizations. The organizational chart of the extension services in Kwale and Kilifi districts is presented in Figs. 6 and 7 respectively.

B. Project Area Staffing

2.06 As shown in paragraph 2.03 there are four tiers of staffing at the district level: a team at the headquarters headed by the DAO; the division staff; location staff; and the sub-location staff. The present staff position in the project area is shown in Table 2 Schedule 2 for

Kwale District and Table 3 Schedule 2 for Kilifi District. The hierarchy of field staff and of training levels is summarized below:

<u>Designation</u>	<u>Location</u>	<u>Pre-Service Training</u>
District Agricultural Officer (DAO)	District	Degree
District Agricultural Officer (AO)	District	Degree
District Extension Officer (DETO)	District	Degree
Division Extension Officer (DEO)	Division	Diploma
Technical Officer (TO)	Division/Location	Diploma
Technical Assistant (TA)	Location/sub-Location	Certificate (2yrs)
Junior Technical Assistant (JTA)	sub-Location	Induction (3 mths)

Kwale District

2.07 The DOA Kwale District is assisted by 8 other specialist officers at post. At the district level all agricultural activities take the form of extension and training and the main technical divisions operate closely together in the field. All activities at the sub-location level may be performed by the same agent, but in most cases there are separate staff for crops and for livestock.

2.08 There are four divisions divided into 21 locations and sub-divided into 62 sub-locations in Kwale District, as follows (see Map 1.):

<u>Division</u>	<u>No. of locations</u>	<u>No. of sub-Locations</u>
Matuga	4	12
Kubo	4	4
Msambweni	6	19
Kinango	7	27
TOTAL	<u>21</u>	<u>62</u>

At present Matuga and Kinango division are each headed by an Agricultural Officer II (AO II). In Matuga the AO II is responsible for 5 Technical Officers (TO III) and 19 TA's and JTA/JAA. In Kinango Division the AO II is responsible for 13 TO III's (4 of whom are in range management) and 36 TA's and JTA/JAA's. Msambweni and Kubo divisions are each headed by a TO III who are responsible for 40 and 19 staff members respectively (see Table 2). With 93 TA and JTA/JAA's in the district, and a projected 52 522 farm families (Annex I, para 2.2) the ratio of extension staff to farm families in the district is 1:565, which is within the national goal of having 1 TA/JTA to no more than 800 farm families.^{2/}

Kilifi District

2.09 The agricultural services in Kilifi District are organized on identical lines to those for Kwale District. The present staff position

^{2/} See Kenya National Extension Project - Implementation
Volume Annexes 1 - 4 1983.

is shown in Table 3. The DAO heads a specialist support staff of 7 who are based at the district headquarters. The district comprises 4 divisions, 28 locations, and 128 sub-locations, as shown below:

<u>Division</u>	<u>No. of locations</u>	<u>No. of sub-Locations</u>
Kaloleni	9	38
Ganze	5	22
Bahari	5	30
Malindi	9	38
TOTAL	<u>28</u>	<u>128</u>

Both Malindi and Kaloleni divisions are headed by a T0 II. The total staff strength in Malindi is 48 and in Kaloleni 39 (see Table 3). Bahari Division is headed by a T0 I and has 39 other staff while there are 27 officers of various grades in Ganze Division headed by a T0 III (see Table 3). The TA/JTA to farm family ratio is 1:530 in Kilifi District, also falling within the national goal.

C. Extension Methodology^{3/}

2.10 The current extension methodology in the project area follows the National Extension Programme (T & V), and consists basically of training TA's and JTA/JAA's combined with frequent visits by them to farmers in their fields. The agent visits contact families in a given area once a fortnight after having received training himself in the agricultural practices and recommendations which relate directly to farm operations during that fortnight.

2.11 This methodology is different from the traditional approach in Kenya which emphasises field demonstrations. The T & V programme started on a pilot basis in 1981 (in Kericho and Nandi districts). Based on the outcome of the pilot programme, an expanded programme aimed at strengthening the extension services in 30 out of Kenya's 41 districts started in 1983/84. Implementation in Kwale and Kilifi districts began in 1985^{3/}. MALD has recently completed a national evaluation survey on the performance of the T & V programme^{4/} which covered 634 frontline agents, 18 of whom are from Kwale and 17 from Kilifi districts; the rest are from the 28 other participating districts. Several interesting observations came up, but the major constraints were found to be lack of transport, lack of demonstration materials, and unavailability of contact farmers during the agents' visits. Many farmers were also reported to think that

^{3/} See Training and Visits Programme 1985 Long rains, Kwale District, by Martin Orlane, for details.

^{4/} Details included in Part A of the Report: The Performance of the National Extension Programme, MALD, June 1986.

contact farmers receive undue favours and did not see the point of learning from another person's farm. The overall effectiveness of the T & V programme is generally lower than anticipated.

D. Project Area Facilities/Vehicles

Buildings

2.12 The MALD staff at Kwale District headquarters currently occupy offices which are inadequate, both in number and size. Msambweni Division staff occupy a small office (constructed under the SRDP) which needs expansion. Kubo Division has adequate office accommodation. In general there is total lack of offices in the district. There is no housing for some of the district staff and all of the division and location/sub-location staff. The availability of offices and housing in Kilifi District is equally poor.

2.13 It is understood that basic provisions have been made under the World Bank/IFAD financed National Extension Programme to meet these critical needs and no additional provision has been made in this study. Provision has been made, however, for nursery sheds/stores for the Central tree nurseries, both in Kwale and Kilifi districts.

Vehicles

2.14 Limited transport is available in both districts (See Tables 2 and Schedule 4). However, it is understood that adequate provision has been made under the National Extension Programme for the supply of vehicles to the districts. There are also motorcycle loans available to junior staff.

III. DEPARTMENT OF VETERINARY SERVICES^{5/}

Organization

3.01 The organizational chart of the DVS is shown as Fig. 8. Its broad structure, from the national down to the district level parallels that of the DOA. The Field Services Division is the main implementing arm of the Department. It is divided into five units - Tick Control, Tsetse Control, Clinical Services, General Disease Control and Artificial Insemination. The functions of these units are implicit in their titles.

3.02 As well as carrying out basic and applied research into livestock diseases, the Veterinary Research Division provides various support services to the Field Services Division. These services include the production of vaccines, laboratory services, disease control, monitoring, planning and evaluation.

3.03 Vaccine Production. At its main laboratories at Kabete, the vaccine production unit of the Veterinary Research Division makes a range of vaccines for use by the Field Services Division. Vaccines are produced for combatting rabies (LEP), Newcastle disease, Rift Valley fever, fowl and turkey pox, orf (contagious pustular dermatitis), blue tongue, sheep and goat pox, fowl typhoid, and contagious caprine pleuropneumonia. The vaccines are provided free of charge to the Field Services Division.

3.04 Laboratory Services. In addition to its main facilities at Kabete, the Veterinary Research Division maintains four (shortly to be five) field investigation laboratories. These laboratories liaise closely with the district veterinary services. They provide routine diagnostic services, conduct investigations into disease outbreaks and undertake surveys to furnish information on disease incidence and other basic epidemiological data.

3.05 The Research Division also contains a specialized Epidemiology and Economics Unit. The main responsibilities of the Unit are performing epidemiological and economic analyses for disease control planning purposes. The Unit also provides statistical support services to the Research Division and maintains data bases on its micro-computer network of the results of all disease surveys and research conducted by the division. In addition, the Unit runs a computer based dip monitoring service and monitors the issue of all vaccines and trypanicidal drugs to the field service.

^{5/} Animal Health Services are already comprehensively supported by the IFAD-financed Rehabilitation Programme. No additional financing is proposed in the present project.

3.06 The Veterinary Public Health Division is responsible for providing meat and hides and skins inspection services; and the Projects/Programming Development Unit responsible for the preparation of projects for submission to donors and for the coordination of all donor related activities. Basic administration is the responsibility of the Central Revenue Support Unit.

3.07 Staffing. The DVS has a total of 137 professional and technical staff of various categories in the project area. Of these 85 are in Kwale District (Table 2 Schedule 5) and 52 in Kilifi District (Table 3 Schedule 5). There are 12 headquarters staff headed by the DVO in each of the districts. The rest are in post in the various divisions. All the divisional heads are qualified veterinary officers, except for Bahari and Ganze divisions in Kilifi District where the division staff is headed by Livestock Officers within the DVS structure.

3.08 Vehicles. The existing vehicles operated by the DVS and their condition are shown in Table 2 Schedule 4 and Table 3 Schedule 4 for Kwale and Kilifi districts respectively. Of the 36 vehicles owned by the DVS in Kilifi District, only 14 operate satisfactorily; 20 are either under repair or are awaiting repair, and 2 are completely grounded. The headquarters is fairly well supplied with transportation (4 four-wheel drive vehicles and 5 motor cycles in running order). The situation is very bad at the division and lower levels - each division having only one vehicle in satisfactory running order.

3.09 Kwale District presents a similar picture, having only 4 running four-wheel drive vehicles and 9 motor cycles in the entire district; 1 under repair and 6 abandoned. The problem of limited transportation for the department is aggravated by the lack of funds to operate the vehicles, together with the generally poor state of the entire fleet. There is no scheduled maintenance due to lack of funds; vehicles are repaired only when funds are available, and after long and complex authorization procedures. It is understood that provision has been made for DVS vehicles in both Kwale and Kilifi Districts, and no extra provision will be made under this project.^{5/}

6/ Details provided in Annex 3 of the Animal Health Services Rehabilitation Programme for Kenya IFAD 1986.

IV. PROPOSED DEVELOPMENT

A. Agricultural Extension

4.01 The Projects would promote on-farm development by providing assistance for:

- (a) the initial bulking and supply of improved planting materials (mosaic free cassava cuttings, banana suckers and sorghum seed) to participating farmers, and thereafter encouraging interested farmers or groups to take over the bulking of approved material under the technical supervision of MALD;
- (b) demonstration and promotion of improved hand tools and ox-drawn implements, aimed at improving husbandry practices and crop hygiene;
- (c) demonstration and promotion of improved, small farm storage cribs, aimed at reducing storage losses in grains.

4.02 Limited incremental support to the extension services for such activities would be continued under the Projects through the provision of transport, including two 4WD vehicles, two 7-tonne trucks and eight motorcycles, demonstration, nursery and office equipment, operating costs and field allowances.

Food Crops

4.03 Cassava. The established cassava bulking plots would be maintained, and both Kwale and Malindi Prisons would be approached to replicate the Kilifi experience, whereby Kilifi Prison provides labour for the bulking programme. MALD would also encourage interested farmers to bulk and distribute approved material under its technical supervision.

4.04 Bananas. Existing bulking plots would be maintained and provision made for the supply of the required inputs and tools. No new bulking plots would be established; MALD would encourage interested farmers to carry out bulking of approved materials. It is estimated that about 6 000 suckers could be obtained from existing plots in Project Year 1. This would be provided to about 50 carefully selected farmers, well distributed over the banana growing zones, who would each plant about 0.1 ha of the approved material to serve as the basis for further multiplication to other farmers.

4.05 Sorghum. Assistance would be given for the bulking of improved sorghum varieties and promotional work in the L4 (and L5) zones. This will include all incremental costs. Farmers would be encouraged to plant in mixed stands. Home economics extension would be carried out to promote the use of sorghum in the family diet.

4.06 Crop Production during the project period (Annex 2, Tables 29 and 30) is summarised as follows:

Table 1: Production of Annual Crops (tonnes)

<u>Crop</u>	<u>Pre-project</u>	<u>Project Year 5</u>	<u>Incremental Production</u>
Maize	27 520	32 345	4 825
Cassava	89 340	97 313	7 973
Banana	13 518	14 583	1 065
Cowpea	2 687	2 925	238
Sorghum	162	3 042	2 880
Green gram	783	819	36
Simsim	809	827	19
Sweet Potato	4 943	5 760	781
Groundnut	40	210	258
Cotton	1 098	1 813	715

Tree Crops

4.07 The development of tree crops under the project would be based on improved and intensive extension advice on tree crop husbandry, and on the supply of improved planting material to participating farmers.

4.08. Coconut. Two existing bulking plots at Msambweni in Kwale District, and at Kibarani Farm in Kilifi District, would be maintained. It is estimated that approximately 400 ha of new and replacement planting would be done annually in each district. MALD would bulk and supply the Project Year 1 requirements of about 70 000 seedlings, but would phase out seedling production at a rate of 20% per annum and completely hand-over to selected interested farmers, by Project Year 6. Thereafter MALD staff would select nuts from high-yielding trees, in cooperation with research officers, at the Coast Agricultural Research Station (CARS), Mtwapa, and also provide technical supervision for farmers engaged in the bulking programme.

4.09 Cashewnut. The production and supply of cashewnut seedlings would be decentralised and carried out at Chief's nurseries, under MALD supervision. The Chiefs would provide extension officers with seedling requirements in their localities from time to time. MALD technicians, in cooperation with the research officers at Mtwapa, would select seeds from prior identified high-yielding trees for bulking at the Chief's nurseries to meet local demand. Interested farmers would also be encouraged to bulk

B. Livestock Extension

4.14 Pilot phase experience clearly indicates that the viability of improved livestock production by smallholders has yet to be fully established. Although the Dutch Aid-assisted Dairy Development Project has succeeded in maintaining cross-bred stock on smallholdings in areas of low tse-tse challenge in the Kilifi coastal strip, it has been at a high cost in supervision. The problems of maintaining improved stock either indigenous breeds or exotic crosses, brought in from tse-tse free areas into the project area rangeland which are under heavy tse-tse challenge are well recognized by the traditional livestock owners. There has been little demand in areas such as Kinango, where it might have been expected, for Galla goats or Boran cattle, the quality of which is well appreciated by the smallholders. Project support therefore would be continued through farmer-based demonstration, aimed at developing a suitable animal health and feeding regime which would be both sustainable and acceptable to the typical target group livestock produced.

4.15 Given the animal health risks, selected demonstration farmers or farmers groups would not be required to purchase the improved stock. However, a pre-condition of the distribution of stock would be the construction of stock handling and watering facilities and the planting up of fodder plots, which would also be used for the bulking of suitable material for distribution to other interested livestock owners. The programme, which is discussed in Annex 2 is incremental to the animal husbandry programmes for which recurrent budgetary provision is made; project funding would be made available therefore, for purchase of stock, drugs sera and vaccine, transport and operating costs for its continued operation during the development period.

4.16 Project support would also be provided to the extension services for essential operating costs to continue two further pilot-phase developments: (a) the rabbitry programme, the viability and replicability of which, like the large and small stock programmes, has yet to be proven; and (b) the successful bee-keeping development which would be expanded.

C. Costs, Programming and Budgeting

4.17 The total base line costs for the proposed development for the five year disbursement period are KSh0.30 million (US\$ 0.375 million) for Kwale District and KSh0.24 million (US\$).305 million) for Kilifi District. Detailed and phased cost estimates are set out in End Tables 1, 2, and 3 of this Annex, and are summarized as follows:

Table Summary MALD Incremental Technical Service Costs

	<u>Kwale District</u>			<u>Kilifi District</u>			<u>Consolidated</u>		
	<u>Local</u>			<u>Local</u>			<u>Local</u>		
	<u>Cost</u>	<u>F.E.</u>	<u>Total</u>	<u>Cost</u>	<u>F.E.</u>	<u>Total</u>	<u>Cost</u>	<u>F.E.</u>	<u>Total</u>
1. Capital	25.2	31.8	57.0	23.4	31.5	54.9	48.6	63.3	111.9
2. Operating Costs	164.3	51.0	215.3	124.7	38.2	162.9	289.0	89.2	378.2
3. Professional Training	13.5	13.5	27.0	13.5	13.5	27.0	27.0	27.0	54.0
Total	203.0	96.3	299.3	161.6	83.2	244.8	364.6	179.5	544.1
	=====	=====	=====	=====	=====	=====	=====	=====	=====

Budgeting

4.18 In accordance with Treasury regulations, outline project costs, based on up-dated appraisal cost estimates, would be included in the Forward Budget and detailed submissions set out in the Annex to the District Development Plan. MALD already has a development budget head for the present Kwale-Kilifi Development Project and would make notional provision for Project Year 1 (1987/88) costs in the 1987/88 FB in anticipation of agreement on project financing. Thereafter, budgetary provision would be made in line with the prevailing Treasury regulations.

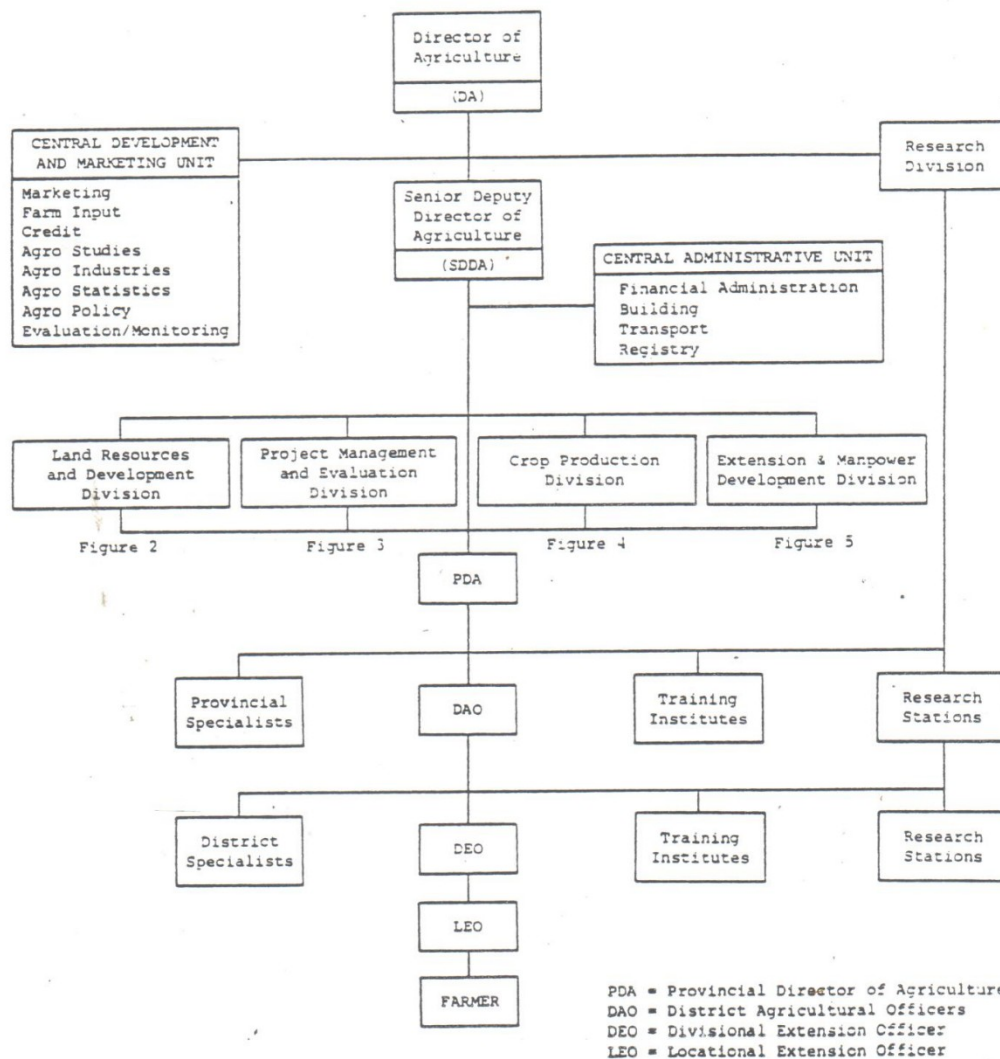
4.19 Current Treasury instructions require that, in line with the policy of District Focus for Rural Development, the Districts should be involved fully at every stage of the budgetary process, i.e., that they should be informed of the basis of MCD priorities for expenditure within the District and have the opportunity to call for reallocation within the budget ceiling allotted to the District by MALD. Accordingly, DAO would adhere to the time table and provide for FB and recurrent budget estimate preparation and submission, which is set out in Annex 7 para 2.11 et seq.

4.20 Annual Work Programmes. The preparation of Annual Work Programmes (AWP) would provide the basis for project implementation and justification for the allocation of incremental project funding. Accordingly, AWP would constitute an integral part of project financial reporting, and disbursements or reimbursements would depend upon their timely submission.



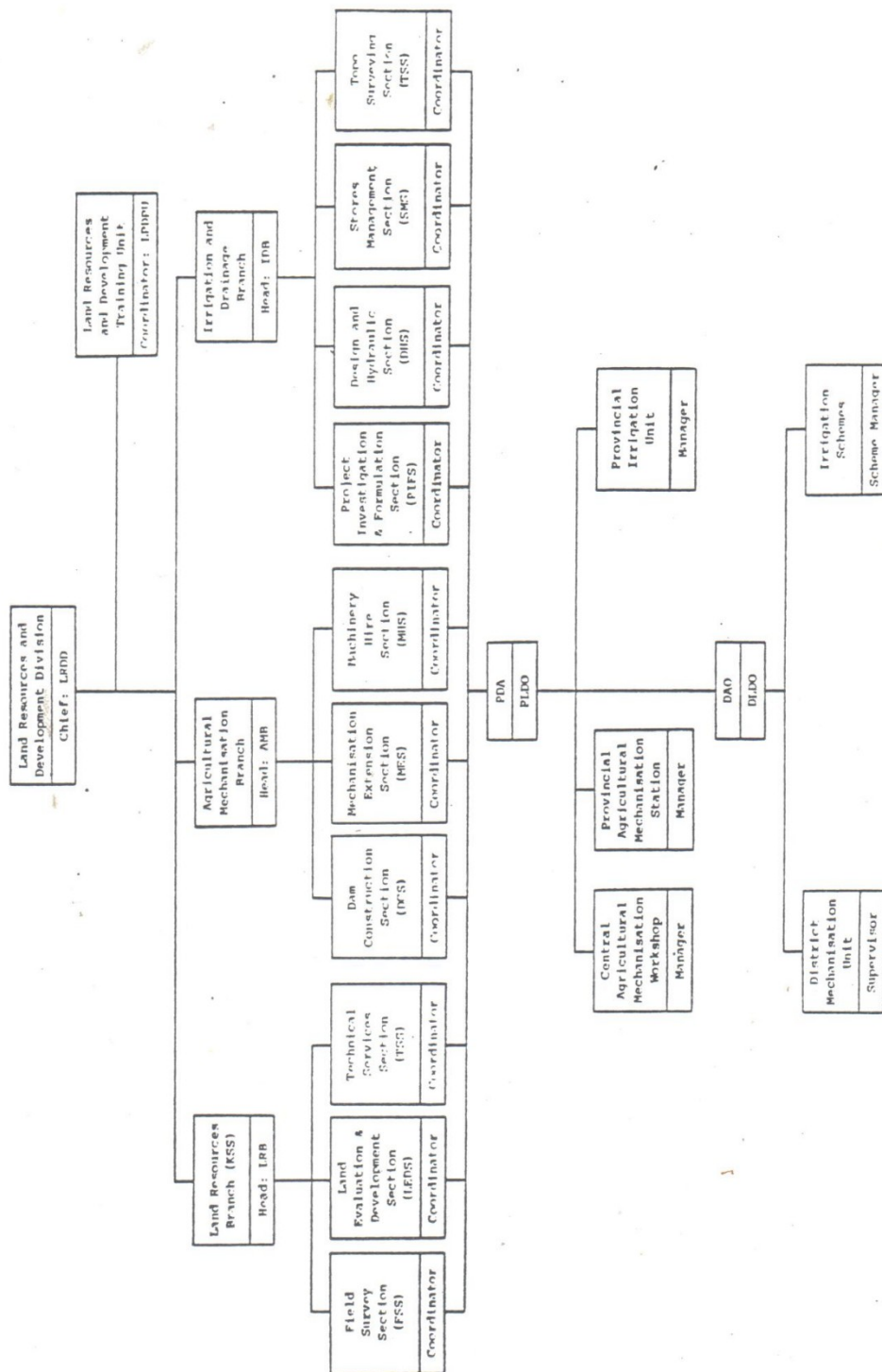
Ministry of Agriculture
Department of Agriculture

FIG.1



Ministry of Agriculture
Land Resources and Development Division

FIG. 2



Ministry of Agriculture
Project Management and Evaluation Division

FIG.3

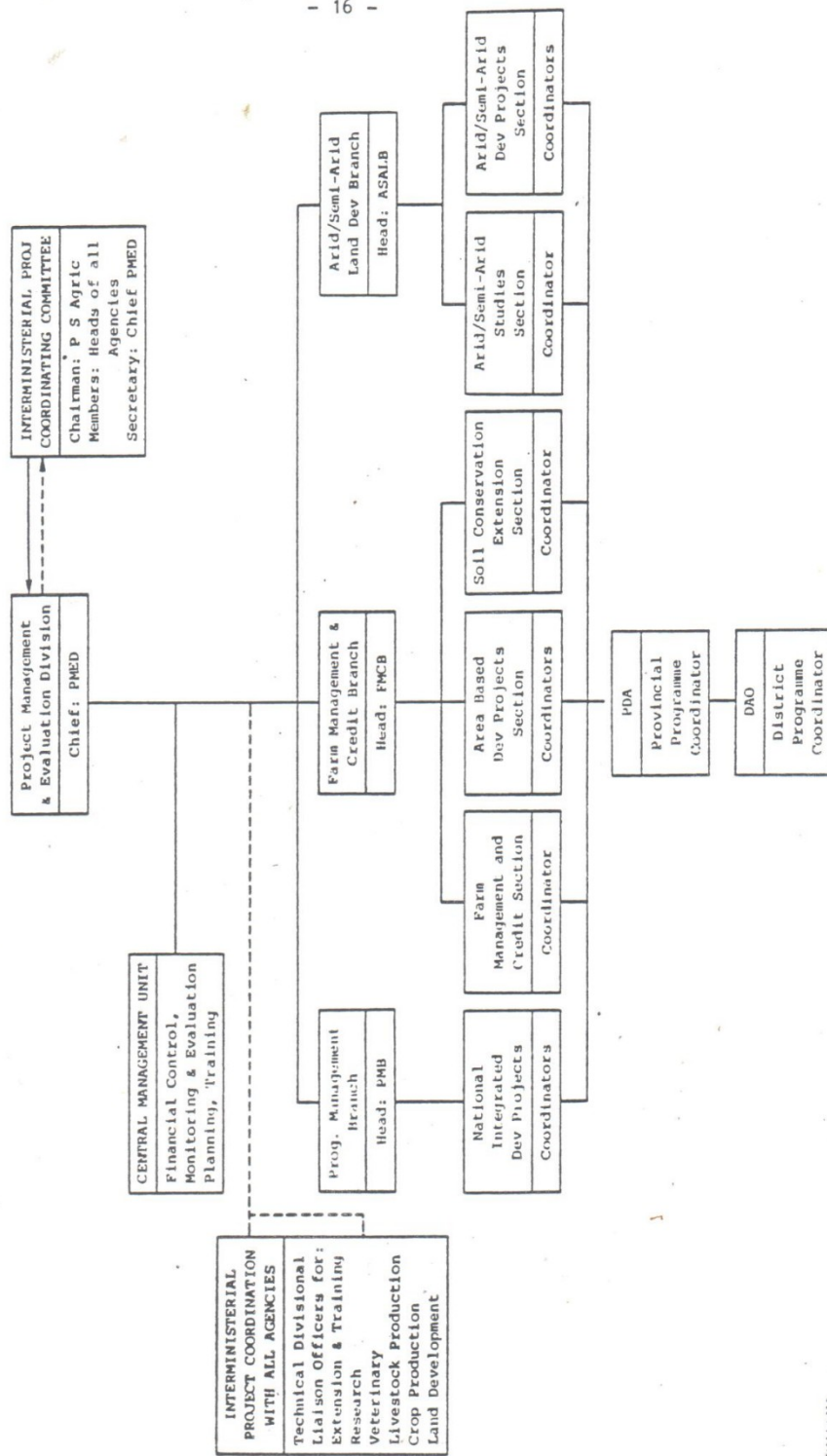
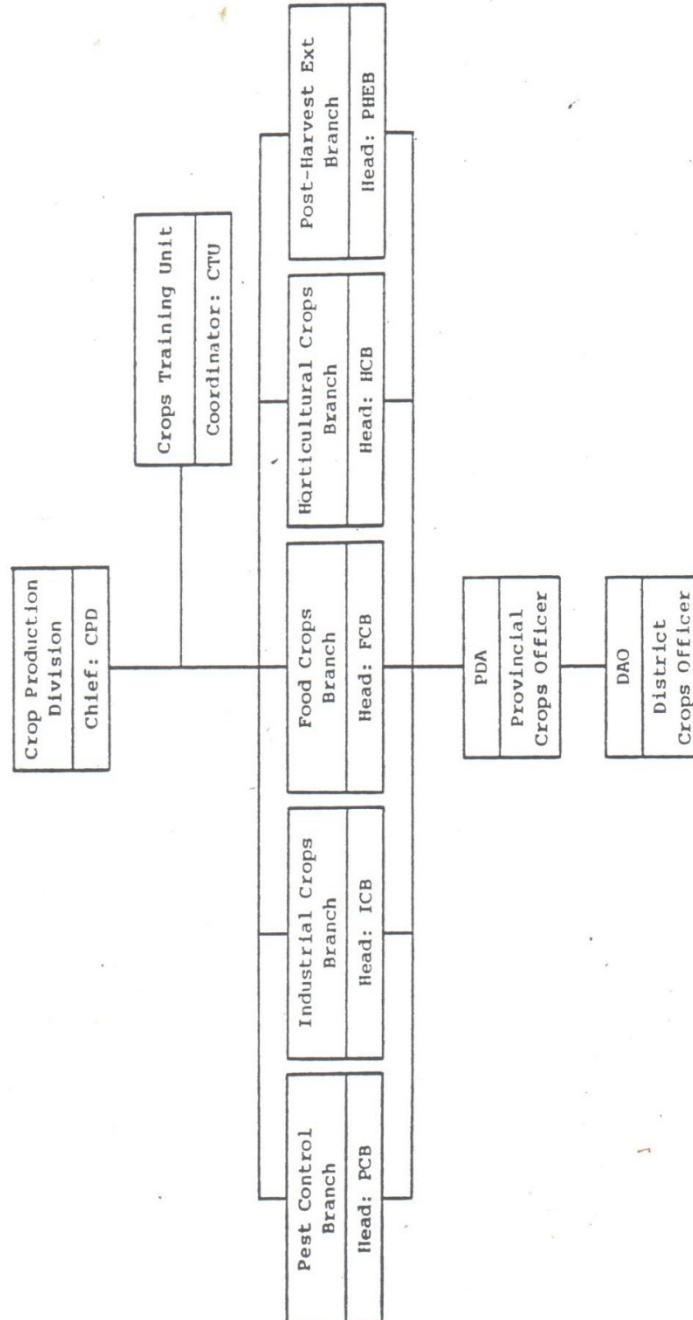


FIG 3

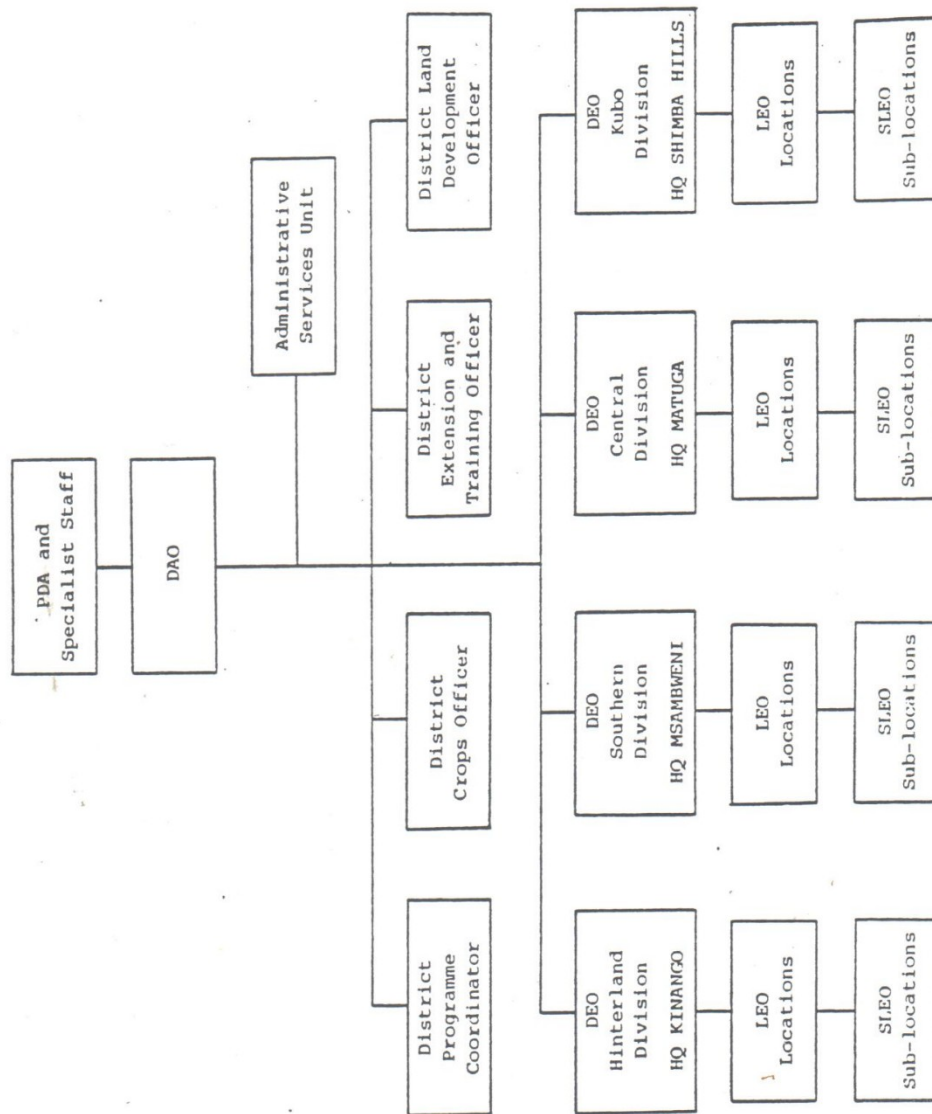
Ministry of Agriculture
Crop Production Division

FIG. 4



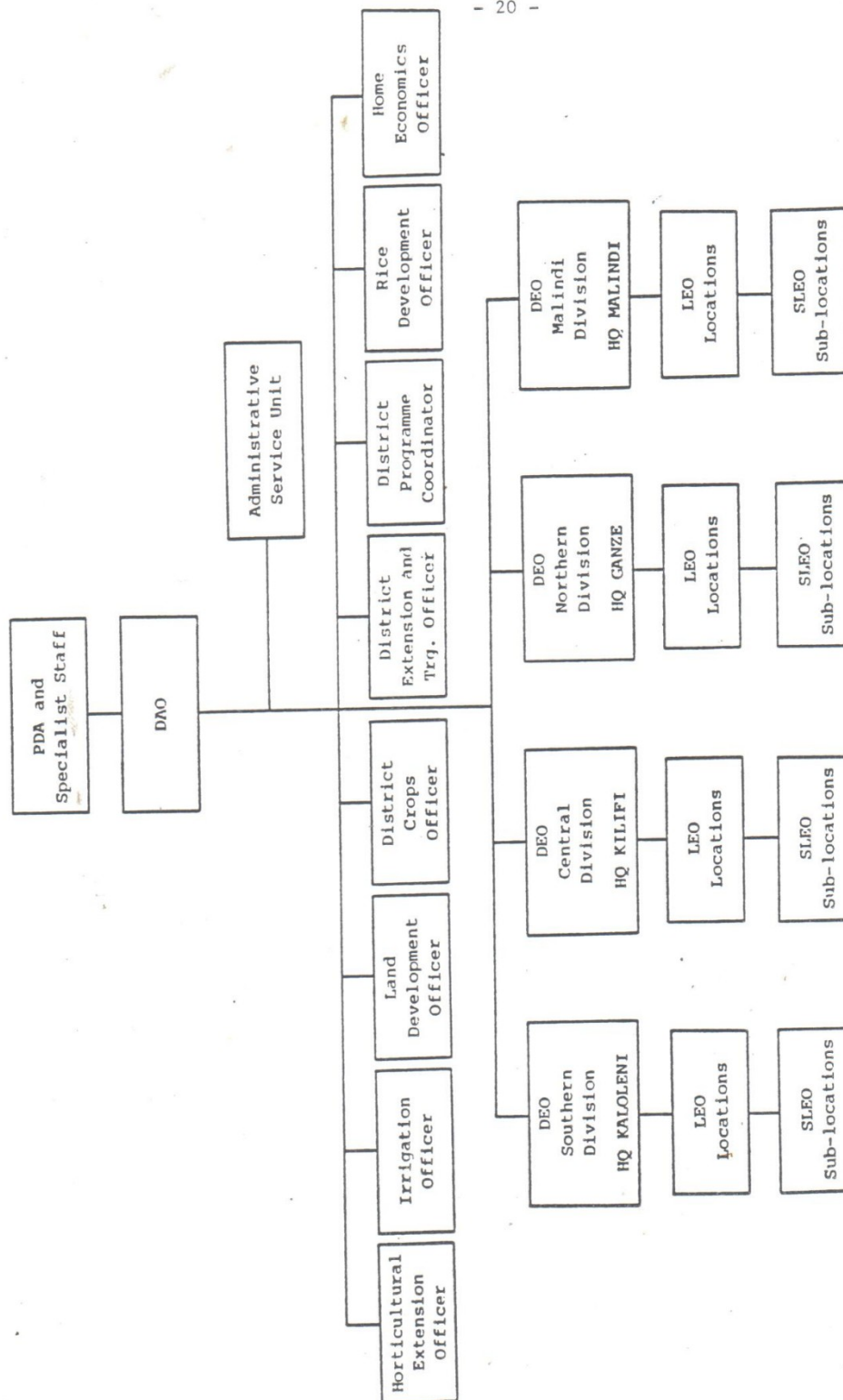
Department of Agriculture Organisation
Kwale District

FIG. 6



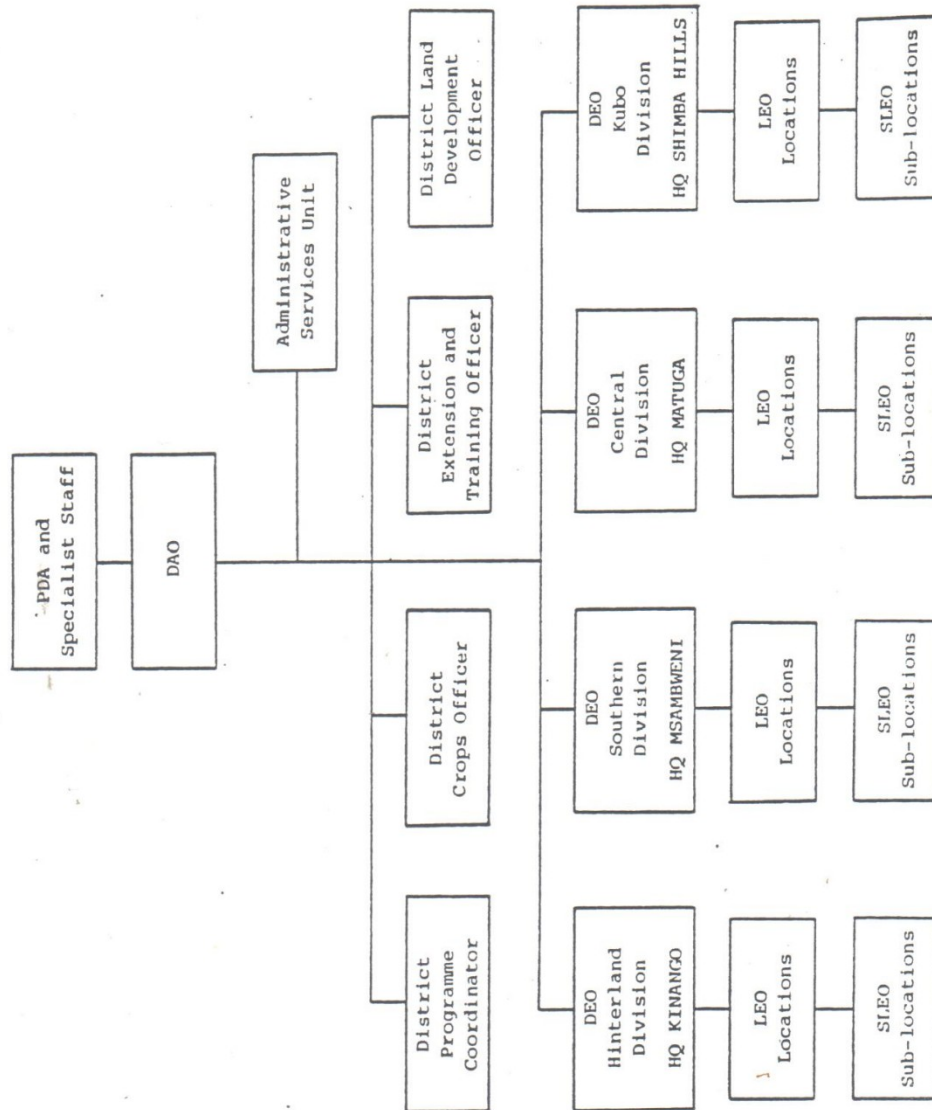
Department of Agriculture Organisation
Kilifi District

