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KENYA: Sugar Rehabilitation
Loan 1636 Project Completion Report

CONFIDENTIAL

KENYA

SUGAR REHABILITATION PROJECT

(LOAN 1636-KE)

PROJECT COMPLETION REPORT

Eastern Africa Project Department
Central Agriculture Division

December 1986

KENYA
SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

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CURRENCY EXCHANGE RATES

Currency: Kenya Shilling (KSh)
1 Kenya Pound (KL 1.00) = KSh 20

KSh per US$ 1.00

1978 (Appraisal)	= 8.00	1982	= 11.39
1979	= 7.40	1983	= 13.43
1980	= 7.49	1984	= 14.59
1981	= 9.45	1985	= 16.50 1/

List of Abbreviations

ADC	=	Agricultural Development Corporation
AFC	=	Agricultural Finance Corporation
CIR	=	County Implementation Review
CPCS	=	Crop Production Credit Scheme
DFCK	=	Development Finance Company of Kenya
EASI	=	East African Sugar Industries Ltd.
GOK	=	Government of Kenya
KFA	=	Kenya Farmers Association
KNTC	=	Kenya National Trading Corporation
KSA	=	Kenya Sugar Authority
MOALD	=	Ministry of Agriculture and Livestock Development
MCU	=	Muhoroni Cooperative Union
NIB	=	National Irrigation Board
NSRI	=	National Sugar Research Institute
RDMF	=	Roads and Drainage Maintenance Fund
RMESA	=	Regional Mission (of the World Bank) in Eastern and Southern Africa
SBCU	=	Sugar Belt Cooperative Union
SSO	=	Sugar Settlement Organization

WEIGHTS AND MEASURES

1 hectare	=	10,000m = 2.47 acres
1 kilometer (km)	=	0.62 miles
1 sq. kilometer (km)	=	0.39 sq. miles = 100 ha
1 kilogram (kg)	=	2.20 pounds
1 litre (l)	=	0.26 US gallons
1 metric ton (t)	=	0.98 long tons = 1,000 kg

1/ As of March 1985

KENYA
SUGAR REHABILITATION PROJECT
LOAN 1636-KE

PROJECT COMPLETION REPORT

PREFACE

This is the Project Completion Report (PCR) for the Sugar Rehabilitation Project in Kenya, for which Loan 1636-KE was approved on December 5, 1978 for the sum of US$ 72 million. The loan, to be disbursed over a six year period, was declared effective on September 20, 1979; the closing date was March 31, 1985 and was not extended. At the request of the Government a sum of US$ 58 million was cancelled in September 1983. Final disbursement was made on October 7, 1985 when US$ 12.8 million had been disbursed and the undisbursed balance of US$ 1.2 million was cancelled.

The PCR was prepared by the Central Agriculture Division of the Eastern and Southern Africa Projects Department. The first draft was prepared by a consultant together with Bank staff. The report is based on a review of the following documents: Loan and Subsidiary Financing Agreements: Preparation and Appraisal Reports; Supervision and other review reports; Bank memoranda and other documents contained in World Bank files; and material drawn from reports and papers produced by East African Sugar Industries Ltd (EASI) and the Kenya Sugar Authority (KSA). A field mission was undertaken in November, 1985 and interviews were held with relevant staff of the Ministry of Finance, the Ministry of Agriculture and Livestock Development and the Ministry of Cooperative Development.

The assistance provided by the Government of Kenya is gratefully acknowledged.

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BASIC DATA SHEET

I. KEY PROJECT DATA

Borrower:	Government of Kenya
Executing Agencies	Sugar Companies; Government of Kenya and Kenya Sugar Authority (KSA)
Fiscal Year:	July 1 - June 30

	Appraisal Estimate (US$ million)	Actual	Actual as % of Appraisal Estimate
Total Project Cost	138.00	14.70 1/	
Loan Amount	72.00	14.00 1/	19
Loan Amount Disbursed	72.00	12.80	18
Loan Amount Repaid	9.60	2.20 2/	23
Loan Amount Outstanding	62.40	10.60 2/	18
Date Physical Components Completed	12/31/84	None entirely completed - various 3/	
Economic Rate of Return	33%-35%	3%	
Financial Rate of Return	14%	2%	
Institutional Performance	Good	Poor	

II. IMPORTANT DATES	Original	Revised	Actual
Identification (UNDP)	-	-	9/75
Preparation (UNDP/GOK)	-	-	5/76
Appraisal	-	-	4/77-04/78
Negotiations	8/28/78	9/06/78	10/2-9/78
Board approval	12/78	-	12/5/78
Loan Agreement Date	-	-	12/20/78
Effectiveness Date	3/20/79	6/30/79) 9/30/79)	9/20/79
Closing Date	3/31/85	-	03/31/85

1/ Project scope reduced: US$ 58 million cancelled September 1983; undisbursed balance of US$ 1.2 million was cancelled October 7, 1985

2/ Amortization Schedule amended November 1983: repayments as at June 1986 were in line with the amended schedule

3/ No component to be undertaken by KSA/Government was commenced: completion of residual company components (Muhoroni) varies: irrigation NIL; drainage NIL; nucleus estate development 88%; outgrowers field development 45%; increase factory capacity NIL: infrastructure 42%.

III. CUMULATIVE DISBURSEMENTS 1/

	1979	1980	1981	1982	1983	1984	1985	
Appraisal Estimate (US$M)	5.7	20.7	38.1	54.7	63.7	70.7	72.0	(03/31/85
Actual (US$ Million)	NIL	2.3	4.2	6.2	7.8	10.6	12.8	(10/07/85
Actual as % of Estimate	-	11.1	11.0	11.3	12.2	15.0	17.8	

Date of Final Disbursement: October 7, 1985

IV. MISSION DATA

		Date	No. of Persons	Mandays in Field	Specialization Represented 2/
Supervision	1 HQ/RMESA	May/June 1979	3	63	a,b
	2 RMESA	Sep./Oct.1979	3	54	a,b,c,
	3 "	June/July 1980	2)	50	a,b,c,d,e
	4 "	February 1981	3)		
	5 "	December 1981	3	12	a,f,b
	6 "	February 1984	3	30	c,b,d,
	7 "	February 1985	1	22	c

Note: Supervision total field man days recorded: 231 days.
During 1982 and 1983, while revision or cancellation of the project was under discussion, no field supervision was carried out. However project discussions during this period absorbed much RMESA staff time; total staff input, including field work, is estimated at 587 man days.

1/ In year 5 (September 1983) US$58.0 million was cancelled leaving US$ 14.0 million to be drawn by March 31, 1985. Only US$ 12.8 million or 91.4% of the reduced loan amount was drawn. The total amount cancelled was thus US$ 58.0 million plus US$ 1.2 million = US$ 59.2 million.

2/ a = Engineering
b = Financial Analysis
c = Agronomy
d = Economics
e = Young Professional
f = Agriculture

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SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPETION REPORT

HIGHLIGHTS

1. From a study of the genesis of this Project, it is apparent that its success was always in doubt. Five basic flaws in the Project are apparent. First, it seems that Government gave lower priority to rehabilitation than to the construction of new factories. The Bank had a different perception of relative priorities and favoured rehabilitation before new construction. There was thus a fundamental lack of agreement between Bank and Government on the priority to be given to the Project. In fact, Government can be said to have shown little commitment to Project objectives.

2. Second, there were a number of basic policy issues that were never resolved. Appraisal took two years and required four separate missions, because of the large number of unresolved issues (para. 8.01). In the absence of political will on the part of Government to solve these issues, the technical solution adopted was the drawing up of numerous covenants in an attempt to tie Government down to specific solutions. These covenants caused delays in achieving effectiveness, because the sugar companies, Kenya Sugar Authority (KSA), and Government could not appreciate and fully understand the legal and financial requirements of the Loan Agreement. Following loan effectiveness, Government began to back away from its commitments, reflecting the fundamental differences of perception between Bank and Government. The first such action was a volte face in Government policy regarding the provision of funds to private sugar companies. Most of the Project proved unimplementable because of this problem, and a painful and costly process of cutting down the Project was begun. It took three years to recast the Project and negotiate a cancellation of US$ 58 million. The delays in decision making cost the Government US$ 2.4 million in commitment fees. At the same time lack of resolution of major sectoral policy issues: on cane and sugar pricing levels, sugar sector development policy, mechanism for sugar sector coordination, reduced the potential contribution of the remaining components.

3. Third, Government did not have the institutional mechanism to coordinate and implement what was in fact a sugar rehabilitation program loan. The several Sugar Companies themselves were probably capable of implementing their own sub-projects, but overall planning, formulation of development policy, reconciliation between policy issues and implementation was never achieved as no strong institution was responsible for sugar policy or for the project. KSA made an effort but had no authoritative power; it was in any case in a development stage itself, and there was inadequate staff (both in numbers and experience) in the Ministry of Agriculture (MOA). The Permanent Secretaries of Finance and Agriculture, at separate times, criticized the complexity of the Project and felt that a coordinating unit should have been built into the Project in the first place.

4. Fourth, Project costs were underestimated and the Project was therefore underfunded. In the event, even the funding that was to be provided by the one company that implemented a sub-project never materialized as unfavorable movements in pricing policy and declining sugar factory efficiency resulted in operating losses, not profits. Finally, the implementation period coincided with the Government budgetary crisis of 1981-84 and even the greatly reduced level of resources allocated to the rump of the project could not all be fitted into the Government budget when required.

5. The fourth and fifth flaws included underestimates of costs and Government budgetary problems. These problems were common to other projects appraised in the Region at this time. Unanticipated levels of inflation and less rigorous Bank practices in making cost estimates at the appraisal stage combined to make the cost estimates too low. Higher investment costs and lower international sugar prices caught the Kenya Governments unprepared, and there were losses fiscal losses which Government could not manage properly.

6. The Muhoroni sugar factory component (the only one implemented) has only been partially successful. Appraisal cost estimates for irrigation, drainage, road maintenance and the increase of the factory capacity were too low and Government could not provide funds to bridge the financing gap. As a result these components of the Muhoroni sub project were not completed. When the Project design was revised in 1983 the housing component for Muhoroni was also cut back. Agricultural development was delayed and at the closing date only 88% of the appraisal estimates for the nucleus sugar estate and 45% of outgrowers lands had been achieved. The Muhoroni program is however now showing results and the financial rate of return to the combination of Government, farmers, and Muhoroni Factory of the more limited investment actually undertaken is about 20%. Farmers and Government are the main beneficiaries (Government from the high excise taxes collected on Muhoroni sugar sales). However, the economic rate of return is 3% due to the low international price of sugar.

7. Major lessons from the project experience may be summarized as follows:

(a) The lack of agreed priorities and a clear strategy for sugar development in Kenya led to a shaky policy foundation for the Project. The pragmatic solution adopted by the Bank of trying to support two projects (the Sugar Rehabilitation and SONY Projects) with quite different characteristics failed. Both projects have been poor performers. Full agreement between Government and the Bank on investment priorities and strategy is a prerequisite for successful investment. Agreement cannot be easily worked out during the implementation.

(b) Failure to resolve basic issues led to an unwieldy number of covenants, to many of which Government had no commitment. The use of covenants to paper over inconsistencies or disagreements on policy, places undue strain on the legal documents and inevitably leads to breaches of covenants. Resolution of basic sub-sector issues should precede appraisal.

(c) The project was very complicated, with fifteen implementing agencies whose roles were not always clearly defined. Overly complex design placed too great a burden on weak executing agencies.

(d) Underestimated quantities and prices during technical preparation and appraisal resulted in "cost overruns". Physical implementation consequently fell short of appraisal targets. Greater precision of physical estimates is now provided by Bank rulings on the level of engineering necessary prior to Board presentation. Price level changes remain difficult to forecast accurately.

(e) The project required a great degree of administrative support and coordination. KSA could have handled this but its role was never properly defined and it lacked skilled manpower and authority to do the job. Greater attention to the role of sub-sector management and the need for a coodinating institution in a rehabilitation program loan is indicated.

(f) If subsector issues, particularly coordination and pricing are resolved, properly managed sugar production in high potential areas could be a profitable and economically justified activity in Kenya. Investment in rehabilitation of existing estates and factories with potential would probably yield satisfactory returns, but expansion of area or the creation of new factories would not.

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SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

I. Introduction

1.01 Although sugar production in Kenya had its origins as far back as the 1920's when two private factories (Miwani and Ramisi) were set up, further development did not take place until 1966-73 when three more factories were established (Muhoroni, Chemelil and Mumias). The Government was the majority shareholder in these new factories. By 1976 the annual output of the five factories was 167,000 tons sugar derived from about 51,000 ha sugar cane.

1.02 In 1976, the performance of the sugar industry was poor. In particular, management of smallholder services was deficient, resulting in an uneven cane supply to factories, which operated about 40% below capacity. This inefficiency made sugar an unprofitable investment and factories deteriorated as both private and jointly owned factory companies were reluctant to reinvest in expensive plant and equipment. It was clear that the industry would decline further unless corrective action was taken.

1.03 Local demand for sugar in Kenya had exceeded local production for several decades. Imports averaged 52,000 tons sugar per year from 1968 to 1976. In the mid 1970's it was estimated that, without new projects, the annual deficit would reach about 205,000 tons sugar by 1985, rising to 355,000 tons by 1990. In view of the rising cost of imports Government set out a policy to increase local production in order to reach self sufficiency during the 1980's. Government commissioned a survey (financed by UNDP) to work out an appropriate strategy. The survey, carried out in 1975, outlined a sector strategy, defined investment priorities and identified four projects. Highest priority was awarded to a sugar rehabilitation project, comprising the rehabilitation of Miwani Sugar Mills Ltd. (Miwani), Chemelil Sugar Company Ltd. (Chemelil) and East African Sugar Industries Ltd (Muhoroni) in the Nyanza Province sugar belt, together with Associated Sugar Company Ltd. (Ramisi) in Coast Province. The three other projects identified were the construction of new factories at Nzoia in Western Province and in South Nyanza, and the doubling of the capacity of Mumias factory in Western Province.

1.04 The Government accepted the conclusions of the survey but changed the order of priority of investments to implement the creation of new factories before rehabilitation. Projects to construct the Nzoia factory (with French bilateral aid) and to double the capacity of Mumias (with UK bilateral were agreed). The Bank was approached by Government in late 1975 to co-finance the South Nyanza project (SONY). The Bank's position was that the reorganization of the existing sugar industry was a prerequisite to project investment and that better returns would accrue from the rehabilitation of the existing industry than from new projects, which could come later. The Bank therefore agreed to pre-appraise the SONY project only reluctantly and on condition that Government would at the same time commit itself to rehabilitation by requesting funding for a rehabilitation project. The SONY project was appraised between May and November, 1976 and an IBRD Loan of US$ 25 million was granted in April 1977. The Bank then proceeded with the appraisal of the Sugar Rehabilitation Project.

II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

Identification and Preparation

2.01 The Project was identified in the 1975 sugar survey (para. 1.03). The same consultants then prepared a feasibility report, with the cooperation of the four sugar companies involved. The report was made available in May, 1976.

Appraisal

2.02 The appraisal of the Project was a lengthy process lasting two years and requiring no less than four separate missions. This was due to the complexity of the project (which was more akin to a sub-sector rehabilitation program than a project) and to the number and difficulty of the technical and economic issues involved. Project design evolved considerably during this period; the final project description at the end of the appraisal period is shown below, paragraphs 2.08 - 2.09.

2.03 A pre-appraisal team visited Kenya in November 1976, discussed the various proposals with Government and the sugar companies and outlined the supplementary information which was required. A full appraisal mission then visited Kenya in April, 1977 and the first Issues/Decision process was completed by June, 1977. Issues were numerous and could not be easily resolved. They hinged on: (i) technical matters (drainage, irrigation, mechanized harvesting); (ii) organization and management (zoning, cane production to be a factory responsibility, organization of outgrowers, the roles of the Sugar Belt Cooperative Union (SBCU) the Sugar Settlement Organization (SSO) and the Kenya Sugar Authority (KSA), improved labor conditions, training); (iii) finance (outstanding SBCU and SSO loans, control over factory investment, capital increases, levy for maintenance of roads and drainage, financing gap, sugar pricing, six year disbursement period) and (iv) the economic justification of certain project components. Appraisal mission recommendations on these issues were generally accepted, except on economic justification. It was decided that several critical components in the project be subjected to separate economic analyses before a decision could be made on their inclusion. The final composition and project costs could not be determined until these analyses were completed. The decision was therefore taken to send a post-appraisal mission.

2.04 The third, post-appraisal, mission visited Kenya in October 1977 and held discussions with senior staff of the ministries involved (Finance, Agriculture, Cooperatives, Lands and Settlement), Kenya Sugar Authority (KSA), the National Irrigation Board (NIB) and the four factory companies. The draft "White Cover" Staff Appraisal Report was presented at a round up meeting held on October 24, 1977. The minutes of the round-up meeting in Nairobi indicate agreement on the following decisions from the Bank Decision Meeting:

(i) Technical Government accepted the Bank's proposal to study the drainage problems and prepare a regional plan for the Kano plains. Government agreed to set up a Roads and Drainage Maintenance Fund (RDMF) with monies available from the existing Price Equalization Fund. The new RDMF would be made available to and be administered by KSA. The Bank's irrigation proposals for Miwani and Kibos were noted and Government confirmed the agreement to convert the Ahero Scheme from rice to sugar cane. The Ministry of Water Development would determine ground water levels at Ramisi through a special study. Mechanization of cane harvesting would not be adopted and KSA, Ministry of Labor and labor unions would devise means of increasing harvesting labor.

(ii) Organization and Management The recent re-zoning was considered adequate. On cane production and outgrower organization, the Companies would inform the Unions and the Societies of their cane development plans. The SBCU agricultural and cane transport activities would be phased out and all outstanding debts due to SBCU would be audited and arrangements made for their recovery or write off. The SSO would relinquish all agricultural functions and concentrate exclusively on settlement aspects. KSA would adopt the role of advisor and arbitrator and assume its statutory regulatory functions. A Sugar Belt Coordinating Committee (SBCC) would be established. On labor conditions, the SBCU, the Muhoroni Cooperative Union (MCU) and unaffiliated societies would represent their members collectively in dealing with KSA and the Factory Companies. Cooperative staff would receive training.

(iii) Finance SBCU loans would be audited and uncollectable loans written off; a recovery effort would be made for these and for SSO loans. On the financing gap, the Project financing plan would be worked out between the Bank and the Treasury. Government requested retroactive financing effective from July 1977 in order to cover expenditures on the program by companies during the extended appraisal period. The Bank considered September 1977 or from the date of signing the Loan Agreement more appropriate (in fact the date became from November 1, 1977).

2.05 A further meeting was held to discuss sugar pricing. This was a major issue because prices did not provide adequate incentives for either growers or the factories. Government did not give a firm commitment. Government was, however, already committed to real price increases under the SONY project and it was confirmed at the meeting that a letter would be sent to Washington on the pricing issue before Christmas 1977.