FIG. 7



Department of Agriculture Organisation
Kwale District

FIG. 6



Department of Agriculture Organisation
Kilifi District

FIG 7

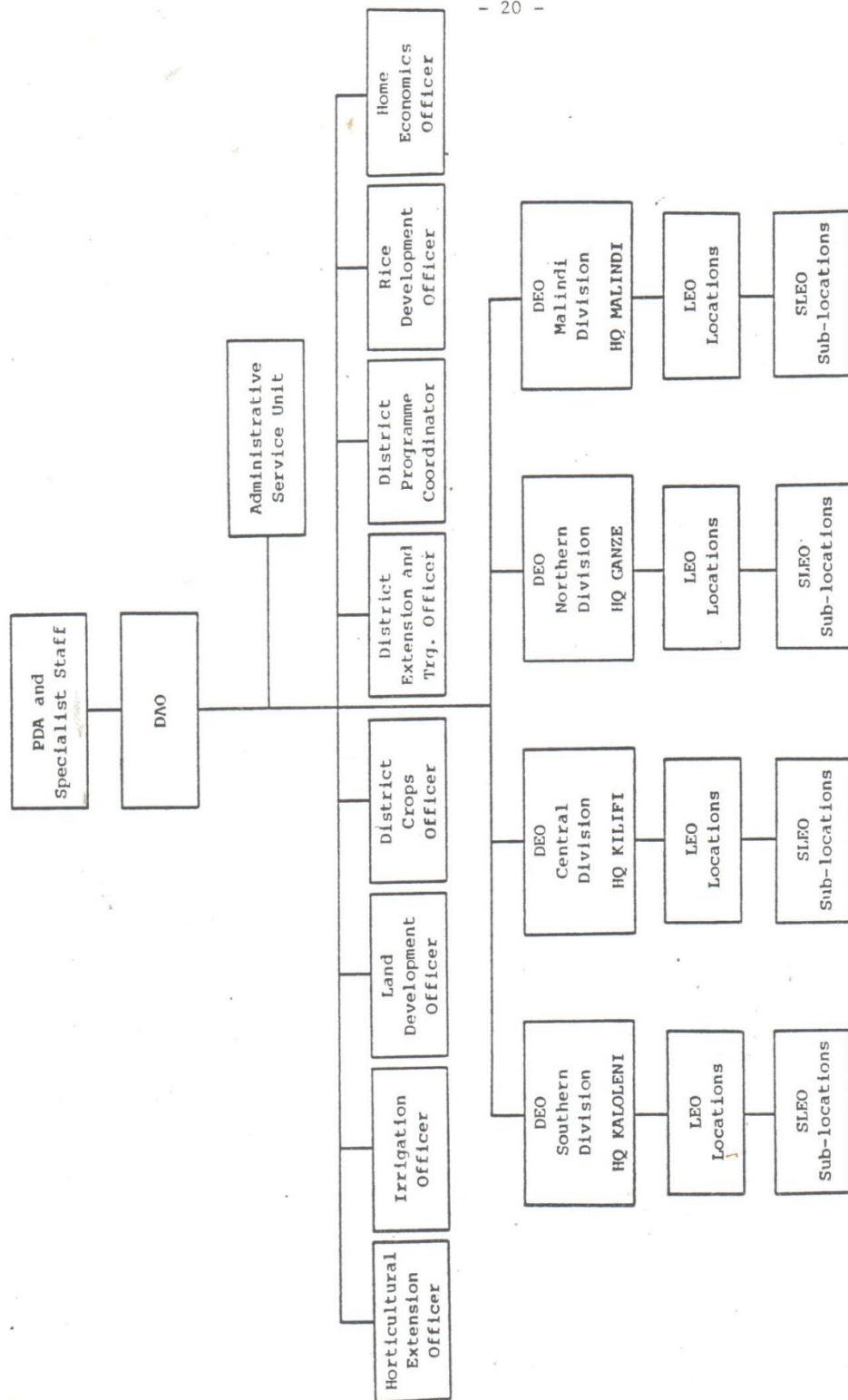


FIG 7

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Awale and Kilifi District Development Projects

ANNEI 4

Ministry of Agriculture & Livestock Development - GDK Treasury Account Code 320 and 310

Table 1

Summary of Total Incremental Technical Services 1/

(K.Pounds'000)

Category	Item code	Unit	Unit cost	Year 1 No.	Year 1 Cost	Year 2 No.	Year 2 Cost	Year 3 No.	Year 3 Cost	Year 4 No.	Year 4 Cost	Year 5 No.	Year 5 Cost	Totals No.	Totals Cost	Local Costs (\$ Amount)	For.Exch. (\$ Amount)	Taxes,duties (\$ Amount)
I Capital																		
A. Buildings & civil works																		
1. Nurseries	295	mod	1.87	2	3.73		.00		.00		.00		.00	2	3.73	75	2.80	.45
Total					3.73		.00		.00		.00		.00		3.73		2.80	.45
of which Local content					3.28		.00		.00		.00		.00		3.28			
Foreign content					.45		.00		.00		.00		.00		.45			
B. Vehicles and plant																		
1. Long wheel base (4x4)	200	mo.	9.00		.00	2	18.00		.00		.00		.00	2	18.00	20	3.60	80
2. Motorcycle	212	mo.	1.00	8	8.00		.00		.00	8	8.00		.00	16	16.00	10	1.60	90
3. Lorry (7-tonne)	200	mo.	17.00	2	34.00		.00		.00		.00		.00	2	34.00	20	6.80	80
Total					42.00		18.00		.00		8.00		.00		68.00		12.00	56.00
of which Local content					7.60		3.60		.00		.80		.00		12.00			
Foreign content					34.40		14.40		.00		7.20		.00		56.00			
C. Equipment																		
1. Demonstration equip't	220	mod.	12.72	2	25.44		.00		.00		.00		.00	2	25.44	75	19.08	15
2. Photocopier	220	mo.	1.90	2	3.80		.00		.00		.00		.00	2	3.80	32	1.22	37
3. Central Nursery	220	mod.	.55	2	1.10		.00		.00		.00		.00	2	1.10	37	.41	35
4. Hand tools, implements	220	qty	1.22	1	2.03	1	1.99	1	1.95	1	1.93	1	1.89	5	9.79	64	6.26	13
Total					32.37		1.99		1.95		1.93		1.89		40.13		26.97	6.88
of which Local content					26.03		1.27		1.25		1.23		1.21		31.00			
Foreign content					6.34		.72		.70		.69		.68		9.13			
TOTAL CAPITAL COSTS					78.10		19.99		1.95		9.93		1.89		111.86		41.76	63.33
II Operating costs																		
A. Salaries and allowances																		
1. Nights out	110	LM	.30	4	1.20	4	1.20	4	1.20	4	1.20	4	1.20	20	6.00	100	6.00	0
2. Nights out	110	K	.30	4	1.20	4	1.20	4	1.20	4	1.20	4	1.20	20	6.00	100	6.00	0
3. Nights out	110	M	.27	4	1.06	4	1.06	4	1.06	4	1.06	4	1.06	20	5.30	100	5.30	0
4. Field allowance	110	K	.11	8	.85	8	.85	8	.85	8	.85	8	.85	40	4.24	100	4.24	0
5. Field allowance	110	M	.10	16	1.52	16	1.52	16	1.52	16	1.52	16	1.52	80	7.60	100	7.60	0
6. Nursery labour	250	a.yr	.30	19	5.70	18.2	5.46	17.4	5.22	16.7	5.01	15.8	4.74	87.1	26.13	100	26.13	0
Total					11.53		11.29		11.05		10.84		10.57		55.27		55.27	.00
of which Local content					11.53		11.29		11.05		10.84		10.57		55.27			
Foreign content					.00		.00		.00		.00		.00		.00			
B. Vehicle operating costs																		
1. Long-wheel base (4x4)	100	20000	3.62		.00	2	7.64	2	7.64	2	7.64	2	7.64	8	30.56	32	9.76	33
2. Motor cycles	100	25000	.75	8	6.00	8	6.00	8	6.00	8	6.00	8	6.00	40	30.00	27	8.10	33
3. Lorry (7-tonne)	100	25000	6.73	2	13.45	2	13.45	2	13.45	2	13.45	2	13.45	10	67.25	19	12.78	43
Total					19.45		27.09		27.09		27.09		27.09		127.81		30.66	46.90
of which Local content					11.69		16.88		16.69		16.98		16.88		79.21			
Foreign content					7.76		10.21		10.21		10.21		10.21		48.60			

(continued)

(continued)

ANNEX 4
Table 1 page 2.

C. General services																				
1. Drugs and sera	150	p.a.	17.00	1	17.00	1	17.00	1	17.00	1	17.00	5	85.00	55	46.75	30	25.50	15	12.75	
2. Livestock (bulls)	151	mo.	.40	8	3.20	8	3.20	8	3.20	8	3.20	40	16.00	92	14.72	4	.64	4	.64	
3. Livestock (goats)	151	mo.	.02	8	.16	8	.16	8	.16	8	.16	40	.80	92	.74	4	.03	4	.03	
4. Farm inputs																				
-fert. & pest.	153	p.a.	3.24	1	4.99	1	4.96	1	4.93	1	4.91	5	24.67	57	14.06	29	7.15	14	3.45	
-planting mat.	153	p.a.	4.89	1	10.05	1	8.30	1	6.55	1	4.80	5	32.74	93	30.45	5	1.64	2	.65	
-ox ploughing	153	p.a.	.04	18.5	.74	17.5	.60	16.5	.66	15.5	.62	14.5	.58	82.5	3.30	92	3.04	4	.13	
5. Stationery	174	p.a.	1.00	2	2.00	2	2.00	2	2.00	2	2.00	2	2.00	10	10.00	70	7.00	12	1.20	
6. Miscellaneous	190	p.a.	.30	2	.60	2	.60	2	.60	2	.60	2	.60	10	3.00	65	1.95	15	.45	
7. Maintenance:																				
-equipment	250	£ pa	.10		3.24		3.44		3.63		3.82		4.01	0	18.14	60	10.88	18	3.27	
-stations	260	£ pa	.08		.30		.30		.30		.30		.30	0	1.49	60	.90	18	.27	
Total					42.27		40.64		39.03		37.41		35.79		195.14		130.48		40.28	
of which Local content					34.09		32.53		30.98		29.41		27.85		154.86					
Foreign content					8.18		8.12		8.06		7.99		7.93		40.28					
TOTAL OPERATING COSTS					73.25		79.02		77.17		75.33		73.45		378.22		216.41		89.18	
					=====		=====		=====		=====		=====		=====		=====		=====	
III Training costs																				
A. Training courses																				
5. Advanced training	154	m-mth	4.50	12	54.00		.00		.00		.00		.00		54.00	45	24.30	50	27.00	
Total					54.00		.00		.00		.00		.00		54.00		24.30		27.00	
of which: Local content					27.00		.00		.00		.00		.00		27.00					
Foreign content					27.00		.00		.00		.00		.00		27.00					
TOTAL TRAINING COSTS					54.00		.00		.00		.00		.00		54.00		24.30		27.00	
					=====		=====		=====		=====		=====		=====		=====		=====	
TOTAL MINISTRY COSTS					205.35		99.01		79.12		85.26		75.33		544.08		282.47		179.51	
					=====		=====		=====		=====		=====		=====		=====		=====	

NOTE: Small rounding errors arise due to the use of units of £Pounds'000.

Sources: 1/ Tables 2 and 3 consolidated

KKDF11

KENYA

Kwale District Development Project

Ministry of Agriculture & Livestock Development - BOM Treasury Account Code 320

Incremental Technical Services

ANNEX 4

Table 2

(K'Pounds'000)

Category	Item code	Unit	Unit cost	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For.Exch.	Taxes,duties
				No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%) Amount	(%) Amount
I Capital													
A. Buildings & civil works													
1. Nurseries 1/	295	mod	1.87	1	1.87	.00	.00	.00	.00	1	1.87	75	1.40
Total					1.87	.00	.00	.00	.00		1.87		1.40
of which Local content					1.64	.00	.00	.00	.00		1.64		.22
Foreign content					.22	.00	.00	.00	.00		.22		.24
B. Vehicles and plant 2/													
1. Long wheel base (4x4)	200	no.	9.00	.00	1	9.00	.00	.00	.00	1	9.00	20	1.80
2. Motorcycle	212	no.	1.00	4	4.00	.00	.00	4	4.00	.00	8	8.00	10
3. Lorry (7-tonne)	200	no.	17.00	1	17.00	.00	.00	.00	.00	1	17.00	20	3.40
Total					21.00	9.00	.00	4.00	.00		34.00		6.00
of which Local content					3.80	1.80	.00	.40	.00		6.00		28.00
Foreign content					17.20	7.20	.00	3.60	.00		28.00		.00
C. Equipment													
1. Demonstration equip't 3/	220	mod.	12.72	1	12.72	.00	.00	.00	.00	1	12.72	75	9.54
2. Photocopier 4/	220	no.	1.90	1	1.90	.00	.00	.00	.00	1	1.90	32	.61
3. Central Nursery 1/	220	mod.	.55	1	.55	.00	.00	.00	.00	1	.55	37	.20
4. Hand tools, implements 5/	220	qty	1.22	1	1.22	1	1.18	1	1.17	1	1.15	5	5.92
Total					16.39	1.20	1.18	1.17	1.15		21.09		14.14
of which Local content					13.15	.77	.76	.75	.73		16.15		3.57
Foreign content					3.24	.43	.43	.42	.41		4.93		3.36
TOTAL CAPITAL COSTS					39.25	10.20	1.18	5.17	1.15		56.95		21.54
													31.80
													3.62
II Operating costs													
A. Salaries and allowances 6/													
1. Nights out	110	LM	.30	2	.60	2	.60	2	.60	2	.60	10	3.00
2. Nights out	110	K	.30	2	.60	2	.60	2	.60	2	.60	10	3.00
3. Nights out	110	H	.27	2	.53	2	.53	2	.53	2	.53	10	2.65
4. Field allowance	110	K	.11	4	.42	4	.42	4	.42	4	.42	20	2.12
5. Field allowance	110	H	.10	8	.76	8	.76	8	.76	8	.76	40	3.80
6. Nursery labour 5/	260	m.yr	.30	13	3.90	12.6	3.78	12.2	3.66	11.8	3.54	11.4	3.42
Total					6.81	6.69	6.57	6.45	6.33		32.87		32.87
of which Local content					6.81	6.69	6.57	6.45	6.33		32.87		.00
Foreign content					.00	.00	.00	.00	.00		.00		.00
B. Vehicle operating costs 2/													
1. Long-wheel base (4x4)	100	20000	3.82	.00	1	3.82	1	3.82	1	3.82	4	15.28	32
2. Motor cycles	100	25000	.75	4	3.00	4	3.00	4	3.00	4	3.00	20	15.00
3. Lorry (7-tonne)	100	25000	6.73	1	6.73	1	6.73	1	6.73	1	6.73	5	23.63
Total					9.73	13.55	13.55	13.55	13.55		43.91		15.33
of which Local content					5.84	8.44	8.44	8.44	8.44		39.61		24.45
Foreign content					3.88	5.10	5.10	5.10	5.10		4.30		24.13

(continued...)

KKDFII

KENYA

ANNEX 4

Kwale District Development Project

Table 2

Ministry of Agriculture & Livestock Development - 601 Treasury Account Code 320

Incremental Technical Services

(KPeounds'000)

Category	Item code	Unit	Unit cost	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For.	Exch.	Taxes, duties
				No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%) Amount	(%) Amount	(%) Amount
I Capital														
A. Buildings & civil works														
1. Nurseries 1/	295	mod	1.87	1	1.87		.00		.00		.00	1	1.87	75 1.40 12 .22 13 .24
Total					1.87		.00		.00		.00		1.87	1.40 .22 .24
of which: Local content					1.64		.00		.00		.00		1.64	
Foreign content					.22		.00		.00		.00		.22	
B. Vehicles and plant 2/														
1. Long wheel base (4x4)	200	no.	9.00		.00	1	9.00		.00		.00	1	9.00	20 1.80 80 7.20 0 .00
2. Motorcycle	212	no.	1.00	4	4.00		.00		4.00		.00	8	8.00	10 .80 90 7.20 0 .00
3. Lorry (7-tonne)	200	no.	17.00	1	17.00		.00		.00		.00	1	17.00	20 3.40 80 13.60 0 .00
Total					21.00		9.00		.00		4.00		34.00	6.00 28.00 .00
of which Local content					3.80		1.80		.00		.40		6.00	
Foreign content					17.20		7.20		.00		3.60		28.00	
C. Equipment														
1. Demonstration equip' 43/	220	mod.	12.72	1	12.72		.00		.00		.00	1	12.72	75 9.54 15 1.91 10 1.27
2. Photocopier 4/	220	no.	1.90	1	1.90		.00		.00		.00	1	1.90	32 .61 37 .70 31 .59
3. Central Nursery 1/	220	mod.	.55	1	.55		.00		.00		.00	1	.55	37 .20 35 .19 28 .15
4. Hand tools, implements 5/	220	qty	1.22	1	1.22	1	1.20	1	1.18	1	1.17	1	1.15	5 5.92 64 3.79 13 .77 23 1.36
Total					16.39		1.20		1.18		1.17		21.09	14.14 3.57 3.38
of which Local content					13.15		.77		.76		.75		16.15	
Foreign content					3.24		.43		.42		.41		4.93	
TOTAL CAPITAL COSTS					39.25		10.20		1.16		5.17		1.15	56.95 21.54 31.80 3.62
II Operating costs														
A. Salaries and allowances 6/														
1. Nights out	110	LM	.30	2	.60	2	.60	2	.60	2	.60	10	3.00	100 3.00 0 .00 0 .00
2. Nights out	110	K	.30	2	.60	2	.60	2	.60	2	.60	10	3.00	100 3.00 0 .00 0 .00
3. Nights out	110	H	.27	2	.53	2	.53	2	.53	2	.53	10	2.65	100 2.65 0 .00 0 .00
4. Field allowance	110	K	.11	4	.42	4	.42	4	.42	4	.42	20	2.12	100 2.12 0 .00 0 .00
5. Field allowance	110	H	.10	8	.76	8	.76	8	.76	8	.76	40	3.80	100 3.80 0 .00 0 .00
6. Nursery labour 5/	260	m.yr	.30	13	3.90	12.6	3.78	12.2	3.66	11.8	3.54	11.4	3.42	61 18.30 100 18.30 0 .00 0 .00
Total					6.81		6.69		6.57		6.45		6.33	32.87 32.87 .00 .00
of which Local content					6.81		6.69		6.57		6.45		6.33	32.87
Foreign content					.00		.00		.00		.00		.00	
B. Vehicle operating costs 2/														
1. Long-wheel base (4x4)	100	E5000	3.82		.00	1	3.82	1	3.82	1	3.82	4	15.28	32 4.89 33 5.04 35 5.35
2. Motor cycles	100	E5000	.75	4	3.00	4	3.00	4	3.00	4	3.00	20	15.00	27 4.05 33 4.95 40 6.00
3. Lorry (7-tonne)	100	E5000	6.73	1	6.73	1	6.73	1	6.73	1	6.73	5	33.63	19 4.39 43 14.46 38 12.76
Total					9.72		13.55		13.55		13.55		43.91	15.33 24.45 24.13
of which Local content					3.84		8.44		8.44		8.44		39.61	
Foreign content					3.88		5.10		5.10		5.10		24.30	

(continued...)

(continued)

ANNEX 4
Table 2 page 2

C. General services													
1. Drugs and sera 7/	150	p.a.	12.00	1	12.00	1	12.00	1	12.00	1	12.00	5	60.00
2. Livestock (bulls) 8/	151	no.	.40	4	1.60	4	1.60	4	1.60	4	1.60	20	8.00
3. Livestock (goats) 8/	151	no.	.02	4	.08	4	.08	4	.08	4	.08	20	.40
4. Farm inputs 5/													
-fertil. & pest.	153	p.a.	3.24	1	3.24	1	3.24	1	3.24	1	3.19	5	16.08
-planting mat.	153	p.a.	4.89	1	4.89	1	4.02	1	3.14	1	2.27	1	1.39
-ox ploughing	153	p.a.	.04	9.5	.38	9	.38	8.5	.34	8	.32	7.5	.30
5. Stationery	174	p.a.	1.00	1	1.00	1	1.00	1	1.00	1	1.00	5	5.00
6. Miscellaneous 5/	190	p.a.	.30	1	.30	1	.30	1	.30	1	.30	5	1.50
6. Maintenance:													
-equipment	250	1 pa	.10		1.64		1.76		1.88		1.99	0	9.38
-stations	260	1 pa	.08		.15		.15		.15		.15	0	.75
Total					25.28		24.49		23.70		22.91		118.48
of which Local content					19.92		19.16		18.40		17.64		91.99
Foreign content					5.35		5.33		5.30		5.27		26.49
TOTAL OPERATING COSTS					41.81		44.73		43.82		42.91		215.26
					=====		=====		=====		=====		=====
III Training costs													
A. Training courses 9/													
5. Advanced training 10/	154	a-att	4.50	6	27.00		.00		.00		.00		27.00
Total					27.00		.00		.00		.00		27.00
of which: Local content					13.50		.00		.00		.00		13.50
Foreign content					13.50		.00		.00		.00		13.50
TOTAL TRAINING COSTS					27.00		.00		.00		.00		27.00
					=====		=====		=====		=====		=====
TOTAL MINISTRY COSTS - Kwale District					108.07		54.93		45.00		48.07		299.21
					=====		=====		=====		=====		=====

NOTE : Small rounding errors arise due to the use of units of Kfounds'000.

Sources : 1/ Table 9, Annex 9

2/ Table 5, Annex 9

3/ Table 11, Annex 9

4/ Table 6, Annex 9

5/ Tables 4 -B , Annex 4 (coconut bulking costs reduced by 20% per annum)

6/ Table 7, Annex 9

7/ Allocations maintained at 1986/87 Budget levels

8/ Market prices for bulls and Matuga (MOCALD) prices for goats

9/ Staff training costs for BFP are budgeted under OP estimates

10/ See text for details

KENYA

KWALE DISTRICT DEVELOPMENT PROJECT

Ministry of Agriculture and Livestock Development

Department of Agriculture

Schedule of Professional and Technical Staff as at 31 July 1986

<u>Category</u>	<u>Job Group</u>	<u>Total in Post</u>	<u>HQ</u>	<u>Matuga</u>	<u>Kinango</u>	<u>Kubo</u>	<u>Msambweni</u>
1. Senior Agricultural Officer M	M	1	1	-	-	-	-
2. Agricultural Officer I	L	1	1	-	-	-	-
3. Agric. Officer I (RM) ^{1/}	L	1	1	-	-	-	-
4. Agricultural Officer II	K	8	6	1	1	-	-
5. Technical Officer I	J	-	-	-	-	-	-
6. Technical Officer II	H	-	-	-	-	-	-
7. Technical Officer III	G	27	4	5	9	3	6
8. Technical Officer III (RM)	G	6	2	-	4	-	-
9. Technical Assistant	F	61	1	13	13	13	21
10. Technical Assistant (RM)	F	15	-	-	15	-	-
11. JTA - JAA	A-E	32	-	6	8	4	14
		152	16	25	50	20	41

^{1/} RM : Range Management

Source : DAO - Kwale District

(continued)

ANNEX 4
Table 2 page 2

C. General services													
1. Drugs and sera 7/	150	p.a.	12.00	1	12.00	1	12.00	1	12.00	1	12.00	5	60.00
2. Livestock (bulls) 8/	151	no.	.40	4	1.60	4	1.60	4	1.60	4	1.60	20	8.00
3. Livestock (goats) 8/	151	no.	.02	4	.08	4	.08	4	.08	4	.08	20	.40
4. Farm inputs 5/													
-fertil. & pest.	153	p.a.	3.24	1	3.24	1	3.23	1	3.21	1	3.20	5	16.08
-planting mat.	153	p.a.	4.89	1	4.89	1	4.02	1	3.14	1	2.27	5	11.35
-ox ploughing	153	p.a.	.04	9.5	.38	9	.36	8.5	.34	8	.32	7.5	.30
5. Stationery	174	p.a.	1.00	1	1.00	1	1.00	1	1.00	1	1.00	5	5.00
6. Miscellaneous 5/	190	p.a.	.30	1	.30	1	.30	1	.30	1	.30	5	1.50
6. Maintenance:													
-equipment	250	1 pa	.10		1.64		1.76		1.88		1.99	0	9.38
-stations	260	1 pa	.08		.15		.15		.15		.15	0	.75
Total					25.28		24.49		23.70		22.91		118.48
of which Local content					19.92		19.16		18.40		17.64		91.99
Foreign content					5.35		5.33		5.30		5.27		26.49
TOTAL OPERATING COSTS					41.81		44.73		43.82		42.91		215.26
					=====		=====		=====		=====		=====
III Training costs													
A. Training courses 9/													
5. Advanced training 10/	154	a-ath	4.50	6	27.00		.00		.00		.00		27.00
Total					27.00		.00		.00		.00		27.00
of which: Local content					13.50		.00		.00		.00		13.50
Foreign content					13.50		.00		.00		.00		13.50
TOTAL TRAINING COSTS					27.00		.00		.00		.00		27.00
					=====		=====		=====		=====		=====
TOTAL MINISTRY COSTS - Kwale District					108.07		54.93		45.00		48.07		299.21
					=====		=====		=====		=====		=====

NOTE : Small rounding errors arise due to the use of units of KShs'000.

Sources : 1/ Table 9, Annex 9

2/ Table 5, Annex 9

3/ Table 11, Annex 9

4/ Table 6, Annex 9

5/ Tables 4 -B , Annex 4 (coconut bulking costs reduced by 20% per annum)

6/ Table 7, Annex 9

7/ Allocations maintained at 1986/87 Budget levels

8/ Market prices for bulls and Matuga (MCAID) prices for goats

9/ Staff training costs for DFP are budgeted under OP estimates

10/ See text for details

KENYA

KWALE DISTRICT DEVELOPMENT PROJECT

Ministry of Agriculture and Livestock Development

Department of Agriculture

Schedule of Professional and Technical Staff as at 31 July 1986

<u>Category</u>	<u>Job Group</u>	<u>Total in Post</u>	<u>HQ</u>	<u>Matuga</u>	<u>Kinango</u>	<u>Kubo</u>	<u>Msambweni</u>
1. Senior Agricultural Officer	M	1	1	-	-	-	-
2. Agricultural Officer I	L	1	1	-	-	-	-
3. Agric. Officer I (RM) ^{1/}	L	1	1	-	-	-	-
4. Agricultural Officer II	K	8	6	1	1	-	-
5. Technical Officer I	J	-	-	-	-	-	-
6. Technical Officer II	H	-	-	-	-	-	-
7. Technical Officer III	G	27	4	5	9	3	6
8. Technical Officer III (RM)	G	6	2	-	4	-	-
9. Technical Assistant	F	61	1	13	13	13	21
10. Technical Assistant (RM)	F	15	-	-	15	-	-
11. JTA - JAA	A-E	32	-	6	8	4	14
		152	16	25	50	20	41

^{1/} RM : Range Management

Source : DAO - Kwale District

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Demonstration Equipment

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost (K£)</u>	<u>Total Cost (K£)</u>
Small improved hand tools ^{a/}	Qty	-	1 000
Hand-propelled punch planter	8	80	640
Hand-propelled weeder	8	80	640
Hand-propelled weeder	8	60	480
Knapsack sprayer	8	80	640
Light weight plough/cultivator	12	150	1 800
Multipurpose plough	12	150	1 800
Harrow	12	100	1 200
Ridger/cultivator	12	150	1 800
Ox-drawn cart	12	60	720
Storage cribs ^{b/}	Qty	-	1 000
Accessories	-	-	1 000
 TOTAL	 -	 -	 12 720 =====

a/ Consists of long-handle hoe, fork jemses, etc. and cost is lump-sum per district.

b/ Cost of roofing material, nails and other purchased inputs. Poles and labour to be provided by participating farmers: 1 crib/location.

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KENYA
KWALE DISTRICT DEVELOPMENT PROJECT
MINISTRY OF AGRICULTURE & LIVESTOCK DEVELOPMENT

ANNEX 4
Table 2
Schedule 4

DEPARTMENT OF AGRICULTURE:
TECHNICAL SERVICES - EXISTING VEHICLES
(as at 31 July 1986)

<u>STATION</u>	<u>TYPE OF VEHICLE</u>	<u>CONDITION</u>		
		<u>satisfactory</u>	<u>under repair</u>	<u>grounded</u>
1. Headquarters	1. Land Rover	-	2	-
	2. Land Cruiser	1	-	-
	3. Chev. Pick-up	1	1	-
	4. Mazda Pick-up	-	1	-
	5. Isuzu Pick-up	1	-	-
	6. Motor cycle	1	-	-
B. Kinango	7. Land Rover	1	1	-
C. Kubo	8. Land Rover	-	1	-
D. Matuga	9. Chev. Pick-up	1	-	-
	10. Toyota Pick-up	1	-	-
	11. Motor cycle	1	-	-
E. Msambweni	12. Chev. Pick-up	1	-	-
	13. Land Rover	-	1	-
	14. Motor cycle	1	-	-

Source: DAO Kwale District, 1986

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KENYA

KWALE DISTRICT DEVELOPMENT PROJECT

MINISTRY OF AGRICULTURE & LIVESTOCK DEVELOPMENT

ANNEX 4
Table 2
Schedule 4

DEPARTMENT OF AGRICULTURE:

TECHNICAL SERVICES - EXISTING VEHICLES
(as at 31 July 1986)

<u>STATION</u>	<u>TYPE OF VEHICLE</u>	<u>CONDITION</u>		
		<u>satisfactory</u>	<u>under repair</u>	<u>grounded</u>
1. Headquarters	1. Land Rover	-	2	-
	2. Land Cruiser	1	-	-
	3. Chev. Pick-up	1	1	-
	4. Mazda Pick-up	-	1	-
	5. Isuzu Pick-up	1	-	-
	6. Motor cycle	1	-	-
B. Kinango	7. Land Rover	1	1	-
C. Kubo	8. Land Rover	-	1	-
D. Matuga	9. Chev. Pick-up	1	-	-
	10. Toyota Pick-up	1	-	-
	11. Motor cycle	1	-	-
E. Msambweni	12. Chev. Pick-up	1	-	-
	13. Land Rover	-	1	-
	14. Motor cycle	1	-	-

Source: DAO Kwale District, 1986

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Table 2
Schedule 6

KENYA

KWALE DISTRICT DEVELOPMENT PROJECT

MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT

DEPARTMENT OF VETERINARY SERVICES

TECHNICAL SERVICES - EXISTING VEHICLES

<u>Type of Vehicle</u>	<u>Condition</u>		
	<u>Satisfactory</u>	<u>Under Repair</u>	<u>Grounded</u>
1. Land Rover LWB	2	1	-
2. Land Rover SWB	1	-	1
3. Toyota Land Cruiser	1	-	-
4. Chev. Pick-up	1	-	-
5. Pony Pick-up	-	-	1
6. Toyota Scout	-	-	1
7. Motor cycle	9	-	3

Source: DVO - Kwale District 1986

KXDF12

KENYA

ANNEX 4

Kilifi District Development Project

Table 3

Ministry of Agriculture & Livestock Development - GOK Treasury Account Code 310

Incremental Technical Services

(Kfounds'000)

Category	Item code	Unit	Unit cost	Year 1		Year 2		Year 3		Year 4		Year 5		Totals	Local	Costs	For.Exch.	Taxes,duties
				No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%) Amount	(%) Amount	(%) Amount
I Capital																		
A. Buildings & civil works																		
1. Nurseries 1/	295	mod	1.87	1	1.87		.00		.00		.00		.00	1	1.87	75	1.40	12 .22 13 .24
Total					1.87		.00		.00		.00		.00		1.87		1.40	.22 .24
of which Local content					1.64		.00		.00		.00		.00		1.64			
Foreign content					.22		.00		.00		.00		.00		.22			
B. Vehicles and plant 2/																		
1. Long wheel base (4x4)	200	no.	9.00		.00	1	9.00		.00		.00		.00	1	9.00	20	1.80	80 7.20 0 .00
2. Motorcycle	212	no.	1.00	4	4.00		.00		.00	4	4.00		.00	8	8.00	10	.80	90 7.20 0 .00
3. Lorry (7-tonne)	200	no.	17.00	1	17.00		.00		.00		.00		.00	1	17.00	20	3.40	80 13.60 0 .00
Total					21.00		9.00		.00		4.00		.00		34.00		6.00	28.00 .00
of which Local content					3.80		1.80		.00		.40		.00		6.00			
Foreign content					17.20		7.20		.00		3.60		.00		28.00			
C. Equipment																		
1. Demonstration equip'ts/	220	mod.	12.72	1	12.72		.00		.00		.00		.00	1	12.72	75	9.54	15 1.91 10 1.27
2. Photocopier 4/	220	no.	1.90	1	1.90		.00		.00		.00		.00	1	1.90	32	.61	37 .70 31 .59
3. Central Nursery 1/	220	mod.	.55	1	.55		.00		.00		.00		.00	1	.55	37	.20	35 .19 22 .15
4. Hand tools, implements/	220	qty	.81	1	.81	1	.79	1	.77	1	.76	1	.74	5	3.87	64	2.47	13 .50 23 .89
Total					15.98		.79		.77		.76		.74		19.04		12.83	3.31 2.90
of which Local content					12.88		.51		.49		.48		.47		14.84			
Foreign content					3.09		.28		.28		.27		.27		4.19			
TOTAL CAPITAL COSTS					38.84		9.79		.77		4.76		.74		54.90		20.22	31.53 3.15
II Operating costs																		
A. Salaries and allowances 6/																		
1. Nights out	110	LM	.30	2	.60	2	.60	2	.60	2	.60	2	.60	10	3.00	100	3.00	0 .00 0 .00
2. Nights out	110	K	.30	2	.60	2	.60	2	.60	2	.60	2	.60	10	3.00	100	3.00	0 .00 0 .00
3. Nights out	110	M	.27	2	.53	2	.53	2	.53	2	.53	2	.53	10	2.65	100	2.65	0 .00 0 .00
4. Field allowance	110	K	.11	4	.42	4	.42	4	.42	4	.42	4	.42	20	2.12	100	2.12	0 .00 0 .00
5. Field allowance	110	H	.10	8	.76	8	.76	8	.76	8	.76	8	.76	40	3.80	100	3.80	0 .00 0 .00
6. Nursery labour 5/	260	m.yr	.30	6	1.80	5.6	1.68	5.2	1.56	4.9	1.47	4.4	1.32	26.1	7.63	100	7.63	0 .00 0 .00
Total					4.71		4.59		4.47		4.38		4.23		22.40		22.40	.00 .00
of which Local content					4.71		4.59		4.47		4.38		4.23		22.40			
Foreign content					.00		.00		.00		.00		.00		.00			
B. Vehicle operating costs 2/																		
1. Long-wheel base (4x4)	100	20000	3.82		.00	1	3.82	1	3.82	1	3.82	1	3.82	4	15.28	32	4.89	33 5.04 35 5.35
2. Motor cycles	100	25000	.75	4	3.00	4	3.00	4	3.00	4	3.00	4	3.00	20	15.00	27	4.05	33 4.95 40 6.00
3. Lorry (7-tonne)	100	25000	6.73	1	6.73	1	6.73	1	6.73	1	6.73	1	6.73	5	33.63	19	4.39	43 14.46 38 12.78
Total					9.73		13.55		13.55		13.55		13.55		43.91		15.23	24.45 24.13
of which Local content					5.84		8.44		8.44		8.44		8.44		37.61			
Foreign content					3.89		5.10		5.10		5.10		5.10		6.30			

(continued...)

(continued)

ANNEX 4
Table 3 page 2.

C. General services																																							
1. Drugs and sera 7/	150	p.a.	5.00	1	5.00	1	5.00	1	5.00	1	5.00	5	25.00	55	13.75	30	7.50	15	3.75																				
2. Livestock (bulls) 6/	151	no.	.40	4	1.60	4	1.60	4	1.60	4	1.60	20	8.00	92	7.36	4	.32	4	.32																				
3. Livestock (goats) 8/	151	no.	.02	4	.08	4	.08	4	.08	4	.08	20	.40	92	.37	4	.02	4	.02																				
4. Farm inputs 5/																																							
-fert. & pest.	153	p.a.	1.75	1	1.75	1	1.73	1	1.72	1	1.71	5	8.61	57	4.91	29	2.50	14	1.20																				
-planting mat.	153	p.a.	5.16	1	5.16	1	4.28	1	3.41	1	2.53	5	17.03	93	15.83	5	.85	2	.34																				
-ox ploughing	153	p.a.	.04	9	.36	8.5	.34	8	.32	7.5	.30	7	.26	40	4.60	92	1.47	4	.06																				
5. Stationery	174	p.a.	1.00	1	1.00	1	1.00	1	1.00	1	1.00	5	5.00	70	3.50	12	.60	18	.90																				
6. Miscellaneous 5/	190	p.a.	.30	1	.30	1	.30	1	.30	1	.30	5	1.50	65	.98	15	.23	20	.30																				
6. Maintenance:																																							
-equipment	250	% pa	.10		1.60		1.62		1.75		1.85		1.90	0	8.76	60	5.26	18	1.59																				
-stations	260	% pa	.08		.15		.15		.15		.15		.15	0	.75	60	.45	18	.13																				
				16.99				16.16				15.33				14.50				13.66				76.64				53.27				13.76				8.99			
Total				14.16				13.37				12.57				11.78				10.95				62.86															
of which Local content				2.83				2.79				2.76				2.69				13.78																			
Foreign content																																							
TOTAL OPERATING COSTS				31.43				34.30				33.35				32.43				31.44				162.94				91.60				38.23				33.11			
				=====				=====				=====				=====				=====				=====				=====				=====							
III Training costs																																							
A. Training courses 9/																																							
5. Advanced training 10/	154	a-ath	4.50	4	27.00		.00		.00		.00		.00		27.00	45	12.15	50	13.50																				
				27.00				.00				.00				.00				27.00				12.15				13.50				1.35							
Total				13.50				.00				.00				.00				13.50																			
of which: Local content				13.50				.00				.00				.00				13.50																			
Foreign content																																							
TOTAL TRAINING COSTS				27.00				.00				.00				.00				27.00				12.15				13.50				1.35							
				=====				=====				=====				=====				=====				=====				=====				=====							
TOTAL MINISTRY COSTS - Kilifi District				97.27				44.09				34.12				37.18				32.18				244.84				123.97				83.26				37.61			
				=====				=====				=====				=====				=====				=====				=====				=====							

NOTE: Small rounding errors arise due to the use of units of KShs'000.

Sources: 1/ Table 9, Annex 9

2/ Table 5, Annex 9

3/ Table 11, Annex 9

4/ Table 6, Annex 9

5/ Tables 4 - 8, Annex 4 (coconut bulking costs reduced by 20% per annum)

6/ Table 7, Annex 9

7/ Allocations maintained at 1986/87 Budget levels

8/ Market prices for bulls and Matuga (MDALD) prices for goats

9/ Table 8, Annex 9

10/ See text for details

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT

Ministry of Agriculture and Livestock Development

Department of Agriculture

Schedule of Professional and Technical Staff as at 31 July 1986

		<u>Job</u>	<u>Total in</u>					
<u>Settlement</u>	<u>Category</u>	<u>Group</u>	<u>Post</u>	<u>HQ</u>	<u>Bahari</u>	<u>Malindi</u>	<u>Ganze</u>	<u>Kaloleni</u>
<u>Scheme</u>								
<hr/>								
1. Snr. Agricultural Officer M		-	-	-	-	-	-	-
2. Agricultural Officer I	L	1	1	-	-	-	-	-
3. Agric. Officer I (RM)1)	L	-	-	-	-	-	-	-
4. Agricultural Officer II	K	12	7	-	1	-	1	3
5. Technical Officer I	J	2	-	2	-	-	-	-
6. Technical Officer II	H	-	-	-	-	-	-	-
7. Technical Officer III	G	37	2	10	8	7	7	3
8. Technical Assistant	F	108	1	22	27	19	24	15
9. JTA - JAA	A-E	26	-	6	12	1	7	-
<hr/>								
		186	11	40	48	27	39	21

1/ RM : Range Management

Source: D.A.O. - Kilifi District

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Demonstration Equipment

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost (K£)</u>	<u>Total Cost (K£)</u>
Small improved hand tools ^{a/}	Qty	-	1 000
Hand-propelled punch planter	8	80	640
Hand-propelled weeder	8	80	640
Hand-propelled weeder	8	60	480
Knapsack sprayer	8	80	640
Light weight plough/cultivator	12	150	1 800
Multipurpose plough	12	150	1 800
Harrow	12	100	1 200
Ridger/cultivator	12	150	1 800
Ox-drawn cart	12	60	720
Storage cribs ^{a/}	Qt	-	1 000
Accessories	-	-	1 000
 TOTAL	 -	 -	 12 720 =====

^{a/} Consists of long-handle hoe, fork jemses, etc. and cost is lump-sum per district.

^{b/} Cost of roofing material, nails and other purchased inputs. Poles and labour to be provided by participating farmers: 1 crib/location.

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KILIFI DISTRICT DEVELOPMENT PROJECT

MINISTRY OF AGRICULTURE & LIVESTOCK DEVELOPMENT

ANNEX 4
Table 3
Schedule 4

DEPARTMENT OF AGRICULTURE:

TECHNICAL SERVICES - EXISTING VEHICLES
(as at 31 July 1986)

<u>STATION</u>	<u>TYPE OF VEHICLE</u>	<u>CONDITION</u>		
		<u>satisfactory</u>	<u>under repair</u>	<u>grounded</u>
1. Headquarters	1. Land Rover LWB	-	2	-
	2. Land Rover SWB	2	-	1
	3. Datsun Saloon	2	-	-
	4. Toyota Scout	-	1	1
	5. Mazda Pick-up	-	-	1
	6. Chev. Pick-up	1	1	-
	7. Tractor	2	-	-
B. Malindi	8. Chev. Pick-up	-	-	-
	9. Motor cycle	3	-	-
C. Kaloleni	10. Land Rover SWB	1	-	-
	11. Motor cycle	1	-	-
D. Ganze	12. Land Rover SWB	1	-	-
	13. Motor cycle	-	1	-
F. Bahari	14. Motor cycle	1	-	-
F. Mtwapa FTC	15. Toyota Scout	-	1	-
	16. Daihatsu lorry	-	1	-
	17. Land Rover	1	-	-
	18. Mazda	-	-	1
	19. Bus	-	1	1
	20. Motor cycle	3	1	-

Source: DAO, Kilifi District, 1986

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ANNEX 4
Table 3
Schedule 5

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT

MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT

DEPARTMENT OF VETERINARY SERVICES

SCHEDULE of PROFESSIONAL & TECHNICAL STAFF as at 31 JULY 1986

<u>Category</u>	<u>Job</u>	<u>Total</u>	<u>HQ</u>	<u>Bahari</u>	<u>Malindi</u>	<u>Ganze</u>	<u>Kaldeni</u>
	<u>Group</u>	<u>in post</u>					
<u>I. FIELD SERVICES DIVISION:</u>							
1. Snr Veterinary Officer	M	1	1	-	-	-	-
2. Veterinary Officer I	L	1	1	-	-	-	-
3. Veterinary Officer II	K	4	2	-	1	-	1
4. Zoologist	H	1	1	-	-	-	-
5. Executive Assistant	G	1	1	-	-	-	-
6. Livestock Officer	G	6	2	1	1	1	1
7. Hides and Skins Officer	G	1	1	-	-	-	-
8. Animal Health Assistant	F	22	1	4	7	5	5
9. Snr Animal Health Assistant	F	1	-	-	-	1	-
10. Hides and Skins Inspector	F	4	-	1	1	1	1
sub-total		42	10	6	10	8	8
<u>II. MEAT INSPECTION:</u>							
1. Meat Inspector	10	2	2	3	1	2	
TOTAL		52	12	8	13	9	10

Source: DVO - Kilifi District, 1986

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ANNEX 4
Table 3
Schedule 6

KENYA
KILIFI DISTRICT DEVELOPMENT PROJECT
MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT
DEPARTMENT OF VETERINARY SERVICES
TECHNICAL SERVICES - EXISTING VEHICLES

<u>Location</u>	<u>Type of Vehicle</u>	<u>Condition</u>		
		<u>Satisfactory</u>	<u>Under Repair</u>	<u>Grounded</u>
A. Headquarters	Land Rover LWB	2	1	1
	Subaru Saloon	-	1	-
	Volkswagen	-	1	-
	Toyota Scout	1	-	-
	Isuzu lorry	-	1	-
	Datsun pick-up	-	-	1
	Land Rover SWB	-	1	-
	Toyota Land Cruiser	1	2	-
	Pony pick-up	-	1	-
	Bedford lorry	-	1	-
	Motor cycles	5	1	-
B. Malindi	Land Rover LWB	1	22	-
	Motor cycle	-	4	-
C. Ganze	Land Rover LWB	1	-	-
	Motor cycle	-	2	-
D. Kaloleni	Land Rover LWB	-	1	-
	Land Rover SWB	1	-	-
	Toyota Land cruiser	-	1	-
	Motor cycle	2	1	-

Source: DVO Kilifi District 1986

KENYA

Mwale and Kilifi District Development Projects

Ministry of Agriculture and Livestock Development

Coconut Bulking Plots - Illustrative Annual Costs (1 ha) 1/

(KShs)

Category	Units	Unit Cost	Number Units	Total Cost	Local Cost		Foreign Exch		Taxes, duties	
					(%)	Amount	(%)	Amount	(%)	Amount
1. Labour 2/	m.year	300.00	2	600.00	100	600.00	0	.00	0	.00
2. Tools and implements 3/	ha	89.50	1	89.50	64	57.28	13	11.64	23	20.59
3. Cultivation 4/	ha	40.00	2	80.00	92	73.60	4	3.20	4	3.20
4. Fertilizers & pesticides 5/	ha	63.75	1	63.75	33	21.04	65	41.44	2	1.28
5. Planting materials 6/	ha	4375.00	1	4375.00	93	4068.75	5	218.75	2	87.50
Total				5208.25		4820.67		275.02		112.56

1/ Bulking plot areas phased out at 20% per annum

2/ Assumes one permanent labourer for 300 man-days of cultivation, harvesting and weeding

3/ Costs for 10 jembes, 6 pangas, and 2 wheel-barrow per annum (MOALD estimates)
See Table 10, Annex 9 for unit costs

4/ Ox-ploughing costs - see Table 10, Annex 9 for unit rates

5/ Compound fertilizer (NPK-20:20:10) - 250 kg - see Table 10, Annex 9 for unit rates

6/ 35,000 selected nuts per annum - see Table 10, Annex 9 for unit costs

KKNC2

ANNEX 4

KENYA

Table 5

Kwale and Kilifi District Development Projects
Ministry of Agriculture and Livestock Development
Cassava Bulking Plots - Illustrative Annual Costs (1 ha)
(KShounds)

Category	Item Code	Units	Unit Cost	Number Units	Total Cost	Local Cost		Foreign Exch Taxes, duties	
						(%)	Amount	(%)	Amount
1. Labour 1/	260	m.year	.00	2	.00	100	.00	0	.00
2. Tools and implements 2/	220	ha	52.90	1	52.90	64	33.86	13	6.88
3. Cultivation 3/	260	ha	40.00	1	40.00	92	36.80	4	1.60
4. Fertilizers & pesticides 4/	153	ha	102.00	1	102.00	33	33.66	65	66.30
5. Planting materials 5/	153	ha	250.00	1	250.00	94	235.00	6	15.00
Total					444.90		339.32		89.78
									15.81

1/ Assumes labour is free from prisons

2/ Costs for 10 jembes, 10 pangas, and 1 mattock per annum (MOALD estimates)

See Table 10, Annex 9 for unit costs

3/ Ox-ploughing costs - see Table 10, Annex 9 for unit rates

4/ Compound fertilizer (NPK-20:20:10) - 400 kg - see Table 10, Annex 9 for unit rates

5/ 10,000 cuttings per annum - see Table 10, Annex 9 for unit costs

ANNEX 4
Table 6

KKMC3

KENYA

Kwale and Kilifi District Development Projects

Ministry of Agriculture and Livestock Development

Banana Bulking Plots - Illustrative Annual Costs (1 ha)

(K/Pounds)

Category	Item Code	Units	Unit Cost	Number Units	Total Local Cost	Foreign Exch Taxes, duties
					(K) Amount	(K) Amount
1. Labour 1/	260	a. year	300.00	2	600.00	0 .00
2. Tools and implements 2/	220	ha	140.60	1	140.60	13 18.28
3. Cultivation 3/	260	ha	40.00	1	40.00	4 1.60
4. Fertilizers & pesticides 4/	153	ha	525.00	1	525.00	65 341.25
5. Planting materials 5/	153	ha	.00	1	.00	6 .00
Total					1305.60	361.13
					=====	44.44

1/ Assumes labour is free from prisons

2/ Costs for 20 jembes, 8 mattocks and 2 wheel-barrows per annum (MOALD estimates)

See Table 10, Annex 9 for unit costs

3/ Ox-ploughing costs - see Table 10, Annex 9 for unit rates

4/ Compound fertilizer (NPK-20:20:10) - 700 kg ; Dielidren - 175 kg ; Aldicarb - 105 kg

See Table 10, Annex 9 for unit costs

5/ 2,000 suckers per annum - see Table 10, Annex 9 for unit costs

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ANNEX 4

Table 8

Mwale and Kilifi District Development Projects

Ministry of Agriculture and Livestock Development

Extension and Maintenance of Central Fruit Tree Nurseries (1 ha)

(K.Pounds)

Category	Item Code	Units	Unit Cost	Number Units	Total Cost	Local Cost	Cost	Foreign Exch	Taxes, duties
						(%) Amount		(%) Amount	(%) Amount
1. Labour 1/	260	m. year	300.00	2	600.00	100	600.00	0	.00
2. Building 2/	295	mod.	1865.00	1	1865.00	76	1417.40	12	223.80
3. Equipment 3/	220	mod.	550.00	1	550.00	37	203.50	35	192.50
4. Tools and implements 4/									
a) Hand tools, implements	220	set	85.75	1	85.75	64	54.88	13	11.15
b) Watering cans	220	no.	4.00	20	80.00	65	52.00	12	9.60
c) Spray pumps	220	no.	56.00	4	224.00	59	132.16	17	38.08
d) Pruning knives	220	no.	2.50	20	50.00	54	27.00	18	9.00
e) Budding tape	220	no.	2.25	10	22.50	58	13.05	24	5.40
f) First aid kits	220	no.	20.00	2	40.00	30	12.00	40	16.00
Sub-total					502.25		291.89		89.23
5. Fertilizers & pesticides 5/									
a) Compound (NPK-20:20:10)	153	50kg	12.75	10	127.50	39	49.73	54	68.85
b) Foliar feed (12:12:6)	153	kg	1.75	10	17.50	57	9.98	23	4.03
c) Foliar feed (Shimorfor)	153	kg	3.85	10	38.50	57	21.95	23	8.86
d) Insecticide (Metasystox)	153	litre	1.65	80	132.00	58	76.56	23	30.36
e) Insecticide (Dieldren)	153	kg	.75	20	15.00	60	9.00	22	3.30
f) Nematicide (Nemacur)	153	kg	1.75	100	175.00	57	99.75	23	40.25
g) Nematicide (Aldicarb)	153	kg	2.05	100	205.00	56	114.80	23	47.15
h) Fungicide (Sepron)	153	litre	1.10	25	27.50	59	16.23	23	6.33
i) Fungicide (Dithane)	153	kg	4.00	25	150.00	58	87.00	23	34.50
Sub-total					888.00		484.98		243.62
6. Planting materials 6/									
a) Rough lemon root-stock	153	kg	.00	250	.00		.00		.00
b) Certified seed (citrus)	153	kg	.00	100	.00		.00		.00
c) Selected seed (mango)	153	kg	.00	100	.00		.00		.00
Sub-total					.00		.00		.00
7. Operating costs 7/									
a) Miscellaneous	190	pa	300.00	1	300.00	65	195.00	15	45.00
Total					4705.25		3191.97		794.14

1/ All costs incremental to present recurrent cost allocations

2/ Cost for nursery store, water tank and fencing-see Table 9, Annex 9 for unit costs

3/ Cost for water pump, pipes and fittings - see Table 9, Annex 9 for unit costs

4/ Hand tools and implements are a set (15 jembes, 10 shovels, 10 pangas); others as separate items - see Table 10, Annex 9 for unit costs

5/ See Table 10, Annex 9 for unit costs

6/ See Table 10, Annex 9 for explanation of nil unit costs

7/ Consultant's estimate

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSMINISTRY OF CO-OPERATIVE DEVELOPMENTINCREMENTAL TECHNICAL SERVICES COSTS

I. INTRODUCTION

A. Background

1.01. The co-operative movement is recognized by Government as a key mechanism "in fostering development within the overall national development objectives, especially in the rural areas"^{1/}. The statutory framework within which it is legally established is the Cooperatives Act and its subsidiary legislation. The law provides for the appointment of a Registrar of Cooperative Societies and sets out the conditions of registration, audit, supervision and inspection of co-operative societies. The office of Registrar is held by the Commissioner for Cooperative Development within the Ministry of Cooperative Development (MCD).

1.02 MCD provincial and district field services fall into two categories: statutory, in which MCD exercises its responsibilities, particularly of audit and inspection, in accordance with the provisions of co-operative legislation; and development, which covers the promotion of co-operative activity, education and training. The MCD recurrent budget (1986/87) of K£ 4.17 million^{2/} and a professional staff (audit, educational and field technicians) of 917 reflects the importance which Government places on the co-operative sector.

1.03 The co-operative movement is widely established in crop marketing and processing, particularly in coffee, dairy products, pyrethrum, cotton and sugar cane. In 1984, 1 486 registered societies with a membership of 1.18 million turned over K£ 146.3 million in agricultural produce. Total co-operative turnover in the same period was K£ 186.1 million^{3/}.

1.04 In seeking to strengthen the movement, government strategy is aimed at the expansion of co-operative activity both in scope and turnover. To achieve this objective it has proposed an array of measures^{4/} of which the most important for the agricultural sector are:

^{1/} Development Plan: 1984-1988 Cap 6

^{2/} Estimates of Recurrent Expenditure: 1986/87

^{3/} Statistical Abstracts 1985: CBS

^{4/} Development Plan 1984-1988 Cap 6

- (a) provision of credit for purchase of storage and transport facilities and agricultural processing;
- (b) promotion of investment in new areas under the technical appraisal and supervision of MCD;
- (c) management of co-operatives as efficient business organizations;
- (d) improvement of small-scale co-operative loan recovery.

Constraints

1.05 In drawing up these aims, Government recognized^{5/} that the major constraints to development, identified in the previous plan period, still existed:

- (a) inadequate professional manpower with auditing and accounts knowledge both in MCD and the movement;
- (b) deficiencies of appropriate marketing facilities and infrastructure; and
- (c) shortage of operational funds within MCD.

The problems of poor management continue to concern Government^{5/} which has re-emphasised the need for sound technical training at all levels in the movement.

1.06 However, although such deficiencies continue to affect co-operative performance, they are technical issues and must be set in the context of a long-term policy in which agricultural co-operatives have been developed as the unsophisticated primary units in the marketing of a 'scheduled' or controlled crops, under the umbrella of a marketing board. Their success has depended on (a) the degree to which they have enjoyed a monopsony in a given crop; and (b) the adequacy of the crop marketing margins. Where both conditions have been favourable, e.g., in coffee, the co-operatives have tended to succeed but in annual crops e.g. maize, their performance has been poor. The example of the co-operatives in the project area typifies the situation. Although dealing principally in scheduled crops in which they nominally have sole buying rights, the societies have neither the funds, facilities nor commercial acumen to exercise them; and the low fixed margins paid by the National Cereals and Produce Board (NCPB) combined with low turnover have not generated sufficient income to employ good management. Hence, the majority of the agricultural marketing primary co-operatives, by commercial criteria, are barely viable.

^{5/} Op.cit. CAP 6.

^{6/} Session Paper No.1 of 1986: Economic Management for Renewed Growth

1.07 The difficulties of the co-operative marketing groups have been further compounded by two major policy initiatives:

- (a) the ill-advised attempts, particularly by aid donors, to channel substantial sums of production credit for annual crops through a system which was not capable of handling such an activity; and
- (b) diversification into other activities e.g., transport, which almost invariably has resulted in losses.

1.08 It is emphasised that the value of the co-operative system, whether developed in direct response to producers' needs, or as an instrument of policy, remains intact. If, however, agricultural co-operatives are to be used as effective instruments of development, they must be re-established in accordance with simple co-operative and business principles, i.e. as commercially viable units, serving the common interests of the members in an equitable manner. For the typical project area producer, this means a village store at which he can sell his crop for cash at the official or best market price. The 'multi-purpose' aspects of the village agricultural co-operatives, e.g., input supply, can only be developed through soundly based marketing organizations and this must be the primary objective of the proposed development.

B. Kwale District

Co-operative Societies

1.09 There are 42 registered co-operative societies in Kwale including two unions one of which, the South Coast Fishermens' Union, is active. From the DCO's records 28 of the 40 primary societies are active:

Table 1: Kwale District Co-operative Societies: July 1986^{a/}

<u>Division</u>	<u>Savings & Credit</u>	<u>Agric. Marketing</u>	<u>Dairy</u>	<u>Coop. Ranching</u>	<u>Mining^{b/} Sand & Stone</u>	<u>Fisheries</u>
Matuga	4	4	-	-	-	
Kinango	-	1	4	1	-	
Kubo	-	3	-	-	-	
Msanbweni	<u>11</u>	<u>5</u>	<u>1</u>	<u>—</u>	<u>1</u>	<u>5</u>
<u>Total</u>	<u>15(1)</u>	<u>13(3)</u>	<u>5(5)</u>	<u>1(1)</u>	<u>(1)</u>	<u>5</u>

^{a/} bracketed figures refer to dormant societies

^{b/} district-wide society

The Savings and Credit groups are principally operated for wage earners and salaried staff under the aegis of the Kenya Union of Savings and Credit Cooperative Societies (KUSCCO). With the exception of the now defunct mining/sand and stone co-operative, all others are in the agricultural sector and are reviewed below.

1.10 Agricultural Marketing Societies. There are 10 active co-operative primaries dealing in cashew nuts, bixa and sesame (sim-sim), details of which are set out in End Table 4. The figures illustrate the dilemma in which most primaries find themselves. The three crops are marketed through NCPB which in 1984/85 paid an average commission of KShs 12/- per bag handled. The co-operatives earned, therefore, about KE 67 500 on their 1983/84 turnover and KE 32 800 on that for 1985/86. In the better year, commission varied from about KE 18 500 to KE 1 260 per society and in 1984/85 from KE 8 400 to under KE 700. Even the smallest society or branch of a larger primary, operating only during the harvest season, will incur minimum direct costs of about KE 1 000 in crop handling, night guards, bookkeeping charges, crop shrinkage and wastage. 'Incentive' payments to ensure acceptance of the crop by NCPB stores, repairs, and other charges and cash deficits will rarely amount to less than another KE 800. Most societies therefore barely cover operating expenses and are unable to service any debt. In Kwale District, only Kikoneni Farmers' Cooperative was recorded as having an outstanding loan which stood at KE 30 300 (principal plus accrued interest) at 31/12/85. It is noticeable that in 1984/85, while turnover was reduced in all societies, Kikoneni almost ceased trading.

1.11 To survive, therefore, the co-operatives must increase their turnover and MCD technical services must be directed exclusively to ensuring the development of viable crop buying operations. The appointment of co-operatives as sole NCPB buying agents presents a difficult but realistic opportunity for them so to do and development proposals are directed to this end (para 2.02 et seq.).

1.12 Dairy Co-operatives. The dairy co-operative societies, Puma, Kinango, Samburu and Mwereni (members of the defunct Kwale-Kilifi Dairy Cooperative Union) formerly operated collection/cooling centres on the fringes of the hinterland. The members were traditional livestock owners of the area and the milk was sold to the Mariakani milk processing plant. Following the failure of the Union to pay societies for milk delivered to Mariakani, the societies ceased to operate. Mariakani itself has ceased to operate due to the establishment of the Mombasa KCC plant. Until the marketing framework for milk production in the area is re-established, there are no grounds for the re-establishment of co-operative milk processing units, unless the Kenya Dairy Board is prepared to provide and underwrite the total cost of the operation.

1.13 Co-operative Ranching. The single ranching co-operative, Chenze, which was one of 12 proposed group co-operative and private ranches established in Kwale by 1973,^{7/} has never operated. It was intended that land should be set aside for use as a co-operative ranch but this has not been done. More importantly, a satisfactory animal disease control regime in an area subject to heavy tse-tse challenge, the form of ranching organization and the economic viability of the enterprise, have yet to be established. Until the technical and organizational constraints have been resolved, no further co-operative initiative is justified.

1.14. Fisheries Co-operatives. The details of the five active fishermen's co-operatives in the South Coast Fishermen's Union (SCFU) are set out in End Table 5. The co-operatives enjoy exclusive rights to commercial fishing in their area of operations and they have benefitted from substantial assistance under the Nordic Aid Projects; during 1984/85 SCFCU received K£ 17 900 in grants and as at 30/6/1985, the accumulated total of Nordic aid stood at K£ 64 300. Working capital at the same date was K£ 74 400 and net assets were K£ 93 500, both of which figures reflect the grant aid^{8/}. The major problems facing SCFCU operations are the size and collection rate of its outstanding debts which at the date of the last audit stood at K£ 34 900, a rise of K£ 5 400 on the previous year's balance of K£ 29 000. SCFCU carries stocks of fishing gear and is sufficiently well financed to expand its operations in accordance with its members' requirements.

MCD Technical Services

1.15 Kwale District MCD staff establishment is set out at End Table 2, Schedule 2. The ratio of eight professional staff to 28 active societies (1:4) or five field staff (1:6) is adequate for intensive supervision. The DCO and field officers are competent and progress, particularly in the development of marketing societies, over the past 5 years, has been good. However, there are a number of persistent and endemic problems which are reflected in staff work programmes. In 1984/85 only 80 visits to societies were made, i.e., each active society was visited on average less than 3 times per year. Only 17 societies have audited within the past 18 months.

1.16 Inadequate supervision is the root cause of many operational problems and, while lack of transport has exacerbated the difficulty district staff have in carrying out a regular inspection routine, both the statutory and development work programmes must be re-organized to meet the needs of the proposed development.

^{7/} The problem is discussed in detail in:

- a) Socio-Economics of Ranching. Institute for Development Studies, Nairobi: Occasional Paper 17, 1976.
- b) Kwale Special Rural Development Area, Mwereni Ranch: Min. Ag. Report, August 1974.
- c) E.A.D.D Report on visit to Kwale SRDP: June 1974.

^{8/} SCFCU Balance Sheet as at 30/6/1985.

C. Kilifi District

Co-operative Societies

1.17 The DCO's records as at 31/12/1985 show 35 active societies out of a total of 48 registered co-operatives.

Table 2: Kilifi District Co-operative Societies

	<u>Total</u>	<u>Active</u>	<u>Dormant</u>	<u>In Liquidation</u>
Fruit & vegetables	2	1	1	-
Dairy	3	-	3	-
Ranching	1	-	1	-
Agricultural multipurpose	13	13	-	-
Housing	1	1	-	-
Farming	1	-	1	-
Savings and Credit	18	13	4	1
Craftsmen	4	4	-	-
Fisheries	2	2	-	-
Charcoal	1	-	1	-
Building	1	-	1	-
District Union	1	1	-	-
<u>Total</u>	<u>48</u>	<u>35</u>	<u>12</u>	<u>1</u>

1.18 The active societies fall into two main groups: Savings and Credit, and the affiliates of the Kilifi District Co-operative Union, which is principally concerned with agricultural marketing. The Savings and Credit groups benefit from the services of KUSCCO (para 1.09 above). Total membership of the active groups currently stands at 4 426 with a share capital of K£ 1 111 600 and an outstanding loan portfolio of K£ 1 106 400.

1.19 Agricultural Marketing/Multi-purpose Societies. Details of the societies affiliated with the Kilifi District Co-operative Union (KDCU) are set out in End Table 6. The problems which beset the Kwale primaries (para 1.10) are equally acute in Kilifi. The Kilifi co-operatives have been longer established than those in Kwale and the 13 primaries operate directly some 22 branches or stores. However, in order to gain greater cover and exercise their nominal sole buying rights to scheduled produce, they also operate through sub-agents who are private traders and with whom they share the NCPB commission. Overall rates of commission per bag therefore on the turnover figure given in Table 5 are diluted by the amount of commission paid to sub-agents. On an estimated commission of KShs 9/- per bag (assuming 50% of produce bought through sub-agents), the co-operatives earned K£ 82 000 in 1983/84 or K£ 3 700 per store. In 1984/85 the comparative figures were K£ 5 900 or K£ 2 350 per store. In the absence of detailed accounts for the years in question, it is emphasised that these figures are approximations but they indicate the

order of magnitude of the margins on which the societies must operate. As with the Kwale co-operatives, the gross income is barely adequate to cover operating costs and would not accommodate any debt service.

1.20 Under IADP II societies were encouraged to expand with grants for store construction and payment of salaries of society staff. This unhealthy development established the societies in the eyes of the members as government institutions. In addition, the co-operatives were used for the disbursement of IADP II credit, details of which are set out in Table 6. The loans were made by CBK to KDCU which distributed them to societies for disbursement to members. The loans were inadequately appraised and supervised, and very little principal has been recovered. There are therefore outstanding debit balances in the accounts of CBK, KDCU, and each of the primary societies which effectively categorize both KDCU and its primaries as uncreditworthy. Until the debts are rescheduled, and satisfactory and realistic repayment arrangements are made, development of co-operative marketing, the original function of the primaries, will be severely constrained.

1.21 Kilifi District Co-operative Union. KDCU finances reflect the unsupervised and unappraised expansion into new areas which Government policy (para 1.04) implicitly sought to avoid. In addition to an outstanding KE 42 400 in principal and interest under IADP II, KDCU currently owes KE 210 000 for a loan used to purchase an hotel, which is operating at a loss; and KE 419 100 (K1 288 800 principal and K1 202 300 in accumulated interest) for a 30% share of Kenya Cashewnut Ltd. While the latter investment may have had merit if made from accumulated earnings, given the state of KDCU indebtedness, a loan for such a purpose could not have been justified. Again, a satisfactory accommodation for disposing of the assets or rescheduling of the debt must be made with CBK to rehabilitate the Union's financial standing. The Union has recently been the subject of a statutory enquiry and the accounts for the last two years were not available for inspection by the Mission.

1.22 Dairy Co-operatives. Three defunct dairy co-operatives are still maintained on the co-operative register. However, like the Kwale District Dairy Societies they have never operated since the demise of the Kwale-Kilifi Dairy Cooperative Union. MCD have not liquidated them in accordance with the provisions of co-operative legislation; as in Kwale, most of the cooling centre assets have been stolen or left to waste, and the buildings, where they still stand, have been appropriated for other use. No further co-operative intervention in dairying is recommended until status and future of the Mariakani centre is determined.

1.23 Fisheries Co-operatives. There are two fishermen's co-operatives, Malindi and Kilifi Central, Malindi, with 324 members serve the Watamu, Malindi and Ngomeni areas. Turnover in 1984 and 1985 was reported as 51.5 tons and 21.8 tons respectively (KE 215 000 and KE 63 800). The main cause of the drop in turnover appears to be the attempt by the Society to recover members' loans. The Kilifi Central is barely active although the DCO reports increased interest in 1985 with a catch of 71.6 tons and a turnover of KE 20 600. There have been numerous attempts by Nordic Aid and IDA (Fisheries Project 1980) to intervene in the development of small scale fishing in the area but without lasting results. The mission

discussed the problem with the Assistant Director of Fisheries, MTWL, and agreed that definitive proposals for any development would be inappropriate until a full enquiry and evaluation of the matter had been made. This would be carried out by the Fisheries Department prior to appraisal and further co-operative involvement must await the outcome of the investigation.

MCD Technical Services

1.24 Kilifi District Staff establishment is set out in End Table 3 Schedule 2. As in Kwale, the professional staff to active societies ratio is adequate; there are 10 professional/technical officers, of whom 6 are field staff, giving ratios of 1:4 for all staff and 1:6 for field staff. In addition 23 of the societies are audited by private accountants leaving Department staff with the minor audit burden of 12 primary co-operatives. No record of the field programmes was available but the DCO acknowledged the problems of establishing a regular routine of society visits due to lack of transport and transport operating costs. Although these difficulties are appreciated (para 1.16), the development of viable village co-operative societies is dependent on constant supervision. Proposed developments, as those detailed for Kwale, would be directed to this end.

II. PROPOSED DEVELOPMENT

A. Rationale

2.01 Co-operative activity throughout the project area is presently constrained, despite sole buying rights to scheduled crops, by the inability of the primary societies, to fulfill their major function, namely the efficient marketing of their members' produce. As a result, membership loyalty and involvement in co-operative affairs is minimal. To arrest the deterioration in co-operative affairs, the projects must first address the causes of the present malaise: indebtedness, lack of finance and poor management. There is a need also to restore the interest of the typical farmer in his society. Co-operatives which have received substantial government assistance are too often categorized as government agencies (para 1.20). However, as IADP II investments have demonstrated, provision of free facilities and payment of operating costs guarantees neither usage nor turnover. Progress is possible, however, if members can be induced to participate in a practical manner, e.g., through the construction of their own simple store or, where storage exists, to maintain it in good condition and to take full part in its operation.

2.02 A small homogeneous group of 80 to 150 members has the most potential for the establishment of this type of village marketing society. The material costs involved in the construction of a mud-walled corrugated galvanised iron-roofed store with adequate wood palleting for 150 bags would amount to about K£ 500, say K£ 5 or one half-bag of maize equivalent per member. This would not be onerous even in the poorer communities.

2.03 The incentive to the group to construct or refurbish and operate its own store would be:

- (a) the availability of crop purchase finance and weekly payments in full for crop deliveries;
- (b) the availability of district NCPB storage to reduce transport costs; and
- (c) MCD supervision of payments and direct assistance with maintenance of society records.

2.04 This type of development would lend itself to the project area with its widely scattered communities and, in Kwale its different ethnic groups. It would also enable MCD field staff to undertake a well-defined pilot programme to establish the organization and size of co-operative unit best adapted to the needs of the local community.

B. Detailed Proposals

Summary Description

2.05 Each district project would establish a minimum of five village level marketing co-operatives or co-operative branches per annum. The programme would be set within the framework of central district storage facilities, co-operatively owned but managed by NCPB; and of a mobile banking service operated by the Cooperative Bank of Kenya (CBK) throughout the season to provide a secure source of crop financing. By the end of the development period, 25 selected village co-operatives with about 3 000 members and a turnover of about 50 000 bags of produce (including that of non-members) would have benefitted from the programme.

Village Marketing Co-operatives

2.06 Selection of the village co-operative or co-operative branch would be based on the size of the group, its past performance, its catchment area and potential turnover. The group would:

- (a) construct its own store, or where it already had had a store built by Government, increase its share capital per member to an equivalent level which would ensure the continued interest of the members in the society's affairs;
- (b) agree to provide a roster of members to operate the store throughout the harvest season. Each member would contribute the same number of days service for which a nominal amount per day would be credited to his account. Such payments would not be an operating expense but a charge against the Appropriation Account i.e., against any surplus made at the end of the year.

2.07 On this basis, MCD would prepare an evaluation of the enterprise with detailed cash flow projections based on projected turnover, and an

estimate of direct operating expenses. This would form the basis of a training course for the committee and elected officers of the group.

2.08 Marketing Operations. The store would open on one or more days per week for the receipt of produce. A clerk, preferably a member, would be employed for crop receipting. The co-operative would maintain only the books of prime entry (crop receipts, payment receipts). The members' ledger cash book and stock records would be written up weekly by the Cooperative Assistant on his weekly visit. Crop would be despatched to NCPB at least once per week.

2.09 Co-operative Indebtedness There is a legacy of co-operative indebtedness, principally in Kilifi, for credit disbursed under IADP II which would debar defaulters from receipt of further loans. A selected co-operative, therefore, would be free from debt or be required to clear any outstanding loan balances with CBK, with its parent society or, in the case of Kilifi, with the Kilifi District Co-operative Union (KDCU). The Kilifi debt presently stands at K£71 800 equivalent to 6% of 1984/85 KDCU turnover. This is not onerous and MCD would initiate exemplary action under its own powers to effect recovery. In Kwale, only one Society is recorded as a CBK debtor and, again MCD would take debt recovery proceedings.

2.10 Crop Finance Selected groups would qualify for crop purchase loans from CBK (Annex 6). An initial advance would be equivalent in value to 100 bags of produce, or K£1 500 whichever was greater. The cash would be drawn from the CBK mobile branch which would coordinate its visits with store opening days. A member would be paid up to 50% of the value of the crop, in cash on delivery, with the balance paid the following week.

2.11 NCPB receipts for crop deliveries would be paid directly to CBK which in turn would recharge the cash "float" to the society on its next weekly visit. The level of the float would be adjusted downwards as the season advanced, in accordance with a schedule prepared by the CBK manager in cooperation with the ACO/CA.

2.12 Loans would be made directly by CBK to the society i.e., in the case of Kilifi, KDCU would be by-passed. The success of the development would depend on direct lending by CBK to small societies or branches; by avoiding aggregate loans, the failure of one group would not damage the creditworthiness of the scheme as a whole.

2.13 Where the selected group was not a registered society, but the branch of a primary society, present practice would require the loan to be made to the society. It, in turn, would make a subsidiary loan to the group members for which they would be jointly and severally responsible. The Commissioner for Cooperative Development therefore would review the position with the general Manager CBK, to establish whether a direct lending mechanism for such groups was feasible.

MCD Technical Services

2.14 MCD would exercise intensive supervision over the operation. In each district an Assistant Cooperative Officer (ACO) or a Cooperative

Assistant (CA) would be assigned to the development and be provided with transport. His duties would include supervision of all co-operative crop marketing within his area of jurisdiction, but in the case of the selected marketing groups he would be responsible for:

- (a) group selection and loan appraisal and preparation;
- (b) the training of members and elected officials;
- (c) the write-up of the cash book and ledger of the society or branch;
- (d) supervision of bank withdrawals and payments to members;
- (e) coordination with Kenya Police/local chief for the safekeeping of any balance of crop purchase funds.

2.15 Joint work programmes for the CBK mobile unit and the division ACO/CA would be drawn up by the respective DCO and the Manager of CBK Mombasa branch.

Other Co-operative Activity

2.16 In addition to the specific development of marketing societies, project funding for MCD technical services would support on-going co-operative activity. In particular, the project would create a demand for improved bee hives (Annex 2). KDCU has well equipped central joinery and metal working shops and its craftsmen are well able to produce the quality of work required from specifications supplied by MALD. MCD would assist in the promotion of this development and other agro-industrial activity.

2.17 Input Supply. The project would assist establish district stores in both Districts to ensure a convenient source of the agricultural inputs called for under the crop development programme (Annex 6). The extent to which primary societies would be able to stock inputs would depend upon their financial status; KGCCU would not be a source of trade credit. Societies would either purchase from their own funds or, if creditworthy, obtain the necessary inventory financing from CBK.

C. Costs Programming and Budgeting

2.18 The total base line costs for the proposed development for the five year disbursement period are KE 112 700 (US\$ 140 000) for Kwale District; and KE 85 200 (US\$ 106 500) for Kilifi District. Detailed and phased cost estimates are set out in End Tables 1, 2 and 3 of the Annex and are summarized on the following page.

Table 3: MCD Incremental Technical Services Costs
for Kwale and Kilifi Districts
(KE '000's)

<u>Category</u>	<u>Local</u>	<u>F.E.</u>	<u>Total</u>	<u>Local</u>	<u>F.E.</u>	<u>Total</u>	<u>Local</u>	<u>F.E.</u>	<u>Consolidated</u>
1. Capital	27.1	18.1	45.2	6.6	13.6	20.2	33.6	31.7	65.3
2. Operating Costs	43.3	10.7	54.0	41.2	10.3	51.5	84.6	21.0	105.6
3. Training	6.7	6.8	13.50	6.8	6.7	13.5	13.50	13.50	27.0
TOTAL BASELINE COSTS	77.1	35.6	112.7	54.6	30.6	85.2	131.7	66.2	197.9

Programming & Budgeting

2.19 In accordance with Treasury regulations, outline project costs, based on updated appraised cost estimates, would be included in the Forward Budget and detailed submissions included in the Annex to the District Development Plan.^{2/} In discussions with the Deputy Commissioner for Cooperative Development, the importance of providing for Project Year 1 (1987/88) costs in the 1987/88 FB was emphasised, and it has been assumed that a notional figure for this purpose has been so submitted. Thereafter budgetary provision would be made in accordance with the prevailing Treasury regulations.

2.20 Current Treasury instructions require that, in line with the policy of District Focus for Rural Development, the Districts should be involved fully at every stage of the budgetary process, i.e., that they should be informed of the basis of MCD priorities for expenditure within the District and have the opportunity to call for reallocation within the budget ceiling allotted to the District by MCD.^{10/} Accordingly, DCO would adhere to the time table and provide for FB and recurrent budget estimate preparation and submission, which is set out in Annex 7 para 2.11 et seq.

2.21 Annual Work Programmes. The preparation of Annual Work Programmes (AWP) would provide the basis for project implementation and justification for the allocation of incremental project funding. Accordingly, AWP would constitute an integral part of project financial reporting and disbursements or reimbursements would depend upon their timely submission.

2/ See Annex 7 para 2.09 et seq. for explanatory notes.

10/ Treasury Circular No. 3. 18 February 1986

D. Benefits and Justification

2.22 The major impact of project funded investments in the co-operative sector would be in the reinstatement of the village co-operative as the focus of development. Both co-operative technical services and crop purchase finance would be directed to the establishment of viable commercial units, in which the membership had full participation. First phase project objectives have been limited to the creation of an efficient network of primary marketing co-operative units dealing in non-perishable scheduled produce. Close supervision, a mobile banking service, and the provision of central district NCPB storage, would create a framework within which the village primary society could flourish. At full development, a minimum 25 co-operative societies or branches with 3 000 members, a turnover of KE 0.75 million, would have benefitted from the reorganized MCD and CBK services.