2.06 In the event, Government told the Bank that it considered there was no case for the 6% increase in real cane prices in 1978 which was stipulated in the SONY project. The Bank thus had a major issue on its hands. In mid March 1978 the Regional Vice President chaired a meeting to review the issue. It was decided that the consequences of the Government pricing decision required detailed review. The implications for the financial rate of return and the viability or otherwise of the various project components had to be determined. It was stressed that Bank analyses had to be incontrovertible as evidence of potential world over supply was becoming available. In fact, the Board discussion of the SONY project had linked the issue of pricing to that of the balance of supply and demand; if Kenya were to become a net exporter, then prices would have to come down or subsidies be paid. It was therefore agreed that a desk study would be carried out in Washington followed by a further field mission to discuss the basis of Government's decision and its implications for the Project. Provided a satisfactory financial basis for the project could be established, a revised appraisal report would be prepared for submission to the Loan Committee.

2.07 A fourth mission, therefore, visited Kenya from April 10-25, 1978 and held extensive discussions with government on the main issues, (a) cane and the ex-factory sugar prices, and (b) the balance between production and demand. An aide memoire was submitted to Government (April 28, 1978), and a second Decision Meeting was held in Washington on May 12, 1978. The Bank agreed with the Government decision not to increase sugar prices at that time and that the then current price of KSh 133/- per ton of cane was adequate. Agreements and mechanisms would be developed during negotiations for joint reviews between the Bank and Government regarding prices. The Appraisal Report would be updated on this basis. Government would be formally advised of the decision and also that the South Nyanza pricing clause in the Loan Agreement was not in default. On the question of production and demand, it was agreed that the likely exportable surplus as a result of the Project would be quite small and would be caught up by consumption in time. However, a joint mechanism would likewise be developed at negotiations, to review investment and production plans. The Bank was concerned that Kenya should not generate large surpluses for export, as price prospects for export were poor. The necessary covenants would be included in the Legal Documents.

<u>Project Description</u>

2.08 The Project as described in Appraisal report No. 1887-KE November 17, 1978 was designed, over the six years 1979-84, to rehabilitate and expand the sugar companies at Miwani, Chemelil, Muhoroni and Ramisi, including the factories (with the exception of Chemelil), the nucleus estates, outgrower cane areas and housing and transportation infrastructure. The Project would increase the annual domestic production of mill-white sugar, thus helping Kenya to reach self-sufficiency in sugar in the early 1980's. Specifically, the Project would comprise:

(a) the establishment of run-of-the-river irrigation on 2,000 ha in Miwani, Chemelil and Muhoroni zones; the conversion of 770 ha of irrigated rice area to irrigated sugarcane at Ahero; and the rehabilitation of the existing irrigation system for 370 ha and establishment of sprinkler irrigation from a new dam for an additional 400 ha at Ramisi;

(b) Drainage for 15,000 ha of nucleus estate and outgrowers land in the Sugar Belt;

(c) Agricultural development, including the rehabilitation of existing cane lands (12,000 ha) and establishment of new cane areas (2,690 ha), improvements in cane harvesting and transportation, and strengthening of the sugar companies' agricultural research and training;

(d) Rehabilitation and expansion by a total of 1,150 TCD of the Miwani, Muhoroni and Ramisi sugar factories, and training of factory staff;

(e) Improvement of the companies' general management and administration, mainly through the provision of equipment and extra staff;

(f) Infrastructure, including construction and maintenance of roads and tracks, (a total of 678 km were involved) and of staff housing and other facilities;

(g) The strengthening of the National Sugar Research Institute with equipment and personnel;

(h) Studies and additional agricultural staff training to be undertaken by the KSA.

2.09 During the investment period (Years 1-5) all incremental staff salaries and agricultural and factory inputs and materials would be capitalised and treated as project expenditures for funding purposes. The Project would be executed by the respective sugar companies (agriculture, factories, training, company research, minor roads and tracks), the Ministry of Works (major roads), the Ministry of Agriculture (national research), the National Irrigation Board (Ahero conversion) and the Kenya Sugar Authority (drainage, irrigation, training, studies).

<u>Agreements Reached</u>

2.10 In view of the project's complex nature and the long appraisal cycle the number of agreements to be discussed during loan negotiations in Nairobi in October, 1978 was considerable. The following important agreements were reached (reference to Loan Agreement is shown in parenthesis):-

(a) the on-lending of funds for factory rehabilitation and expansion would be conditional upon review and approval by KSA of the companies' factory rehabilitation plans; (Sch 2, D)

(b) the KSA would appoint consultants under terms and conditions satisfactory to the Bank to (i) undertake studies and (ii) review and approve the sugar companies' factory rehabilitation plans; (Sch 2, H and D[4])

(c) Government would prepare a regional drainage development plan for the Kano plains, acceptable to the Bank, before December 31, 1981; (Sch 2, H[4]).

(d) the Government would establish a Roads and Drainage Maintenance Fund (RDMF) which KSA would administer; (4.07).

(e) the Ministry of Labor would review the market for cane harvest labor in collaboration with KSA and the labor unions and prepare a plan, acceptable to the Bank, for improvement in labor supply and in employment conditions by December 31, 1979; (4.08).

(f) until December 31, 1988 Government would consult with the Bank before making or promoting investments in additional sugar milling capacity in Kenya; (4.11).

(g) sugarcane, ex-mill and sugar retail prices would be reviewed periodically in consultation with the Bank; (4.10).

Detailed obligations of the companies were set out in the Loan Agreement, and the Companies undertook to perform these obligations in separate Letters of Agreement with the Bank.

2.11 Conditions of disbursements of Loan funds were:

(a) the disbursement of any funds to an individual sugar company would be conditional on effectiveness of an agreement between Government and that company covering investment and on-lending terms; and (Sch 1.4)

(b) the disbursement of funds to Ramisi, Miwani and Muhoroni companies would be conditional on the conversion into equity of the existing parent company loan at Ramisi and reserves at Ramisi, Miwani and Muhoroni (Sch 1.4).

2.12 In addition to the above important covenants, there were a number of less important, project specific covenants, plus the regular covenants on consultants, accounts, procurement etc. All covenants are listed in detail in Annex 2. The plethora of legal undertakings led to adverse comment at Board presentation and to difficulties in implementation and supervision (para 7.05).

<u>Costs and Financing</u>

2.13 Total Project cost was estimated at KSh 1,104 million (US$138 million), of which about US$71.8 million or about 52% represented foreign exchange requirements. Total project cost is detailed below.

TABLE I: Summary of Project Cost Estimates (reproduced from the Appraisal Report)

	Local	Foreign (KSh. Million)	Total	Local	Foreign (US$ Million)	Total	Foreign Exchange %
Irrigation	21.9	23.2	45.1	2.7	2.9	5.6	51
Drainage	26.4	31.5	57.9	3.4	3.9	7.3	55
Agriculture	155.8	183.7	339.5	19.4	23.4	42.4	54
Sugar Factories	60.7	97.5	158.2	7.6	12.2	19.8	62
General Company Management & Administration	16.9	13.8	30.7	2.1	1.7	3.8	45
Roads	31.4	28.9	60.3	3.9	3.6	7.5	48
Housing and Other Facilities	54.8	22.7	77.5	6.9	2.8	9.7	29
National Sugar Research Institute	3.4	3.8	7.2	0.4	0.5	0.9	53
Kenya Sugar Authority	1.5	2.9	4.4	0.2	0.4	0.6	65
Sub total	372.8	408.0	780.8	46.6	51.0	97.6	52
Contingency Allowances:							
Physical	48.8	54.4	103.2	6.1	6.8	12.9	53
Price	107.6	112.3	219.9	13.5	14.0	27.5	51
	529.2	574.7	1,103.9	66.2	71.8	138.0	52

2.14 Base costs were estimated at prices expected to prevail in September 1978. Physical contingencies of 10% were included on all Project components except on irrigation and drainage investments, to which a physical contingency of 35% was applied because final engineering designs had not been prepared. Price contingencies were based on IBRD/IDA guidelines and mission estimates. Local taxes estimated at KSh 76.5 million (US$ 9.6 million) were included in the above Project cost estimates.

2.15 Project costs were to be financed as follows:

TABLE 2: Financing Schedule

Sources of Financing	(US$ Million)	%
World Bank	72.0	56
African Development Bank	6.0	5
GOK	3.5	3
Miwani	8.5	6
Chemelil	14.9	12
Muhoroni	14.3	11
Ramisi	9.2	7
Cost Net of Taxes/Duties	128.4	100
Taxes and Duties	9.6	
Total Project Cost	138.0	

2.16 The IBRD Loan of US$72 million to GOK, to be repaid over 20 years, was to carry an annual interest rate of 7.35% and there was a commitment charge of 0.75% per annum on the unwithdrawn balance. There was a grace period of $5^1/_2$ years, the first payment falling due on July 15, 1984 and the final payment on January 15, 1999. The loan would be drawn down by the closing date of March 31, 1985.

2.17 GOK was to make the proceeds of the loan available to the sugar companies at an interest rate of $10^1/_2$% per annum with a term of 20 years including 5 years grace for Miwani and Muhoroni and 8 years grace in the case of Ramisi. The GOK was also to make available KSh. 27.2 million (US$3.4 million) to Muhoroni in exchange for shares and KSh. 14.4 million (US$1.8 million) to Ramisi in exchange for shares.