KMST4

KENYA

Kwale and Kilifi District Development Projects

ANNE1 5

Ministry of Co-operative Development - GDK Treasury Account Codes 220 & 310

Table 1

Summary of Total Incremental Technical Services

(K.Pounds'000)

Category	Item code	Unit	cost	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local Costs	For. Exch.	Taxes, duties		
				No.	Cost	No.	Cost	No.	Cost	No.	Cost	(£) Amount	(£) Amount	(£) Amount
I Capital														
A. Buildings & civil works 1/														
1. Offices	400		5.55	2	11.10		.00		.00		.00			
2. Staff housing	410		6.93	2	13.86		.00		.00		.00			
Total					24.96		.00		.00		.00	24.96	17.47	4.49
of which Local content					20.47		.00		.00		.00	20.47		3.60
Foreign content					4.49		.00		.00		.00	4.49		
B. Vehicles and plant 2/														
1. Pick-up (1 tonne)	200	no.	5.50	2	11.00		.00		.00		.00	2	11.00	20
2. Motorcycle	212	no.	1.00	8	8.00		.00	8	8.00		.00	16	16.00	10
Total					19.00		.00		8.00		.00	27.00	3.80	23.20
of which Local content					3.00		.00		.30		.00	3.80		
Foreign content					16.00		.00		7.70		.00	23.20		
C. Equipment 3/														
1. Office equipment	220	mod.	1.27	4	5.08		.00		.00		.00	4	5.08	54
2. Photocopier	220	no.	1.90	2	3.80		.00		.00		.00	2	3.80	32
3. Heavy duty safe	220	no.	2.25	2	4.50		.00		.00		.00	2	4.50	32
Total					13.38		.00		.00		.00	13.38	5.40	4.04
of which Local content					9.34		.00		.00		.00	9.34		
Foreign content					4.04		.00		.00		.00	4.04		3.94
TOTAL CAPITAL COSTS														
					57.34		.00		8.00		.00	65.34	26.67	31.73
II Operating costs														
A. Salaries and allowances 4/														
1. Nights out	110	I	.25	2	.53	2	.53	2	.53	2	.53	10	2.53	100
2. Nights out	110	EPG	.23	14	3.15	14	3.15	14	3.15	14	3.15	70	15.75	100
3. Field allowance	110	EF	.06	12	.72	12	.72	12	.72	12	.72	60	3.60	100
Total					4.40	4.40	4.40	4.40	4.40	4.40	4.40	21.98	21.98	.00
of which Local content					4.40	4.40	4.40	4.40	4.40	4.40	4.40	21.98		
Foreign content					.00	.00	.00	.00	.00	.00	.00	.00		
B. Vehicle operating costs 2/														
1. Pick-up (1 tonne)	100	20000	2.04	2	4.08	2	4.08	2	4.08	2	4.08	10	20.40	36
2. Motor cycles	100	25000	.75	8	6.00	8	6.00	8	6.00	8	6.00	40	30.00	27
Total					10.08	10.08	10.08	10.08	10.08	10.08	10.08	50.40	15.44	15.43
of which Local content					6.79	6.79	6.79	6.79	6.79	6.79	6.79	33.97		
Foreign content					3.29	3.29	3.29	3.29	3.29	3.29	3.29	16.43		
C. General services 5/														
1. Posts & telegraph	120	p.a.	.30	2	.60	2	.60	2	.60	2	.60	10	3.00	73
2. Telephone	121	p.a.	.30	2	.60	2	.60	2	.60	2	.60	10	3.00	73
3. Utilities	140	p.a.	.30	2	.60	2	.60	2	.60	2	.60	10	3.00	73
4. Publishing & printing	171	p.a.	.50	2	1.00	2	1.00	2	1.00	2	1.00	10	5.00	70
5. Stationery	174	p.a.	1.00	2	2.00	2	2.00	2	2.00	2	2.00	10	10.00	70
d. Maintenance:														
- equipment	250	1 pa	.10		1.34		1.34		1.34		1.34	0	6.39	60
- buildings	250	1 pa	.02		.50		.50		.50		.50	0	2.50	60
Total					6.64	6.64	6.64	6.64	6.64	6.64	6.64	33.19	22.58	4.53
of which Local content					5.73	5.73	5.73	5.73	5.73	5.73	5.73	29.65		
Foreign content					.91	.91	.91	.91	.91	.91	.91	4.53		
TOTAL OPERATING COSTS														
					21.11	21.11	21.11	21.11	21.11	21.11	21.11	105.57	60.01	24.60
III Training costs														
A. Training courses 6/														
5. Advanced training 7/	154	m-mth	4.50	6	27.00		.00		.00		.00	6	27.00	45
Total					27.00	.00	.00	.00	.00	.00	.00	27.00	12.15	13.50
of which Local content					13.50	.00	.00	.00	.00	.00	.00	13.50		
Foreign content					13.50	.00	.00	.00	.00	.00	.00	13.50		
TOTAL TRAINING COSTS														
					27.00	.00	.00	.00	.00	.00	.00	27.00	12.15	13.50
TOTAL MINISTRY COSTS - Kwale District														
					105.45	21.11	21.11	21.11	21.11	21.11	21.11	197.91	98.83	32.39

NOTE : Small rounding errors arise due to the use of units of K.Pounds'000.

Sources : 1/ Tables 1 and 2 consolidated

Incremental Technical Services

(K'Pounds'000)

Category	Item code	Unit	Unit cost	Year 1		Year 2		Year 3		Year 4		Year 5		Totals		Local		Costs		For Exch.		Taxes, duties	
				No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%)	Amount	(%)	Amount	(%)	Amount
I Capital																							
A. Buildings & civil works 1/																							
1. Offices		400	60m2	5.55	2	11.10		.00	.00	.00	.00	.00	2	11.10	70	7.77	18	2.00	12	2.00	12	1.33	
2. Staff housing		410	55m2	6.93	2	13.86		.00	.00	.00	.00	.00	2	13.86	70	9.70	18	2.49	12	1.66			
Total					24.96		.00	.00	.00	.00	.00	.00		24.96		17.47		4.49				3.00	
of which: Local content					20.47		.00	.00	.00	.00	.00	.00		20.47									
Foreign content					4.49		.00	.00	.00	.00	.00	.00		4.49									
B. Vehicles and plant 2/																							
1. Pick-up (1 tonne)		200	no.	5.50	1	5.50		.00	.00	.00	.00	.00	1	5.50	20	1.10	80	4.40	0	.00	0	.00	
2. Motorcycle		212	no.	1.00	4	4.00		.00	.00	.00	4	4.00	8	8.00	10	.30	90	7.20	0	.00			
Total					9.50		.00	.00	.00	4.00	.00	.00		13.50		1.90		11.60				.00	
of which Local content					1.50		.00	.00	.00	.40	.00	.00		1.90									
Foreign content					8.00		.00	.00	.00	3.60	.00	.00		11.60									
C. Equipment 3/																							
1. Office equipment		220	mod.	1.27	2	2.54		.00	.00	.00	.00	.00	2	2.54	54	1.37	19	.48	27	.69			
2. Photocopier		220	no.	1.90	1	1.90		.00	.00	.00	.00	.00	1	1.90	32	.61	37	.70	31	.59			
3. Heavy duty safe		220	no.	2.25	1	2.25		.00	.00	.00	.00	.00	1	2.25	32	.72	37	.83	31	.70			
Total					6.69		.00	.00	.00	.00	.00	.00		6.69		2.70		2.02				1.97	
of which Local content					4.67		.00	.00	.00	.00	.00	.00		4.67									
Foreign content					2.02		.00	.00	.00	.00	.00	.00		2.02									
TOTAL CAPITAL COSTS					41.15		.00	.00	.00	4.00	.00	.00		45.15		22.07		18.11				4.97	
II Operating costs																							
A. Salaries and allowances 4/																							
1. Nights out		110	J	.25	1	.25	1	.25	1	.25	1	.25	1	.25	5	1.25	100	1.32	0	.00	0	.00	
2. Nights out		110	EFG	.23	7	1.58	7	1.58	7	1.58	7	1.58	7	1.58	25	7.88	100	7.88	0	.00	0	.00	
3. Field allowance		110	EF	.06	6	.36	6	.36	6	.36	6	.36	6	.36	30	1.80	100	1.80	0	.00	0	.00	
Total					2.20		2.20		2.20		2.20		2.20		10.99		10.99		.00			.00	
of which Local content					2.20		2.20		2.20		2.20		2.20		10.99								
Foreign content					.00		.00		.00		.00		.00		.00								
B. Vehicle operating costs 2/																							
1. Pick-up (1 tonne)		100	20000	2.04	1	2.04	1	2.04	1	2.04	1	2.04	1	2.04	5	10.20	36	3.67	32	3.26	32	3.26	
2. Motor cycles		100	25000	.75	4	3.00	4	3.00	4	3.00	4	3.00	4	3.00	20	15.00	27	4.05	33	4.95	40	6.00	
Total					5.04		5.04		5.04		5.04		5.04		25.20		7.72		8.21			9.26	
of which Local content					3.40		3.40		3.40		3.40		3.40		16.99								
Foreign content					1.64		1.64		1.64		1.64		1.64		8.21								
C. General services 5/																							
1. Posts & telegraph		120	p.a.	.30	1	.30	1	.30	1	.30	1	.30	1	.30	5	1.50	73	1.10	12	.18	15	.23	
2. Telephone		121	p.a.	.30	1	.30	1	.30	1	.30	1	.30	1	.30	5	1.50	73	1.10	12	.18	15	.23	
3. Utilities		140	p.a.	.30	1	.30	1	.30	1	.30	1	.30	1	.30	5	1.50	73	1.10	12	.18	15	.23	
4. Publishing & printing		171	p.a.	.50	1	.50	1	.50	1	.50	1	.50	1	.50	5	2.50	70	1.75	12	.30	18	.45	
5. Stationery		174	p.a.	1.00	1	1.00	1	1.00	1	1.00	1	1.00	1	1.00	5	5.00	70	3.50	12	.60	18	.90	
6. Maintenance:																							
-equipment		250	% pa	.10	.67	.67	.67	.67	.67	.67	.67	.67	0	3.25	60	2.01	18	.60	22	.74			
-buildings		260	% pa	.02	.50	.50	.50	.50	.50	.50	.50	.50	0	2.50	60	1.50	18	.45	22	.55			
Total					3.57		3.57		3.57		3.57		3.57		17.84		12.04		2.49			3.31	
of which Local content					3.07		3.07		3.07		3.07		3.07		15.25								
Foreign content					.50		.50		.50		.50		.50		2.49								
TOTAL OPERATING COSTS					10.81		10.81		10.81		10.81		10.81		54.03		30.75		10.71			12.57	
III Training costs																							
A. Training courses 6/																							
5. Advanced training 7/		154	a-math	4.50	3	13.50		.00	.00	.00	.00	.00	3	13.50	45	6.08	50	6.75	5	.68			
Total					13.50		.00	.00	.00	.00	.00	.00		13.50		6.08		6.75				.68	
of which: Local content					6.75		.00	.00	.00	.00	.00	.00		6.75									
Foreign content					6.75		.00	.00	.00	.00	.00	.00		6.75									
TOTAL TRAINING COSTS					13.50		.00	.00	.00	.00	.00	.00		13.50		6.08		6.75				.68	
TOTAL MINISTRY COSTS - Kwale District					55.46		10.81		10.81		14.31		14.31		112.38		58.90		35.57			18.22	

NOTE: Small rounding errors arise due to the use of units of K'Pounds'000.

Sources: 1/ Table 4, Annex 9

2/ Table 5, Annex 9

3/ Table 6, Annex 9

4/ Table 7, Annex 9

5/ Allocations maintained at 1986/87 Budget levels

6/ Staff training in DFP included under the 2P Budget

7/ See text for details

KENYA
KWALE DISTRICT DEVELOPMENT PROJECT

1986/87 Recurrent Budget District Allocation (July-December)
Reference R22 Head 709-320

<u>Item Code</u>		<u>K£</u>
080	Passages & Leave	185
100	Transport Operating	850
110	Travelling & Accommodation	800
120	Post & Telegrammes	125
121	Telephone	300
140	Utilities	155
172	Uniforms	165
174	Stationery	300
175	Publicity	90
190	Miscellaneous	100
250	Maintenance of Plant	120
260	Maintenance of Buildings	90
	TOTAL	<u>3280</u>
	Annual Equivalent	<u>6560</u>

Source: AIE for DCO Kwale July 1986

KENYA

KWALE DISTRICT DEVELOPMENT PROJECT

Ministry of Co-operative Development
District Staff as at 30.7.1986

Category	Job Group	Total In post	HQ	Matuga	Kinango	Kubo	Msambweni
1. District Cooperative Officer	J	1	1	-	-	-	-
2. Asst. Co-operative Officer	G	2	1	-	-	-	1
3. Co-operative Assistants	E/F	3	-	1	-	-	-
4. District Auditor	H	1	1	-	-	-	-
5. Auditor	G	1	1	-	-	-	-
6. Clerk/Typists	D	4	4	-	-	-	-
7. Subordinate Staff	C	4	4	-	-	-	-
TOTAL:		<u>16</u>	<u>12</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>-</u>

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ANNEX 5
 Table 2
 Schedule 2

Source: DCO KDwale JDuly 1986

Kilifi District Development Project

Table 3

Ministry of Co-operative Development - BOK Treasury Account Code 310

Incremental Technical Services

(Kpounds'000)

Category	Item code	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For.	Exch.	Taxes	Duties
			Cost	Cost	Cost	Cost	Cost	Cost	Cost	(%) Amount	(%) Amount	(%) Amount	(%) Amount	(%) Amount
I Capital														
A. Buildings & civil works														
B. Vehicles and plant 1/														
1. Pick-up (1 tonne)	200	no.	5.50	1 5.50	.00	.00	.00	.00	1 5.50	20	1.10	80	4.40	0 .00
2. Motorcycle	212	no.	1.00	4 4.00	.00	.00	4 4.00	.00	8 8.00	10	.80	90	7.20	0 .00
Total			9.50	.00	.00	.00	4.00	.00	13.50	1.90	11.60			.00
of which Local content			1.50	.00	.00	.00	.40	.00	1.90					
Foreign content			8.00	.00	.00	.00	3.60	.00	11.60					
C. Equipment 2/														
1. Office equipment	220	mod.	1.27	2 2.54	.00	.00	.00	.00	2 2.54	54	1.37	19	.48	27 .69
2. Photocopier	220	no.	1.90	1 1.90	.00	.00	.00	.00	1 1.90	32	.81	37	.70	31 .59
3. Heavy duty safe	220	no.	2.25	1 2.25	.00	.00	.00	.00	1 2.25	32	.72	37	.83	31 .70
Total			6.69	.00	.00	.00	.00	.00	6.69	2.70	2.02			1.97
of which Local content			4.67	.00	.00	.00	.00	.00	4.67					
Foreign content			2.02	.00	.00	.00	.00	.00	2.02					
TOTAL CAPITAL COSTS			16.19	.00	.00	.00	4.00	.00	20.19	4.60	13.62			1.97
II Operating costs														
A. Salaries and allowances 3/														
1. Nights out	110	J	.26	1 .26	1 .26	1 .26	1 .26	1 .26	5 1.32	100	1.32	0	.00	0 .00
2. Nights out	110	EF6	.23	7 1.58	7 1.58	7 1.58	7 1.58	7 1.58	35 7.88	100	7.88	0	.00	0 .00
3. Field allowance	110	EF	.06	6 .36	6 .36	6 .36	6 .36	6 .36	30 1.80	100	1.80	0	.00	0 .00
Total			2.20	2.20	2.20	2.20	2.20	2.20	10.99	10.99	.00			.00
of which Local content			2.20	2.20	2.20	2.20	2.20	2.20	10.99					
Foreign content			.00	.00	.00	.00	.00	.00	.00					
B. Vehicle operating costs 1/														
1. Pick-up (1 tonne)	100	20000	2.04	1 2.04	1 2.04	1 2.04	1 2.04	1 2.04	5 10.20	36	3.67	32	3.26	32 3.26
2. Motor cycles	100	25000	.75	4 3.00	4 3.00	4 3.00	4 3.00	4 3.00	20 15.00	27	4.05	33	4.55	40 6.00
Total			5.04	5.04	5.04	5.04	5.04	5.04	25.20	7.72	8.21			9.26
of which Local content			3.40	3.40	3.40	3.40	3.40	3.40	16.99					
Foreign content			1.64	1.64	1.64	1.64	1.64	1.64	8.21					
C. General services 4/														
1. Posts & telegraph	120	p.a.	.30	1 .30	1 .30	1 .30	1 .30	1 .30	5 1.50	73	1.10	12	.18	15 .23
2. Telephone	121	p.a.	.30	1 .30	1 .30	1 .30	1 .30	1 .30	5 1.50	73	1.10	12	.18	15 .23
3. Utilities	140	p.a.	.30	1 .30	1 .30	1 .30	1 .30	1 .30	5 1.50	73	1.10	12	.18	15 .23
4. Publishing & printing	171	p.a.	.50	1 .50	1 .50	1 .50	1 .50	1 .50	5 2.50	70	1.75	12	.30	18 .45
5. Stationery	174	p.a.	1.00	1 1.00	1 1.00	1 1.00	1 1.00	1 1.00	5 5.00	70	3.50	12	.60	13 .50
6. Maintenance - equipment	250	£ pa	.10	.67	.67	.67	.67	.67	0 3.35	60	2.01	18	.60	22 .74
Total			3.07	3.07	3.07	3.07	3.07	3.07	15.35	10.54	2.04			2.76
of which Local content			2.66	2.66	2.66	2.66	2.66	2.66	13.30					
Foreign content			.41	.41	.41	.41	.41	.41	2.04					
TOTAL OPERATING COSTS			10.31	10.31	10.31	10.31	10.31	10.31	51.54	29.25	10.26			12.02
III Training costs														
A. Training courses 5/														
5. Advanced training 6/	154	m-mth	4.50	3 13.50	.00	.00	.00	.00	3 13.50	45	6.08	50	6.75	5 .68
Total			13.50	.00	.00	.00	.00	.00	13.50	6.08	6.75			.68
of which Local content			6.75	.00	.00	.00	.00	.00	6.75					
Foreign content			6.75	.00	.00	.00	.00	.00	6.75					
TOTAL TRAINING COSTS			13.50	.00	.00	.00	.00	.00	13.50	6.08	6.75			.68
TOTAL MINISTRY COSTS - Kilifi District			40.00	10.31	10.31	14.31	10.31	85.23	39.93	30.62	14.57			

NOTE: Small rounding errors arise due to the use of units of Kpounds'000.

Sources: 1/ Table 5, Annex 9
2/ Table 6, Annex 9
3/ Table 7, Annex 9
4/ Allocations maintained at 1985/87 Budget levels
5/ Staff training in BPP included under the CP budget
6/ See text for details

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT

Ministry of Co-operative Development

1986/87 Recurrent Budget District Allocation (July-December)

Vote Reference R22 HEAD 709-310

Item Code		K£
080	Passage & Leave	165
100	Transport Operating	1150
110	Travelling & Accommodation	950
120	Post & Telegrammes	150
121	Telephone Expenses	275
140	Utilities	160
172	Uniforms	150
174	Stationery	275
175	Publicity	85
190	Miscellaneous	100
250	Maintenance of Plant	120
260	Maintenance of Buildings	90
	TOTAL	<u>3670</u>
	Total - Annual Equivalent	<u>7340</u>

Source: AIE for DCO Kilifi July 1986

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECTMinistry of Co-operative Development
District Staff as at 30.7.1986

Category	Job Group	Total In post	Bahari HQ	Malindi	Kaloleni	Ganze
1. District Cooperative Officer	K	1	1	-	-	-
2. Cooperative Officer	H	2	2	-	-	-
3. District Auditor	H	1	1	-	-	-
4. Asst. Co-operative Officer	G	5	2	2	1	-
5. Co-operative Assistant	F	1	1	-	-	-
6. Higher Clerical Officer	E	1	1	-	-	-
7. Typist	D	1	1	-	-	-
8. Driver	D	2	1	1	-	-
9. Subordinate Staff	C	4	2	1	1	-
10. Workman	A	1	1	-	-	-
		-	-	-	-	-
TOTAL		19	13	4	2	-

KENYA
KWALE DISTRICT DEVELOPMENT PROJECT
Crop Marketing Societies : Turnover 1983/84 - 1984/85^{1/}

Primary Society	Membership		Cashew Nuts		Bixa		Sim-Sim		Turnover		Turnover per member	
	1983/84	1984/5	1983/4	1984/5	1983/4	1984/5	1983/4	1984/5	1983/4	1984/5	1983/4	1984/5
			baga	baga	baga	baga	baga	baga	(K£'000's)	(K£'000's)	(K£)	(K£)
Shimba Hills	660	702	20 998	7 316	9 691	6 756	185	-	407.5	205.1	617	292
Mkongani	316	535	2 361	5 859	4 137	4 211	420	897	79.7	163.1	252	305
Mwalaphumba	230	230	4 008	3 068	381	399	97	280	67.1	60.8	292	264
Kinango	70	70	2 704	1 082	5	2 523	45	116	43.4	21.5	620	307
Kaya	63	63	985	474	1 541	636	2	38	28.8	16.2	457	257
Mangor	320	320	3 926	4 811	24	-	2	26	60.6	77.2	189	241
Kikoneni	500	500	6 397	350	6 918	680	417	54	174.2	1.5	348	3
Lunga-Lunga	362	362	11 736	3 546	2 641	1 034	-	598	246.1	84.6	680	234
Kwale Farmers	556	556	27200	7115	1509	1045	145	167	415.3	134.8	747	242
Diani	116	116	1 000	1 474	1 100	41	-	-	30.6	24.1	264	208
Mbuguni Teembo	160	160	-	-	-	-	-	-	-	-	-	-
Kitsakamatsa	200	-	-	-	-	-	-	-	-	-	-	-
	3 553	3 614	81 315	35 095	29 947	17 355	1 313	2 176	1 553.3	788.9	437	218
											486 ^{b/}	228 ^{b/}

a/ Source: Annual Reports DCO Kwale
b/ Turnover on Membership of active Societies only

ANNEX 5
Table 5

KENYA

KWALE DISTRICT DEVELOPMENT PROJECT

SOUTH COAST FISHERMEN'S CO-OPERATIVE UNION

MEMBER SOCIETIES : TURNOVER 1986/84 - 1984/85

(KE'000')

(K£'000')								Members	
Membership	1983/4		1984/5		Commission		payments		
	Sales	Purchases	Sales	Purchases	earned		per head		
					83/84	84/85	1983/4	1984/5	
								K£	K£
Mwagugu	193	189.4	166.4	116.3	101.6	23.0	14.7	862	526
Majoreni	121	27.2	24.1	21.2	18.5	3.1	2.9	199	153
Shimoni	180	76.8	67.9	60.3	52.2	8.9	8.1	377	290
Msambweni	188	16.7	14.6	26.9	23.5	2.1	3.4	77	125
Diani	83	8.4	7.3	10.5	9.2	1.1	1.3	88	111
TOTAL	765	318.5	280.3	235.2	205.0	38.2	30.2	366	268

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT

Kilifi District Co-operative Union

Member Societies Turnover 1983/84 - 1984/85 A/

Primary Society	Member-Ship	No. of Stores	Cashewnuts		Simsim		1984/5 Bags K '000
			1983/4 Bags K '000	1984/5 Bags K '000	1983/4 Bags K '000	1984/5 Bags K '000	
Margarini	938	2	140 050	2 187.6	28 540	434.2	40 .8
Galana	2 113	1	-	-	18 313	283.6	306 6.1
Tezo Roka	1 497	6	-	-	11 330	173.9	297 5.9
Godoma	544	-	-	-	7 329	110.0	52 1.1
Kilifi S.E.	1 078	4	-	-	2 403	36.9	328 6.6
Chonyi	769	2	-	-	482	6.7	-
Kaloleni	908	1	-	-	334	4.7	152 3.0
Jibana	504	2	-	-	4	.1	15 .3
Kayafungo	246	-	-	-	617	8.8	34 .7
Kambe/Ribe	419	1	-	-	-	-	-
Ruruna	465	1	-	-	-	-	3 .1
Rabat	242	1	-	-	-	-	-
Malindi	69	1	-	-	-	-	-
Total	9 792	22	140 050	2 187.6	69 304	1 058.9	2 964 57.4 1 227 24.6

a/ Source: KDCU and Annual Reports DCO Kilifi

b/ Individual Societies Turnover for 1983/84 not available.

c/ 95% FAQ 5% UG.

d/ 84% FAQ 16% UG.

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT

Kilifi District Co-operative Union

Member Societies Turnover 1983/84 - 1984/85 A/

a/	Copra		Total Turnover		Turnover per member	
	1983/4	1984/5	1983/4	1984/5	1983/4	1984/5
	Bags K '000	Bags K '000	K '000	K '0000	K	K
Margarini	-	-	-	435.0	-	464
Galana	-	3 398	48.3	338.0	-	160
Tezo Roka	-	5 286	73.8	253.6	-	169
Godoma	-	1 156	16.4	127.5	-	234
Kilifi S.E.	-	1 185	16.6	60.1	-	56
Chonyi	-	6 369	89.6	96.3	-	125
Kaloleni	-	14 112	198.5	206.2	-	227
Jibana	-	7 689	108.4	108.8	-	216
Kayafungo	-	677	9.6	19.1	-	77
Kambe/Ribe	-	1 077	15.2	15.2	-	36
Ruruma	-	2 566	36.2	36.3	-	78
Rabai	-	1 300	18.3	18.3	-	75
Malindi	-	-	-	-	-	-
Total	39 286	44 815	630.9	2 743.7	1 714.4	175
	=====	=====	=====	=====	=====	=====
		c/		b/		

a/ Source: KDCU and Annual Reports DCO Kilifi

b/ Individual Societies Turnover for 1983/84 not available.

ANNEX 5
Table 7

KENYA
KILIFI DISTRICT DEVELOPMENT PROJECT
Outstanding Co-operative ADP Loans as at 31.8.85

Society	Balance at 1/8/84 K£	Repaid 8/84 to 7/85 K£	Balance 7/85 K£	Interest Accrued K£	Balance as at 31/8/85 K£	Date of last Audit	Audit Years in Arrear	Turnover 1984/85 K£	Debt as % of 1984/85 Turnover
Galana	10 683	-	10 683	276	10 959	31/8/84	1	338 050	3.2
Chonyi	25 647	-	25 647	704	26 351	31/8/84	1	96 348	27.3
Kaloleni	11 929	79	11 850	317	12 167	31/8/84	1	206 214	5.9
Jibana	1 838	-	1 838	61	1 899	31/8/84	1	108 740	1.7
Kayafungo	7 575	52	7 523	87	7 610	31/8/80	5	19 079	40.0
Ruruma	4 331	7	4 324	116	4 440	31/8/85	-	36 205	12.3
Rabai	1 959	14	1 945	52	1 997	31/8/84	1	18 244	10.9
Magarini	679	-	679	17	696	31/8/84	1	338 050	2
Kambe/Ribe	5 533	-	5 533	148	5 681	31/8/83	2	15 216	3.7
TOTAL	70 174	152	70 022	1 778	71 800			1 176 146	6.1

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSAgricultural Marketing: Input Supply: Credit

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KENYA

KWALE AND KILIFI DEVELOPMENT PROJECTSAgricultural Marketing: Input Supply: CreditI. INTRODUCTION

1.01 This Annex briefly reviews the three major peripheral services to agricultural and livestock production: marketing, input supply and production and marketing credit. Sections II, III and IV discuss the marketing organizations and regulations dealing with the major crops of the area; Section V considers supply of farm inputs and Section VI reviews the problems of smallholder credit in Kwale and Kilifi. The broad aspects of all these services have been reviewed in depth^{1/} and this Annex is directed specifically to project area requirements. In accordance with government policy, and to take full advantage of the substantial existing network of facilities and services, support for primary and secondary marketing and credit services would be channelled through the co-operative movement. While support for the statutory and developmental co-operative field services would be in the form of budgetary finance (Annex 5), co-operative marketing credit is provided as loan funding through the Co-operative Bank of Kenya. Details of the proposed investments are set out and quantified in Section VII.

II. CROP MARKETINGA. Organisation

2.01 Agricultural produce is divided into "scheduled" crops for which regulated (controlled) prices are set each year by Government, and "non-scheduled" commodities, which are sold without controls at any level in the marketing system. Maize, wheat, rice, sugarcane, cashew nut, bixa, cotton, milk and beef, are scheduled commodities.

1/ Farmers Groups and Community Support Project, Annex 5, IFAD, 1985. Agricultural Credit Policy Review, IBRD, 1985; Agricultural Sector Adjustment Operation, IBRD, 1986.

2.01 Before 1986, farmers were free to sell produce, including the regulated crops, to licensed buying agents (LBAs), who were either middlemen or end-users of crops for oil milling. The primary co-operative societies are now the sole LBAs for all farm produce in Kwale and Kilifi Districts. The National Cereals and Produce Board (NCPB) and its two companies, Kenya Cashewnuts Limited (KCL) and Kenya Bixa Limited (KBL) are the principal crop purchasing organisations handling scheduled crops. Cashew nuts and bixa are the principal marketed commodities as Kwale and Kilifi are net food importers (see Table 1).

2.02 Ready markets exist for sesame seed (Ufuta Limited), copra (private oil millers), cassava (Tapioca Ltd - Mazeras Starch Factory), sugar cane (Associated Sugar Company Limited), and cotton (Malindi Ginnery Limited and Cotton Lint and Seed Marketing Board (CLSMB) in Mombasa). Sesame, cassava and castor seed are no longer scheduled crops but they are effectively price controlled because purchase rests with the co-operative societies which apply NCPB price levels. Copra is a scheduled crop and price and commission must be approved by NCPB, although the Board itself does not handle the commodity.

2.03 The informal market handles vegetables and fruit; cassava, sweet potatoes, tomatoes, mangoes, bananas, papaya, pineapples, citrus and fresh coconuts (mdafu) are the principal commodities.

2.04 Mombasa and export markets absorb most of the fruit and vegetables, but seasonal surpluses occur for citrus (Kwale, Malindi), pineapples (Malindi) and mangoes (Kwale and Malindi). Price margins during these periods do not warrant the transport costs, and variable supply and quality limits export potential. A pineapple canning factory may be established at Malindi and a fruit juice processing operation at Mtwapa. These are private sector proposals and may offer some relief for the fruit market situation. The Horticultural Crops Development Authority (HCDA) with FAO assistance, is investigating export of fresh fruit by sea. Vipingo Estates Limited has diversified its sisal and beef operations by establishing a mango project which will commence exports of fresh fruit and canned juice and slices in 1987.

B. Prices

2.05 Producer prices are fixed by Government for commodities traded or purchased by most parastatals and co-operatives. Government intervention in marketing through marketing boards and price controls is intended:

- (a) to ensure supplies of basic foodstuffs;
- (b) to provide remunerative and stable prices to producers;
- (c) to maintain reasonable costs for consumers; and
- (d) to protect domestic markets for import substitution crops.

Table 1: Purchases of Principal Crops by the National Cereals and Produce Board
(1983/84-1985/86)

Crop Type	Units	1983/1984		1984/1985		1985/1986	
		Kwale	Kilifi	Kwale	Kilifi	Kwale	Kilifi
Cashew nuts							
- FAQ	tonnes	6,786.00	10,109.92	1,773.60	3,912.12	1,485.12	5,279.68
- UG	tonnes	474.00	523.44	1 210.48	899.04	994.80	398.80
- Total	bags	90,750	132,917	37,301	60,227	30,999	70,981
Bixa annato	tonnes	1,860.24	-	1,806.32	-	974.24	0.32
	bags	23,253	0	22,599	-	12,178	4
Maize	tonnes	-	-	54.00	-	23.76	-
	bags	-	-	600	-	264	-
Sesame seeds	tonnes	216.80	6.80	0.40	0	3.60	-
	bags	2,170	85	5	-	45	-
Castor seed	tonnes	-	2.73	-	3.51	-	2.54
	bags	-	42	-	54	-	39
Peppers (hot)	tonnes	-	-	0.86	-	5.12	-
	bags	-	-	43	-	256	-

Source: National Cereals and Produce Board

2.06 Ministries participating in the annual review of scheduled commodity prices include the Ministry of Agriculture and Livestock Development, Ministry of Finance, Office of the President, and Ministry of Planning and National Development. Margins for parastatals, wholesalers and retailers are fixed by the Price Controller in MOF, after consultation with MALD, while producer prices are fixed for scheduled commodities at point of delivery (buying centres or depots).

2.07 The major problems in crop marketing in Kenya which act as disincentives to producers are:

- (a) inadequate price levels for some crops;
- (b) payments to growers from official marketing organizations are often delayed; and
- (c) heavy deductions are made by co-operatives and parastatals.

The issue of prices is related to the consumer food subsidies which exist in Kenya; although the terms of trade for producers have consistently moved against producers for most crops, consumers are paying less in real terms than they were in 1980. Producer prices apply uniformly and allow no variation for seasonal changes in supply and demand (except for milk) nor for differences in the quality of the produce. Government is now deregulating a number of the produce markets (cotton, milk, oil seeds) under the second Structural Adjustment Programme.

2.08 In the project area, all food crops in the scheduled categories (maize, beans, rice) are sold on the parallel market and therefore handled by unauthorised agents, as farmgate prices for scheduled crops have been consistently lower than local market prices. NCPB prices for the last five seasons for the principal marketed crops of the project area are given in Table 2. Informal market prices for maize and beans are about 40% higher than official 1985/86 prices for grains and 25% for copra, greengrams and cowpeas.

2.09 NCPB publishes the farmgate or buying centre price payable by the co-operatives, net of commission, cost of bags and transport and district council cesses. The transport margin is KSh 10/- bag irrespective of distance to the only NCPB Coast Province store at Mombasa. Prices for scheduled crops are usually published prior to the start of each crop season.

C. Supply and Demand

2.10 Kenya imports considerable quantities of the major project area crops, or their products, including vegetable oils, cotton and maize. Coast Province, including Kwale and Kilifi Districts, has usually been a deficit area in terms of maize production, because of extreme fluctuation of rainfall in the hinterland areas, a move away from traditional staples such as cassava and sweet potato, and non-use of inputs.

2.11 Sales of incremental production from the proposed project are not expected to present problems, either in terms of throughput or price; it is anticipated that most of the output will be consumed on-farm or find its way into local markets.

D. National Cereals and Produce Board

2.12 NCPB functions include purchase, transport, storage and marketing of scheduled produce, and it has a monopoly in the purchase of these crops. The Board has a sub-branch office in Kwale but no stores in either Kwale or Kilifi; its branch office and store in Mombasa serve the whole of Coast Province.

2.13 Variations in purchases by the NCPB (Table 1) from year to year are primarily due to fluctuations in rainfall in the project area; the insignificance of food grains (maize, pulses) purchased by the NCPB suggests that any surpluses which do occur in good seasons are marketed through informal channels.

E. Co-operatives

2.14 In Kwale District, the co-operatives are active as LBAs and hire private transporters to move crops from seasonal buying centres. There are no permanent co-operative stores in Kwale District. In Kilifi, in addition to their own facilities, the co-operatives continue to utilize the services of agents in purchasing and moving produce during the season. Transport, storage and crop purchase financing are major problems for the co-operative movement in the project area. Crops handled by the co-operative movement in the Districts in the last two years are given in Table 3.

Table 2: Prices of Principal Marketed Crops at Buying Centres
Offered by the National Cereals and Produce Board (1981/82-1986/87)
(in Kf)

Crop Type	Unit	C R O P S E A S O N					
		1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
Cashewnuts (in shells)							
- FAQ	80 kg bag	440	440	280	280	320	na
- UC	80 kg bag	300	300	196	196	236	na
Bixa annato	80 kg bag	160	168	144	144	211	240
Maize	90 kg bag	na	120	126	134	175	188
Beans (mixed)	90 kg bag	189	189	186	166	220	na
Sesame seed	80 kg bag	372	372	344	380	400	na
Castor seed	65 kg bag	136	136	130	130	120	na
Peppers (hot)							
- Gr. 1	20 kg bag	78	78	60	160	180	na
- Gr. 2	20 kg bag	58	58	40	32	na	na
Cassava (dried)	50 kg bag	42	42	25	25	10	na

Note: Depot prices are Kf 40 per bag higher than prices at buying centre

Other prices of importance of in the project area are (1985/86):

Greengrams Kf 360/90 kg bag
Copra Kf 225/50 kg bag
Cowpeas Kf 160/90 kg bag

Source: National Cereals and Produce Board

Table 3: Purchases of Principal Crops by the District Co-operatives (1983/84 and 1984/85)

Crop type	1983/1984		1984/1985	
	Kwale	Kilifi	Kwale	Kilifi
cashew nuts				
- total tonnes	6 505	11 204	2 808	5 544
- total bags	81 315	140 050	35 094	69 304
bixa				
- total tonnes	2 396	-	1 388	-
- total bags	29 947	-	17 355	-
sesame seed				
- total tonnes	105	237	174	98
- total bags	1 313	2 964	2 176	1 227
copra				
- total tonnes	-	982	-	2 241
- total bags	-	39 286	-	44 815

Source: Co-operative Unions and societies.

F. Kenya Cashewnut Company Limited

2.15 The KCL is the sole buyer of cashew nuts and has a processing factory adjacent to Kilifi town; capacity is 15 000 t/p.a. but is currently underutilized (see Table 4). Consideration has been given to installing a second factory in Kwale District but this has been shelved pending further expansion of production. Disease, aged trees and low returns have caused a downturn in production. Cashewnut is a scheduled crop which must be sold through an agent of the NCPB, and is the major crop handled by the co-operative unions and societies.

Table 4: Annual Intake of Cashewnuts at KCL
(in tonnes)

Year			
1966/67	14 320	10 029	3 861
1967/68	7 369	5 087	2 044
1968/69	9 954	6 925	2 383
1969/70	16 805	na	na
1970/71	23 466	16 289	6 636
1971/72	20 603	14 759	5 296
1972/73	10 360	6 877	2 918
1973/74	21 309	14 175	5 887
1974/75	15 892	9 796	5 618
1975/76	17 582	10 700	6 062
1976/77	15 139	9 144	5 079
1977/78	6 041	4 219	1 405
1978/79	11 182	7 230	3 570
1979/80	16 414	11 799	4 169
1980/81	16 454	10 032	6 093
1981/82	12 008	6 865	4 662
1982/83	na	na	na
1983/84	17 923	10 663	7 260
1984/85	7 802	4 818	2 984
1985/86	8 158	5 678	2 480

Source: Oltremare SPA (1982) and NCPB (ref. Table 1).

G. Kenya Bixa Limited

2.16 Bixa annato is a major crop in Kwale District but production has fallen from levels of 3 000-3 500 t/p.a. to approximately 1 000 t in 1985/86. The existing factory has a capacity for processing 250 t/p.a. and the balance of the crop is exported as raw seed. Prices have not been attractive in recent years but have been raised 14% to KSh 3/-/kg for the 1986/87 season. This may spur deliveries in the coming season.

2.17 Both cashewnut and bixa producer prices are subject to world commodity trends and prices of both crops recorded falls in the 1983/84 season through 1984/85. These were apparently strong disincentives and were compounded by higher overheads of KCL and KBL (due to lower throughput levels) which prevented any bonus payments to farmers.

H. Other Agencies

2.18 The Cotton Lint and Seed Marketing Board is responsible for promoting cotton growing, providing services to growers, organising or undertaking cotton buying, transport, ginning and marketing. In the project area, cotton is mainly produced in the Malindi sub-district of Kilifi; only a small quantity of lint is produced in southern Kilifi and Kwale. Most of the production in the project area is processed at the privately-owned Malindi Ginnery Limited (386.7 tonnes in 1985/86). Production has been declining due to high labour and input costs in relation to grower returns, and competition from greater demand for food crops. CLSMB has a branch office in Mombasa and also cotton storage warehouses for storage of lint and seed for auction.

2.19 Associated Sugar Company Limited operates an estate and factory at Ramisi in Kwale District. Cane is purchased from out-growers but late payment has now become a major issue of protest among farmers. The cane growing area lies in the highest potential zone of the project area, and land could easily be transferred to growing alternative crops.

2.20 Ufuta Limited is a subsidiary of the Mercat Group which has major maize, wheat and oil milling interests and Elianto Limited (the major maize oil producer in Kenya). The company supplies seed and some extension assistance to farmers and pays promptly for all deliveries directly through co-operative societies. Transport and supervision of farmer payment are provided by the company. The company has an outgrower target of 10 000 farmers, mainly in Kwale and Kilifi Districts.

2.21 Tapioca Limited at Mazeras in Kilifi District purchases wet cassava in the field or at the factory for the production of starch. There is a shortage of cassava this season because of serious losses due to white fly mosaic disease.

III. LIVESTOCK MARKETING

A. Organisation

3.01. The Kenya Meat Commisison (KMC) with a slaughterhouse in Mombasa and the Kenya Co-operative Creameries (KCC) with a processing plant at Miritini on the outskirts of Mombasa, are Government's major marketing organisations in the project area.

3.02 Livestock transactions and meat marketing are effectively de-regulated, although maximum retail prices for low grades of meat are set by Government. The private sector, comprising traders and butchers who purchase directly from producers, are the principal purchasers of live animals.

3.03 The licensing of milk collection and processing is controlled by the Kenya Dairy Board. The KCC is the major purchaser, processor and supplier of milk in the project area. KCC's milk is largely re-constituted from milk powder, as deliveries of fresh milk to the plant are inadequate. The only other large-scale producer and distributor of milk is Kilifi Plantations Limited (150 000 litres/month). There is a substantial shortfall in milk production in the project area.

3.04 The Livestock Marketing Branch (LMB) of MALD is concerned with the marketing of slaughter stock to the KMC, and for the purchase, quarantine and supply of immature stock to ranches or other feeding operations. The project area is a net exporter of beef animals, which are traditionally grown out in the rangeland areas. The demand for immature animals in Coast Province is believed to be 25 000 - 40 000 head (MALD, Mombasa); these are obtained mainly from Tana River and Garissa Districts.

3.05 LMD also operates auction rings at Mwangulu and Kinango (Kwale) and Mariakani and Bamba (Kilifi) each week. There is a holding ground in Malindi Sub-district and designated trekking routes through the rangeland areas of both Districts.

3.06 The co-operatives are no longer active in milk collection and deliveries, nor in processing. The Mariakani Milk Factory, once owned and operated by the Kwale-Kilifi Dairy Co-operative Union, is no longer functional. There were five milk cooling centres in Kilifi and four in Kwale, along a designated collection route. These are now in disrepair. Smallholder dairy farmers are being assisted under the Dairy Development Project (assisted by the Netherlands) through MALD; smallholders are financed mainly by the Agricultural Finance Corporation (AFC) to purchase animals and establish the recommended facilities. Sales are local only as KCC has no collection routes through the project area, and farmers prefer to market informally to obtain higher prices.

B. Prices

3.07. The retail prices of meat and milk are controlled by the Government and gazetted each year. However, KMC prices for live animals appear to be close to market prices and the organisation plays a crucial role as the buyer of manufacturing grade animals, and as a buyer of last resort. Private traders and butchers who purchase directly from ranches or agreed buying points are the major market forces.

3.08 The retail prices of livestock at both KMC and private treaty are in the range of KSh 11-14 (on a liveweight basis) depending on quality. KMC's system of payment depends on the carcass yield, while traders make estimates of dressing-out percentages at site of purchase. Prices are discounted for transport costs, so KSh 9-11 can be expected for both mature and immature stock in the rangeland areas. Gazetted retail prices are uniform and pan-district for both Kwale and Kilifi. They are set to protect consumers of low grades of meat. For 1986, the prices are:

<u>Cut/offals</u>	<u>Retail price</u> (KE/kg)
Beef with bone	21.0
Beef ex-bone	26.0
Mutton/goat meat	20.6
Liver, heart, tongue, kidney	18.6
Tripes	11.8

Price controls on higher grades of beef were removed in 1985, resulting in the formation of a strong and dynamic local market for better quality beef.

3.09 In both Kwale and Kilifi Districts, local prices paid for fresh milk exceed KCC prices by over 80%. KCC pays producers just less than KSh 3 per litre at designated collection points.

3.10. Broilers sell for KSh 30-35/kg, with local birds selling for KSh 20-30; marketing is entirely by private treaty and there is no processing facility. Eggs are also marketed locally at KSh 1.20-1.50 each.

3.11 Hides and skins are handled by licensed traders and four grades are recognized. Prices are not controlled, and for Kwale and Kilifi are shown below. The hides and skin industry is very active and important in Kenya (1% of value of GDP) and GOK is encouraging more processing in-country by taxing the export of untreated hides.

	<u>Unit</u>	<u>Price range</u>
cattle hide	kg	KSh. 10 - 20
goat skin	piece	KSh. 7 - 20
sheep skin	piece	KSh. 9 - 18

3.12. Honey is also marketed informally with strong demand creating a lively market and considerable producer interest. Current producer price is KSh 35 per kg.

C. Supply and demand

3.13 Kenya has historically been an exporter of livestock products both in the form of meat/meat preparations and live animals. In recent years, growing local demand plus restrictions on import of Kenyan beef to European countries has resulted in exports being reduced to about 3,000 mt. per year, mainly in the form of processed beef. A few thousand head of cattle are currently exported each year to the Middle East, although there is a general restriction on the export of live animals. Sheep and goats constitute the majority of live animal exports (Table 5).

3.14 Prior to 1979 Kenya was a net exporter of dairy products; growing demand in both urban and rural areas and the introduction of the School Milk Scheme has generated strong demand for fresh milk and all milk products.

Table 5: Exports and Imports of Certain Livestock Products

	<u>unit</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
<u>Exports</u>							
Live Animals ^{a/}	hd.	139 964	224 269	44 317	32 565	32 104	41 434
Meat, meat prep'ns	t.	2 643	1 253	1 890	2 916	2 367	4 294
Milk and cream (dry)	t.	1 913	83	31	20	30	16
Butter and ghee	t.	1 206	230	565	878	1 179	438
<u>Imports</u>							
Milk (dry)	t	417	5 199	5 860	1 968	2 654	5 973

a/ Includes cattle, sheep, goats, camels, mainly for food.

Source: Statistical Abstract, 1985

3.15 Improved breeding animals, especially crossbred dairy stock, are in strong demand in the project area. Current prices are:

<u>Bulls</u>	<u>KSh.head</u>
Boran	8 000
<u>Cows</u>	
Sahiwal X Friesian or Ayrshire	6 000
<u>Sheet/Goats</u>	
Dorper rams	800
Dorper X Persian rams	300
Galla Bucks	400

IV. FISH MARKETING

A. Organization

4.01 Fish marketing is mainly free of Government regulatory control and is undertaken by direct treaty with hotels and fishmongers, or through traders and co-operatives. (Government sets minimum prices, but these are much lower than market prices to fishermen). There are five co-operative societies in Kwale District, which handled over 420 tonnes of fish produce in 1985. These are affiliated with the South Coast Fishermen's Co-operative Union Ltd (SCFCU), located at Shimoni. The co-operative societies, with the exception of Diani, have been granted monopolies over fish catches, and fishermen are therefore obliged to channel their catches through the societies. Only 2 co-operatives are active in Kilifi District, and handled 290 tonnes in 1985 (Table 6). The tourist hotels provide a major market for the co-operatives, individual fishermen and traders.

Table 6: Fisheries Co-operative Membership, Purchases and Sales in Kwale and Kilifi District in 1984 and 1985

	<u>1984</u>		<u>1985</u>	
	<u>Kwale</u>	<u>Kilifi</u>	<u>Kwale</u>	<u>Kilifi</u>
No. of societies	5	2	5	2
Membership	767	na	796	na
Purchases (t)	525.99	na	423.03	290.09
Sales (t)	524.77	na	421.77	
Average Purchase Price(KSh/kg)	10.66	na	9.69	5.59
Average Sales Price(KSh/Kg)	12.14	na	11.16	-

4.02 The Ministry of Tourism and Wildlife, through its Fisheries Department, is responsible for research, technical assistance and project implementation in the fisheries sub-sector.

4.03 Several private companies are engaged in wholesale and retail fish marketing, cold storage and transport. The largest include Samatki Industries (Kenya) Ltd., Kenya Cold Storage Company Ltd., Wanainchi Marine Products Ltd., and Ocean Products. Nearly all sales are made in Mombasa, Nairobi and to export markets. These Companies operate offshore trawlers, ice plants and cold storage. There are no operating ice plants outside Mombasa, except for a private prawn freezing factory at Malindi. No fish meal processing or canning is done in Kenya.

B. Prices

4.04 Information on producer prices for fish is contradictory, but the current price range is KSh 6-12 per kg depending on location along the coast. The total length of coastline in the project area is nearly 400 km, so transportation is an important cost issue. At present traders and

fish mongers purchase directly at fish landing points and are responsible for their own refrigeration (usually in simple ice boxes) and transport. An exorbitant margin of at least KSh 10 per kg is obtained for providing this infrastructure, but the margin level is partly a function of irregular supplies through the co-operatives. Variation in local fishing conditions often prevent fishermen from reach fishing grounds, as craft are traditional canoes or Shirazi boats.

4.05 Market prices for fish in Mombasa are not less than KSh 25 per kg on a whole-fish basis. Jumbo prawns (Penaeus monodon) fetch KSh 120 per kg; smaller sizes (Penaeus indicus) sell for not less than KSh 80 per kg. Lobster is KSh 90 per kg.

4.06 Little distinction is made between types of fish in the market, although "reef fish" for inshore species and "sea fish" for offshore species are recognized categories. Prices appear to be uniform with higher prices for bigger fish.

C. Supply and Demand

4.07 The trader - fishmonger - market sale network is well-developed for both fresh fish and frozen fillets, and demand is strong and growing. The dramatic growth in tourism in the last two years and a growing taste for fish in Kenya's urban population has generated a buoyant market. Average annual per capita fish consumption in Kenya was estimated at about 3.5 kg. in 1978, which was significantly lower than in neighbouring countries; there appears to be substantial scope for growth in consumption and production. The export market for deep sea fish and prawns is thriving and prices are attractive. The local market for fresh and frozen fish and crustacea is generally under-supplied; export prospects are excellent.

V. INPUT SUPPLY

5.01 The initial preparation report^{2/} noted that the demand for farm inputs, other than for hand tools, was low in the project area, reflecting the low technical level of agriculture, the lack of research into production systems, the high risk of crop failure, limited resources available to farmers and the weaknesses of the delivery system. These comments remain valid and have since been compounded by the failure of IADP II to establish a viable input distribution mechanism.

5.02 The major purveyor of farm inputs is the Kenya Grain Growers Co-operative Union (KGGCU) the successor to the former Kenya Farmers Association (Co-operative) Ltd. KFA/KGGCU was originally formed as a co-operative for the large farm sector to supply production inputs and equipment, credit, and marketing services to its members insofar as the latter was not the responsibility of other organisations. In the project area, it acted primarily as a supplier to larger farmers in the coastal strip but with the expansion of smallholder development, it increased its operations by acting as sole supplier under certain development credit schemes including those operated by AFC, CBK and IADP II. Its position was secure in that it issued goods and supplies to approved farmers and co-operatives against credit agency indents thus avoiding direct credit transactions. During this period, KGGCU built up direct connections with the district-based co-operatives through which the input credit was channelled. The arrangement was satisfactory to all parties in that while the co-operatives maximized their trading margins and held minimum stocks, KFA/KGGCU enjoyed a risk-free market.

5.03 Following the collapse of IADP credit, however, KGGCU links with the project area societies have weakened. Although still included in the 31 KGGCU agencies for Kwale District and the 50 agencies in Kilifi District, the district co-operatives have virtually ceased to trade with the KGGCU coastal branch at Mombasa. This, however, is a reflection of the minimal use of farm inputs by the average smallholder, rather than of any inter-organizational problems and both KGGCU and the cooperatives, KDCU in particular, would re-establish contact if the basis for a commercial relationship existed. Input requirements under the proposed projects are not substantial and can be readily handled by KGGCU; they would however provide a commercial linkage which would permit the expansion of KGGCU services in the project area through the village-level primary societies.

^{2/} Kwale Kilifi Integrated Development Project: BAI Ltd: 1982.

VI. AGRICULTURAL CREDIT

Background

6.01 The importance of formal production credit in government strategy of crop intensification has been repeatedly emphasized.^{3/} The principal channels utilized by Government for its credit interventions are the Agricultural Finance Corporation (AFC) and the Co-operative Bank of Kenya (CBK). These are the only significant services of credit for the smallholder segment of the agricultural sector; the commercial banks, several marketing boards, and private organizations such as the tobacco companies lend principally to commercial or large farmers.

6.02 Data on credit, however, are not sufficiently detailed to break out on a national basis the amount of loans to smallholders. This is due to the fact that, for statistical purposes, smallholders are included in the "smallscale farmers" category which embraces all producers owning less 50 ha. In 1982/3^{4/}, this group accounted for KE6.28 million (20%) of the total new credit for the year of KE31.67 million. Clearly, the allocation to typical target group farmers i.e. those cultivating less than 1 ha, would be a fraction of this amount.

Project Area Target Group Credit

6.03 However, for practical purposes, formal credit for target group producers in Kwale and Kilifi Districts farmers is confined to co-operative credit. In theory, they would be eligible for AFC credit but the vast majority would be unable to provide the collateral for credit required by the lending regulations of that institution. A further constraint on AFC lending to smallholders is the lack of liquidity^{5/}. A high arrears rate has created a significant cash problem and available AFC funds are increasingly directed to the more secure medium-sized or commercial farmer.

6.04 Cooperative Bank of Kenya (CBK). CBK was established in 1968 as the main banker to the Cooperative movement and, since its inception, it has provided the mechanism for the distribution of credit through unions and primary societies, to smallholders. In addition to its own funds it has handled the credit component in some 20 schemes, the major one of which in the project area has been IADP II (IDA Credit 959-KE: IFAD Loan 25-KE).

^{3/} For example, 'Economic Management for Renewed Growth: Sessional Paper No. 1, of 1986'. It is significant that the provision of credit and prompt cash payment for produce are linked as the key element in ensuring that farmers have an adequate cash flow to purchase inputs.

^{4/} Statistical Abstract, 1985.

^{5/} See Annex 5: Agricultural Credit, Kenya Farmers Groups and Community Support Project.

6.05 Recovery of that credit, which is reviewed in Annex 5 has been poor. In the project area, a total of KE71 000 is still outstanding in Kilifi from KDCU and its affiliates; in Kwale the accumulated balance of principal and interest due from the sole debtor, Kaloleni Cooperative Society is KE33 000. The poor recovery rate has been variously attributed to managerial inefficiencies within the institution; to technical inefficiencies, e.g. inadequate crop packages, untimely distribution of inputs; to climatic problems which have brought about crop failure; and to development and political priorities which have overridden the purely technical considerations of smallholder lending.

6.06 Whatever the causes of the failure to recover IADP II loans, the problem of the resultant indebtedness of the Cooperative Societies must be addressed if advantage is to be taken of the substantial scale investment in cooperative facilities for the proposed development. The matter is discussed in detail in Annex 5 and firm recommendations made for the initiation of proceedings by the Commissioner of Cooperative Development, under the powers of the Cooperative Act, against recalcitrant debtors. With a restored state of creditworthiness, the primaries would play a central role in input distribution and crop marketing.

Production Credit

6.07 With major emphasis on improved planting material and cultivation for increased production, the agricultural component and its benefits are not critically dependent upon credit for fertilizers and other inputs. The maximum cost of purchased inputs to a producer for the improvement of his total holding would be about KShs 350 in zones L2 and L3, and KShs 145 in zones L4 and L5, i.e. either a bag or one half bag of cashewnuts at 1985/86 prices. With the relatively slow rate of build-up in the numbers of contacted farmers, the need, as distinct from demand, for formal input credit would not constitute a major implementation constraint. It must also be noted that the main cost of inputs would be for fertilizer and seed for maize production for which benefits have already been taken in NEP and which are therefore excluded in the calculation of KWDDP and KDDP incremental benefits.

6.08 Under these circumstances, no line of production credit would be included in project costs. If, as a result of MCD action, a co-operative primary society re-established its creditworthiness, ample credit is presently, and would be, available from existing CBK loans funds.

Marketing Credit

6.09 In contrast to production credit, crop marketing credit is indispensable if co-operatives are to achieve the turnover required to earn the gross margins for the employment of efficient staff and the maintenance of their facilities. If adequately supervised and controlled, marketing credit also carries less risk than production loans and it is therefore a good basis on which to re-establish the viability of the co-operatives during the development period.

VII. DEVELOPMENT PROPOSALS

Crop Marketing and Input Supply Facilities

7.01 National Cereals and Produce Board District Storage. The provision of NCPB transit stores at central district locations, which is under active consideration by NCPB, would be critical to the orderly implementation of the proposed cooperative development. First, the small village produce stores would have limited storage; availability of transit storage within the district would ease the burden of crop evacuation. Secondly, the transport costs to the societies, now fixed at KShs 10 per bag for delivery to the NCPB Mombasa store, would be considerably reduced. Third, the additional unofficial payments which societies must make to ensure acceptance of their crop at the Mombasa store would be avoided. Finally, the regular delivery of produce would reduce interest on the crop purchase advances to a minimum.

7.02 To secure the rapid provision of the required facilities, project funds would be available for the construction of the required storage at both District Headquarters. In Kilifi, the Kilifi District Cooperative Union has adequate space suitable for conversion to transit storage and would secure a CBK loan for this purpose, on the basis of a long term rental agreement with NCPB. The rental would cover the costs of debt service and loan repayment. In Kwale, an NCPB transit store would be constructed on similar terms at a site to be selected by DEC on the advice of the District Cooperative Officer.

7.03 Kenya Grain Growers' Co-operative Union (KGGCU). The proposals for the installation of district NCPB storage would be complemented by the parallel construction of KGGU facilities for farm input storage and distribution. KGGCU presently has only tenuous links with the district-based co-operatives, and it operates through private traders (para 5.02). The establishment of district level wholesale KGGCU units would stimulate co-operative activity and reduce transport costs to the primaries. District store construction is already KGGCU policy, and project finance for construction of suitable storage by district cooperatives for KGGCU storage, would advance the timing of the development.

7.04 Store Construction Costs. During project formulation, it was possible only to clear the principle of district storage with the DEC's and with the regional offices of NCPB and KGGCU; final agreement on specifications would need to be reached with their respective headquarters. Accordingly, a nominal provision of K£150 000 has been made for constructions, based on an estimated total of 1 875 m² of storage space at K£80 per m². This amount has been included in the total project credit requirements (end Table 2, and para. 7.07).

Crop Marketing Credit

7.05 Co-operative Bank of Kenya. To provide the crop finance called for in the project area pilot co-operative marketing development (Annex 5), the project would establish a Revolving Credit Fund (RCF) within CBK. Qualifying societies would be able to draw down a crop purchase advance of up to KE2 000. On delivery of the crop to NCPB, generally at weekly intervals, the delivery notes would be paid directly to CBK and a society would then be permitted to draw any balance due, together with a further advance for the following week's transaction. The risk in the system would thus be limited to the total of the 'cash floats' outstanding at any one time, i.e. an estimated KE100 000 at full development. However given the proposed level of loan appraisal, careful group selection and regular supervision, this risk would be acceptable.

7.06 RCF would also need to cope with the lack of NCPB liquidity and the consequent delays in payment for crop. Calculations of RCF size at any one time are provisional; for purposes of project formulation it has been assumed that the normal period of delay in NCPB settlements would be four weeks. Once the co-operative had delivered its crop to NCPB, and the delivery note made over to CBK, the co-operative's account would be credited in full with the value of the delivery. NCPB would stand as an RCF debtor, until it paid for the crop received. At present, the producers throughout Kenya carry the cost of the NCPB delays in payment, i.e., they are the source of marketing credit. Within the project area, this cost would be transferred to RCF for all co-operative transactions.

7.07 CBK project area services, at present confined to the Mombasa office, would be expanded by the provision of a mobile unit which would tour the districts throughout the crop season. The annual operating costs, estimated at KE17 700 have been charged to RCF (End Table 1). Total RCF cumulative capital requirement including provision for storage facility loans (para. 7.04) is estimated at KE600 000 (End Table 2).

7.08 While the intensive supervision would reduce crop marketing credit risks to an acceptable level, the development costs of the system would exceed those which CBK would undertake in the normal course of its business. RCF would be administered therefore on an agency basis, i.e. RCF would not constitute a part of CBK capital; and Government would be requested either to a) permit an interest spread on RCF transactions which would cover CBK's operating costs or b) to permit CBK to charge its full operating costs to FCF in lieu of an interest spread.

KKOP13

KENYA

Kwale and Kilifi District Development Projects

Co-operative Bank of Kenya

Incremental Technical Services

(KShs'000)

Category	Item code	Unit	Unit cost	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local Costs	For. Exch.	Taxes, duties
				No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%) Amount
I Capital												
A. Buildings & civil works												
B. Vehicles and plant 1/												
1. Mobile bank (4x4 Rover)		no.	30.00	1	30.00		.00		.00		.00	
Total					30.00		.00		.00		30.00	
of which Local content					12.00		.00		.00		12.00	
Foreign content					18.00		.00		.00		18.00	
C. Equipment												
TOTAL CAPITAL COSTS					30.00		.00		.00		30.00	
II Operating costs												
A. Salaries and allowances 2/												
1. Driver and assistant	p.a.	1.20	2	2.40	2	2.40	2	2.40	2	2.40	10	12.00
2. Allowances 3/	p.a.	5.00	1	5.00	1	5.00	1	5.00	1	5.00	5	25.00
3. Escort costs 4/	p.a.	5.00	1	5.00	1	5.00	1	5.00	1	5.00	5	25.00
Total					12.40		12.40		12.40		62.00	
of which Local content					7.90		7.90		7.90		39.50	
Foreign content					.50		.50		.50		2.50	
B. Vehicle operating costs 5/												
1. Mobile bank (4x4 Rover)	20000	3.82	1	3.82	1	3.82	1	3.82	1	3.82	5	19.10
Total					3.82		3.82		3.82		19.10	
of which Local content					2.56		2.56		2.56		12.80	
Foreign content					1.26		1.26		1.26		6.30	
C. General services												
1. Office costs 6/	p.a.	1.50	1	1.50	1	1.50	1	1.50	1	1.50	5	7.50
Total					1.50		1.50		1.50		7.50	
of which Local content					1.28		1.28		1.28		6.36	
Foreign content					.23		.23		.23		1.13	
TOTAL OPERATING COSTS					17.72		17.72		17.72		88.60	
III Training costs												
TOTAL CBK COSTS					47.72		17.72		17.72		118.60	

NOTE: Small rounding errors arise due to the use of units of KShs'000.

- Sources: 1/ Provides for a fully-equipped unit, insured to complete insurance specifications
 2/ Assumes banking personnel provided from existing establishments; drivers are incremental
 3/ Lump sum to cover field allowances
 4/ Provides for Kenya Police escort to accompany vehicle and for Administration Police presence at banking stations
 5/ Table 5, Annex 9
 6/ Includes incremental office costs and insurances

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

COOPERATIVE BANK OF KENYA : CROP MARKETING PROGRAMME

REVOLVING CREDIT FUND : CASH FLOW PROJECTIONS
(K£ '000's)

	1	2	3	4	5	6	7	8	9	10	11	12	Total
Source of Funds													
1. GOK/IFADs/	300.0	150.0	150.0	-	-	-	-	-	-	-	-	-	600.0
2. Loan & Interest repayments	-	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	150.0
(a) Long term loan repayments ^{b/}	-	100.0	200.0	400.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	4 700.0
(b) Seasonal loan repayments ^{c/}	19.5	19.5	17.6	15.6	13.7	11.7	9.8	7.8	5.9	3.9	2.0	-	127.0
(c) Long term interest payments	14.0	28.0	56.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	728.0
(d) Seasonal loan interest payments	33.5	312.5	438.6	500.6	598.7	596.7	594.8	592.8	590.9	588.9	587.0	570.0	6305.0
sub-total	(5.7)	(6.4)	(12.8)	(23.5)	(23.5)	(23.5)	(23.5)	(23.5)	(23.5)	(23.5)	(23.5)	(23.5)	(236.4)
less net default ^{d/}	327.8	306.1	425.8	477.1	575.2	573.2	571.3	569.3	567.4	565.4	563.5	546.5	6068.6
sub-total	-	30.1	118.5	127.6	87.5	144.5	200.0	253.6	305.2	354.9	402.6	448.4	2472.4
Year end balance b/f	327.8	336.2	544.3	604.7	662.2	717.7	771.3	822.9	872.6	920.3	966.1	994.9	8541.0
Total	47.9	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.6	17.7	17.7	242.4
Use of Funds													
1. CBK Incremental Costs	150.0	-	-	-	-	-	-	-	-	-	-	-	150.0
2. Long term loans	100.0	200.0	400.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	5200.0
3. Short term loans	297.7	217.7	417.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	5592.4
Total (1+2+3)	30.1	118.5	127.6	87.0	144.5	200.0	253.6	305.2	354.9	402.6	448.4	-	2472.4
Cumulative Year end Balance													

^{a/} K£600 000 loan to be administered on an agency basis by CBK.

^{b/} K£150 000 in loans to cooperatives for construction of stores for rental to KGGU and NCCPB, 10 yr loans at 13% p.a with 1 yr period of grace on repayment of principal

^{c/} Crop buying advances to participating cooperatives; seasonal loans at 10% p.a. Assumed that within a year balances would

earn equivalent annual rate of interest on commercial/GOK Treasury Deposit.

^{d/} Notional net default rate of 5% on seasonal crop purchase loans. Long term storage loans secured by rentals.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSPROJECT MANAGEMENT AND ORGANIZATION

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KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSPROJECT MANAGEMENT AND ORGANIZATIONI. BACKGROUND

1.01. The objectives of the preparatory phase, the Kwale-Kilifi Development Project (K-KDP), to the proposed development were:

- to strengthen the institutional capacity of the district authorities in the planning and execution of rural development projects;
- to prepare a first phase programme for each district;
- to begin agricultural activities which require a long lead time, e.g., nurseries; and
- to test potential developments through appropriate pilot programmes.

1.02 It was intended that K-KDP would be managed at provincial level by MPND (then Ministry of Economic Planning and Development) and administered in the districts by District Development Officers (DDO) and by the district officials of the sectoral Ministries, principally the District Agricultural Officers (DAO).

1.03 This organization was, and remains, basically flawed. First, by including a level of provincial management, it introduced a division of responsibilities which was not envisaged in the District Focus Policy (DFP)^{1/}. Responsibility for DFP implementation lies solely with the District Development Committee (DDC), a policy-making body of which the District Commissioner is both chairman and, through his District Development Officer (DDO), chief executive. To compound this structural weakness, it failed to establish the relationship of the provincial level coordinator, a Ministry of Planning and National Development official, with the DDO; nor did it define their respective responsibilities. When district coordinators were appointed, they were minor officials in the District Agricultural Department, not in the office of DDO. Without a clear definition of duties, contact between the coordinator and DDO has been tenuous; in Kilifi District, it has broken down with mutual recrimination, while in Kwale misunderstandings have delayed implementation. As a result, no progress has been made in the primary objective of strengthening district planning capacity. Second, the lack of a disciplined organizational structure is reflected in the absence of reporting procedures. What reports are made are qualitative and lack any

firm data on the results of the pilot programmes, e.g., area cultivated, survival rate of seedlings planted. No systematic monitoring of activities has been provided for or carried out. Thus, while a number of developments appear to have proved popular with farmers, there is little hard evidence of their effect, cost, or basis for replicability. Finally, failure to detail responsibility for action has meant that key initiatives such as the pilot development of cooperative marketing, input supply and NCPB district storage, proposed in the K-KDP preparation report^{2/}, have not been implemented.

1.04. It is important therefore to resolve the present problems of coordination and management prior to implementation of the proposed projects, and Government may wish to take advantage of the remaining period of K-KDP to establish a satisfactory project organization. The proposals set out in the following sections present a standardized structure for both districts and have been specifically designed not only to meet the immediate needs of the project but also to serve the broader requirements of the District Focus Policy.

II. PROPOSED DEVELOPMENT

A. Policy Formulation and Coordination

2.01 The policy-making body for a district-level project is already in place in the District Development Committee (para 1.03). DDC has the necessary authority to ensure that participating agencies carry out their agreed commitments and its technical committee, the District Executive Committee (DEC), composed of the senior officers of all sectoral ministries in the districts, would provide the direction required for orderly implementation. However, to give initial impetus to proposed activities, a Project Steering Committee (PSC) composed of district officials of participating ministries would be established as a sub-committee of DEC. DDC and DEC are legally constituted and operating in both districts. No impediment to the power of DEC to establish a Project Steering Committee is foreseen. It would be convened quarterly and at such other times as deemed necessary by the District Commissioner, to consider the report of the District Project Coordinator (para 2.02), and its principal responsibilities would be:

- (a) to coordinate project activities throughout the district;
- (b) to scrutinize and approve on technical grounds all developments;
- (c) to ensure that project developments complied with government policy for their respective sectors;
- (d) to approve annual project work plans; and
- (e) to scrutinize and recommend for DDC approval the annual project budget (para 2.11 et seq.).

^{2/} Kwale-Kilifi Rural Development Project - Min. Agric., Sept. 1983.

B. Project Organization and Management

2.02 In accordance with established practice, the projects would be implemented by participating ministries through existing financial and administrative mechanisms rather than through a separate executive, which would duplicate present services. The principal task of management therefore, would be to ensure the coordination of project activities. While the mechanism for this requirement already exists (para 1.03) in the office of the District Development Officer (DDO), it has yet to acquire the professional capacity necessary for rapid implementation. For the first phase development, therefore, MPND would appoint a senior officer as District Project Coordinator (DPC) to each district who would be directly responsible to the District Commissioner for the project administration and who would act as the executive of the PSC. His duties would not call for a substantial executive capacity and he would work through the office of the DDO, the facilities of which would be strengthened under the project. However, to ensure the effective and timely preparation of reimbursement claims, he would be provided with the services of an Accounts Assistant. In this manner, the project would aim to create a competent structure within the district administration for the planning and execution of a second phase development. A chart of the proposed Project Organization is attached as Chart I.

Management Studies and Technical Assistance

2.03 In discussions with MPND as the sponsoring agency of the project, it was agreed that three aspects of the development constraints outlined in Section I of this Annex would benefit from more detailed study under MPND direction:

- (a) District Development Management. Although a principal objective under K-KDP, little progress had been made in strengthening the professional capacity of the DDO's office or in establishing a sound institutional linkage between MPND and the Provincial Administration (para. 1.03). The pilot phase had failed to develop a well defined organization and none of the essential features of sound administration, namely effective planning and budgeting, clear-cut job specifications and responsibilities, timely processing of financial documentation, and accurate reporting and monitoring, were in place at the time of project formulation. To assist in the establishment of a satisfactory and replicable management structure, the Project would undertake a detailed review of district development organization, of DFP financial and administrative procedures in general and of project implementation in particular. The revision would be carried out by one or more specialist management consultants who would recommend and agree with Government on the required organization and management practices. The consultants would be charged with training of DPC and DDO in the administrative and financial routines. This training would be 'sandwiched' with formal development administration training at, or conducted by, an international institute. EDI both at its Headquarters and through regional courses, conducted at the Institute for Development Studies,

Nairobi, and other venues, offers a formal curriculum in programme preparation and the administration of public resources which is best adapted to project requirements. A total 14 man-months of studies-cum-training is proposed.

- (b) Base Line Survey. MPND and MALD are both engaged in unrelated household and farm surveys in both districts. There is a clear need to collate and update existing data which may be incorporated into a baseline survey of the project area target group. The survey would assist in the planning of project activities and provide the basis for an evaluation of their impact upon the beneficiaries. The project would fund the incremental costs of the survey which would be carried out by CBS. Provision would also be made for the regular periodic assessment of project initiatives to establish the basis for replication and to ensure that the thrust of project development was directed to the needs of the farmer rather than to the requirements of technicians.
- (c) Marketing of Perishable Farm Produce. The outstanding issue raised by K-KDP initiatives but unaddressed in the proposed development, is that of the marketing of perishable farm produce and, in particular, the rationalization of the present marketing chain for fresh fruit and the processing or sale of large seasonal surpluses. A 12 man-month study would be carried out by specialized management consultants under MPND.

Management Costs

2.04 In accordance with the proposed budgeting procedures (para 2.16 below), component financing would be channelled through the responsible agency, i.e., project coordination costs through MPND budget and support for DDO through that of the Office of the President (OP).

2.05 Project Coordination. Funds would be provided for office accommodation, transport, operating costs, and for specialist data processing and office equipment. The requirements for each district have been individually assessed and full account taken of present and proposed facilities. However, Government may wish to utilize unexpired funding under the existing K-KDP (IFAD Loan K-25) to cut down the lead time of the establishment of the proposed structure. In this event, the estimated costs (para.2.08) would be proportionately reduced.

2.06 Strengthening of the Office of the DDO. In preparing incremental DDO costings, full account has been taken of the present (1986/87) recurrent budget allocation and it has been assumed that this level would be maintained in real terms throughout the disbursement period. The project would fund incremental transport, equipment and operating costs. Again, in the event of the financing of any capital item under available K-KDP funds, a corresponding adjustment would be made to the first phase cost estimates.

2.07 District Focus Policy: Training. Project training proposals, detailed in Annex 8, cover both project specific training and support for

the broader aspects of training for implementation of DFP.^{3/} Training costs for participating ministries have been included in the relevant incremental technical services costs; all other DFP training costs have been allocated to the districts under the OP budget allocations.

2.08 For ease of presentation, all cost categories budgeted under MPND and Office of the President have been presented under this Annex. Consolidated base-line cost estimates for project co-ordination amount of KSh 283 800; for MPND professional training and management studies to KSh 186 000; for District Development Office support to KSh 97 300; and for DFP training to KSh 273 400. Detailed and phased cost estimates are set out in End Tables 1 to 7 of this Annex and are summarized in Table 1.

^{3/} The framework for such training is given in "District Focus for Rural Development: National Training Strategy for District Focus": Office of the President March 1985. Project proposals adhere closely to the guidelines set out in this document.

KENYA

KWALE & KILIFI DISTRICT DEVELOPMENT PROJECTS

PROJECT MANAGEMENT AND ORGANIZATION

Table 1: Project Co-ordination: DDO Support; DFP Training; MPND Training and Studies

Summary Costs
(KSh'000's)

	Kwale		District		Kilifi		District		Consolidated	
	Local	F.E	F.E	Total	Local	Total	F.E	Total	Local	F.E
I. MPND: Project Co-ordination Costs										
A. Capital	13.6	10.8	24.4		17.4	11.6	29.0		30.9	22.5
B. Recurrent	105.5	9.5	115.0		105.8	9.6	115.4		211.4	19.0
Total	119.1	20.3	139.4		123.2	21.2	144.4		242.3	41.5
II. MPND: Professional Training and Studies										
A. Training	-	-	-		-	-	-		-	54.0
B. Studies	-	-	-		-	-	-		64.8	67.2
Total	-	-	-		-	-	-		64.8	121.2
III. OP: DDO Costs and DFP Training										
A. DDO Costs	29.9	16.0	45.9		34.5	16.9	51.4		64.4	32.9
B. DFP Training	102.1	26.7	128.8		114.5	30.1	144.6		2165.6	56.8
Total	132.0	42.7	174.7		149.0	47.0	196.0		281.0	89.7

Programming and Budgeting

2.09 In accordance with Treasury regulations, outline costs for the DDO support components, and for DFP training, based on updated appraisal cost estimates, would be included in the Forward Budget and detailed submissions included in the Annex to the District Development Plan. Project Coordination and studies and technical assistance costs would be provided for in MPND (Rural Planning) estimates. In discussions with OP and MPND, the importance of providing for Project Year 1 (1987/88) costs in the 1987/88 FB was emphasised, and it has been assumed that notional figures for this purpose has been so submitted. Thereafter budgetary provision would be made in accordance with the prevailing Treasury regulations.

C. Implementation

Smallholder Crop and Livestock Production

2.10 The District Agricultural Officer (DAO) would have direct responsibility for the promotion of project-sponsored developments and technical services, which would be fully integrated into the overall pattern of agricultural and livestock development within the district. He would also coordinate and encourage the development of input supply, marketing and credit services required in support of his planned production programmes. Project proposals emphasise the need for the development of production packages which would take account of the full range of services which the smallholder may require to improve production; the success of such a policy would depend directly upon the full involvement of the DAO in its implementation.

Cooperative Services

2.11 The District Cooperative Officers (DCO) would be responsible for the key peripheral service for agricultural production, namely the expansion of village level crop marketing. He would work closely with the Cooperative Bank of Kenya (CBK) in ensuring the regular provision of crop marketing credit throughout the marketing season; and he would coordinate the activities of the Kenya Grain Growers Cooperative Union (KGCCU) and primary societies in ensuring the availability of farm inputs.

Secondary Crop Marketing Services

2.12 Consequent upon its appointment of cooperatives as sole buying agents for scheduled crops, the National Cereals and Produce Board (NCPB) would operate transit stores in both districts. Directly managed by NCPB they would be rented from cooperative agencies (Annex 6).

Wholesale Input Supply

2.13 KGGCU would establish a central branch in each district both for direct retail and for wholesale supply to member primary cooperatives. It would operate on a cash basis, credit facilities would be available to approved societies through CBK. (Annex 6).

Credit

2.14 Project credit facilities would be channeled through CBK. A Revolving Credit Fund (RCF) for crop purchase would be established and operated by CBK on an agency basis. Until the turnover justified the establishment of a district branch, CBK would operate through a mobile unit. (Annex 6).

Training

2.15 The Government Training Institute (GTI) Mombasa would have prime responsibility for the training programme. It would use the services of the Rural Services Coordination and Training Unit (RSCTU) of MFND to organize and coordinate the training within the districts. It would conduct courses through its own facilities, or in collaboration with other district, provincial or National institutions.

D. Accounts, Audit and Programming

General

2.16 Project costs for each district would be included in the 1987/88 Forward Budget (FB) in accordance with Treasury and MPND^{4/} provisions. FB is the formal link between planning and finance and it is revised annually for the ensuing three year period. No expenditure, recurrent or development, may be considered for inclusion in the draft annual estimates^{5/} unless provision has been previously made for it in FB expenditure ceilings. At the time of project formulation, definitive provision had yet to be made for the 1987/88 FB submission due 30 August 1986. Formulation costs have therefore been based upon indicative cost ceilings which remain to be confirmed by participating ministries prior to project appraisal.

2.17 At time of project formulation, no firm decision had been made upon the budgetary mechanism for the proposed project; the final format would depend upon the size and number of its components. For formulation purposes, therefore, it has been assumed that costs would be allocated individually to each participating Ministry and would be identified in the national accounts by a development vote head and district sub-head. MFND

4/ MPND 'Guidelines for the Preparation of the 1986/87 District Annexes' (EPD/SC/237/016 dated 14 April 1986) sets out minimum standards of preparation

5/ Treasury Circular No. 3 of 18 February 1986

(Head 210) and MALD (Head 241) already incur expenditure under the current IFAD-financed pilot phase (K-KPD) and would retain these account identifications.

Accounting Procedures

2.18 Under the financial administration introduced under the District Focus Policy, payment of bills and accounting for expenditure by all sectoral ministries in the district is handled by the District Accountant (DA). At the end of the month the DA prepares a statement of expenditure, commitments, and balances each AIE^{6/} for submission to the Provincial Accountant. He in turn prepares a machine ledger statement from that documentation which he forwards to government with a copy to the Accounts Controller of the ministry concerned. Following scrutiny by each Ministry, the statements are returned by the Accounts Controller to DA who is required to reconcile them with the vote book (or ledger), details of individual AIE holders. The DA then submits a certificate of reconciliation with details of any discrepancies to the Accounts Controller. The procedure ensures that not only is control maintained over expenditure, but also that it is subject to verification and internal audit prior to the preparation of the national accounts. The procedure is important for control of project expenditure, reimbursement claims and audit of project accounts.

2.19 Project Expenditure and Accounts. Project accounts would be prepared by each DPC from the machine ledger statements of the participating ministries which would constitute the Project Ledger. The accounts would be forwarded quarterly to MPND which would submit a consolidated biannual cost report to IFAD (para 2.19). The provision of accountancy assistance to DPC (para 2.02) would ensure that there was adequate capacity at district level for the preparation of the necessary documentation.

2.20 Reimbursement. Government has experienced considerable past difficulty in claiming reimbursement of authorized expenditure from donors. However, IFAD has agreed (Siaya Farmer Group and Community Support Project : BGI-KE) that copies of the vouchers submitted to province and included in the machine ledger statements would provide the necessary and sufficient basis for reimbursement claims. Reimbursement procedures established for the Siaya project would be adequate for the Kwale and Kilifi developments.

2.21 Audit. The project accounts would be made up of abstracts from the reconciled machine ledger statements of each participating ministry and would be readily identifiable from the designated vote heads (para 2.10). They would be subject to statutory audit by the office of the Auditor General and would be included in the Appropriation Accounts (national

6/ The senior officers of each Ministry or department in the district are given an Authority to Incur Expenditure (AIE) which details the amount of expenditure by cost category which they may incur for the following six months.

audited accounts) which form part of the Auditor General's annual report to Parliament. The Appropriation Accounts are rigorously prepared and would meet IFAD requirements, but they would be available only some twelve to fourteen months in arrears. However, as the ledger statement from which the Appropriation Accounts are prepared is reconciled monthly, the delay would be acceptable to IFAD. The External Aid Office of the Treasury would certify that the previously submitted unaudited figures were in agreement with the Appropriation Accounts.

Annual Work Programme

2.22 The preparation of Annual Work Programmes (AWP) would provide the basis for project implementation. AWP would be prepared in conjunction with the annual budget estimates. However, in order to tie in the physical programmes and objectives to budgetary allocation, both AWP and financial estimates would require more detailed preparation than is presently the case, and would need to comply with District Focus Policy procedures.

2.23 At present, at the beginning of January, the Accounting Officer of each Ministry informs his senior officer in a district of the intended allocation of funding, identified in FB, to the district for the following financial year. The district official then informs the DDC which must submit any bid for amendment to that allocation within the district budget ceiling by 30 January. Following that date the standard procedures for the preparation of the annual draft estimates are initiated for completion by 21 March.

2.24 To comply with loan conditions, it would be necessary for the AWP and project estimates, which form an integral part of AWP, to be submitted to IFAD for comment prior to their inclusion in the draft annual estimates, i.e., by 21 March. Accordingly, the following timetable would be followed in AWP preparation:

30 October	:	District preparation of AWP and project estimates cleared by DDC and submitted to Accounting Officers of respective ministries for review.
1 December	:	Submission of AWP by DPC to IFAD for comment.
1 January	:	Accounting Officers inform district officers of allocations.
1 Jan. - 21 March	:	DPC coordinates timely submission of revised AWP and draft budget to participating Ministries and to IFAD.