III. Project Implementation and Operating Performance

Effectiveness and Start-up

3.01 The original loan effectiveness date (March 20, 1979) was extended twice, and the loan was not declared effective until September 20, 1979. Effectiveness was held up by the need to have effective agreements with each of the companies; the legal opinions initially provided by the companies' lawyers were not acceptable to the Bank's Legal Department. The problem was resolved with the assistance of a local law firm retained by the Bank's Nairobi office. The delay did not, however, hold up the start of the Project, as equipment procurement for Muhoroni proceeded and was eligible for retroactive financing (para 2.04). Selection of consultants for factory rehabilitation, road works, drainage and irrigation also progressed. In any case Government made no provision for the Project in the Estimates until the year beginning July, 1979, so that neither Government nor World Bank contributions could begin to disburse until then.

3.02 Satisfying the conditions for disbursements from the loan as mentioned in paragraph 2.11 above took much longer and ultimately only those in respect of Muhoroni were finalised:

<u>Muhoroni</u>: The company having converted KSh. 4 million of its reserves into share capital in October 1979, Government and the Bank agreed that this created a satisfactory debt: equity ratio and that it was unnecessary to convert the full amount of KSh. 23 million stated in the Loan Agreement (Schedule I paragraph 4[d]). The Subsidiary Financing Agreement (SFA) was signed in March 1980, with which the Muhoroni component disbursement conditions were fulfilled (15 months after the signing of the Loan Agreement).

<u>Miwani</u>: All formalities including a debenture were completed by June 1980 and Miwani signed the SFA. Government, however, had begun to have doubts about on-lending to private companies and never signed the SFA.

<u>Ramisi</u>: Government's attitude towards on-lending to Ramisi was even more negative. Not only was Ramisi a private company, but Government had problems with loan recoveries from the group to which Ramisi belongs and was, through auditors and consultants, endeavoring to assess Ramisi's assets and liabilities position. The SFA was never signed.

Project Revision

3.03 In July 1980 a supervision mission identified Government's hesitancy in entering into SFAs with Miwani and Ramisi but was unable to obtain formal confirmation. Lack of the two SFAs blocked implementation of the largest components of the project, and the Bank requested a formal statement of the Government's position at a Country Implementation Review

(CIR) in January 1981. No clear response was received. Bank staff then met with Ministry of Agriculture and Livestock Development (MOALD) officials in March 1981 to express concern about this issue and to raise other important issues on Government policy which were then becoming apparent; the issues included policy on outgrowers; unprogrammed and apparently uneconomic expansion of land under cane; prices for cane and sugar; and lack of Project coordination.

3.04 Clearly Government's refusal to sign agreements with the private sugar companies made most of the project unimplementable. In addition the passage of time had brought to light important sugar sub-sector issues that made prospects for the project very dim. In mid - 1981, therefore, the Regional Vice President agreed with the Minister of Agriculture the need to "re-formulate the project in an appropriate sector policy context". Details of how the re-formulation was to be achieved were agreed by January 1982: funds would not be passed to the private companies; a sector strategy would be drawn up; and the project would be reformulated and reappraised. As a first step, at the Spring 1982 CIR, it was agreed that the Ramisi component should be scrapped and that the funds from the Bank loan allocated (US$ 30 million) should be cancelled.1/

3.05 During 1982, efforts were made by the Bank and KSA to draw up the sector strategy and to reformulate the Project. Consultants (financed under the SONY Project, Loan 1389-KE) studied sector issues and a special committee set up by Government reviewed the sugar industry's financial crisis. However, the Bank's offer to finance technical assistance for project revision was not taken up at this stage, the Government failed to come up with a comprehensive strategy for the sugar sector and by mid - 1983 proposals for project re-formulation were still inadequate as a basis for reappraisal. It was thus agreed, in August 1983, to shelve attempts to agree a strategy and to reformulate the project; instead Government would request cancellation of US$ 58 million (inclusive of the US$ 30 million allocated to Ramisi). This would reduce the loan to US$ 14 million to finance a rump comprising a (reduced) Muhoroni component and funds for technical assistance and for preparation of an investment proposal for revised sugar projects. Of the US$ 14 million, US$ 7 million had by that time either been spent or committed, leaving a balance of US$ 7 million.

3.06 Government made its formal request on August 31, 1983 and the remaining Loan balance, allocated as follows, was to be drawn down by March 31, 1985:

1/ Even this proved problematic as Ramisi's' owners, with whom the Bank had a Letter of Agreement, withheld their counter-signature. The Legal Department subsequently advised that cancellation by the Bank for cause (non-performance of obligations) would not require a counter-signature by Ramisi.

Table 3: Allocation of Remaining Loan Balance

				US$ million
1.	Commitments to August 31, 1983			
	Muhoroni:	Agricultural equipment, sugar factory, housing, land and agriculture, staff training and incremental salaries	1.50	
	GOK/KSA	Roads, equipment, salaries, technical Assistance	0.40	1.90
2.	Future Commitments: September 1983-March 1985			
	Muhoroni:	Field equipment	1.90	
		Agricultural development	1.95	3.85
	KSA:	Technical assistance	0.25	0.25
3.	Preparation by MOALD and KSA of an investment proposal for a revised sugar project		1.00	1.00
				7.00

The revised disbursement schedule is shown in Annex 1.

Implementation Performance: Project Coordination

3.07 Overall, the Project performed far below expectations. Early supervision missions reported adequate project co-ordination by KSA and MOALD but this was short lived due to staff changes in both KSA and MOALD. It became clear in the course of implementation that MOALD and KSA did not have the capacity in terms of manpower to co-ordinate a project of this size involving about fifteen agencies. At a CIR held in March 1982, the Permanent Secretary to the Ministry of Finance indicated that projects of this type were difficult to implement, partly because they required difficult policy decisions, and partly because they were complex. He suggested that in formulating and selecting projects ease of implementation should be as important a criterion as economic and financial rates of return and the skill composition of the implementing Ministry should be carefully assessed. Details of the activities which MOALD/KSA were expected to either monitor or implement during the project are listed in Annex 2 which also shows the status of each at the close of the Project. It can be seen that none of the Government's tasks were achieved.

3.08 Financially, the Project suffered from budgetary constraints, as no provision was made in the Estimates until 1979/80, and the provision thereafter was consistently too low. This slowed down the rate of implementation and resulted in cost increases.

Muhoroni: Development and Performance

3.09 Project Concept: With the reduction of the Project scope as described above the only active component was Muhoroni. Muhoroni started production in 1966 with an installed capacity of 1,250 tons of cane per day (TCD) which through various stages was increased to 1,800 TCD by 1978. (Appraisal assumed or estimated 2,000 TCD but the company has disputed this figure ever since). Initially the Company was only involved in milling cane and carried out no agricultural operations. The cane was supplied by individual large scale farmers (40%) and the Sugar Settlement Organization (SSO) (60%). Chemelil factory, established in 1968, absorbed some of the large scale farmer cane which was intended to be replaced by cane from SSO. Subsequently, societies under the Sugar Belt Cooperative Union (SBCU) were organized in 1973 to promote smallholder production. Unfortunately neither the SSO nor the SBCU societies achieved their targets due to organizational problems. Under the Project, therefore, it was agreed that the Company would take a more active role in cane production: cane production would be the responsibility of an Agricultural Department, which was to be set up within the Company. The Department would be responsible for rehabilitating and developing a nucleus estate and outgrower lands. The production objective was 630,000 tons cane per annum and to mill this the factory would be expanded to 2,400 TCD. It was forecast at appraisal that, apart from the Bank Loan and the Government contribution, the Company would generate adequate funds from its own resources and have access to short term loans (arranged by Government) to finance the project. It was also assumed that cane and sugar prices would be reviewed regularly in consultation with the Bank and adjusted as necessary to ensure profits for both the farmers and the factory.

3.10 Project Description: The Muhoroni component comprised: irrigation on about 670 ha of the nucleus estate; improved drainage on 1,340 ha; provision of vehicles and equipment for maintenance of roads not maintained by Government; rehabilitation and supply of inputs on 2,200 ha of the nucleus estate (1,200 ha improved husbandry, 600 ha reclaimed fallow land and 400 ha new land) and on 11,300 ha outgrowers land (5,700 ha improved husbandry, 900 ha reclaimed fallow land and 4,700 ha new land); establishment of an Agricultural Department within the Company with trained staff, vehicles and equipment; research on cane husbandry; new and modified existing equipment for harvesting, loading, transporting and unloading cane; increasing factory capacity to 2,400 tons cane per day; office machinery, equipment, furniture and additional staff; and housing for 760 staff, and other common facilities such as a dispensary, workers club, offices, storage and a garage.

3.11 Project Start-up: First step in the Project program was to be the creation of the Company's Agricultural Department to take over from SSO and SBCU, and beginning of the agricultural development. However start-up was delayed by shortage of funds. Although retroactive financing had been agreed, the Company could not draw Loan funds until March 1980 when the SFA became effective (para. 302). However, producer price incentives were good in 1977-9, following a 27% price hike in May 1977, and this induced farmers to plant cane using their own resources.

This period of good cane availability coincided with favorable factory margins for Muhoroni and the Company crushed record levels of cane. Factory throughput rose from 241,293 tons in 1977 to 444,415 tons (1978), 527,835 tons (1979) and 531,200 tons (1980). However, this phenomenon of spontaneous planting was short-lived. Subsequently incentives to replant and to tend ratoons dropped - in a boom and bust cycle resulting from Government pricing policy, cane prices remained unaltered until April 1981. However, by this time the Company was beginning its own program. It borrowed KSh. 10 million from Government and invested KSh. 50 million from its own resources. Start-up was nonetheless slow - the Company could only develop 1,000 ha annually, compared with a rate foreseen at appraisal of 1,600 ha annually.

3.12 Agricultural Development and Performance: Appraisal design provided for improving existing and reclaiming fallow cane areas (8,400 ha) and developing new areas (5,100 ha). Of the total of 13,500 ha an area of 670 ha on the nucleus estate was to be irrigated and 1,340 ha was to have a new drainage system installed. The irrigation and the drainage components were cancelled. Implementation of the remaining program encountered a number of constraints:

(i) Land development was delayed: Delays in securing Credit effectiveness and satisfying disbursement conditions (para 3.11) were followed by lengthy procurement procedures (para 4.05) and the constraint of limited allocations in the Estimates (para 4.02). All this led to a long delay in procurement of land preparation machinery, fertilizer and pesticides, which were only procured in 1984. Because of the delay, costs escalated, thereby limiting the area that could be developed.

(ii) Farmer motivation was poor: In part, this was because of the widespread problem of absentee farmers. The project had provided for a survey by the SSO and a plan to tackle this problem, but neither survey nor plan were ever completed. More important were financial incentives for cane production. Real producer prices fluctuated over the Project period, quite good in 1977 but declining thereafter (para 3.11) until a sharp price hike in 1983. In general, cane was a profitable crop for farmer from 1983 but farmers have apparently differentiated between cane planted with their own resources and project cane. They maintain the former reasonably well but neglect the latter because of the repayment deductions made at the time of harvesting.

(iii) There was a labor shortage at peak periods: Labor availability for weeding, cane cutting and other manual tasks is a constraint. This problem was identified at appraisal and a plan for improvement in labor supply and in employment conditions was to be prepared (LA Section 4.08). The plan was prepared by MOL by November 1978 but was not submitted to the Bank for review. Labor is still a problem in the Muhoroni zone.

TABLE 4: Summary of Cane Land Development (Muhoroni)
(Hectares)

	Improved 1/		Reclaimed 1/		New Land 1/			Total		
	SAR	Actual	SAR	Actual	SAR	Actual	%	SAR	Actual	%
Nucleus Estate	1,200	1,766	600		400	174	44	2,200	1,940	88
Large Farms	1,500)				500)			2,000)		
Coop Farms	900)	4,116			3,700)	968	21	4,600)	5,084	45
SSO Farms	3,300)		900		500)			4,700)		2/
	6,900	5,882	1,500	NIL	5,100	1,142	22	13,500	7,024	52

1/ Due to poor recording the "reclaimed" and "improved husbandry" lands were not separated; total is shown under "improved"; the achievement for both activities was 98% on the nucleus estate, and 62% on outgrowers and overall was 70%.

2/ For the same reasons the groups "large farms", "co-op farms" and "settlement farms" were not recorded separately and all were reported as "outgrowers".

3/ New land development did not fare so well with 44% achievement on the estate and only 21% on outgrower's lands.

(iv) Rezoning deprived Muhoroni of prime cane land: The rezoning of about 2,400 ha of high potential land deprived Muhoroni of a prime source of cane in which it had already invested and obliged it to develop less suitable lands as a substitute.

(v) Muhoroni lost money on land development: Company costs for cane development were higher than the rates fixed by the KSA which could be charged to the farmer. The Company had to subsidise the difference, which (a) diminished its motivation to develop land; and (b) contributed to the Company's losses.

3.13 Within the above constraints, the Company managed to develop or improve 7,024 ha against 13,500 ha foreseen at appraisal.1/ The overall position of cane land improvement is shown in Table 4 and the annual development with comparable appraisal figures is shown in Annex 4. After a drop in cane production from the 1980 peak of 531,200t (para.3.11) to 391,283t (1981) and 330,500t (1982), the agriculture development program between 1983 and 1985 is now showing results with factory throughputs of 392,089 tons in 1983, 490,037 tons in 1984, 460,000 tons in 1985 and 550,000 tons estimated for 1986. However, the scaling down of the factory component may have an unfortunate effect as cane production is likely to be in excess of real factory capacity. Muhoroni has drawn up a plan for continued improvement of agricultural practices and cane development. The plan which is still under review aims at having 1,850 ha on the nucleus estate and 12,089 ha on outgrowers lands under cane to produce about 660,000 tons of cane and 62,700 tons sugar (at 9.5% recovery) annually. Planting, maintenance and harvesting programs for the nucleus estate and outgrowers' under this plan, and projected cane availability from 1986 to 1992, are shown in Annexes 5, 6 and 7.

3.14 Factory Rehabilitation and Expansion The planning of the factory component started in October 1979 with an invitation to consultants to bid. Due to delays in bid evaluation and selection, consultants (nine specialists) arrived only in January 1981 and completed their survey by March 1981. The preliminary estimate for rehabilitation and expansion to 2,400 tons of cane per day was US$ 14.3 million compared with the amount in the Loan of US$ 2.0 million (100% foreign, 90% local). As the cost far exceeded estimates and as the need for factory expansion was not pressing (cane production was lagging), it was agreed by KSA/Bank to carry out rehabilitation within the limited funds and to review the case for expansion at a later date (probably 1984) when cane production was expected to have picked up. Limited rehabilitation was carried out to improve effectiveness.

1/ Muhoroni is continuing to implement the agricultural program with own funds. By the Project Closing Date (March 31, 1985) a further 133 ha on the nucleus estate had been improved and 10 ha new land developed, bringing the total to 2,083 ha. On outgrowers land, 746 ha had been improved and 16 ha of new land developed, bringing the total to 5,846 ha.

3.15 The actual costs of the components undertaken compared with appraisal estimates (Annex 11 Table 22) are shown below (Table 5). It will be seen that there were substantial cost overruns in most factory components. Consultancy fees in particular far exceeded the provision.1/

TABLE 5: Factory Rehabilitation (Muhoroni)
KSh '000

	Appraisal	Cost	Claimed
Reinforce and extend gantry and instal two 10T travelling cranes	1,400	1,826 2/	1,643
Rehabilitate equipment	200	302	272
Install additional river water treatment facilities	700	413	371
Install additional lagoon for treatment of factory effluent	400	1,654	1,488
Consultancy services	300	3,984	3,958
	3,000	8,179	7,732
Physical contingencies 3/	360		
Price contingencies 3/	700		
	4,060	8,179	7,732

1/ Although the bulk of the consultant work was for a factory expansion which was not implemented during the Project, it has subsequently formed the basis for a proposal for factory rehabilitation and expansion now under consideration by the Muhoroni Board (para 3.17).
2/ Only one crane installed.
3/ Estimated from appraisal figures.

3.16 During the Project period it was expected that the sugar to cane ratio would rise to 10% due to improved factory and field operations. The companys' cash generation and its contribution to project costs were also based on this assumption. In fact the ratio has dropped (Table 6). Sugar to cane ratio and poor capacity utilization are the two prime causes of unprofitable sugar factory operations. Capacity utilization was very high in 1984 and 1985, but the sugar to cane ratio dropped to the unsatisfactory level of 8.3% (rule of thumb for profitable operation is 10%). The cause of the drop was a combination of climatic conditions, use of low sucrose cultivars and sub-optimal factory processing due to restricted maintenance (long milling season, lack of finance and spares). The adverse financial implications of the deteriorating ratio were exacerbated during the Project period by an adverse movement in factory "terms of trade" during 1979/85. The cane price rose by 103% while the ex-factory sugar price rose by only 78%. In addition, in 1984/5, cane quality declined further with harvesting of over-aged cane and cane deliveries being bunched due to uncontrolled burning by farmers. Annex 3 lists in abbreviated form the Muhoroni factory performance from 1979/1985 (the final year is estimated).

3.17 There are two problems with the factory at present. Low efficiency has made operations unprofitable. Increasing production of cane is outstripping factory capacity; if the Company goes ahead with further agricultural development, factory expansion will be essential. The Company has therefore prepared a factory rehabilitation and expansion proposal designed to improve factory efficiency and to expand capacity to cope up with increased cane production. The proposal is to carry out all repairs and replacements and balance the various stations in the factory to improve the technical performance. The crushing capacity would be increased to 100 tons cane per hour. Field operations would be improved to balance cane availability and delivery with factory capacity. Cane varietal studies would be carried out and low yielding varieties would be phased out. The objective would be to increase the polarity percentage in cane by 1.75% and the sugar to cane ratio will increase to 9.5% by 1990. In effect, the Company proposal is to complete the Muhoroni sub-project as originally proposed. It is understood that the cost of carrying out essential repairs and increasing the factory capacity to 2400 TCD is about KSh 151 million (US$ 9.26 million) in December 1985 prices. However, it appears that rezoning of Muhoroni cane to nearby Chemelil, which has excess capacity, is a feasible alternative to expansion at Muhoroni. But even with rezoning, rehabilitation to improve efficiency is essential if Muhoroni is to break even.

3.18 <u>Housing</u> A firm of architects to complete designs for the housing component was appointed in August 1980 in accordance with Bank procedures. The estimated costs exceeded the funding availability ($ 4.0 million, of which 90% from the Bank loan). No provision was made in the 1981-3 Estimates for the component and when funds were re-allocated in 1983 the housing component was scaled down and the Bank allocation reduced to US$ 1.05 million from the original US$ 3.6 million. The reduced component was successfully implemented within the revised funding envelope. The items completed and their costs compared with appraisal estimates (Annex 10 Tables 7 and 8) are shown in Table 7.