2.25. Past failure to make specific and timely FB and draft annual estimates submissions, in strict accord with Treasury procedures, has resulted in unnecessary delays in the procurement of essential project goods and services. DPC would ensure the regular and timely submission of project-related estimates.

E. Financial Reports

Quarterly Reports

2.26 Each DPC would submit a quarterly financial report to MPND. It would be prepared from the separate budget heads (para 2.10) for incremental expenditure in the Project Ledger (para 2.12). The reporting format would be based on that drawn up for the IFAD-assisted NEP and would show expenditure by disbursement category for each AIE-holder (sub-head); it would give the budget allocation, expenditure to the beginning of the reporting period, quarterly expenditure, total expenditure and balance. A draft format is set out on End Table 6.

Six-monthly Reports

2.27 MPND would submit a six-monthly financial report as an integral part of project progress reports. It would consolidate the quarterly district financial reports prepared by the DPC and would be set out in similar format. In addition and in cooperation with Treasury, MPND would compile a biannual statement of payment claims and reimbursement submissions. It would list the qualifying expenditure incurred, the claims submitted by disbursement category balances in each category and briefly detail the progress of the documentation.

Annual Reports

2.28 The annual financial report for each Project would be prepared by MPND and submitted within four months of the end of the financial year. The report format would be in a similar format to the quarterly report and would be supported by a copy of the Project Ledger. It would be accompanied by a detailed and reconciled statement of reimbursement and payment claims for the period under review.

F. Procurement

General

2.29 The procurement of government goods and services is controlled by the regulatory framework of the Government of Kenya Suppliers' Manual; model Departmental Stores Regulations; and by Financial Orders as revised from time to time by Treasury. In addition, the Treasury issues supplementary guidelines and instructions in the form of Treasury Circulars. As the principal documentation has not been updated for a number of years, current procedures are covered by the Treasury Circulars. At the time of the mission, a further circular on procurement was in course of preparation and the detail set out in this Section is subject to any amendment contained in that document.

2.30 Government procurement policy is through open competition by prospective suppliers.^{7/} Authority for procurement is dependent upon the cost of the purchase^{8/} viz:

- stores and services not exceeding KSh 1 000 may be procured without written quotations or agreement;
- stores and services worth between KSh 1 000 and KSh 4 000 may be procured without reference to a tender board provided that they are procured through competitive quotation and that the quotations are adjudicated by a departmental committee of at least three members;
- vehicle repairs or spares up to KSh 4 000 may be procured without competitive quotation if carried out or supplied by the manufacturer's agent;
- stores and services costing between KSh 4 000 and KSh 20 000 may be purchased through competitive quotation adjudicated by a District Tender Board (DTB) or Ministerial Tender Board (MTB);;
- single items worth more than KSh 60 000 are passed by DTB/MTB to the Central Tender Board for adjudication.

2.31 Tenders for supply are advertised in the Official Gazette and in at least one other national paper; specifications for the goods are comprehensive but broad enough to attract suitable alternatives. A period of four to six weeks, which may be extended to accommodate overseas bids, is usually allowed for tender submission.

Project Procurement

2.32 The principle categories of procurement would be vehicles, consisting of 2 trucks, 5 four-wheel drive vehicles and cars, and 16 motorcycles; and about K£ 100 000 in miscellaneous items of equipment and supplies. As incremental project funding would be budgetted under the separate vote heads of the several participating ministries, each would undertake its own procurement. Acceptable procedures for procurement have been reached in on-going IFAD-assisted projects in Kenya, and, where applicable, they would be followed. Where bids exceeded K£ 50 000, they would be procured through International Competitive bidding procedures acceptable to IFAD. For the procurement of vehicles, present regulations which require the in-country assembly of four-wheel drive vehicles and pick-up trucks would not apply, and relaxation of the relevant Treasury orders would be requested.

7/ Treasury Circular No.1, Kenya Government Tendering System, 1979

8/ District Tender Boards and Procurement Procedures for Rural Development: sub Annex 1A

2.33 In view of their small size and scattered locations, contracts for minor works valued at K£ 54 600, would be awarded on the basis of local competitive bidding in accordance with District Tender Board procedures which are acceptable to IFAD.

G. Monitoring and Evaluation

2.34 The absence of regular reporting and monitoring routines under the pilot phase programme (para 1.03) emphasises the need for the immediate institution of an effective system for monitoring project activities. This would be established by a reporting framework for each participating ministry or agency of annual work plans, budget estimates, financial reporting and by technical reporting and audit of physical progress as against planned and budgeted targets. The report formats and reporting procedures would be drawn up as a working manual by the specialised consultants engaged to undertake the development management study (para. 2.03). DPC would be responsible to the District Commissioner and DOC for the overall implementation of the monitoring programme, and for the regular and timely submission of financial and progress reports by participating agencies.

2.35 To secure impartial evaluation of the effects of project initiatives, it would be preferable for the regular review to be carried out by an agency not directly engaged in project implementation. CBS, which would carry out the initial baseline survey (para 2.03), has both the technical competence and experience to undertake this task. CBS would be able to call upon substantial evaluation expertise within MALD and the academic institutions. Continuity, however, is critical to good evaluation and this would be secured by using CBS as the lead agency. The costs of evaluation have been merged with those of the base line survey.

KSTS

KENYA

Mwale and Kilifi District Development Projects

Ministry of Planning & National Development - GOK Treasury Account Codes 320 and 310

ANNEX 7
Table 1

Summary of Total Incremental Technical Services

(Kpounds'000)

Category	Item	Unit	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For.Exch.	Taxes,duties
	code	Unit	cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%) Amount	(%) Amount
I Capital													
A. Buildings & civil works 1/													
	1. Offices and store	400	110m ²	5.09	2 10.18	.00	.00	.00	.00	2 10.18	70	7.13	18 1.83 12 1.22
	Total				10.18	.00	.00	.00	.00	10.18	70	7.13	18 1.83 12 1.22
	of which Local content				8.35	.00	.00	.00	.00	8.35			
	Foreign content				1.83	.00	.00	.00	.00	1.83			
B. Vehicles and plant 2/													
	1. Short-wheel base (4x4)	200	mc.	8.20	2 16.40	.00	.00	.00	.00	2 16.40	20	3.28	80 13.12 0 .00
	Total				16.40	.00	.00	.00	.00	16.40	20	3.28	80 13.12 .00
	of which Local content				3.28	.00	.00	.00	.00	3.28			
	Foreign content				13.12	.00	.00	.00	.00	13.12			
C. Equipment 3/													
	1. Office equipment	220	mc.	1.27	4 5.08	.00	.00	.00	.00	4 5.08	54	2.74	19 .97 27 1.37
	2. Photocopier	220	mc.	1.90	2 3.80	.00	.00	.00	.00	2 3.80	32	1.22	37 1.41 31 1.18
	3. Micro-computer system	220	mc.	8.30	2 16.60	.00	.00	.00	.00	2 16.60	27	4.48	28 4.65 45 7.47
	4. Air conditioner	220	mc.	.65	2 1.30	.00	.00	.00	.00	2 1.30	32	.42	37 .48 31 .40
	Total				26.78	.00	.00	.00	.00	26.78	86	7.50	10.42
	of which Local content				19.28	.00	.00	.00	.00	19.28			
	Foreign content				7.50	.00	.00	.00	.00	7.50			
	TOTAL CAPITAL COSTS				53.36	.00	.00	.00	.00	53.36	19.28	22.45	11.64
II Operating costs													
A. Salaries and allowances 4/													
	1. Accounts assistant	000	G	1.65	2 3.30	2 3.30	2 3.30	2 3.30	2 3.30	10 16.50	90	14.85	0 .00 10 1.65
	2. Housing allowance	050	L	1.24	14 17.36	14 17.36	14 17.36	14 17.36	14 17.36	70 86.30	90	78.12	0 .00 10 8.68
	3. Housing allowance	050	G	.58	12 6.96	12 6.96	12 6.96	12 6.96	12 6.96	60 34.92	90	31.43	0 .00 10 3.49
	4. Nights out	110	L	.30	4 1.20	4 1.20	4 1.20	4 1.20	4 1.20	20 8.00	100	8.00	0 .00 0 .00
	5. Field allowance	110	L	.11	4 .44	4 .44	4 .44	4 .44	4 .44	20 2.20	100	2.20	0 .00 0 .00
	Total				29.30	29.30	29.30	29.30	29.30	146.48	132.60	.00	13.82
	of which Local content				29.30	29.30	29.30	29.30	29.30	146.48			
	Foreign content				.00	.00	.00	.00	.00	.00			
B. Vehicle operating costs 2/													
	1. Short-wheel base (4x4)	100	25000	3.85	2 7.70	2 7.70	2 7.70	2 7.70	2 7.70	10 38.50	35	13.48	33 12.71 32 12.32
	Total				7.70	7.70	7.70	7.70	7.70	38.50	13.48	12.71	12.32
	of which Local content				5.16	5.16	5.16	5.16	5.16	25.80			
	Foreign content				2.54	2.54	2.54	2.54	2.54	12.71			
C. General services 5/													
	1. Posts & telegraph	120	p.a.	.30	2 .60	2 .60	2 .60	2 .60	2 .60	10 3.00	73	2.19	12 .36 15 .45
	2. Telephone	121	p.a.	.50	2 1.00	2 1.00	2 1.00	2 1.00	2 1.00	10 5.00	73	3.65	12 .60 15 .75
	3. Utilities	140	p.a.	.50	2 1.00	2 1.00	2 1.00	2 1.00	2 1.00	10 5.00	73	3.65	12 .60 15 .75
	4. Publishing & printing	171	p.a.	.30	2 .60	2 .60	2 .60	2 .60	2 .60	10 3.00	70	2.10	12 .36 18 .54
	5. Stationery	174	p.a.	1.50	2 3.00	2 3.00	2 3.00	2 3.00	2 3.00	10 15.00	70	10.50	12 1.80 18 2.70
	6. Maintenance:												
	-equipment	250	£ pa	.10	2 .68	2 .68	2 .68	2 .68	2 .68	13.39	60	8.03	18 2.41 22 2.95
	-buildings	260	£ pa	.02	.20	.20	.20	.20	.20	1.02	60	.61	18 .18 22 .22
	Total				9.08	9.08	9.08	9.08	9.08	45.41	30.73	8.31	8.36
	of which Local content				7.82	7.82	7.82	7.82	7.82	39.09			
	Foreign content				1.26	1.26	1.26	1.26	1.26	6.31			
	TOTAL OPERATING COSTS				46.08	46.08	46.08	46.08	46.08	230.39	176.87	19.02	34.50
III Training costs													
A. Training courses 6/													
	TOTAL MINISTRY COSTS - Mwale District				99.44	46.08	46.08	46.08	46.08	283.75	196.13	41.47	46.15

NOTE: Small rounding errors arise due to the use of units of Kpounds'000.

Sources: 1/ Tables 2 and 3 consolidated

Kwale District Development Project

Ministry of Planning & National Development - 604 Treasury Account Code 520

Incremental Technical Services

ANNEX 7
Table 2

		(Kfounds'000)																				
Category	Item code	Unit	Year 1		Year 2		Year 3		Year 4		Year 5		Totals		Local Costs		For Each.		Taxes, duties			
			No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	(%) Amount	(%) Amount	(%) Amount	(%) Amount				
I Capital																						
A. Buildings & civil works 1/																						
1. Office extensions		400	30x2	2.78	1	2.78		.00		.00		.00		.00	1	2.78	70	1.94	18	.50	12	.33
Total				2.78		.00		.00		.00		.00		2.78		1.94		.50				.33
of which Local content				2.28		.00		.00		.00		.00		2.28								
Foreign content				.50		.00		.00		.00		.00		.50								
B. Vehicles and plant 2/																						
1. Short-wheel base (4x4)		200	no.	8.20	1	8.20		.00		.00		.00		.00	1	8.20	20	1.64	80	6.56	0	.00
Total				8.20		.00		.00		.00		.00		8.20		1.64		6.56				.00
of which Local content				1.64		.00		.00		.00		.00		1.64								
Foreign content				6.56		.00		.00		.00		.00		6.56								
C. Equipment 3/																						
1. Office equipment		220	mod.	1.27	2	2.54		.00		.00		.00		.00	2	2.54	54	1.37	19	.48	27	.67
2. Photocopier		220	no.	1.90	1	1.90		.00		.00		.00		.00	1	1.90	32	.61	37	.70	31	.59
3. Micro-computer system		220	no.	8.30	1	8.30		.00		.00		.00		.00	1	8.30	27	2.24	28	2.32	45	3.74
4. Air conditioner		220	no.	.65	1	.65		.00		.00		.00		.00	1	.65	32	.21	37	.24	31	.20
Total				13.39		.00		.00		.00		.00		13.39		4.43		3.75				5.21
of which Local content				9.64		.00		.00		.00		.00		9.64								
Foreign content				3.75		.00		.00		.00		.00		3.75								
TOTAL CAPITAL COSTS				24.37		.00		.00		.00		.00		24.37		8.01		10.81				5.54
II Operating costs																						
A. Salaries and allowances 4/																						
1. Accounts assistant		000	G	1.65	1	1.65	1	1.65	1	1.65	1	1.65	5	8.25	90	7.43	0	.00	10	.83		
2. Housing allowance		050	L	1.24	7	8.68	7	8.68	7	8.68	7	8.68	35	43.40	90	39.06	0	.00	10	4.34		
3. Housing allowance		050	G	.56	6	3.49	6	3.49	6	3.49	6	3.49	30	17.46	90	15.71	0	.00	10	1.75		
4. Nights out		110	L	.30	2	.60	2	.60	2	.60	2	.60	10	3.00	100	3.00	0	.00	0	.00		
5. Field allowance		110	L	.11	2	.22	2	.22	2	.22	2	.22	10	1.13	100	1.13	0	.00	0	.00		
Total				14.65		14.65		14.65		14.65		14.65		73.24		66.53		.00				6.91
of which Local content				14.65		14.65		14.65		14.65		14.65		73.24								
Foreign content				.00		.00		.00		.00		.00		.00								
B. Vehicle operating costs 2/																						
1. Short-wheel base (4x4)		100	25000	3.85	1	3.85	1	3.85	1	3.85	1	3.85	5	19.25	35	6.74	33	6.25	32	6.16		
Total				3.85		3.85		3.85		3.85		3.85		19.25		6.74		6.25				6.16
of which Local content				2.58		2.58		2.58		2.58		2.58		12.90								
Foreign content				1.27		1.27		1.27		1.27		1.27		6.35								
C. General services 5/																						
1. Posts & telegraph		120	p.a.	.30	1	.30	1	.30	1	.30	1	.30	5	1.50	73	1.10	12	.18	15	.23		
2. Telephone		121	p.a.	.50	1	.50	1	.50	1	.50	1	.50	5	2.50	73	1.83	12	.30	15	.28		
3. Utilities		140	p.a.	.50	1	.50	1	.50	1	.50	1	.50	5	2.50	73	1.83	12	.30	15	.28		
4. Publishing & printing		171	p.a.	.30	1	.30	1	.30	1	.30	1	.30	5	1.50	70	1.05	12	.18	15	.27		
5. Stationery		174	p.a.	1.50	1	1.50	1	1.50	1	1.50	1	1.50	5	7.50	70	5.25	12	.90	16	1.35		
6. Maintenance:																						
-equipment		250	\$ pa	.10	1	1.34	1	1.34	1	1.34	1	1.34	6.70	60	4.02	18	1.21	22	1.47			
-buildings		260	\$ pa	.02	1	.06	1	.06	1	.06	1	.06	.28	60	.17	18	.05	22	.06			
Total				4.49		4.49		4.49		4.49		4.49		22.47		15.23		3.12				4.13
of which Local content				3.87		3.87		3.87		3.87		3.87		19.36								
Foreign content				.62		.62		.62		.62		.62		3.12								
TOTAL OPERATING COSTS				22.99		22.99		22.99		22.99		22.99		114.96		88.30		9.47				17.20
III Training costs																						
A. Training courses 6/																						
TOTAL MINISTRY COSTS - Kwale District				47.36		22.99		22.99		22.99		22.99		139.33		96.31		20.28				22.74

NOTE: Small rounding errors arise due to the use of units of Kfounds'000.

Sources: 1/ Table 4, Annex 9

2/ Table 5, Annex 9

3/ Table 6, Annex 9

4/ Table 7, Annex 9

5/ Allocations maintained at 1986/87 Budget levels

6/ Staff training in DPP included under the DP budget

1407

KENYA

Kilifi District Development Project

Ministry of Planning & National Development - GKA Treasury Account Code 210

Incremental Technical Services

ANNEX 7
Table 3

(Kfounds'000)																				
Category	Item code	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For.	Exch.	Taxes, duties							
		Unit	Cost	Cost	Cost	Cost	Cost	Cost	Cost	(%) Amount	(%) Amount	(%) Amount	(%) Amount							
I Capital																				
A. Buildings & civil works 1/																				
1. Office and store																				
	400	86x2	7.40	1	7.40	.00	.00	.00	.00	1	7.40	70	5.18							

NOTE: Small rounding errors arise due to the use of units of Kfounds'000.

Sources: 1/ Table 4, Annex 9

2/ Table 5, Annex 9

3/ Table 6, Annex 9

4/ Table 7, Annex 9

5/ Allocations maintained at 1986/87 Budget levels/allocations

6/ Staff training in DFP included under the DP budget

AR56a

KENYA

Kwale and Kilifi District Development Projects

Office of the President - 50A Treasury Account Codes 320 and 310

Summary of Total Incremental Technical Services

ANNEX 7
Table 4

(Kfounds'000)

Category	Item	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For	Exch.	Taxes	Duties					
	code	Unit	Cost	Cost	Cost	Cost	Cost	Cost	Cost	(\$)	Amount	(\$)	Amount	(\$)	Amount				
I Capital																			
A. Buildings & civil works 1/																			
1. Offices	400	60m2	5.55	1	5.55	.00	.00	.00	.00	1	5.55	70	3.89	18	1.00	12	.67		
Total			5.55		.00	.00	.00	.00	.00	5.55	3.89		1.00		.67				
of which Local content			4.55		.00	.00	.00	.00	.00	4.55									
Foreign content			1.00		.00	.00	.00	.00	.00	1.00									
B. Vehicles and plant 2/																			
1. Long-wheel base (4x4)	210	no.	9.00	2	18.00	.00	.00	.00	.00	2	18.00	20	3.60	80	14.40	0	.00		
Total			18.00		.00	.00	.00	.00	.00	18.00	3.60		14.40		.00				
of which Local content			3.60		.00	.00	.00	.00	.00	3.60									
Foreign content			14.40		.00	.00	.00	.00	.00	14.40									
C. Equipment 3/																			
1. Office equipment	220	mod.	1.27	4	5.08	.00	.00	.00	.00	4	5.08	54	2.74	19	.97	27	1.37		
2. Photocopier	220	no.	1.90	2	3.80	.00	.00	.00	.00	2	3.80	32	1.22	37	1.41	31	1.18		
Total			8.88		.00	.00	.00	.00	.00	8.88	3.96		2.37		2.55				
of which Local content			6.51		.00	.00	.00	.00	.00	6.51									
Foreign content			2.37		.00	.00	.00	.00	.00	2.37									
TOTAL CAPITAL COSTS			32.43		.00	.00	.00	.00	.00	32.43	11.44		17.77		3.22				
II Operating costs																			
A. Salaries and allowances 4/																			
1. Nights out	110	L	.30	4	1.20	4	1.20	4	1.20	20	6.00	100	6.00	0	.00	0	.00		
2. Field allowance	110	L	.11	4	.45	4	.45	4	.45	20	2.26	100	2.26	0	.00	0	.00		
Total			1.65		1.65	1.65	1.65	1.65	1.65	8.26	8.26		.00		.00				
of which Local content			1.65		1.65	1.65	1.65	1.65	1.65	8.26									
Foreign content			.00		.00	.00	.00	.00	.00	.00									
B. Vehicle operating costs 2/																			
1. Long-wheel base (4x4)	100	20000	3.82	2	7.64	2	7.64	2	7.64	2	7.64	10	36.20	35	13.37	33	12.61	32	12.22
Total			7.64		7.64	7.64	7.64	7.64	7.64	36.20	13.37		12.61		12.22				
of which Local content			5.12		5.12	5.12	5.12	5.12	5.12	25.59									
Foreign content			2.52		2.52	2.52	2.52	2.52	2.52	10.61									
C. General services 5/																			
1. Posts & telegraph	120	p.a.	.20	2	.40	2	.40	2	.40	2	.40	10	2.00	73	1.46	12	.24	15	.30
2. Telephone	121	p.a.	.20	2	.40	2	.40	2	.40	2	.40	10	2.00	73	1.46	12	.24	15	.30
3. Utilities	140	p.a.	.50	2	1.00	2	1.00	2	1.00	2	1.00	10	5.00	70	3.50	12	.60	15	.75
4. Stationery	174	p.a.	.50	2	1.00	2	1.00	2	1.00	2	1.00	10	5.00	70	3.50	12	.60	15	.75
5. Maintenance equipment	250	% pa	.10		.89		.89		.89		.89	4.44	60	2.66	16	.80	22	.98	
Total			3.69		3.69		3.69		3.69		18.44		12.73		2.48		3.23		
of which Local content			3.19		3.19		3.19		3.19		15.96								
Foreign content			.50		.50		.50		.50		2.48								
TOTAL OPERATING COSTS			12.98		12.98		12.98		12.98		64.90		34.36		15.09		15.43		
III Training costs																			
A. Training courses 6/																			
1. District level	154	m-day	10.25	1038	10.64	1038	10.64	1038	10.64	1038	10.64	53.20	64	34.05	24	12.77	12	6.38	
2. Divisional level	154	m-day	11.85	1930	22.87	1930	22.87	1930	22.87	1930	22.87	114.35	63	72.04	20	22.87	17	19.44	
3. Locational level	154	m-day	9.80	972	9.53	972	9.53	972	9.53	972	9.53	47.63	63	30.01	20	9.53	17	8.10	
4. Sub-locational level	154	m-day	11.65	1000	11.65	1000	11.65	1000	11.65	1000	11.65	58.25	63	36.70	20	11.65	17	9.90	
Total			54.69		54.69		54.69		54.69		273.43		172.79		56.81		43.82		
of which Local content			43.32		43.32		43.32		43.32		218.61								
Foreign content			11.36		11.36		11.36		11.36		54.81								
TOTAL TRAINING COSTS			54.69		54.69		54.69		54.69		273.43		172.79		56.81		43.82		
TOTAL MINISTRY COSTS - Kilifi District			100.10		67.67		67.67		67.67		370.76		218.60		89.87		82.49		

NOTE: Small rounding errors arise due to the use of units of Kfounds'000.

Sources: 1/ Tables 5 and 6 consolidated

Kwale District Development Project
Office of the President - BOK Treasury Account Code 320
Incremental Technical Services

ANNEX 7
Table 5

(Kfounds'000)

Category	Item code	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For Each	Taxes, duties
			No.	Cost	No.	Cost	No.	Cost	No.	Cost	(\$)	Amount
I Capital												
A. Buildings & civil works												
B. Vehicles and plant 1/												
1. Long-wheel base (4x4)	210	no.	9.00	1	9.00	.00	.00	.00	.00	1	9.00	20
Total				9.00	.00	.00	.00	.00	9.00	1.80	7.20	.00
of which Local content				1.80	.00	.00	.00	.00	1.80			
Foreign content				7.20	.00	.00	.00	.00	7.20			
C. Equipment 2/												
1. Office equipment	220	mod.	1.27	2	2.54	.00	.00	.00	.00	2	2.54	54
2. Photocopier	220	no.	1.90	1	1.90	.00	.00	.00	.00	1	1.90	32
Total				4.44	.00	.00	.00	.00	4.44	1.98	1.19	1.27
of which Local content				3.25	.00	.00	.00	.00	3.25			
Foreign content				1.19	.00	.00	.00	.00	1.19			
TOTAL CAPITAL COSTS				13.44	.00	.00	.00	.00	13.44	3.78	8.35	1.27
II Operating costs												
A. Salaries and allowances 3/												
1. Nights out	110	L	.30	2	.60	2	.60	2	.60	10	3.00	100
2. Field allowance	110	L	.11	2	.23	2	.23	2	.23	10	1.13	100
Total				.83	.83	.83	.83	.83	4.13	4.13	.00	.00
of which Local content				.83	.83	.83	.83	.83	4.13			
Foreign content				.00	.00	.00	.00	.00	.00			
E. Vehicle operating costs 1/												
1. Long-wheel base (4x4)	100	20000	3.82	1	3.82	1	3.82	1	3.82	5	19.10	35
Total				3.82	3.82	3.82	3.82	3.82	19.10	6.69	6.30	6.11
of which Local content				2.56	2.56	2.56	2.56	2.56	12.80			
Foreign content				1.26	1.26	1.26	1.26	1.26	6.30			
C. General services 4/												
1. Posts & telegraph	120	p.a.	.20	1	.20	1	.20	1	.20	5	1.00	73
2. Telephone	121	p.a.	.20	1	.20	1	.20	1	.20	5	1.00	73
3. Utilities	140	p.a.	.50	1	.50	1	.50	1	.50	5	2.50	73
4. Stationery	174	p.a.	.50	1	.50	1	.50	1	.50	5	2.50	70
5. Maintenance: -equipment	250	% pa	.10	.44	.44	.44	.44	.44	2.22	60	1.33	18
Total				1.84	1.84	1.84	1.84	1.84	9.22	6.27	1.24	1.61
of which Local content				1.60	1.60	1.60	1.60	1.60	7.98			
Foreign content				.25	.25	.25	.25	.25	1.24			
TOTAL OPERATING COSTS				6.49	6.49	6.49	6.49	6.49	32.45	17.18	7.54	7.73
III Training costs												
A. Training courses 5/												
1. District level	154	a-day	10.25	462	4.74	462	4.74	462	4.74	23.68	64	15.15
1. Divisional level	154	a-day	11.85	930	11.02	930	11.02	930	11.02	55.10	63	34.71
1. Locational level	154	a-day	9.80	426	4.17	426	4.17	426	4.17	20.87	63	13.15
1. Sub-locational level	154	a-day	11.45	500	5.83	500	5.83	500	5.83	29.13	63	15.35
Total				25.76	25.76	25.76	25.76	25.76	128.78	81.37	26.70	20.71
of which Local content				20.42	20.42	20.42	20.42	20.42	102.08			
Foreign content				5.34	5.34	5.34	5.34	5.34	26.70			
TOTAL TRAINING COSTS				25.76	25.76	25.76	25.76	25.76	128.78	81.37	26.70	20.71
TOTAL MINISTRY COSTS - Kwale District				45.69	32.25	32.25	32.25	32.25	174.67	102.33	42.63	29.71

NOTE: Small rounding errors arise due to the use of units of Kfounds'000.

Sources: 1/ Table 5, Annex 9
2/ Table 6, Annex 9
3/ Table 7, Annex 9
4/ Allocations maintained at 1986/87 Budget levels
5/ Costs of training for all ministries in DFF
(see Table 8, Annex 9 for unit rates)

Category	Item code	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Totals	Local	Costs	For.Exch.	Taxes.duties
			Cost No.	Cost No.	Cost No.	Cost No.	Cost No.	Cost	(\$)	Amount	(\$)	Amount
I Capital												
A. Buildings & civil works 1/												
1. Offices	400	6662	5.55	1	5.55	.00	.00	.00	.00	1	5.55	70
Total			5.55	.00	.00	.00	.00	5.55	3.89	1.00	.67	
of which Local content			4.55	.00	.00	.00	.00	4.55				
Foreign content			1.00	.00	.00	.00	.00	1.00				
B. Vehicles and plant 2/												
1. Long-wheel base (4x4)	210	no.	9.00	1	9.00	.00	.00	.00	.00	1	9.00	20
Total			9.00	.00	.00	.00	.00	9.00	1.80	7.20	0	.00
of which Local content			1.80	.00	.00	.00	.00	1.80				
Foreign content			7.20	.00	.00	.00	.00	7.20				
C. Equipment 3/												
1. Office equipment	220	mod.	1.27	2	2.54	.00	.00	.00	.00	2	2.54	54
2. Photocopier	220	no.	1.90	1	1.90	.00	.00	.00	.00	1	1.90	32
Total			4.44	.00	.00	.00	.00	4.44	1.98	1.19	1.27	
of which Local content			3.25	.00	.00	.00	.00	3.25				
Foreign content			1.19	.00	.00	.00	.00	1.19				
TOTAL CAPITAL COSTS			19.99	.00	.00	.00	.00	19.99	7.66	9.38	1.94	
II Operating costs												
A. Salaries and allowances 4/												
1. Rights out	110	L	.30	2	.60	2	.60	2	.60	10	3.00	100
2. Field allowance	110	L	.11	2	.23	2	.23	2	.23	10	1.13	100
Total			.83	.83	.83	.83	.83	4.13	4.13	.00	.00	
of which Local content			.83	.83	.83	.83	.83	4.13				
Foreign content			.00	.00	.00	.00	.00	.00				
B. Vehicle operating costs 2/												
1. Long-wheel base (4x4)	100	20000	3.82	1	3.82	1	3.82	1	3.82	5	19.10	35
Total			3.82	3.82	3.82	3.82	3.82	19.10	6.49	6.30	32	6.11
of which Local content			2.56	2.56	2.56	2.56	2.56	12.80				
Foreign content			1.26	1.26	1.26	1.26	1.26	6.30				
C. General services 5/												
1. Posts & telegraph	120	p.a.	.20	1	.20	1	.20	1	.20	5	1.00	73
2. Telephone	121	p.a.	.20	1	.20	1	.20	1	.20	5	1.00	73
3. Utilities	140	p.a.	.50	1	.50	1	.50	1	.50	5	2.50	73
4. Stationery	174	p.a.	.50	1	.50	1	.50	1	.50	5	2.50	70
5. Maintenance - equipment	250	\$ pa	.44	.44	.44	.44	.44	.44	2.22	60	1.33	18
Total			1.84	1.84	1.84	1.84	1.84	9.22	6.37	1.24	1.61	
of which Local content			1.60	1.60	1.60	1.60	1.60	7.98				
Foreign content			.25	.25	.25	.25	.25	1.24				
TOTAL OPERATING COSTS			6.49	6.49	6.49	6.49	6.49	32.45	17.18	7.54	7.73	
III Training costs												
A. Training courses 6/												
1. District level	154	n-day	10.25	576	5.90	576	5.90	576	5.90	29.52	64	16.89
2. Divisional level	154	n-day	11.85	1000	11.85	1000	11.85	1000	11.85	59.25	43	37.33
3. Locational level	154	n-day	9.80	546	5.35	546	5.35	546	5.35	26.75	63	16.84
4. Sub-locational level	154	n-day	11.65	500	5.83	500	5.83	500	5.83	29.13	63	16.35
Total			28.93	28.93	28.93	28.93	28.93	144.65	91.42	30.11	23.11	
of which Local content			22.91	22.91	22.91	22.91	22.91	114.54				
Foreign content			6.02	6.02	6.02	6.02	6.02	30.11				
TOTAL TRAINING COSTS			28.93	28.93	28.93	28.93	28.93	144.65	91.42	30.11	23.11	
TOTAL MINISTRY COSTS - Kilifi District			54.41	35.42	35.42	35.42	35.42	196.09	116.27	47.04	32.78	

NOTE: Small rounding errors arise due to the use of units of K'Pounds'000.

Sources: 1/ Table 4, Annex 9

2/ Table 5, Annex 9

3/ Table 6, Annex 9

4/ Table 7, Annex 9

5/ Allocations maintained at 1986/87 Budget levels

6/ Costs of training for all ministries in DPP

(see Table 8, Annex 9 for unit rates)

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ANNEX 7

Kwale and Kilifi District Development Projects

Table 7

Ministry of Planning and National Development Headquarters - GOK Treasury Account Code 000

Incremental Technical Services

(K'Pounds'000)

Category	Item code	Unit	Unit cost	Year 1 No. Cost	Year 2 No. Cost	Year 3 No. Cost	Year 4 No. Cost	Year 5 No. Cost	Totals No. Cost	Local Costs Cost (%) Amount	For. Exch. Cost (%) Amount	Taxes, duties Cost (%) Amount
I Capital												
II Operating costs												
III Training costs												
A. Professional Training 1/												
1. District Dev't Officers	154 m-mth	4.50	6	27.00	.00	.00	.00	.00	6 27.00	0 .00	100 27.00	0 .00
1. Project co-ordinators	154 m-mth	4.50	6	27.00	.00	.00	.00	.00	6 27.00	0 .00	100 27.00	0 .00
Total				54.00	.00	.00	.00	.00	54.00	.00	54.00	.00
of which: Local content				.00	.00	.00	.00	.00	.00			
Foreign content				54.00	.00	.00	.00	.00	54.00			
TOTAL TRAINING COSTS				54.00	.00	.00	.00	.00	54.00	.00	54.00	.00
IV Technical Services & Studies												
A. Studies 2/												
1. Management study	184 m-mth	4.00	8	32.00	.00	.00	.00	.00	8 32.00	58 18.56	10 3.20	32 10.24
2. Baseline survey 3/	184 lump	32.00	1	32.00	5.00	5.00	5.00	5.00	52.00	58 30.16	10 5.20	32 16.64
3. Marketing study	184 m-mth	4.00	12	48.00	.00	.00	.00	.00	12 48.00	58 27.84	10 4.80	32 15.36
Total				112.00	5.00	5.00	5.00	5.00	132.00	76.56	13.20	42.24
of which: Local content				100.80	4.50	4.50	4.50	4.50	118.80	68.90	11.88	38.02
Foreign content				11.20	.50	.50	.50	.50	13.20	7.66	1.32	4.22
TOTAL TECHNICAL COSTS				112.00	5.00	5.00	5.00	5.00	132.00	76.56	13.20	42.24
TOTAL MINISTRY COSTS				166.00	5.00	5.00	5.00	5.00	166.00	76.56	67.20	42.24

NOTE : Small rounding errors arise due to the use of units of K'Pounds'000.
 Sources : 1/ Estimated costs of training at the Economic Development Institute (IBRD)
 for regional/US courses (provides all costs excluding salaries)
 2/ Provides for additional professional and technical staff, field costs
 and technical assistance
 3/ Includes an allowance for annual monitoring of project impact at the farm level

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSTRAINING

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KWALE & KILIFI DISTRICT DEVELOPMENT PROJECTSTRAININGI. INTRODUCTION

1.01. This Annex deals primarily with the planning and management skills which are required at the four administrative levels, namely: district, divisional, locational and sub-locational, within the project area for the implementation of the District Focus Policy. Technical or professional training of staff is discussed in the Annexes covering the incremental technical services provided by the Projects for participating sectoral ministries. Section II sets out the approach to DFP training, and defines its objectives and programmes in the light of training experience during the pilot phase development. Section III reviews the capacity of project area training institutions; and Section IV sets out the unit costs of training for each administrative category, and gives the notional costs of full district-wide training programmes. The proposed programmes for which detailed cost proposals have been put forward would cover the full costs of training the three higher echelon Training but limit the sub-locational training to about 500 man-days per district per year, using the development period to establish the type of DFP training best suited to this level.

1.02 As DFP training falls within the portfolio and budget of the Department of Personnel Management of the Office of the President, project costs for this component have been included in the incremental OP budgetary provisions. These are set out in Annex 7, Tables 1, 2, and 3, and are detailed for each district, and in aggregate in Section III of the respective Tables.

II. IDENTIFICATION OF TRAINING NEEDS

A. Introduction

2.01 The identification of training needs in Kwale and Kilifi Districts was done during the visit of the IFAD-appointed team to the two districts. The team visited and worked in Kwale District from July 7th to 11th, 1986 and in Kilifi District from July 14th to 18th, 1986. The identification task comprised reference to pertinent policy documents, the district development plans and the draft programmes from the two districts; it included extensive discussion with Government officers in the two districts, interviews with selected people and direct field observations. The strategy used can be summarized in the following four steps:

I. REFERENCE TO DOCUMENTS to obtain basic information on development policy, the programme objectives and strategy, district priorities and the general development environment.

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II. DISCUSSION WITH OFFICERS/LEADERS to get data and opinion on district strategies and project performance, district capacities and constraints, and to establish legitimacy for training as a tool for development in the area.

III. INTERVIEW WITH SELECTED PEOPLE to amplify on information from steps I and II; to test awareness of development strategy and project activities; to probe specific project activities/issues; to build legitimacy for potential training as a helpful development tool in the area.

IV. DIRECT OBSERVATIONS to obtain first hand data on details of development activities in the districts; establish direct acquaintance with the physical and socio-cultural features; verify data from steps II and III; and link up with specific training requirements.

2.02 The training proposed in the subsequent sections is the outcome of the above four-step process. It reflects the conditions in the two districts at present but should be considered as a flexible strategy adaptable to the area's changing training requirements which will inevitably keep shifting in response to policy and procedural changes.

B. Goal, Rationale and Strategy

2.03 Training fosters change in knowledge, skills, values and attitudes. From the standpoint of socio-economic development in a given organization, training can play a vital role in:

- (a) generating familiarity with, and appreciation of the organisation's development priorities and strategy and the role that different people can play in it;
- (b) developing capacity to identify, bring about and manage desired change in the organisation and in its operating environment;
- (c) developing needed skills for effective accomplishment of specific production tasks within the organisation development strategy.

2.04 Over the past year and a half a considerable amount of training was undertaken in Kwale and Kilifi Districts. A range of courses was covered, including agro-forestry, extension methods, child survival techniques, soil and water conservation, adult training methods and specific areas of crop and animal production such as ox-ploughing, bee-keeping, rabbitry, dryland grain production, etc. These courses were attended by various members of the district staff, and some of the training, especially in general administration and planning techniques, was funded by IFAD under the preparatory phase of the Kwale-Kilifi project and conducted by local training institutions, especially the GTI Mombasa and Matuga Development Centre.

2.05 This training cut across various projects and appeared disjointed. Even within the preparatory phase of the KKDP there was no explicit training strategy and the training accomplished showed little overall coherence and co-ordination. This compartmentalised approach to training has left the recipients with unconnected bits of information. Coupled with a non-integrated approach to farm-level advice and demonstration, the recipients at the base level appear to have been left with many missing links in the information chain and this has greatly lessened the acceptability and application of the information and skills delivered.

2.06 Current development operations in the two districts show certain weaknesses at organisational and individual level which can be addressed through an integrated programme of intensified training. The discernible areas of weakness include low capacity and/or understanding and practice in the following four respects:

- (a) administrative procedures and management;
- (b) project planning and control;
- (c) in-house training; and
- (d) application of specific production skills at the user/farmer level.

A striking feature reinforcing these weaknesses in both districts is the apparent lack of appreciation of the importance of statistical records and the absence of systematic collection of quantitative information on the development projects. Generally, the weaknesses manifest themselves in the lack of expediency and accuracy in routine matters such as the processing of financial transactions, hardly any monitoring and evaluation of projects, limited in-house training and slow base-level response to extension service. The impact is sluggish performance and low productivity and incomes.

2.07 The training component of the IFAD-aided integrated development programmes in the two districts has the macro goal of contributing towards district-wide system improvement through the strengthening of project planning and implementation capacity in the context of the Kenya Government's policy of District Focus for Rural Development, through encouragement of a more rational and productivity-guided allocation of resources and through the fostering of greater awareness of the strategies for improved living standards through better family health care and planning - all of which are core elements in the country's development policy. As a "service" component of the district programmes, the training has the specific objectives specified for each training level.

C. Training Structures and Areas.

2.08 The training will cover basically four essential content areas, and will be conducted at four different levels as summarized in Text Table 1.

District Level Training

2.09 The objectives are as follows:

- (a) to enhance the district leaders' capacity to facilitate community awareness and participation in development;
- (b) to strengthen their ability to plan, implement and monitor development programmes and projects;
- (c) to familiarize them with with government financial and budgeting procedures and their role in the preparation of the Forward Budget;
- (d) to equip some key officers with skills in adult education and training.

2.10 Course details are:

(a) Administration and Management Orientation Workshop

- (i) Target Group: DDC members and senior technical officers in charge of project implementation; the number is 45 in Kwale and 60 in Kilifi District.
- (ii) Duration and Pattern: Each workshop will run for a period of five days. The course is to be held thrice during the project period.