TABLE 6: Cane/Sugar Production; Extraction Rates; Earnings and Prices
(Tons '000 and KSh million)

	1979	1980	1981	1982	1983	1984	1985	1986	Total
Cane: Appraisal	255	255	255	396	487	523	620	619	3410
Sugar: Appraisal	25.5	25.5	25.5	39.6	48.7	52.3	62.0	61.9	341
Sugar/Cane %	10	10	10	10	10	10	10	10	10
Cane : Actual	528	532	391	330	392	490	460	550 1/	3693
Sugar: Actual	47.0	51.9	35.5	29.2	34.4	42.3	38.0	46.7	326.8
Sugar/Cane Actual %	8.91	9.75	9.05	8.83	8.77	8.63	8.3	8.5	8.85
Assumed cane price KSh/Ton	133	133	133	133	133	133	133	133	
Assumed ex-factory sugar price KSh/Ton	2800	2800	2800	2800	2800	2800	2800	2800	
Actual Cane Price KSh/Ton	133	133	150	170	227	250	270	290	
Actual Sugar Price KSh/Ton	2800	2808	3075	3600	4290	4773	4986	5386	
Cane Price Increase %	-	-	13	13	34	10	8	7 2/	
Sugar Price Increase %	-	-	10	17	19	11	4.5	5 2/	
Estimated addition to retained earnings	4	2	1	8	8	10	19	19	
Estimated retained earnings	16	18	19	27	35	45	64	83	
Actual addition to retained earnings	8.7	5.4	(20.4)	(24.2)	(15.9)	(1.0)	(19.5)	(7.3)	
Actual retained earnings	34.3	39.7	19.3	(4.9)	(20.8)	(21.8)	(41.3)	(48.6)	

1/ Estimated.
2/ Projected in Company's factory expansion plan.

TABLE 7: Housing and Social Amenities Costs
(KSh. '000)

Houses	Appraisal Nos	Appraisal Unit Cost	Appraisal Total Cost	Revised Nos	Revised Total Cost	Actual Costs Nos.	Actual Costs Total Cost	Actual Costs Costs Claimed	
Type A	-	210	-	4	840	4	261	1,044	- 1/
" B	4	143	572	-	-	-	-	-	-
" C	9	88	792	6	528	6	295	1,771	1,595
" D	25	65	1,625	4	260	4	128	514	463
" E	45	32	1,440	160	5,120	160	21	3,345	3,011
" F	680	20	13,600	-	-	-	-	-	-
Sub total	763		18,029	174	6,748	174	6,674	5,069	
Other Facilities									
Dispensary	1	364	364	-	-	-	-	- 1/	
Workers Club	1	220	220	-	-	-	-	- 1/	
Dormitory/Training Inst./Nursery		221	221		297 2/		297	267	
Other Buildings		2,500	2,500		1,687 2/			1,687	1,519
Sub Total			3,305		1,984		1,984	1,786	
Sub Total Houses/ Facilities			21,334		8,732		8,658	6,855	
Architects Fees 10%			2,133		873		2,554	2,298	
Infrastructure 25%			5,333		2,183 3/			-	-
			28,800		11,788		11,212	9,153	

1/ These units were built pre-project from EASI own funds. Cost of Dispensary
and workers club could not be easily identified.

2/ Actually built: Outgrowers offices; field offices; primary school; agricultural workshop building and agronomy/research building.

3/ Estimated on same proportion as SAR. Actual costs intermixed with building costs and could
not be easily identified.

3.19 Other Components The irrigation, drainage and road maintenance components were not implemented. The consultants, hired in 1980 to prepare detailed irrigation plans, estimated the costs at about US$ 4.5 million. The cost was agreed to be too high to justify the investment economically and financially, in any case, Bank funding of US$ 1.3 million, supposed to cover 90% of the cost, was inadequate and neither Muhoroni nor Government wished to increase their contribution. It was therefore agreed to drop the component and transfer the funds to agricultural development, where the economic and financial returns justified it. The drainage component which was to be undertaken by Government, was held in suspense pending a decision on the Miwani Sub-project (para. 3.03). Consultant studies showed costs well in excess of appraisal estimates (US$ 16.9 million, whereas the amount in the Loan was US$ 6.4 million, 90% of costs). The component was deleted. Muhoroni, however, carried out some minor drainage works on the nucleus estate. Consultants prepared rehabilition and maintenance proposals for roads, which again were much more costly than appraisal estimates. The consultants estimated the cost of establishing and operating one Road Construction Unit for the sugar belt roads alone at US$ 6.3 million whereas the allocation in the loan for all roadworks was US$ 2.5 million (50% financing). Government never made a provision in Estimates for this program, the Roads and Drainage Maintenance Fund (RDMF) was not established and no road works were implemented.

3.20 Overall Implementation From the above it will be apparent (i) that engineering works were underestimated at appraisal; and (ii) that reduction in the scope of the Muhoroni sub-project was effected during implementation within available financing. Actual investments were less than foreseen in the revised loan agreement as follows (see Annex 10 for full details):-

	Revised L.A.	Actual
Agriculture		
New development	5,100 ha	1,142 ha
Rehabilitation	8,400 ha	5,882 ha
Factory		
Increase capacity	400 TCD (20%)	Rehabilitation of existing capacity only.
Housing	174 units	174 units
Total Cost	US$ 13.8	US$ 13.8

IV. Project Costs, Disbursements, Procurement

Costs

4.01 The Project at closure was very different from that which was appraised during 1977/78. As discussed in Chapter Three (para. 3.03 ff), an amount of US$ 58 million was cancelled in August 1983 and a further US$ 1.2 million at closure in October 1985. There were considerable cost escalations in other components which led to reductions of physical implementation within existing financing (para. 3.20). Overall the appraisal base cost estimates were over-optimistic, price contingencies were lower than actual price inflation and implementation delays led to further disparity between appraisal and actual cost. A summary of project costs is given in Table 8; total cost was KSh. 182.7 million (US$ 14.7 million).

Disbursements

4.02 Delays in achieving effectiveness and satisfying the conditions for disbursement resulted in the initial transfer of funds being much slower than anticipated at appraisal. This was compounded by Government's unwillingness, throughout the Project period, to make adequate provision in the Estimates. Within these constraints, this was true even when the Project was scaled down to a fraction of its former size in 1983, at which time the World Bank funds accounted for 90% of funding and the Company provided the balance (i.e. there was no net cost to Government). The Company prepared withdrawal applications and KSA processed them without delay. However, there was often a long delay in MOALD and Treasury before the applications reached the Bank. There were also delays in Treasury repaying Muhoroni after the Bank had paid applications. A proposed system of quarterly advance payments never worked. All these problems created cash flow problems for the Company and delayed project implementation. Claims were properly documented.

4.03 Despite these hitches, the revised allocation to the Muhoroni components was almost completely disbursed. An undisbursed balance of only US$ 82,000 was cancelled. The "residual" component to be implemented by the Government - the investment proposals - never got off the ground and the US$ 1 million left in the Loan in August 1983 for this specific purpose, together with US$ 115,000 for other items, were cancelled. The total amount cancelled from the reduced balance, therefore, was just under US$ 1.2 million bringing the total amount cancelled from the original Loan of US$ 72 million to US$ 59.2 million (82.2%).

4.04 Government paid over US$ 2.4 million to the Bank in commitment fees, much of which was run up during the period 1980-3 when Government and Bank were trying to reach agreement on cancellation of the bulk of the loan (para. 3.04 ff). Table 9 shows the interest and service payments made by Government on the loan up to the closing date, October 7, 1985, when the final disbursement was made.

TABLE 8: Summary of Project Costs
(KShs million)

	1978	1979	1980	1981	1982	1983	1984	1985	Total	Drawn Against Loan	%
Muhoroni											
Agricultural Vehicles & Equipment	13.2	0.2	0.4	1.2	2.0	4.4	17.1	8.5	47.0	39.2	83
Factory	–	–	1.8	1.4	0.4	0.8	1.0	2.8	8.2	7.7	94
Housing	3.5	2.1	1.1	0.6	1.9	0.1	–	1.9	11.2	9.1	81
Roads and Drainage	–	–	–	–	–	–	–	–	NIL	NIL 1/	--
Land Preparation, Planting) Nucleus		5.2	4.1	5.5	5.2	5.1	5.1	1.5	31.7	28.6	90
and Fertilizer) Outgrowers	–	–	–	6.0	17.8	13.7	19.9	6.2	63.6	57.7	90
Staff Training and Incremental salaries	–	1.3	1.5	2.1	2.8	2.0	–	--	9.7	8.7	90
Sub-Total	16.7	8.8	8.9	16.8	30.1	26.1	43.1	20.9	171.4	151.0	88
Government/KSA											
Roads				0.9					0.9	0.9	100
Training and Studies 2/						2.9	2.7		5.6	5.6	100
Topographical Survey, Kano Plains 3/			3.0						3.0	–	--
Drainage				1.8					1.8	1.8	100
Sub-Total			3.0	2.7		2.9	2.7		11.3	8.3	80
Grand Total	16.7	8.8	11.9	19.5	30.1	29.0	45.8	20.9	182.7	159.3	87

1/ Claim 105 was debited in error against roads (Annex 1 Category [e] US$ 0.119 m). In this table it has been included in housing (Category 1[c]) where it belongs.
2/ Although debited to training, costs were for consultants attached to KSA originally under SONY Project as Loan 1389-KE closed March 1983
3/ Carried out by Consultants to Ministry of Water Development but no claims submitted.

TABLE 9: Loan Service Payments
(US$ 000s)

Financial Year	Interest	Commitment Fees
1980	-	490.5
1981	90.0	530.7
1982	260.5	512.5
1983	390.5	498.9
1984	477.9	326.5
1985	572.0	36.5
1986	371.9	8.7
Total	2162.8	2404.7

Procurement

4.05 The Company was poorly briefed on Bank procurement requirements, and KSA and Bank staff had to spend much time ensuring that guidelines were followed, with inevitable delays. In some instances rebidding was required, resulting in cost escalation. A reimbursement problem regarding fertilizer which had been purchased from a Government agency and which had been originally supplied under an aid program took a long time to resolve. The issue was whether double financing was involved or not. The Bank finally reimbursed but the Company's cash flow position was tight in the meantime. This prevented the purchase of further fertilizer supplies which were necessary.

V. Financial Performance

5.01 Project Investments. At appraisal it was expected that expansion of the factory at Muhoroni from about 2000 tcd to 2400 tcd, additional agricultural development on 13,500 ha and related investments in management, roads and housing would cost KSh 308 million ($38.5 million), of which KSh 171 million ($21.4 million) was to be financed by the World Bank, KSh 21 million ($2.6 million) by Government and KSh 114 million ($14.3 million) by EASI from retained earnings.1/ The actual project implemented was very much reduced and comprised only a limited rehabilitation of the factory, additional agricultural development on 7,024 ha and a small housing development. The irrigation, drainage, management and roads components were not implemented. The cost of the actual project was KSh 171 million ($13.9 million), financed by the World Bank KSh 151 million ($12.2 million) and EASI KSh 20 million ($1.6 million). The physical and cost estimates and actual realisations are shown in detail in Annex 10.

5.02 Project Production. It is estimated that Project investments have resulted in an increase of production at Muhoroni compared with appraisal estimates as follows:

	(tons '000s)					
	-- SAR --		--------- Actual/Forecast --------			
	Cane	Sugar	Cane	% of Appraisal	Sugar	% of Appraisal
1. Extra production Total PY1-7 (1979-85)	1,006	100	521	(52)	45	(45)
2. Average annual production PY9-25 (1987-2003)	365	36	259	(71)	22	(61)

Project production has thus achieved 45% of appraisal estimates and is expected to sustain about 61% of appraisal estimates in the future. The shortfall is due to the smaller than anticipated agricultural development and declining factory outturn.

5.03 Financial Rate of Return. The financial flows relating to this reduced level of investment and reduced level of production have been calculated on broadly the same assumptions as at appraisal (see detailed table and notes in Annex 8.4 "Project Costs and Revenues").

1/ These figures are drawn from Annex 10, based on SAR Annex 15, table 25. They include estimated apportionment of certain project costs (e.g. drainage) and differ slightly from the information in other parts of the project documents (e.g. Schedule 1 of the LA which shows total Bank financing for Muhoroni of $ 19.2 million).

The financial rate of return to the Company on project investments is estimated at 2% if production forecasts hold good, if the present (1984/85) price and cost relationships are maintained, and if present factory outturn levels are maintained. This return compares with 24% estimated at appraisal, unfavorably because of lower overhead recovery, higher operating costs, less favorable cane/sugar price ratios and lower factory outturn than estimated at appraisal.

5.04 Returns to Outgrowers. The above return takes payments to outgrowers as a proxy for cane production costs, following appraisal methodology. An analysis of project financial flows taking Company outgrower service costs and the imputed value of outgrower labor as a proxy for cane production costs gives a rate of return of 18%.1/ Although this overstates the FRR as it excludes the cost of land rent and any direct non-labor farmer costs, it gives a rough measure of the financial profitability of the project investments for the farmer. An investment that from the Company's viewpoint is unable to generate adequate cash flow to service project-related debt becomes from the viewpoint of the farmer attractive (so long as the present cost/revenue relationship holds).

5.05 Returns to Government. Government has collected 1981-5 about KSh 58 million in duty and levy on project production and is projected to collect a further KSh 516 million over the life of the project. If this taxation is counted as part of project financial revenues, the return to the project becomes 21%. As for the farmer, so for the Government the project is likely to prove more profitable than for the Company.

5.06 EASI Financial Position.2/ At appraisal it was estimated that Company Project and non-Project activities would generate sufficient cash to allow the company itself to finance KSh 114 million ($14.3 million) of project investments and to service KSh 126 million ($15.8 million) of debt contracted to implement the project. It was forecast that, in 1989, the debt to equity ratio would be an acceptable 24:76, and that the Company would have a net worth of KSh 195 million ($24.4 million). In fact, the Company has lost money every year since 1981 (KSh 61 million 1981-4) and is projected to continue to turn in small losses unless one or other of the basic parameters of operations changes. As a result the Company is likely to have a net worth of only KSh 106 million ($6.6 million) in 1989. The debt to equity ratio was a barely satisfactory 41:59 at last balance sheet date (1984) and is projected to deteriorate to an unsatisfactory 56:44 in 1989. In practice, therefore, the Company could not have financed 37% of project investments as had been foreseen at appraisal. In the event, the Company financed only 12% of a much reduced project.

1/ This is a rough and ready approach to give an order of magnitude only. Farm budgets to allow more precise analysis were not available.

2/ See Annexes 8.2 and 8.3.

5.07 <u>The Company's Cost/Revenue Structure and Operating Performance.</u> The reasons for the bad financial performance of the Company during the Project period can be summarized under three headings (See Annex 8.1):

(i) unfavorable movement in the input: output price structure. The Company slice of the cake got smaller as the farmers' and Government's got bigger. It was assumed at appraisal that the sugar price would remain at 21 times the cane price. In fact by 1985 it had dropped to a multiple of 18.

(ii) drop in factory outturn. It was assumed at appraisal that the sugar/cane ratio would stay at 10%. In fact by 1985, it had dropped to 8.3%. As a result of this, and of factor (i), cane cost accounted for 64% of sales revenue against 46% estimated at appraisal.

(iii) low overhead recovery. At appraisal it was assumed that by 1985 sugar sales would reach 62,000 tons of sugar annually and that fixed costs would represent only 21% of sales revenue. In fact fixed costs were 30% of sales revenue in 1985. This is partly owing to the lower turnover (39,000 tons of sugar sold), partly owing to higher overheads. The main factor in the latter was the rise in the level of "unabsorbed outgrower expenses". Unabsorbed expenses are the differences between the rates set by KSA at which the Company can recover from outgrowers the cost of services and the actual cost of providing those services (see para. 3.12 (v)). Unabsorbed expenses in 1984 totalled KSh 11.5 million or 21% of fixed cost.

5.08 <u>Conclusion</u>. The Project is capable of generating adequate financial flows to service and repay project debt and provide an adequate profit for growers and the Company. However the terms of trade set by Government control of input and output prices have become unfavorable to the Company; as a result the Company's Project investments are not profitable and overall the Company is likely to continue to lose money. Contributory factors in these losses are inefficiency in field and factory operations and the resulting high cost of providing outgrower services and low factory outturn. To some extent the scaling down of the Project is the cause of the factory inefficiencies as the investments needed to maintain factory efficiency were only partly made. A short term solution to the Company's financial problems would be to restore a more favorable input/output price relationship and to raise outgrower change rates. In the medium term action to reduce costs and increase yields is essential and will require further investment.

VI. Project Impact

6.01 Sugar Production Forecasts: In 1976, when the project was identified, the annual output of the existing five factories was 167,000 tons of sugar. Annual imports to satisfy consumption had been running at 205,000 tons. In the absence of investment, it was projected that the deficit would rise to 233,000 tons by 1985 and 355,000 tons by 1990. The on-going investment program (new projects at Nzoia and SONY and the extension of Mumias) would still leave a shortfall of 25,000 tons in 1985 and 97,000 tons by 1990. The present Project was to provide an annual incremental production of 103,000 tons by 1985 (therefore a surplus of 78,000 tons) and 109,000 tons by 1990 (a surplus of 12,000 tons). As uncertainties surrounded sugar production in Kenya, and there would be a shortfall without the Project, it was assumed that the Project's output would largely replace imports. In the event that exportable surpluses were consistently produced, no particular problem was foreseen as Kenya's cost of production of sugar was close to the Bank's projection of the export parity price for 1985 and no problem was anticipated in disposing of the surpluses to neighboring countries and other markets. A note of caution was sounded, however, regarding any additional new factories which would generate structural surpluses which would turn Kenya into a regular and sizable exporter - a clause was incorporated in the Loan Agreement whereby Government would report to the Bank on projected demand and production by December 31, 1979, and annually thereafter, with anticipated investments and plans for the marketing of sugar. (This clause, 4.11, was violated throughout the project). In practice, however, the forecasts of production have varied widely from expectations. Aggregate production far exceeded projections in 1979-81, resulting in considerable exports in 1980 and 1981. Thereafter, production levelled off well below forecast levels and Kenya resumed sugar imports in 1984. Details of sugar production, consumption, imports and exports 1974/85 are shown in Table 10.

6.02 Project Objectives: The primary direct objectives of the Project were to increase production of sugar and to reduce sugar imports. Better use of existing facilities would increase economic returns on existing investments. The Project's beneficiaries would be primarily the Government, the owners of Miwani and Ramisi, a number of large cane producers and some 10,800 smallholder producers. About 1,080 persons would gain employment and a large proportion of existing employees would enjoy better living conditions. Taking into account the value of foreign exchange savings through import substitution of the sugar produced under the Project, the Government's foreign exchange balance was expected to improve by KShs 617.9 million (US$ 77.2 million) during the six year development period. Annual net foreign exchange savings after debt service payments were expected to be KShs 250 million (US$ 31.3 million) in year 8 (expressed in constant 1978 prices) and to increase thereafter. The 10,800 smallholders would achieve average net returns of KShs 2,400/ha per year and those at Muhoroni were expected to achieve KShs 2,770/ha per year.