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KHALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Table 1: TRAINING AREAS

	ADMINISTRATION AND MANAGEMENT	TECHNICAL SKILLS	TRAINING SKILLS	PRODUCTION SKILLS
I. DISTRICT LEVEL	1. Administration & management orientation workshops. 2. Government financial and budgeting process seminars.	3. Programme/project planning and control workshops.	4. Adult training skills workshops.	--
II. DIVISIONAL LEVEL	1. Administration & management orientation workshops. 2. Government financial and budgeting process seminars.	3. Project planning and control workshops.	4. Adult training skills workshops.	--
III. LOCAL LEVEL	1. Community leadership and management skills seminars.	--	--	--
IV. SUB-LOCAL AND COMMUNITY/ GROUP LEVEL	1. Community leadership and management skills seminars. 2. Co-operatives management. 3. Farm community and group orientation-courses	--	--	4. Activity-specific training and follow-up

(iii) Content:

- Up to date on district focus procedures;
- Review of recent development performance in the district and identification and analysis of emerging issues and problems;
- an overview of the project development and management cycle.
- some basic managerial and administrative skills:
 - decision-making and problem solving strategies;
 - delegation;
 - supervision;
 - information gathering and communication skills.

(iv) Venues: Matuga DD Centre for Kwale District and GTI Mombasa (or Coast Agricultural Institute when open) for Kilifi District.

(v) Organisation and Trainers: Matuga Centre and GTI Mombasa would organise for Kwale and Kilifi Districts respectively, with resource person participation from the KIA and the Ministry of Planning and National Development (MPND). These are residential workshops where the participants arrive on Sunday evening, work through the following week and depart the following Saturday morning.

(b) Adult Education and Training Skill Workshop

(i) Target Group: The District Agricultural Officer, Crops Officer, Extension Co-ordinator, Animal Production Officer, Adult Education Officer, DEO, Co-operative Officer, Public Health Officer, Social Development Officer and various Subject Matter Specialists. Numbers are 15 for Kwale and 17 for Kilifi.

(ii) Duration and Pattern: This would be a two-week course to be held twice - once during fiscal year (FY) 1987/88 and again, for review and extension, during FY 1990/91.

(iii) Content:

- principles of adult learning;
- the experimental training approach;
- the role of the adult trainer;
- adult training techniques;
- training needs identification;
- Course design and scheduling;
- organizing for the delivery of a training event;
- the evaluation of training;
- the development and use of training materials.

(iv) Venues: The workshop should be hosted at GTI Mombasa for both districts

- (v) Organisation and Trainers: This is a residential course to be conducted by GTI staff at GTI. Adult training methods will be taught and applied simultaneously. Participants will be encouraged to take part in the actual running of the workshop during its final days.

(c) Programme and Project Planning and Control Workshop

- (i) Target Group: DEC Members and senior technical officers in charge of project implementation. Numbers are 45 for Kwale and 60 for Kilifi.
- (ii) Duration and Pattern: The course is planned for a five-day duration, and it would be conducted twice during the project period.
- (iii) Content:- project identification and formulation methods;
 - project feasibility study;
 - project appraisal methods;
 - implementation, monitoring and evaluation of projects;
- (iv) Venues: Matuga DD Centre for Kwale District and GTI Mombasa for Kilifi District.
- (v) Organisation and Trainers: Matuga DDC and GTI to organise and conduct the course for Kwale and Kilifi districts respectively, with resource persons support from the KIA and MPND if need be. All are residential courses.

(d) Government Financial and Budgeting Progress Seminars

- (i) Target Group: DEC members and senior technical staff in charge of projected implementation. They number 45 in Kwale and 60 in Kilifi.
- (ii) Duration and Pattern: This will be a five-day course, to be run thrice during the project period in FY 1987/88, FY 1989/90 and FY 1991/92.
- (iii) Content: - the financial management cycle and the role of the financial manager in an organisation;
 - public sector budgeting practices in Kenya;
- (iv) Venues: Matuga DDC and GTI Mombasa.
- (v) Organisation and Trainers: Matuga DDC would organise and run the course for Kwale District while GTI Mombasa would do the same for Kilifi District. In both cases, resource persons from MPND, the Treasury and KIA would be required to prop up these institutions' own capacities.

Divisional Level Training

2.11 The objectives are as follows:

- (a) to enhance the participants' capacity to facilitate community awareness and participation in development activities
- (b) to strengthen the divisional team's ability to plan, implement and monitor development projects;
- (c) to familiarize the participants with GOK financial and budgeting procedures and the role of divisional departmental heads in the preparation of the forward budget;
- (d) to equip some key officers with skills in adult education and training;
- (e) to develop/enhance the officers' skills in community leadership and management, with emphasis on the extension function.

2.12 Course details are:

(a) Administration and Management Orientation Seminar

- (i) Targeted Group: The area DO, divisional heads of departments, agricultural technical officers and some of the Head teachers of secondary schools in the district. Numbers are 82 in Kwale and 89 in Kilifi;
- (ii) Duration and Pattern: This is a two-week course to be conducted twice for each administrative division in the two districts during the project period. A total of eight seminars would be held for each one of the two districts;
- (iii) Content:
 - Review of recent development performances in the division;
 - Identification and analysis of development issues and problems in the division;
 - An overview of the project development cycle;
 - Specific management skills:
 - decision making and problem solving
 - principles of supervision;
 - information gathering skills;
 - communication skills.
 - team building and community leadership skills.
- (iv) Venues: Matuga DD Centre for Kwale District and GTI Mombasa for Kilifi District.

- (v) Organisation and Trainers: These will be residential courses conducted by the above institutions with possible resource assistance from MPND and the respective district headquarters, especially those inducted through district-level courses (b). Besides case studies and group discussions, a great deal of importance will be put on field visits to some projects.

(b) Adult Education and Training Skills Workshops

- (i) Targeted Group: To be selected from among the divisional heads of departments, technical officers and Head teachers of secondary schools in each division. Numbers are 46 in both districts;
- (ii) Duration and Pattern: The course would run for 5 1/2 days, with the participants arriving on a Sunday evening and departing after 2.00 p.m. the following Saturday. The participants from each division (numbering about 12) will be exposed to two such courses during the project period in FY 1987/88 or early 1988/89 and in FY 1990/91. The two divisions would be taken at a time in each district, giving a class size of 24.
- (iii) Content:
- Principles of adult learning;
 - Adult training strategies and the role of the adult trainer;
 - Organising for formal and informal delivery of training;
 - The development and use of training aids;
 - Problems and issues in area adult learning.
- (iv) Venues: Matuga DDC for Kwale District and GTI Mombasa for Kilifi District.
- (v) Organisation and Trainers: The course will be organised and run by the above institutions as residential course. Some senior district staff will be expected to take part as resource persons. During the final day and a half the participants will be encouraged to design and conduct some brief training events and lead some discussions.

(c) Project Planning and Control Workshop

- (i) Targeted Group: Area DDO, divisional heads of departments, senior technical officers in the division (e.g. TOS III) and Head teachers of secondary schools. In total they number about 82 in Kwale and 89 in Kilifi;

- (ii) Duration and Pattern: Each workshop will last 5 1/2 days. Two such courses are to be run for each division, one in Project Year (PY) 1 or 2 and the other in PY 4 or 5.
 - (iii) Content:
 - Project identification and formulation methods;
 - Project feasibility study;
 - Project appraisal and selection;
 - Implementation, monitoring and evaluation of project.
 - (iv) Venues: Matuga DDC and GTI Mombasa.
 - (v) Organisation and Trainers: These are residential courses where resource persons are to be drawn from the host institutes themselves as well as from MPND and the respective district head teachers as needed. Project inspection visits would constitute a vital component of the course.
- (d) Government Financial and Budgeting Process Seminar
- (i) Targeted Group: Area DDO, divisional heads of departments, senior technical officers in the division (e.g. TOs III) and Head teachers of area secondary schools. Again, they number about 82 and 89 in Kwale and Kilifi respectively;
 - (ii) Duration and Pattern: The duration is 5 1/2 days and the course is to be held twice for each division during the project period.
 - (iii) Content:
 - Overview of financial management and the role of the financial manager;
 - Public sector budgeting practices in Kenya;
 - Financial procedures and administration.
 - (iv) Venues: Matuga DDC and GTI Mombasa.
 - (v) Organisation and Trainers: These would be residential courses at the above venues, with external resource persons from MPND, the Treasury and the respective district headquarters.

Locational Level Training

2.13 The objectives are as follows:

- (a) to strengthen the participants' knowledge and skills in team building and teamwork in project administration and management;

- (b) to develop/strengthen the participants' capacity to originate, develop and apply their own ideas and facilitate the same among their communities;
- (c) to acquaint the participants with elementary methods in situation assessment and strategies for efficient use of resources;
- (d) to familiarize them with the potential role of co-operatives in the area's development;
- (e) to familiarize them with elementary skills in book-keeping and stores control as an aid towards increased effectiveness in area project administration and management.

2.14 Course details. Only one but comprehensive/integrated course is deemed necessary and appropriate for locational level government officers and other leaders:

- Community Leadership and Management Seminar

- (i) Targeted Group: Chiefs, area councillors, KANU Chairman, 20% of the primary school head teachers, 20% of the full-time adult education teachers, TOs III, social development assistants and leaders of NGOs represented in the division. They number about 164 in Kwale and 210 in Kilifi districts.
- (ii) Duration and pattern: This is to be a two-week course. The planned average class size is 25 and at least one seminar will be conducted for each administrative division during the first two years of the project period.
- (iii) Content:
 - leadership implications of Kenya's development policy and strategy:
 - the District Focus for Rural Development;
 - Diligent resource management;
 - family care and planning;
 - review of development project and activities in the area;
 - organisation and functioning of co-operatives;
 - basic book-keeping and stores control;
 - effective delegation;
 - some leadership and managerial skills:
 - principles of supervision;
 - methods of gathering and using information;
 - effective delegation;
 - strategies for team building and team work.

- (iv) Venues: Tiwi Rural Training Centre on Kwale southcoast for Kwale District and Mtwapa FTC for Kilifi District.
- (v) Organisation and Trainers: This is to be organised as a residential course by Matuga DDC and GTI Mombasa, with resource person participation from the KUA, MPND, Tiwi Rural Health Training Centre and select district and divisional staff in Kwale and Kilifi District.

Sub-Localational Community and Farmers' Group Level Training and Follow-up

2.15 Objectives. Training at this level will include not only planned instruction in specific concepts and practices but also the necessary follow-up, assessment and advice without which the ultimate productivity of this programme could be considerably reduced and the programme's monitoring and evaluation difficult to achieve. The specific objectives of training at this level will therefore be as follows:

- (a) to create awareness among the people and their leaders about the development priorities and strategy for their area;
- (b) to facilitate effective community leadership, organisation and team work;
- (c) to familiarise the people and their leaders with the role and functioning of co-operatives in the area;
- (d) to engender group and individual commitment to the success of the development efforts in the area;
- (e) to impart/strengthen the skills relevant to the specific production activities involved in the area's development projects;
- (f) to provide an integrated farm-level view of production activities in the area and enhance capacity to make good decisions on development matters.

2.16 Course details are:

- (a) Community leadership and management skills course:
 - (i) Targeted Group: Sub-chiefs, 20% of the primary school head teachers in the location, 20% of the full-time adult education teachers and a selected few other local leaders. Number: 165 in Kwale and 291 in Kilifi.
 - (ii) Duration and pattern: This is to be a two-week course. Roughly five courses will be held for each district in the first three years of the project period.
 - (iii) Content: the same as for the corresponding locational level course.
 - (iv) Venues: Tiwi Rural Health Training Centre for Kwale District and Mtwapa FTC for Kilifi District.

- (b) to develop/strengthen the participants' capacity to originate, develop and apply their own ideas and facilitate the same among their communities;
- (c) to acquaint the participants with elementary methods in situation assessment and strategies for efficient use of resources;
- (d) to familiarize them with the potential role of co-operatives in the area's development;
- (e) to familiarize them with elementary skills in book-keeping and stores control as an aid towards increased effectiveness in area project administration and management.

2.14 Course details. Only one but comprehensive/integrated course is deemed necessary and appropriate for locational level government officers and other leaders:

- Community Leadership and Management Seminar

- (i) Targeted Group: Chiefs, area councillors, KANU Chairman, 20% of the primary school head teachers, 20% of the full-time adult education teachers, TOs III, social development assistants and leaders of NGOs represented in the division. They number about 164 in Kwale and 210 in Kilifi districts.
- (ii) Duration and pattern: This is to be a two-week course. The planned average class size is 25 and at least one seminar will be conducted for each administrative division during the first two years of the project period.
- (iii) Content:
 - leadership implications of Kenya's development policy and strategy:
 - the District Focus for Rural Development;
 - Diligent resource management;
 - family care and planning;
 - review of development project and activities in the area;
 - organisation and functioning of co-operatives;
 - basic book-keeping and stores control;
 - effective delegation;
 - some leadership and managerial skills:
 - principles of supervision;
 - methods of gathering and using information;
 - effective delegation;
 - strategies for team building and team work.

- (iv) Venues: Tiwi Rural Training Centre on Kwale southcoast for Kwale District and Mtwapa FTC for Kilifi District.
- (v) Organisation and Trainers: This is to be organised as a residential course by Matuga DDC and GTI Mombasa, with resource person participation from the KUA, MPND, Tiwi Rural Health Training Centre and select district and divisional staff in Kwale and Kilifi District.

Sub-Local Community and Farmers' Group Level Training and Follow-up

2.15 Objectives. Training at this level will include not only planned instruction in specific concepts and practices but also the necessary follow-up, assessment and advice without which the ultimate productivity of this programme could be considerably reduced and the programme's monitoring and evaluation difficult to achieve. The specific objectives of training at this level will therefore be as follows:

- (a) to create awareness among the people and their leaders about the development priorities and strategy for their area;
- (b) to facilitate effective community leadership, organisation and team work;
- (c) to familiarise the people and their leaders with the role and functioning of co-operatives in the area;
- (d) to engender group and individual commitment to the success of the development efforts in the area;
- (e) to impart/strengthen the skills relevant to the specific production activities involved in the area's development projects;
- (f) to provide an integrated farm-level view of production activities in the area and enhance capacity to make good decisions on development matters.

2.16 Course details are:

- (a) Community leadership and management skills course;
 - (i) Targeted Group: Sub-chiefs, 20% of the primary school head teachers in the location, 20% of the full-time adult education teachers and a selected few other local leaders. Number: 165 in Kwale and 291 in Kilifi.
 - (ii) Duration and pattern: This is to be a two-week course. Roughly five courses will be held for each district in the first three years of the project period.
 - (iii) Content: the same as for the corresponding locational level course.
 - (iv) Venues: Tiwi Rural Health Training Centre for Kwale District and Mtwapa FTC for Kilifi District.

- (v) Organisation and Trainers: The same as for the corresponding locational level courses.

(b) Co-operatives Management Course

- (i) Targeted Group: Co-operative Assistant and top officials of co-operatives (chairmen, secretaries, treasurers and some committee members). Expected numbers are 230 for Kwale and 201 for Kilifi District.
- (ii) Duration and Pattern: This will be a 5 1/2 day course. The expected class average is 45 and five such courses will be conducted for each district during the project period.
- (iii) Content:
- the organisation and functioning of cooperatives;
 - elementary book-keeping and stores control;
 - the role of co-operatives in the area's development:
 - potential banking, credit and input supply functions;
 - marketing strategies;
 - extension functions;
 - some leadership skills:
 - communication skills;
 - the gathering and use of information;
 - team building and teamwork;
 - issues and problems facing the area's co-operatives.
- (iv) Venues: Tiwi Rural Health Training Centre for Kwale and Mtwapa FTC for Kilifi District.
- (v) Organisation and Trainers: The course is to be conducted by Matuga DDC for Kwale and GTI Mombasa for Kilifi, with resource person inputs from the co-operative Collge and the respective district and divisional headquarters.

(c) Farm Community and Group Orientation Course

- (i) Targeted Group: Specific communities and farmer groups where some projects sponsored by the programme are located. Selection will be done with the help of local leaders. This course is expected to reach at least 4 000 farmers in each district.
- (ii) Duration and Pattern: This is to be a two-day course to be conducted as many times as for each district as the situation demands.

(iii) Content:

- review of the area's development projects and activities and the potential issues/problems;
- the major features of the area's development:
 - what the projects are;
 - activities they involve and their time schedule;
 - the inter-relatedness of the projects/activities;
 - the role to be played by the community/group in implementation;
 - the programme's potential impact on incomes in the area;
- basic information relating to the area's development activities:
 - source of technical advice and assistance;
 - input supply and distribution points;
 - potential sources, procedures and conditions for credit;
 - product marketing possibilities;
- how to keep records on farm purchase (inputs) and the use of such information.

(iv) Venues: Matuga Development Centre for Kwale and Mtwapa FTC for Kilifi District.

(v) Organisation and Trainers: The organisation of this series of courses should be done jointly by Centre staff and the respective district and divisional staff concerned with the area's projects. The course can be run for two consecutive days at once or on two separate days. In the former case they would be residential, while in the latter they would not be residential.

(d) Field Follow-Up and Advice on Specific Production Skills

- (i) Targeted Group: Individual farmers or farmers groups undertaking a specific production activity which is sponsored under the IFAD programme. At least 5 000 smallholders are expected to be reached by this course.
- (ii) Duration and Pattern: This is a one-day visit and explanation/demonstration, which could be shortened wherever the situation permits. It is to be undertaken as many times as the situation demands. The target is to reach at least 5 000 farmers during the project period.
- (iii) Content:
 - review of the particular production activity, the skills, practices and actions it demands, and suitable time schedule of the actions;

- its inter-relatedness with other production activities in the area;
- its input supply and marketing aspects;
- sources of technical advice and assistance;
- issues and problems related to the area's activities;

(iv) Venues: In the field/on farms or at local production and trade centres.

(v) Organisation and Trainers: The primary responsibility for scheduling and running this base-level course will rest with the District Agricultural Officer. His close aides will be the agricultural extension staff as well as any suitable divisional level staff who will have been inducted with adult training skills. Training institutions will only be involved in an advisory and/or monitoring capacity when invited.

III. TRAINING INSTITUTIONS

Matuga District Development Centre

3.01 Physical Facilities. 8 classrooms (average capacity 30), hostel (capacity 180, double and triple occupancy), dining hall (can sit 150 at a go).

3.02 Staffing. Besides the Principal and the Deputy Principal who in 1985/86 are in job group K and J respectively, the Centre had the following lecturing staff in July 1986:

Job Group	K	J	H	G
Number	1	5	8	2

3.03 Centre Courses. These currently cover such areas as administration and management, secretarial studies, environmental health, pre-primary teacher education and home economics. The Centre has participated in District Focus training for Kwale District, and Centre staff usually team up with district agricultural staff to train Technical Assistants (TAs) on Travel and Visit in farm management.

3.04 Charges. At present the Centre charges KSh 50 per person per day for full board. However, this carries a substantial government subsidy element.

3.05 The future. There are plans to expand the existing physical facilities, the hostel and office facilities starting in FY 1987/88. The Centre's water problem will be lessened when it acquires a storage tank. With course expansion including the ones under this programme, there is need to strengthen the lecturing force.

Government Training Institute, Mombasa

3.06 Physical Facilities. 9 classrooms (average capacity 25); hostel (currently 218 double rooms). A new hostel block is nearing completion (capacity 210 single rooms); a new dining hall (the present one can accommodate 100 persons at one sitting).

3.07 Staffing. The Principal and the Deputy Principal are at job groups N and M respectively. The Institute has also an establishment for an administrator at job group L. The Institute had the following lecturing staff tally in July 1986:

Job Group Number	L	K	J	H	G
	6	6	12	10	

3.08 Institute Courses. The Institute's programmes include work-oriented management and project planning seminars as well as courses geared towards acquisition of professional qualifications in accounting, administration and secretarial duties.

3.09 The Institute has pioneered the national effort towards group-specific team training in application to District Focus. It has participated in District Focus training for the Kilifi District level and divisional officers, and teamed up with Matuga to train the Kwale Treasury staff. The Institute has conducted District Focus seminars for all DEC's in Coast Province and beyond. It is also actively involved in the training of local government staff in project planning and financial management. Institute staff usually team up with trainers from other institutions whenever needed and requested.

3.10 Charges. The Institute presently charges KSh 55 per person per day for full-board. As in the case of Matuga, there is a strong subsidy element on this.

3.11 The future. A new tuition/office/Library block is under construction. The library seating capacity for 120, and book-shelf capacity of 100 000 volumes. 14 more classrooms are contained in the project. Another dining hall is planned. The international centre for local government training is also planned but there may be a considerable time lag before construction. Expanded training and field-visit programmes call for increased staff, especially lecturers.

IV. TRAINING COSTS ESTIMATES AND SCHEDULE

Equipment

4.01 The local training institutions which will bear the brunt of the proposed training programme are GTI Mombasa and Matuga DD Centre. These institutions need strengthening through provision of some basic equipment to facilitate more effective delivery of training. Both institutions need reinforcement in terms of capacity for document preparation. The suggested equipment which will be held in custody at these two institutions, would be made available to other training institutions especially in two districts, especially the Farmers' Training Centre at Mtwapa and Tiwi Rural Health Training Centre whenever they require them. The required equipment is detailed in Text Table 2.

Table 2: Required Equipment

ITEM DESCRIPTION	Price/Unit (KSh.)	N° required	Amount (KSh.)
1. Gestetner 4130 duplicator	65 000	2	130 000
2. Photocopier	90 000	2	180 000
3. Film projector 16 mm	70 000	2	140 000
4. Portable screens	4 500	2	9 000
5. Heavy duty paper punch	800	2	1 600
6. Heavy duty stapler	400	2	800
7. Complete public address system	55 000	2	110 000
8. Kodak Carousel with sound synchronizer	40 000	2	80 000
9. Garamet slide projector	30 000	2	60 000
10. Video system	70 000	2	140 000
11. Light box for tracing	2 500	2	5 000
12. Flash for camera	2 000	2	4 000
13. Tape recorder reel-to-reel	8 000	2	16 000
Total equipment cost	-	-	<u>760 000</u>

4.02 For overall purposes, this equipment cost is apportioned between the four levels of training according to each level's share in the total of the course person days (CPD) of the entire training for the district. The shares are roughly the same for both districts and are given below:

<u>Training level</u>	<u>Proportion of total CPD</u>	<u>Equipment cost (KSh.)</u>
District level	0.09	68 400
Divisional level	0.18	136 800
Locational level	0.08	60 800
Sub-locational and lower levels	0.65	494 000
TOTAL	1.00	<u>760 000</u>

Travels and Fares

4.03 Course costings have to cater for the cost of local trips carried out for field inspection of projects or other experiences. They also have to cater for resource persons drawn from Nairobi or other up-country places. It will be assumed that all resource person travel will be by first class train. The current Nairobi-Mombasa fare is KSh 642.00.

4.04 Experiences at GTI Mombasa with field trips have shown an average cost of KSh 100.00 per person per day on a trip which commences at 7 am and ends at 6.30 pm. This figure covers cost of fuel and packed lunch.

4.05 These rates will be used to cost all courses except for the last two courses at sub-location/farmer group level. For these two, there will be no need to import resource persons and the field cost will be limited to fuel/transport for the local resource persons and their lunch. Here a figure of KSh 30.00 per person will be assumed.

Accommodation and Food

4.06 The economic cost of full-board at the proposed venues is around KSh. 100.00 per person per day. This rate is used for computing participants' accommodation and food costs. External resource persons are expected to be of the rank of Lecturer I to Principal Lecturer. The Government rate for non-accountable subsistence allowance for this range of serving officers is KSh 200.00 per day. A figure of KSh 350.00 per day is used in order to cater for the expected price increase as well as such incidentals as taxi hire between the residences in Mombasa and the course venues in the two districts.

Training Materials

4.07 Materials needed in the preparations for and during the running of a seminar at district level is estimated/averaged at KSh 40.00 per person per day. This covers acquisition of file/paper folders, writing materials, ink, flip chart papers, pens as well as the actual publication of the training materials, etc. This figure will be taken to apply at divisional level also. But at lower levels, a figure of KSh 25.00 will be used, since at those levels there seems to be more use of audio visual aids as opposed to reading and writing materials.

Consultancy Fees

4.08 The proposed training programme is fairly wide. Given the staffing positions of the proposed training institutions, it is necessary to cater for possible hiring of private sector trainers to prepare training materials and/or take part in the actual training. Private consultants could also be engaged for carrying out an assessment/monitoring and evaluation of the training. For a 1 1/2 classroom task, the private sector trainers are currently charging about KSh 700.00 (i.e. about KSh. 470.00 per hour). Since it is difficult to determine beforehand what skills may need to be hired by the proposed training institutions and/or for what other purposes, an assumption will be made that each course will have a total consultancy input of 5 hours, i.e. KSh 2,350.00.

Cost Estimates for Kwale District

4.09 Using the actual cost calculation procedure given in Appendix 1, the overall costs of training per course person day for Kwale District for the four levels of training are as follows:

<u>Level</u>	<u>KSh. per course person day</u>
District level	214.90
Divisional level	236.60
Locational level	196.20
Sub-locational and lower levels	222.75

The total funds needed to cover training for each ministry at the different training levels are summarized in End Tables 2 to 6 inclusive.

Cost Estimates for Kilifi District

4.10 Since the cost structure in both districts is the same, the costs per course/person/day in Kilifi are identical to those of Kwale District. The funds required to cover training for each ministry are computed in End Tables 7 to 11 inclusive.

Training Schedule

4.11 This schedule is but tentative; the final schedule is to be made by the respective training institutions in integration with their other commitments. The schedule applies separately to each district.

(a) District Level Courses

- Administration and management course: July 1987, October 1989 and October 1991
- Adult training skills course: July 1988 and February 1991
- Project planning and control course: October 1988 and November 1991
- Government financial and budgeting procedure course: May 1988 and June 1990

(b) Divisional Level Course

- Adult training skills course: November 1987 and August 1991
- Project planning and control course: July 1988 and February 1991
- Government financial and budgeting procedures course: May 1988 and June 1990

(c) Locational Level Courses: The one course on community leadership and management skills is tentatively scheduled for August 1987, February 1988, September 1988 and May 1989.

(d) Sub-Locational and Lower Level Courses

- Community leadership and management skills course: September 1987, June 1988, February 1989, November 1989 and May 1990.
- Co-operatives management course: December 1987, November 1988, August 1989, September 1990 and September 1991.
- Farm community support and group orientation course: on and off as the trainers see fit throughout the five-year period.
- Field follow-up and advice: also on and off as the DAO's office sees fit throughout the five-year period.

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Aggregate DFP Training Funds Requirements
for Kwale and Kilifi Districts

<u>Ministry</u>	<u>Amount (KSh.)</u>
OP	1,054,351.40
Agriculture and livestock	7,251,365.00
Health	171,508.40
Cooperatives	672,695.90
Culture and Social Service	391,300.00
Education	1,058,805.80
Water	34,384.00
Finance	140,198.80
Planning	57,388.80
Environment	162,912.40
Transport and communication	46,214.00
Works	34,384.00
Information	162,912.40
Labour	34,384.00
Attorney General's	134,611.40
Land and settlement	134,611.40
Home affairs	134,611.40
Commerce and industry	134,611.40
Local Government	176,272.80
Tourism and wildlife	49,448.00
<u>Total Requirements</u>	<u>12,046,967.00</u>

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Table 2: Total Funds Needed to Cover Training for Each Ministry
at Different Training Levels in Kwale District

Ministry	District Level	Divisional Level	Locational Level	Sub-Locational Level	Total
O P	91,547.40	95,650.00	107,125.20	86,872.50	380,185.10
Agriculture and Livestock	62,321.00	270,670.40	81,619.20	3,155,922.00	3,570,532.60
Health	22,779.40	58,676.80	-	-	81,456.20
Cooperatives	22,779.40	58,676.80	-	267,300.00	348,756.20
Culture and SS	28,366.80	58,676.80	51,012.00	43,436.25	181,491.85
Education	22,779.40	205,368.80	112,226.40	127,413.00	467,787.60
Water	17,192.00	-	-	-	17,192.00
Finance	22,779.40	47,320.00	-	-	70,099.40
Planning	22,779.40	-	-	-	22,779.40
Environment	22,779.40	58,686.80	-	-	81,456.20
Transport and Communication	17,192.00	-	-	-	17,192.00
Works	17,192.00	-	-	-	17,192.00
Information	22,779.40	58,676.80	-	-	81,456.20
Labour	17,192.00	-	-	-	17,192.00
Attorney General's	17,192.00	47,320.00	-	-	64,512.00
Land and Settlement	17,192.00	47,320.00	-	-	64,512.00
Home Affairs	17,192.00	47,320.00	-	-	64,512.00
Commerce and Industry	17,192.00	47,320.00	-	-	64,512.00
Local Government	8,596.00	-	66,315.60	-	74,911.00
Tourism and Wildlife	8,596.00	-	66,315.60	-	74,911.00
ALL	496,419.00	1,020,662.80	418,297.80	3,440,375.50	5,718,673.35

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

District Focus Policy Training

Kwale: District Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	10	1	10	10	426	
2. Agriculture & Livestock	4	5	4	4	290	
3. Health	2	1	2	2	106	
4. Cooperatives	2	1	2	2	106	
5. Culture & S.S.	2	2	2	2	132	
6. Education	2	1	2	2	106	
7. Finance	2	1	2	2	106	
8. Planning	2	1	2	2	106	
9. Environment	2	1	2	2	80	
10. Transport & Comm.	2	-	2	2	80	
11. Works	2	1	2	2	106	
12. Information	2	1	2	2	106	
13. Labour	2	-	2	2	80	
14. Attorney General's	2	-	2	2	80	
15. Lands & Settlement	2	-	2	2	80	
16. Home Affairs	2	-	2	2	80	
17. Commerce & Industry	2	-	2	2	80	
18. Local Government	1	-	1	1	40	
19. Tourism & Wildlife	1	-	1	1	40	
20. Water	2		2	2	80	
Total participation(persons)	48	15	48	48	-	
No. of times course will be run	3	2	2	3	-	
Total course person days	<u>720</u>	<u>390</u>	<u>480</u>	<u>720</u>	<u>2</u>	<u>310</u>

ANNEX 8
Table 5

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

District Focus Policy Training

Kwale: Locational Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	42	-	-	-	546	
2. Agriculture & Livestock	32	-	-	-	416	
3. Health	-	-	-	-	-	
4. Cooperatives	-	-	-	-	-	
5. Culture & S.S.	20	-	-	-	260	
6. Education	44	-	-	-	572	
7. Finance	-	-	-	-	-	
8. Planning	-	-	-	-	-	
9. Environment	-	-	-	-	-	
10. Transport & Comm.	-	-	-	-	-	
11. Works	-	-	-	-	-	
12. Information	-	-	-	-	-	
13. Labour	-	-	-	-	-	
14. Attorney General	-	-	-	-	-	
15. Lands & Settlement	-	-	-	-	-	
16. Home Affairs	-	-	-	-	-	
17. Commerce & Industry	-	-	-	-	-	
18. Local Government	26	-	-	-	338	
19. Tourism & Wildlife	-	-	-	-	-	
20. Water	-	-	-	-	-	
Total participation (persons)	164	-	-	-	-	
Course duration (days)	13	-	-	-	-	
No. of times course will be run	6	-	-	-	-	
Total Course person days	<u>2 132</u>	-	-	-	<u>2 132</u>	

ANNEX 8
Table 6

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

District Focus Policy Training

Kwale: Sublocational & Lower Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	30	-	-	-	390	
2. Agriculture & Livestock	76	30	4 000	5 000	14 168	
3. Health	-	-	-	-	-	
4. Cooperatives	-	200	-	-	1 00	
5. Culture & S.S.	15	-	-	-	195	
6. Education	44	-	-	-	572	
7. Finance	-	-	-	-	-	
8. Planning	-	-	-	-	-	
9. Environment	-	-	-	-	-	
10. Transport & Comm.	-	-	-	-	-	
11. Works	-	-	-	-	-	
12. Information	-	-	-	-	-	
13. Labour	-	-	-	-	-	
14. Attorney General	-	-	-	-	-	
15. Lands & Settlement	-	-	-	-	-	
16. Home Affairs	-	-	-	-	-	
17. Commerce & Industry	-	-	-	-	-	
18. Local Government	-	-	-	-	-	
19. Tourism & Wildlife	-	-	-	-	-	
20. Water	-	-	-	-	-	
Total participation (persons)	165	230	4 000	5 000	-	
Course duration (days)	13	6	2	1	-	
No. of times course will be run	5	5	80*	200*	-	
Total Course Person Days	<u>2 145</u>	<u>1 380</u>	<u>8 000</u>	<u>5 000</u>	<u>16 525</u>	

* For the sake of costing we have assumed a class size of
50 for course No. C and 25 for course No. D.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Table 7: Total Funds Needed to Cover Training for Each Ministry
at Different Training Levels in Kilifi District

Ministry	District Level	Divisional Level	Locational Level	Sub-Local Level	Total
OP	117,335.40	94,640.00	158,137.20	304,053.75	674,166.35
Agriculture and Livestock	85,100.40	270,670.40	91,821.60	3,243,240.00	3,690,832.40
Health	31,375.40	58,676.80	-	-	90,052.20
Cooperatives	31,375.40	58,676.80	-	233,887.50	323,939.70
Culture and Social Service	42,550.20	58,676.80	53,562.60	55,019.25	219,808.85
Education	31,375.40	240,858.80	147,934.80	170,849.23	591,018.25
Water	17,192.00	-	-	-	17,192.00
Finance	22,779.40	47,320.00	-	-	70,099.40
Planning	22,779.40	11,830.00	-	-	29,022.00
Environment	22,779.40	58,686.80	-	-	81,456.20
Transport and Communication	17,192.00	11,830.00	-	-	29,022.00
Works	17,192.00	-	-	-	17,192.00
Information	22,779.40	58,676.80	-	-	91,456.20
Labour	17,192.00	-	-	-	17,192.00
Attorney General	17,192.00	47,320.00	-	-	64,512.00
Land and Settlement	17,192.00	47,320.00	-	-	64,512.00
Home Affairs	17,192.00	47,320.00	-	-	64,512.00
Commerce and Industry	17,192.00	47,320.00	-	-	64,512.00
Local Government	17,192.00	-	84,169.80	-	101,361.80
Tourism and Wildlife	8,596.00	23,660.00	-	-	40,852.00
ALL	602,149.90	1,183,473.20	535,626.00	4,007,049.70	6,328,298.60

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

District Focus Policy Training

Kilifi: District Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	13	1	13	13	546	
2. Agriculture & Livestock	6	6	6	6	396	
3. Health	3	1	3	3	146	
4. Cooperatives	3	1	3	3	146	
5. Culture & S.S.	3	3	3	3	198	
6. Education	3	1	3	3	146	
7. Finance	2	1	2	2	106	
8. Planning	2	1	2	2	106	
9. Environment	2	1	2	2	106	
10. Transport & Comms.	2		2	2	80	
11. Works	2	-	2	2	80	
12. Information	2	1	2	2	106	
13. Labour	2	-	2	2	80	
14. Attorney General	2	-	2	2	80	
15. Lands & Settlement	3	-	3	3	120	
16. Home Affairs	2	-	2	2	80	
17. Commerce & Industry	2	-	2	2	80	
18. Local Government	2	-	2	2	80	
19. Tourism & Wildlife	2	-	2	2	80	
20. Water	2	-	2	2	80	
Total Participation(persons)	60	17	60	60	-	
Course duration (days)	5	13	5	5	-	
No.of times course will be run	3	2	2	3	-	
Total course persons days	<u>910</u>	<u>452</u>	<u>610</u>	<u>910</u>	<u>2 882</u>	

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

District Focus Policy Training

Kilifi: Divisional Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	8	-	8	8	400	
2. Agriculture & Livestock	20	12	20	20	1 144	
3. Health	4	4	4	4	248	
4. Cooperatives	4	4	4	4	248	
5. Culture & S.S.	4	4	4	4	248	
6. Education	17	14	17	17	1 018	
7. Finance	4	-	4	4	200	
8. Planning	1	-	1	1	50	
9. Environment	4	4	4	4	248	
10. Transport & Comm.	1	-	1	1	50	
11. Works	-	-	-	-	-	
12. Information	4	4	4	4	248	
13. Labour	-	-	-	-	-	
14. Attorney General	4	-	4	4	200	
15. Lands & Settlement	4	-	4	4	200	
16. Home Affairs	4	-	4	4	200	
17. Commerce & Industry	4	-	4	4	200	
18. Local Government	-	-	-	-	-	
19. Tourism & Wildlife	2	-	-	-	100	
20. Water	-	-	-	-	-	
Total participation(Persons)	89	46	89	89	-	
Course duration (days)	13	6	6	6	-	
No. of times course will be run	2	2	2	2	-	
Total Course person days	<u>2 314</u>	<u>552</u>	<u>1 068</u>	<u>1 068</u>	<u>5 002</u>	

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

District Focus Policy Training

Kilifi: Locational Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	62				806	
2. Agriculture & Livestock	36				468	
3. Health	-	-	-	-		
4. Cooperatives	-	-	-	-		
5. Culture & S.S.	21				273	
6. Education	58				754	
7. Finance	-	-	-	-		
8. Planning	-	-	-	-		
9. Environment	-	-	-	-		
10. Transport & Comm.	-	-	-	-		
11. Works	-	-	-	-		
12. Information	-	-	-	-		
13. Labour	-	-	-	-		
14. Attorney General	-	-	-	-		
15. Land & Settlement	-	-	-	-		
16. Home Affairs	-	-	-	-		
17. Commerce & Industry	-	-	-	-		
18. Local Government	33	-	-	-	429	
19. Tourism & Wildlife	-	-	-	-		
20. Water	-	-	-	-		
Total participation(persons)	210	-	-	-		
Course duration (days)	13	-	-	-		
No. of times course will be run	1	-	-	-		
Total Course Person Days	2 730	-	-	-	2 730	

ANNEX 8
Table 11

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSDistrict Focus Policy TrainingKilifi: Sub-Locational & Lower Level Course Target Groups by Ministry

MINISTRY	Participation (Persons)				Total Course	
	Course 'A'	Course 'B'	Course 'C'	Course 'D'	Persons	days
1. Office of the President	105	-	-	-	1 365	
2. Agriculture & Livestock	108	26	4 000	5 000	14 560	
3. Health	-	-	-	-	-	
4. Cooperatives	-	175	-	-	1 050	
5. Culture & S.S.	19	-	-	-	247	
6. Education	59	-	-	-	767	
7. Finance	-	-	-	-	-	
8. Planning	-	-	-	-	-	
9. Environment	-	-	-	-	-	
10. Transport & Comm.	-	-	-	-	-	
11. Works	-	-	-	-	-	
12. Information	-	-	-	-	-	
13. Labour	-	-	-	-	-	
14. Attorney General	-	-	-	-	-	
15. Land & Settlement	-	-	-	-	-	
16. Home Affairs	-	-	-	-	-	
17. Commerce & Industry	-	-	-	-	-	
18. Local Government	-	-	-	-	-	
19. Tourism & Wildlife	-	-	-	-	-	
20. Water	-	-	-	-	-	
Total participation(persons)	291	201	4 000	5 000	-	
Course duration (days)	13	6	2	1	-	
No. of times course will be run	1	1	80*	200*	-	
Total course per person days	<u>3 783</u>	<u>1 206</u>	<u>8 000</u>	<u>5 000</u>	<u>17 989</u>	

* For the sake of costing we have assumed a class size of
50 for course No.C and 25 for course No.D.

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

ACTUAL COST CALCULATION PROCEDURE

1.1 To facilitate apportionment of course costs to the various ministries/ departments from which the participants come, the procedure employed has as its central goal arrival at the full training cost per course person day for each one of the four levels of training. A multiplication of a ministry's total course person days for that level into this figure then yields the ministry's budgetary implications of that level of training.

Procedure

Let: N_i = the number of participants in course i at the given level of training
 n_i = the number of times course i at that level is planned to be run
 d_i = the duration (in days) of course i
 E = the training level's share in the total cost of training equipment
 RP = the number of external (e.g. from Nairobi or other up-country) resource persons for the course, assumed to average to 2 overall person day
 SA = student accommodation and food cost per CPD
 RPA = resource person accommodation and food cost per CPD
 RPF = resource person fare cost per CPD
 f = field trip/visit cost per CPD
 TM = training materials cost per CPD
 CS = consultancy cost per CPD
 e = equipment cost per CPD for the given training level
 CPD = number of course person days in course i
 K = overall average cost per CPD at the level of training.

Then:

- \bar{N} = $(\sum N_i \times n_i) \div \sum n_i$ is the average number of participants per course at the given training level
- \bar{d} = $(\sum d_i \times n_i) \div \sum n_i$ is the average course duration at the given training level
- \overline{CPD} = $\bar{N} \times \bar{d}$, the average number of course person days for courses at that training level.
- e = $E \div (\sum N_i \times n_i \times d_i)$

- f = 100 - d
- RFP = (RP x 642) - CPD = 1284 - CPD
- RPA = (RP x 350 x d) - CPD = (700 x d) - CPD
- TM = 40
- CS = 2350 - CPD
- SA = 100

Therefore:

$$K = e + f + RPF + SA + RPA + TM + CS$$

This is the fundamental costing equation, giving the overall average cost per course person day at the given training level. It is comprised of five basic parts:

- equipment cost: = e
- travel and transport = f + RPF
- accomodation and food = SA + RPA
- training materials = TM
- consultancy = CS

For each ministry/department, the total sum required to give training to its targeted participants at a given level is obtained by multiplying the corresponding K by the ministry's projected total course person days for that level of training.

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSECONOMIC ANALYSISTable of Contentspage1. METHODOLOGY

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTECONOMIC ANALYSIS1. METHODOLOGYA. Project Benefits

1.01 This annex describes the techniques applied in the economic analysis and includes summary and basic tables used in deriving estimates of the economic viability of the project.

1.02 The objective of the economic analysis is to determine incremental benefits (in this case, increased crop production) and costs (project development, farm inputs). No further benefits, in the form of increased areas or yields of crops, are assumed beyond PY-5; levels achieved by the end of PY-5 are maintained throughout the 20-year forecasting period used in the economic analysis. Project benefits included in the economic analysis are the incremental production levels from cassava, bananas and sorghum. Incremental production of other crops covered under the project cannot be claimed as a benefit of the Kwale and Kilifi District Development Projects, as the improved results are expected mainly from intensive extension activities. These are covered under the National Extension Project, and the K-KDDP is playing a supportive and institutional role. Table 1 is the Summary Table of the Economic Costs and Benefits taken into account in the evaluation.

1.03 In Tables 2 and 3 the incremental crop areas and production, financial and economic costs and benefits are estimated from Kwale and Kilifi Districts. "Total" financial and economic benefits in each of the tables include all crops under the project; "Project" financial and economic benefits refer only to cassava, bananas and sorghum. Tables 2 and 3 are based on incremental crop areas and production (Tables 16 and 17).

1.04 No incremental production nor economic benefits have been taken into account for tree crops because the situation concerning perishable produce is not clearly understood; it is possible that increased production will not lead to incremental economic benefits, once labour and marketing costs are taken into account. This issue can only be properly addressed once the marketing work is completed.

1.05 Table 15 shows the derivation of economic prices for outputs. Where applicable, these are calculated from international commodity prices adjusted for freight, insurance, local transport and handling costs, to

give equivalent farmgate prices. For non-internationally traded produce average producer prices in the project area are used, as these more closely reflect economic prices (determined by supply and demand); international parity prices and informal market prices are used in economic analysis rather than gazetted farmgate prices which are subject to distortions (controlled pricing).

B. Project Costs

1.06 Economic costs of the project components are calculated from financial values derived in Annex 1.

1.07 Tables 4-13 show the estimates of economic costs of crop production models under the "improved" situation, including the value of incremental labour. Financial and economic costs of proposed input packages are summarized in Table 14.

1.08 Project costs from FY-6 - FY-20: Project unit costs in the post-project period are charged at the following proportions of PY-5 values:

- Year 6 - 80%;
- Year 7 - 60%;
- Year 8 - 40%;
- Year 9 - 20%;
- Years 10-20 - 10%.

This means that in PY-10 line ministry incremental costs will be 10% of PY-5 incremental costs to achieve the same levels of incremental benefit.

1.09 Some of the project costs are not directly related to achieving the agricultural benefits but reflect "institution building" aspects of the investment. The following adjustments to project economic costs are intended to address these points:

- (i) District Focus Policy Training is not included as project costs in deriving benefit/cost indices;
- (ii) the cost of the fisheries component has not been included as it has been budgeted for undefined technical services for which no production impact has been taken into account;
- (iii) for similar reasons the cost of the marketing study for perishable produce has also been excluded (no incremental tree crop production has been included in the benefits);
- (iv) the credit provided to CBK is not included as these funds will remain available in a revolving fund; the purchase and operation of the mobile bank is included at full cost, as it is regarded as an essential element of project implementation.

1.10 The baseline survey, management study and technical training are regarded as important to the achievement of full benefits in terms of project management, effective targeting of project components and delivery of improved technical services, and have therefore been included in project economic costs (Table 1).

1.11. Shadow pricing conventions used in the Economic Analysis: The economic values of goods and services required for the project are estimated by applying accounting ratios; these reflect the adjustments to be made to market prices in order to arrive at the economic values (or accounting prices) of construction, equipment and services. All traded goods can be broken down into four basic components: foreign exchange content; duties, taxes and subsidies; local salaries and wages; and net payments to entrepreneurs (profits). The market price (financial cost) of each project item has been sub-divided into these components, which have then been converted to the economic (or "shadow") prices by applying the accounting ratios. The relevant ratios are discussed below:

- (a) Foreign Exchange Content: a ratio of 1:15 is used as the Kenya Shilling is believed to have a shadow rate of 85% of equivalent foreign currencies used to purchase imports. The recent devaluations of the Kenya Shilling and the greatly improved export earnings have brought the Kenya Shilling nearly in line with foreign currencies; the ratio therefore primarily reflects the comparative scarcity of foreign exchange.
- (b) Duties, Taxes and Subsidies: taxes and duties must be subtracted from market prices, since they are simply transfers within the economy and do not represent economic resources. For the same reason subsidies must be added, as they are applied to artificially reduce prices.
- (c) Local Salaries and Wages: Salaries and wages are usually valued in terms of the opportunity cost of using skilled and unskilled workers on the project being evaluated. Usually a distinction is made between skilled and unskilled labour, which is based on the level of earnings. The use of skilled labour usually means that workers have been attracted away from other sources of full employment, and a premium is paid for their services, which tends to overvalue the scarcity of skills concerned. With allowances for payments of income tax and social security contributions (valued as zero accounting costs), the economic value of salaries earned by skilled labour is taken as 80% of the market prices. The accounting cost of unskilled labour is assumed to be less than unity because of the over-supply of labour in Kenya (unemployment). Taxes are not applicable for wages below KSh 1 200, which covers all unskilled categories. Therefore, the ratio must reflect only the value of the resource of unskilled labour. This is lower than minimum wages paid, and can be assumed to be 70% of market wages, which are KSh 18-20 per man day in the project area. This gives an economic value for labour of KSh 13-14, which is equivalent to the minimum cash wage payable to agricultural workers (Ks 13.2 per man day). In this study the rate of KSh 13.20 has therefore been applied.

C. Contingencies

1.12 The economic analysis includes physical contingencies in project costs but excludes price contingencies.

D. Terminal Value

1.13 A value of 50% of economic construction costs is included as a project benefit in year 20, to represent the terminal (residual) value of buildings constructed under the project. No other residual benefits are claimed.

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Kwale and Kilifi District Development Projects

Summary Table of Economic Costs and Benefits

(Kpounds '000)

Project Year	Project Costs 1/			Project Economic Costs 2/	Project Economic Benefits 3/			Benefits Costs
	Total	For.Ex.	Tax, duty		Kwale Project	Kilifi Project	Total Project	
1	683.47	279.16	91.38	913.12	6.55	22.45	29	-884.12
2	222.10	51.65	37.21	244.29	33.06	79.20	112.26	-132.03
3	200.22	35.72	37.20	204.10	69.37	138.57	207.94	3.84
4	248.75	51.47	37.19	270.75	110.90	212.79	323.69	52.94
5	229.02	35.56	37.17	232.74	152.58	286.97	439.55	206.81
6				201.40	152.58	286.97	439.55	238.15
7				151.05	152.58	286.97	439.55	288.50
8				100.70	152.58	286.97	439.55	338.85
9				50.35	152.58	286.97	439.55	389.20
10				25.17	152.58	286.97	439.55	414.38
11				25.17	152.58	286.97	439.55	414.38
12				25.17	152.58	286.97	439.55	414.38
13				25.17	152.58	286.97	439.55	414.38
14				25.17	152.58	286.97	439.55	414.38
15				25.17	152.58	286.97	439.55	414.38
16				25.17	152.58	286.97	439.55	414.38
17				25.17	152.58	286.97	439.55	414.38
18				25.17	152.58	286.97	439.55	414.38
19				25.17	152.58	286.97	439.55	414.38
20				25.17	152.58	286.97	465.71	440.54
NET PRESENT VALUE AT 12 % DISCOUNT RATE								677.41
								=====
ECONOMIC RATE OF RETURN (%)								19.10
								=====

1/ Financial costs - see Annex 9 for details

2/ Calculated by removal of taxes and duties and shadow pricing of foreign exchange content; for PY6 the average of PY4 and PY5 costs are used as the base (costs are assumed to decline after PY5 (see text for details)

3/ Incremental economic benefits of specific project components (cassava, bananas and sorghum)

Kwale District Development Project

ANNEX 9

Table 2

Estimation of Incremental Financial and Economic Benefits

CROP	Units	Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
								to 20
Maize:								
Area of improved crop	ha		500	1500	2500	3750	5000	5000
Incremental production	tonnes		300	900	1500	2251	3000	3000
Farm gate price	KPnds/t	104						
Economic price	KPnds/t	101						
Financial cost of inputs	KPnds ('000)		7.80	23.41	39.01	58.52	78.03	78.03
Economic cost of inputs	KPnds ('000)		16.89	50.67	84.46	126.68	168.91	168.91
Financial incremental benefit	KPnds ('000)		23.40	70.19	116.99	175.59	233.98	233.98
Economic incremental benefit	KPnds ('000)		13.41	40.23	67.04	100.67	134.09	134.09
Cassava:								
Area of improved crop	ha		150	350	550	800	1050	1050
Incremental production	tonnes		158	1008	1858	2921	3983	3983
Farm gate price	KPnds/t	30						
Economic price	KPnds/t	30						
Financial cost of inputs	KPnds ('000)		.38	.88	1.38	2.00	2.63	2.63
Economic cost of inputs	KPnds ('000)		3.47	10.42	17.37	26.06	34.75	34.75
Financial incremental benefit	KPnds ('000)		4.37	29.37	54.37	85.63	116.87	116.87
Economic incremental benefit	KPnds ('000)		1.27	19.82	38.37	61.57	84.75	84.75
Compeas:								
Area of improved crop	ha		100	300	500	750	1000	1000
Incremental production	tonnes		15	45	75	112	150	150
Farm gate price	KPnds/t	90						
Economic price	KPnds/t	112						
Financial cost of inputs	KPnds ('000)		.10	.30	.50	.75	1.00	1.00
Economic cost of inputs	KPnds ('000)		.70	2.10	3.50	5.25	7.00	7.00
Financial incremental benefit	KPnds ('000)		1.25	3.75	6.25	9.33	12.50	12.50
Economic incremental benefit	KPnds ('000)		.98	2.94	4.90	7.29	9.80	9.80
Banana:								
Area of improved crop	ha		25	75	125	188	250	250
Incremental production	tonnes		75	225	375	561	750	750
Farm gate price	KPnds/t	50						
Economic price	KPnds/t	50						
Financial cost of inputs	KPnds ('000)		1.42	4.25	7.09	10.66	14.18	14.18
Economic cost of inputs	KPnds ('000)		.77	2.32	3.86	5.81	7.73	7.73
Financial incremental benefit	KPnds ('000)		2.33	7.00	11.66	17.39	23.33	23.33
Economic incremental benefit	KPnds ('000)		2.98	8.93	14.89	22.24	29.78	29.78
Green gram:								
Area of improved crop	ha		50	150	250	375	500	500
Incremental production	tonnes		3	8	13	18	25	25
Farm gate price	KPnds/t	200						
Economic price	KPnds/t	250						
Financial cost of inputs	KPnds ('000)		.01	.04	.07	.11	.15	.15
Economic cost of inputs	KPnds ('000)		.09	.28	.47	.70	.93	.93
Financial incremental benefit	KPnds ('000)		.59	1.56	2.53	3.49	4.85	4.85
Economic incremental benefit	KPnds ('000)		.66	1.72	2.78	3.80	5.32	5.32

Sesame:								
Area of improved crop	ha		50	150	250	375	500	500
Incremental production	tonnes		1	3	6	11	13	13
Farm gate price	KPnds/t	250						
Economic price	KPnds/t	250						
Financial cost of inputs	KPnds ('000)		.02	.05	.09	.13	.18	.18
Economic cost of inputs	KPnds ('000)		.03	.10	.17	.26	.34	.34
Financial incremental benefit	KPnds ('000)		.23	.70	1.41	2.62	3.08	3.08
Economic incremental benefit	KPnds ('000)		.22	.65	1.33	2.50	2.91	2.91
Sorghum:								
Area of improved crop	ha		88	263	438	656	875	875
Incremental production	tonnes		31	66	202	333	464	464
Farm gate price	KPnds/t	70						
Economic price	KPnds/t	97						
Financial cost of inputs	KPnds ('000)		.09	.26	.43	.64	.85	.85
Economic cost of inputs	KPnds ('000)		.70	2.09	3.48	5.21	6.95	6.95
Financial incremental benefit	KPnds ('000)		2.08	4.36	13.71	22.67	31.63	31.63
Economic incremental benefit	KPnds ('000)		2.31	4.31	16.12	27.09	38.06	38.06
Sweet potato:								
Area of improved crop	ha		25	75	125	188	250	250
Incremental production	tonnes		56	168	281	420	562	562
Farm gate price	KPnds/t	50						
Economic price	KPnds/t	50						
Financial cost of inputs	KPnds ('000)		.00	.00	.00	.00	.00	.00
Economic cost of inputs	KPnds ('000)		1.16	3.47	5.78	8.69	11.55	11.55
Financial incremental benefit	KPnds ('000)		2.80	8.40	14.05	21.00	28.10	28.10
Economic incremental benefit	KPnds ('000)		1.65	4.94	8.28	12.31	16.55	16.55
Cotton:								
Area of improved crop	ha		0	0	0	0	0	0
Incremental production	tonnes		0	0	0	0	0	0
Farm gate price	KPnds/t	250						
Economic price	KPnds/t	340						
Financial cost of inputs	KPnds ('000)							
Economic cost of inputs	KPnds ('000)							
Financial incremental benefit	KPnds ('000)		.00	.00	.00	.00	.00	.00
Economic incremental benefit	KPnds ('000)		.00	.00	.00	.00	.00	.00
Groundnuts:								
Area of improved crop	ha		0	0	0	0	0	0
Incremental production	tonnes		0	0	0	0	0	0
Farm gate price	KPnds/t	300						
Economic price	KPnds/t	300						
Financial cost of inputs	KPnds ('000)							
Economic cost of inputs	KPnds ('000)							
Financial incremental benefit	KPnds ('000)		.00	.00	.00	.00	.00	.00
Economic incremental benefit	KPnds ('000)		.00	.00	.00	.00	.00	.00
Total Financial Benefit to Farmers	(KPnds'000)		37.05	125.32	220.97	337.71	454.32	454.32
Total Economic Benefits	(KPnds'000)		23.46	83.53	153.70	237.48	321.25	321.25
Project Fin. Benefit to Farmers	(KPnds'000)		8.78	40.73	79.74	125.69	171.82	171.82
Project Econ. Benefit to Farmers	(KPnds'000)		6.55	33.06	69.37	110.90	152.58	152.58

Kilifi District Development Project

Estimation of Incremental Financial and Economic Benefits

CRDP	Units	Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
								to 20
Maize:								
Area of improved crop	ha		700	2100	3500	5250	7000	7000
Incremental production	tonnes		165	494	823	1234	1825	1825
Farm gate price	KPnds/t	104						
Economic price	KPnds/t	101						
Financial cost of inputs	KPnds ('000)		5.79	17.37	28.95	43.43	57.91	57.91
Economic cost of inputs	KPnds ('000)		12.10	36.29	60.49	90.73	120.97	120.97
Financial incremental benefit	KPnds ('000)		11.37	34.00	56.64	84.91	131.89	131.89
Economic incremental benefit	KPnds ('000)		4.57	13.60	22.64	33.90	63.35	63.35
Cassava:								
Area of improved crop	ha		140	420	700	1050	1400	1400
Incremental production	tonnes		400	1198	1996	2993	3990	3990
Farm gate price	KPnds/t	30						
Economic price	KPnds/t	30						
Financial cost of inputs	KPnds ('000)		.35	1.05	1.75	2.63	3.50	3.50
Economic cost of inputs	KPnds ('000)		4.48	13.43	22.39	33.58	44.77	44.77
Financial incremental benefit	KPnds ('000)		11.65	34.89	58.13	87.17	116.20	116.20
Economic incremental benefit	KPnds ('000)		7.52	22.51	37.49	56.21	74.93	74.93
Compeas:								
Area of improved crop	ha		140	420	700	1050	1400	1400
Incremental production	tonnes		10	27	45	67	88	88
Farm gate price	KPnds/t	90						
Economic price	KPnds/t	112						
Financial cost of inputs	KPnds ('000)		.14	.42	.70	1.05	1.40	1.40
Economic cost of inputs	KPnds ('000)		.82	2.45	4.09	6.14	8.18	8.18
Financial incremental benefit	KPnds ('000)		.76	2.01	3.35	4.98	6.52	6.52
Economic incremental benefit	KPnds ('000)		.30	.57	.95	1.37	1.67	1.67
Banana:								
Area of improved crop	ha		11	32	53	79	105	105
Incremental production	tonnes		30	93	156	237	315	315
Farm gate price	KPnds/t	50						
Economic price	KPnds/t	50						
Financial cost of inputs	KPnds ('000)		.62	1.81	3.01	4.48	5.95	5.95
Economic cost of inputs	KPnds ('000)		.34	.99	1.64	2.44	3.24	3.24
Financial incremental benefit	KPnds ('000)		.88	2.84	4.79	7.37	9.80	9.80
Economic incremental benefit	KPnds ('000)		1.16	3.66	6.16	9.41	12.51	12.51
Green gram:								
Area of improved crop	ha		70	210	350	525	700	700
Incremental production	tonnes		1	4	5	9	11	11
Farm gate price	KPnds/t	200						
Economic price	KPnds/t	250						
Financial cost of inputs	KPnds ('000)		.01	.02	.03	.05	.06	.06
Economic cost of inputs	KPnds ('000)		.04	.12	.20	.29	.39	.39
Financial incremental benefit	KPnds ('000)		.19	.78	.97	1.75	2.14	2.14
Economic incremental benefit	KPnds ('000)		.21	.88	1.05	1.96	2.36	2.36

Sesame:		ha	70	210	350	525	700	700
Area of improved crop		tonnes	1	2	3	4	5	5
Incremental production								
Farm gate price		KPnds/t	250					
Economic price		KPnds/t	250					
Financial cost of inputs		KPnds ('000)	.01	.02	.04	.06	.07	.07
Economic cost of inputs		KPnds ('000)	.01	.04	.07	.11	.14	.14
Financial incremental benefit		KPnds ('000)	.24	.48	.71	.94	1.18	1.18
Economic incremental benefit		KPnds ('000)	.24	.46	.68	.89	1.11	1.11
Sorghum:		ha	416	1250	2083	3124	4165	4165
Area of improved crop		tonnes	176	649	1149	1773	2398	2398
Incremental production								
Farm gate price		KPnds/t	70					
Economic price		KPnds/t	97					
Financial cost of inputs		KPnds ('000)	.41	1.22	2.03	3.05	4.06	4.06
Economic cost of inputs		KPnds ('000)	3.30	9.93	16.54	24.80	33.07	33.07
Financial incremental benefit		KPnds ('000)	11.91	44.21	78.40	121.06	163.80	163.80
Economic incremental benefit		KPnds ('000)	13.77	53.03	94.91	147.18	199.54	199.54
Sweet potato:		ha	11	32	53	79	105	105
Area of improved crop		tonnes	22	69	116	178	255	255
Incremental production								
Farm gate price		KPnds/t	50					
Economic price		KPnds/t	50					
Financial cost of inputs		KPnds ('000)	.00	.00	.00	.00	.00	.00
Economic cost of inputs		KPnds ('000)	.51	1.48	2.45	3.65	4.85	4.85
Financial incremental benefit		KPnds ('000)	1.10	3.45	5.80	8.90	12.75	12.75
Economic incremental benefit		KPnds ('000)	.59	1.97	3.35	5.25	7.90	7.90
Cotton:		ha	238	750	1190	1785	2380	2380
Area of improved crop		tonnes	72	226	358	536	715	715
Incremental production								
Farm gate price		KPnds/t	250					
Economic price		KPnds/t	340					
Financial cost of inputs		KPnds ('000)	2.20	6.94	11.01	16.51	22.02	22.02
Economic cost of inputs		KPnds ('000)	3.18	10.02	15.90	23.85	31.80	31.80
Financial incremental benefit		KPnds ('000)	15.80	49.56	78.49	117.49	156.74	156.74
Economic incremental benefit		KPnds ('000)	21.30	66.82	105.82	158.39	211.30	211.30
Groundnuts:		ha	60	179	297	446	595	595
Area of improved crop		tonnes	16	49	109	183	258	258
Incremental production								
Farm gate price		KPnds/t	300					
Economic price		KPnds/t	300					
Financial cost of inputs		KPnds ('000)	.00	.00	.00	.00	.00	.00
Economic cost of inputs		KPnds ('000)	.51	1.54	2.55	3.83	5.11	5.11
Financial incremental benefit		KPnds ('000)	4.80	14.70	32.70	54.90	77.40	77.40
Economic incremental benefit		KPnds ('000)	4.29	13.16	30.15	51.07	72.29	72.29
Total Financial Benefit to Farmers		(KPnds'000)	58.70	186.92	319.99	489.47	678.41	678.41
Total Economic Benefits		(KPnds'000)	53.95	176.66	303.21	465.63	646.96	646.96
Project Fin. Benefit to Farmers		(KPnds'000)	24.44	81.94	141.32	215.60	289.80	289.80
Project Econ. Benefit to Farmers		(KPnds'000)	22.45	79.20	138.57	212.79	286.97	286.97

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Maize: Financial and Economic Costs
of Recommended Incremental Inputs

(a) ZONES L2/L3	- - - - - (KSh/ha) - - - - -		
	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Inputs			
Planting material ^{a/}	52.0	180.0	123.0
Fertilizer	-	367.2	384.6
Insecticide	-	26.4	19.1
Labour ^{b/}	(1029.6)	(1 650.0)	620.4
TOTALS	52.0	573.6	1 147.1

^{a/} Own seed valued at NCPB purchase price; improved seed purchased from KGGU is shadow-priced at KSh 175/ha.

^{b/} Labour priced at KSh 13.2/man-day for the economic costs (excluded from financial costs).

(b) ZONES L4/L5	- - - - - (KSh/ha) - - - - -		
	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Inputs			
Planting material ^{a/}	41.4	144.0	98.6
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(924.0)	(1 029.6)	105.6
TOTALS	41.4	144.0	204.2

^{a/} Own seed at NCPB purchase price; improved seed purchased from KGGU is shadow-priced at KSh 175/ha.

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Cassava: Financial and Economic Costs

of Recommended Incremental Inputs

(a) ZONES L2/L3 - - - - - (KSh/ha) - - - - -			
Inputs	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Planting material ^{a/}	-	50.0	87.9
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(1 320.0)	(2 006.0)	686.0
TOTALS	0	50.0	773.9

^{a/} Financial cost is present MALD price to farmer; economic cost is average cost per hectare of improved crop (economic costs of operating bulking nurseries).

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

(b) ZONES L4/L5 - - - - - (KSh/ha) - - - - -			
Inputs	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Planting material ^{a/}	-	50.0	87.9
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(1 056)	(1 584.0)	528.0
TOTALS	0	50.0	615.9

^{a/} Financial value is present MALD price to farmer; economic cost is average cost per hectare of improved crop (economic costs of operating bulking nurseries).

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Bananas: Financial and Economic Costs

of Recommended Incremental Inputs

(a) ZONES L2/L3		- - - - - (KSh/ha) - - - - -	
<u>Inputs</u>	<u>Financial</u>	<u>Costs</u>	<u>Incremental</u>
	<u>Unimproved</u>	<u>Improved</u>	<u>Economic Costs</u>
Planting material ^{a/}	-	900.0	251.1
Fertilizer	-	-	-
Insecticide	-	234.0	169.1
Labour ^{b/}	(2 838.0)	(3036.0)	198.0
TOTALS	0	1 134.0	618.2

a/ Financial value is present MALD price to farmer; economic cost is average cost per hectare of improved (economic costs of operating bulking nursery).

b/ Labour priced at KSh 13.2/man-day for economic estimates.

(b) ZONES L4/L5

Banana production not recommended in these zones.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Cowpeas: Financial and Economic Costs
of Recommended Incremental Inputs

(a) ZONES L2/L3		- - - - - (KSh/ha) - - - - -	
Inputs	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Planting material ^{a/}	36.0	36.0	-
Fertilizer	-	-	-
Insecticide	-	20.0	14.5
Labour ^{b/}	(924.0)	(1 082.4)	158.4
TOTALS	36.0	56.0	172.9

^{a/} Own seed is used for both improved and unimproved; valued at NCPB purchase price.

^{b/} Labour priced at KSh 13.2/man-day for both economic estimates.

(b) ZONE L4/L5		- - - - - (KSh/ha) - - - - -	
Inputs	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Planting material ^{a/}	36.0	36.0	-
Fertilizer	-	-	-
Insecticide	-	20.0	14.5
Labour ^{b/}	(884.40)	(976.8)	92.4
TOTALS	36.0	56.0	106.9

^{a/} Own seed is used for both improved and unimproved; valued at NCPB purchase price.

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Sorghum: Financial and Economic Costs
of Recommended Incremental Inputs

(a) ZONES L4/L5 Inputs	- - - - - (KSh/ha) - - - - -		Incremental Economic Costs
	Financial Unimproved	Costs Improved	
Planting material ^{a/}	18.0	37.5	26.8
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(858.0)	(990.0)	132.0
TOTALS	18.0	37.5	158.8

^{a/} Own seed (unimproved) valued at NCPB purchase price; improved seed valued at economic costs of bulking for total area of improved crop.

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Green gram: Financial and Economic Costs
of Recommended Incremental Inputs

(a) ZONES L2/L3		(KSh/ha)	
Inputs	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Planting material ^{a/}	80.0	80.0	-
Fertilizer	-	-	-
Insecticide	-	11.8	8.5
Labour ^{b/}	(858.0)	(924.0)	66.0
TOTALS	80.0	91.8	74.5

^{a/} Own seed is valued at NCPB purchase price.

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

(b) ZONE L4/L5

No incremental inputs are recommended.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Sesame: Financial and Economic Costs
of Recommended Incremental Inputs

(a) ZONES L2/L3 Inputs	- - - - - (KSh/ha) - - - - -		
	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Planting material ^{a/}	26.0	40.0	14.0
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(858.0)	(871.2)	13.2
TOTALS	26.0	40.0	27.2

^{a/} Own seed is valued at NCPB purchase price.

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

(b) ZONES L4/L5

No incremental inputs are recommended.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Sweet Potato: Financial and Economic

Costs of Recommended Incremental Prices

(a) ZONES L2/L3	- - - - - (KSh/ha) - - - - -		
	Financial	Costs	Incremental
	Unimproved	Improved	Economic Costs
Inputs			
Planting material ^{a/}	-	-	-
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(1 254.0)	(2 178.0)	924.0
TOTALS	0	0	924.0

^{a/} No value attached to own cuttings used for planting (labour costs only)

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

(b) ZONES L4/L5

No incremental inputs are recommended.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Cotton: Financial and Economic Costs of

Recommended Incremental Inputs

(a) ZONES L4/L5		- - - - - (KSh/ha) - - - - -	
<u>Inputs</u>	<u>Financial</u>	<u>Costs</u>	<u>Incremental</u>
	<u>Unimproved</u>	<u>Improved</u>	<u>Economic Costs</u>
Planting material ^{a/}	-	-	67.5
Fertilizer	-	-	-
Insecticide	-	185.0	133.7
Labour ^{b/}	(858.0)	(924.0)	66.0
TOTALS	0	185.0	267.2

^{a/} Seed supplied free by CLSMB; economic cost is based on purchase of seed cotton, cleaning and delivery of seed.

^{b/} Labour priced at KSh 13.2/man-day for economic estimates.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTS

Groundnut: Financial and Economic Costs of

Recommended Incremental Inputs

(a) ZONES L2/L3 Inputs	- - - - - (KSh/ha) - - - - -		Incremental Economic Costs
	Financial Unimproved	Costs Improved	
Planting material ^{a/}	315.0	315.0	-
Fertilizer	-	-	-
Insecticide	-	-	-
Labour ^{b/}	(1 016.4)	(1 188.0)	171.6
TOTALS	315.0	315.0	171.6

a/ Seed valued at NCPB purchase price (45 kg at KSh 7 kg).

b/ Labour priced at KSh 13.2/man-day for economic estimates.

ANNEX 9
Table 14

KENYA

KWALE & KILIFI DISTRICT DEVELOPMENT PROJECTS

Financial and Economic Costs of Crop Input Packages

Crop	Zone	- - - - - Incremental - - - - -				Total
		Labour ^a / man-days		Purchased	Inputs	Economic
		Total	Incr.	Financial ^a / (KSh/ha)	b/ (KSh/ha)	Cost ^c / (KSh/ha)
<u>Maize</u>						
	L2/L3	125	47	521.6	526.7	1 147.1
	L4/L5	95	25	102.6	98.6	428.6
<u>Cassava</u>						
	L2/L3	152	52	50.0	87.9	773.9
	L4/L5	120	40	50.0	87.9	615.9
<u>Banana</u>						
	L2/L3	230	15	1 134.0	420.2	618.2
<u>Cowpeas</u>						
	L2/L3	82	12	20.0	14.5	172.9
	L4/L5	74	7	20.0	14.5	106.9
<u>Sorghum</u>						
	L4/L5	75	10	19.5	26.8	158.8
<u>Greengram</u>						
	L2/L3	70	5	11.8	8.5	74.5
	L4/L5	65	0	-	112.0	
<u>Sesame</u>						
	L2/L3	66	1	14.0	14.0	27.2
	L4/L5	62	0	-.d/	-	-.e/
<u>Sweet Potatoes</u>						
	L2/L3	165	70	-.d/	-	924.0
<u>Cotton</u>						
	L4/L5	70	5	185.0	201.2	267.2
<u>Groundnut</u>						
	L4/L5	90	13	-.d/	-	171.6

Notes to Table 14

- a/ From Illustrative Crop Budgets, Annex 2, financial cost of inputs excludes labour; all incremental labour is assumed to be provided by the families.
- b/ Economic prices of: (a) seed: based on full economic costs of purchased maize hybrid seed, economic costs of bulking for cassava banana and sorghum, market value for cowpea, green gram, sesame and ground nut (opportunity cost of retaining seed), labour only for sweet potatoes (cuttings are used), and a calculated cost of cotton seed based on the purchase price of seed cotton and an assumed cleaning/delivery cost; (b) chemicals: based on addition of shadow price of foreign exchange content and removal of taxes.
- c/ Includes the economic cost of labour charged at KSh 13.2 per man-day, also believed to be the minimum "living wage" (the minimum wage for unskilled labourers over 18 years of age in agriculture is KSh 13.20 per day).
- d/ No incremental purchase inputs recommended, but additional labour required for improved crop husbandry.
- e/ No incremental purchased inputs recommended; no incremental labour required.

ANNEX 9
Table 15

KENYA

KWALE & KALIFI DISTRICT DEVELOPMENT PROJECTS

Farm Gate and Economic Parity Prices for Agricultural Produce

<u>Crop</u>	<u>"Farm gate price"^{a/}</u> <u>----- Kf per tonne -----</u>	<u>Parity Price^{b/}</u> <u>-----</u>
Maize	104	101
Cassava	30	30
Banana	50	50
Cowpea	90	112
Sorghum	70	97
Green gram	200	250
Sesame	250	250
Sweet Potatoes	50	50
Cotton	250	340
Ground nuts	300	300

a/ NCPB scheduled prices 1985/86 season, for cereals except for maize, for which the 1986/87 price is used (1986/87 prices for other crops were not available at the time of the mission); price levels at buying centres. Cassava, banana and sweet potato prices are averages for local market prices.

b/ Official exchange rate is used to convert CIF Mombasa prices to KSh/t prices in obtaining parity prices; sources for international commodity prices (maize, cotton, sorghum, groundnuts were UNCTAD, Monthly Commodity Price Bulletin; FAO, Monthly Bulletin of Statistics and World Bank Commodity Trade and Price Trends. An increment of 10% for wharfage, handling and transport is added to obtain equivalent economic "farm gate" prices. Cowpea and green gram prices are 1.25 of the NCPB prices to reflect higher parallel market prices.

ANNEX 9
Table 16

KENYA

KWALE DISTRICT DEVELOPMENT PROJECT
INCREMENTAL CROP AREAS AND PRODUCTION^{a/}

<u>Crop</u>	<u>YEAR 1</u>		<u>YEAR 2</u>		<u>YEAR 3</u>		<u>YEAR 4</u>		<u>YEAR 5</u>		<u>Total Prod'n</u>	
	<u>(ha)</u>	<u>(t)</u>	<u>(ha)</u>	<u>(t)</u>	<u>(ha)</u>	<u>(t)</u>	<u>(ha)</u>	<u>(t)</u>	<u>(ha)</u>	<u>(t)</u>	<u>at full Dev't</u>	<u>(t)</u>
Maize	500	300	1500	600	2500	600	3750	751	5000	749	5000	3000
Cassava	150	158	350	850	550	850	800	1063	1050	1062	1050	3983
Cowpea	100	15	300	30	500	30	750	37	1000	38	1000	150
Bananas	25	75	75	150	125	150	188	186	250	189	250	750
Green gram	50	3	150	5	250	5	375	5	500	7	500	25
Sesame	50	1	150	2	250	3	375	5	500	2	500	13
Sorghum	88	31	263	66	438	105	656	131	875	131	875	464
Sweet Potatoes	25	56	75	112	125	113	188	139	250	142	250	562
Cotton		-		-		-		-		-		-
Ground nuts		-		-		-		-		-		-

^{a/} Annex 2, Tables 6 and 8.

ANNEX 9
Table 17

KENYA

KILIFI DISTRICT DEVELOPMENT PROJECT
INCREMENTAL CROP AREAS AND PRODUCTION^{a/}

<u>Crop</u>	<u>YEAR 1</u>		<u>YEAR 2</u>		<u>YEAR 3</u>		<u>YEAR 4</u>		<u>YEAR 5</u>		<u>Total Prod'n at full Dev't</u>	
	(ha)	(t)	(ha)	(t)	(ha)	(t)	(ha)	(t)	(ha)	(t)	(ha)	(t)
Maize	700	165	2100	329	3500	329	5250	411	7000	591	7000	1825
Cassava	140	400	420	798	700	798	1050	997	1400	997	1400	3990
Cowpea	140	10	420	17	700	18	1050	22	1400	21	1400	88
Banana	11	30	32	63	53	63	79	81	105	78	105	315
Green gram	70	1	210	3	350	1	525	4	700	2	700	11
Simsim	70	1	210	1	350	1	525	1	700	1	700	5
Sorghum	416	176	1250	473	2083	500	3124	624	4165	625	4165	2398
Sweet Potato	11	22	32	47	53	47	79	62	105	77	105	255
Cotton	238	72	750	154	1190	132	1785	178	2380	179	2380	715
Ground nuts	60	16	179	33	297	60	446	74	595	75	595	258

^{a/} Annex 2, Tables 7 and 9.

KENYA

KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECTSLIST OF PERSONS METOffice of the President

Mr. P. Leparleen	Under Secretary, DPM
Mr. Kivuti	Under Secretary, OP
Mr. S.M.	Komu District Commissioner Kilifi
Mr. Arigi	DO Kilifi
Mr. P. Masengeli	DO Kilifi
Mr. R.W. Machina	DDO Kilifi
Miss W. Kagiri	District Supplies Officer Kilifi
Mr. Ali Sheikh	District Commissioner Kwale
Mr. E. Gichuki	DO Kwale
Mr. M. Ajwang	DDO Kwale
Mr. N. Mawsigwa	District Statistical Officer

Ministry of Agriculture and Livestock Development

Mr. M. Mukolwe	DDA/CPDO
Mr. Gatheru	Chief of Extension Services
Mr. J. Wanjaiya	Economist
Mr. Shihemi	Economist
Mr. Oketch	Economist
Mr. J. Mburu	CLO
Mr. Mwenda	AO Farm Mechanization
Mr. D.G. Kingori	DAO Kilifi
Mr. M. Githonga	Extension Training Coordinator, Kilifi
Mr. Mbui	AO (Rural Technology) Kilifi
Mr. Kilaya	AO (Extension) Kilifi
Mr. G. Ndguku	AO (Crops) Kilifi
Mr. O. Adede	AO (Soil Conservation) Kilifi
Mr. S. Ndeti	Bee-Keeping Officer, Kilifi
Mr. F. Ojwang	AO (Range) Kilifi
Mr. N. Kirni	Crop Production Officer, Bahari Division, Kilifi
Mr. A. Maindi	Division Extension Officer Bahari, Kilifi
Ms. L. Ndolo	Home Economics Officer, Bahari Division, Kilifi
Mr. R. Chege	Officer-in-charge, Kilifi Prisons
Mr. G. Muiriu	Prison's Officer, Kilifi
Mr. Komu	Prisons Commander, Coast Province
Mr. G. Mwaisege	Principal Mtwapa FTC, Kilifi
Mr. D. Mulu	Vice-Principal, Mtwapa FTC
Mr. Aziz Abubakar	Agriculture Director, Coast Agricultural Research Station, Mtwapa

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page 2

Mr. G. Mabuga	DEO Malindi
Mr. H. Athman	TO (Sabaki Nursery) Malindi
Dr. M. Kibara	DVO, Kilifi
Mr. J. Anumpui	LO (AI) Kilifi
Mr. Onyango	Dairy Officer Kilifi
Mr. Van Slooten	Dairy Officer Kilifi
Mr. Rutagengur	Dairy Officer Kilifi
Mr. J. Anunda	DAO Kwale
Mr. K. Aluda	DSCO Kwale
Mr. M. Nyambu	IFAD Programmes Coordinator Kwale
Mr. N. Gatonye	DEO Kinango
Mr. J. Kitongo	DEO Msambweni
Mr. M. Mwangi	Crops Officer, Matuga
Mr. Mwova	Range Officer Kwale
Dr. Maina Ithagu	DVO Kwale
Dr. Bello	VO (AI) Kwale
Mr. Katona	LO Kwale
Mr. Lalogwah	AO Matuga
Mr. J. Olale	Extension Training Co-ordinator (K-KDP) Kwale
Mr. H. Kivi	Animal Production Officer Bahari Division, Kilifi

Ministry of Finance

Mr. Kairu

External Aid Section

Ministry of Planning & National Development

Mr. J. Kidenda	Chief Planning Officer
Mr. Kalikanda	Senior Planning Officer
Mr. Mjambili	Provincial Planning Officer
Dr. Oburu Oginga	Planning Officer
Mr. Tsuma	Kwale-Kilifi Programme Coordinator
Mr. Atinga	Planning Officer
Mr. Kipkan	Planning Officer

Ministry of Cooperative Development

Mr. A.M. Miriti	Agricultural Deputy Commissioner for Cooperative Development
Mr. Njuguna	PF & EO
Mr. E.K. Mwaura	Planning Officer MCD
Mrs. J. Mirithi	Planning Officer MCD
Mr. Ojiambo	District Co-operative Officer, Kwale
Mr. H. Mwangi	District Co-operative Officer, Kilifi
Mr. S. Mutugi	Cooperative Training Officer, Kilifi

Co-operative Bank of Kenya

Mr. Kimbui

General Manager

Agricultural Finance Corporation

Mr. Otieno Onduru Manager, Kilifi Branch

Ministry of Tourism & Wild Life

Mr. Oburu Deputy Director of Fisheries
Mr. E. Mwakilenge Asst. Provincial Fisheries Officer
Mr. A. Muraja DFO Kwale

Ministry of Works

Mr. Okwado DWO Kilifi

Kilifi District Council

Mr. J. Nguya Clerk to the Council
Mr. Vinya Administrative Officer

Ministry of Water Development

Mr Othiambo Provincial Water Engineer
Mr. D. Ndere District Water Engineer
Mr. Lindgren SIDA
Mr. Biwoth SIDA

Ministry of Transport & Communications

Mr. D. Morintat District Roads Superintendent, Kwale

Ministry of the Environment & Natural Resources

Mr. Mbugua DFO Kwale
Mr. N. Akhonya FCO (Re-Afforestation Kwale)
Mr. B. Kangi DFO Kilifi

Kenya Grain Growers Cooperative Union

Mr. J. N. Timothy Manager, Coast Province

National Cereals and Produce Board

Mr. P. D. Gathu Manager, Coast Province

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KWALE AND KILIFI DISTRICT DEVELOPMENT PROJECT

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