TABLE 10: Sugar Production, Consumption, Exports and Imports 1974/1984
(Tons '000)

YEAR	RAMISI Act	RAMISI App	MUHORONI Act	MUHORONI App	CHEMELIL Act	CHEMELIL App	MIWANI Act	MIWANI App	MUMIAS Act	MUMIAS App	NZOIA Act	NZOIA App	SONY Act	SONY App	TOTAL Act	TOTAL App	CONSUMPTION Act	CONSUMPTION App	IMPORTS Actual	EXPORTS Actual
1974	11	11	28	28	39	39	30	30	56	56					164	164	224	–	82	
1975	7	8	26	26	40	40	27	27	59	59					159	160	195	..	11	
1976	6	6	26	26	46	46	25	25	64	64					167	167	199	199	32	
1977	11	11	23	23	43	44	22	22	81	81					180	181	215	215	34	
1978	11	9	42	26	46	43	36	27	92	90	7	–			204	195	251	237	44	
1979	15	9	47	26	46	43	32	27	110	100	46	–	..	–	296	205	253	263	11	2
1980	13	9	52	26	63	43	32	28	163	115	43	–	35	–	401	221	300	292	1	95
1981	8	13	35	26	51	43	31	29	169	125	44	28	30	25	368	289	324	327	–	69
1982	11	18	29	40	35	49	18	40	139	135	48	36	27	35	307	353	328	345	–	18
1983	12	22	34	49	50	53	24	47	152	145	24	48	28	45	324	409	333	364	–	4
1984	7	25	42	52	57	55	18	50	175	155	32	52	38	56	369	445	349	381	4	4
1985	11	30	38	62	52	59	20	56	178	165	30	52	16	54	345	478	363	400	62	–
1986		30		62		59		56		175		52		75 1/	367 2/	509	372 2/	422	39 3/	–

Source: Kenya Sugar Authority
Staff Appraisal Report: Annex 14 Tables 4 and 6

1/ Includes SONY extension which is now postponed
2/ Estimated by KSA: individual factory estimates are being re-checked
3/ Provision has been made to import 39,000 tons to maintain strategic reserve.

6.03 Impact on Sugar Production: The Project was cut down considerably (paragraphs 3.03-3.06), leaving only the Muhoroni and some small Government components. As a result the production objectives will never be attained - production is forecast to increase by only 22,000 tons a year against 109,000 tons forecast at appraisal. Some improvement in outgrower incomes will be achieved at Muhoroni, but the Company has lost, and will continue to lose money on the Project. Overall, the four companies (and the sugar industry) remain essentially in the same state (or worse) as when the project was mooted in 1976. It can be seen from Table 10 that Miwani production in 1985 was lower than it was in 1974 and 55% of what was achieved in 1978. Ramisi production in 1985 was the same as the production achieved in 1974 and 1978. Even Muhoroni, the only production component to be implemented, produced less in 1985 than it had in the three boom years before implementation began. Production from the Muhoroni component is expected to be sustained at about 61% of appraisal estimates. In addition a certain amount of housing and infrastructure has been improved and the factory was partly rehabilitated (but throughput was not increased). These are lasting beneficial effects of the project but very small in relation to the ambitious targets set at the outset. In addition, almost US$ 1 million has been spent on fruitless studies. KShs 11.3 million (US$ 0.9 million) was spent on consultancy work for roads, KSA, topographical surveys and drainage, the results of which have not been utilized.

VII. Institutional Performance and Development

7.01 KSA: The bulk of the Government components were to be carried out by KSA but performance has been poor (para. 3.07). Although it was agreed that the consultants to KSA (originally financed under Loan 1389-KE, SONY) would be financed under this project until 1984 and KShs 5.6 million (US$ 0.45 million) were spent, KSA has not been effectively strengthened. A bill to give more authority to KSA, originally drafted in 1981, has not been presented to parliament and it seems unlikely that this will ever be done 1/. It appears in fact that KSA's budget is being reduced and that the institution plays no central role in planning or decision-taking for the subsector. Proposals submitted by KSA are not taken up and as a result staff morale is low. Yet the sugar industry sorely needs a body to plan and coordinate policy, and part of the failure of this Project must be attributed to the weakness of the KSA. The reader is referred to Chapter 3 of the South Nyanza Sugar Project Completion Report (Ln. 1389-KE) (paragraphs 3.24-26) for full discussion of this issue.

7.02 Farmers Organization: The Cooperative Societies and Unions were to be an integral part of the outgrowers organization. They were to be reviewed, their debt position rationalized and MOCD was to provide assistance and training to enable them to meet their obligations under the Project. Nothing could be traced as having taken place in this regard and the field mission found that the societies/unions were of little assistance to the farmers or the Company. The labor survey was carried out but was never submitted to and reviewed by the Bank (para. 3.12 (iii)). Labor is still a problem in the Muhoroni zone.

7.03 Muhoroni: Sugar company institutional development was catered for under the Project by components providing for study tours under factory company and KSA auspices and by the establishment of an industry training center. In practice only Muhoroni implemented a training program. The Company on its own resources, established a training center and during 1978-85 conducted a variety of training courses for their staff and for outgrower farmers, and sent officers on overseas courses. The Company was reinforced by extra staff and equipment paid out of the Loan Account. In general, the Company has been well managed and has been strengthened by its own efforts and by Project support.

7.04 Research: The proposed reinforcement of the National Sugar Research Institute at Kibos and the establishment of an industry training centre was never implemented. Sugar research and training nationally still remains at an unsatisfactory low level.

1/ An announcement quoted in the local press on February 13, 1986 by the Minister of Agriculture and Livestock Development states that the Bill will not be presented.

7.05 <u>Compliance with Legal Covenants</u>: Although MOALD and KSA were constantly reminded by supervision missions (and during Country Implementation Reviews) of obligations under the legal agreements, a large number of covenants were violated. These are listed in Annex 2. The number of covenants were considered by one of the Bank's Executive Directors to be excessive (para. 2.12) both in relation to Government's implementation capacity and to the Bank's supervision capability. In the event some covenants were not observed because they were redundant, while others were not observed because they tried to legislate for resolution of basic subsector issues on which Government and Bank had never agreed. The number of violations therefore comes as no surprise.

VIII. Bank Performance

8.01 Unresolved Issues: Project appraisal took two years because of the numerous complex and contentious issues. The agreements reached during negotiations were correspondingly numerous, resulting in an extensively detailed Loan Agreement. These numerous covenants were expected to resolve major issues, including general policy issues (e.g Government's willingness to lend Bank funds to private companies), sector issues (e.g. sugar price levels, lack of a sector development policy, lack of an institutional mechanicism for sector coordination), and project issues (e.g. poor management capability, numerous weak institutions like cooperatives with ill-defined roles in the project, underestimates of costs, labor availability). The question must be asked whether, in fact, the agreements reached at negotiations reflected genuine resolution of issues or whether they were largely nominal agreements which would allow the Project to go ahead. In view of the fact that the Project foundered on these same issues and that most covenants were either breached or lapsed, it is difficult to avoid the conclusion that the covenants "papered over" substantial unresolved issues and differences of opinions. Yet all these issues were adequately identified and debated; only the obvious conclusion was not drawn - that the Project and the sugar subsector were not ready for this investment.

8.02 Cancellation Delays: After supervision missions identified real implementation problems as early as July 1980 (18 months after signing and only 9 months after effectiveness) an inordinate delay took place before the Project was revised (end August 1983). Although the Bank made efforts to sustain a dialogue during this three year period, it had a difficult task in bringing this dialogue to the logical conclusion - that the Project was unimplementable in view of the unresolved issues and should be cancelled. The time taken to reach agreement on this conclusion (three years) was long, and costly for Government in commitment fees. The Bank has to be faulted for not sustaining this dialogue more forcefully or focussing it better, so as to achieve a more rapid cancellation. Even the August 1983 revision contained some wishful thinking: Government made no headway on the investment proposals for a revised project and a further US$ 1.2 million had to be cancelled.

8.03 Supervision: Supervision missions were regular at the commencement of the Project. During 1982/83, while revision or cancellation was under discussion, no field supervision was carried out but much time was spent on preparing and pursuing the dialogue with Government. Total supervision input is estimated at 587 man days but the results were disproportionately small as most of the time was spent in preparing the obsequies of the project.

8.04 Disbursements. Disbursements were handled promptly by the Bank when claims were received. There were, however, delays in claims being processed by MOALD and the Treasury and by the latter in reimbursing Muhoroni. This created cash flow problems for the Company and delayed implementation (paragraph 4.02 ft).

IX. Economic Rate of Return

9.01 Economic Rate of Return. The economic rate of return to the project is expected to be 3%, compared with a rate of 35% foreseen at appraisal. The methodology of the calculation was that used at appraisal and is detailed in annex 9.

9.02 Contrast with the Financial Analysis. The mediocre economic rate of return contrasts with the more buoyant picture given by the financial analysis where financial returns to the project as a whole (benefiting Company, farmers and Government) are in excess of 20%. The major difference between the financial and economic analysis lies in the valuation of benefits. In the case of the financial analysis these were valued at prevailing and anticipated domestic sugar prices. In the economic analysis they were valued at the historical and forecast import parity price, consistent with standard practice for economic analysis. The arguments for alternative approaches are well made in the recent Project Completion Report for the Kenya South Nyanza Sugar Project - SONY (Loan 1389 KE), paragraph 9.03, and need not be repeated here.

9.03 The Economic Lesson. A simple sensitivity analysis shows what might have been. The sugar to cane ratio used in the projections of revenue is 8.5% (latest actual was slightly lower, 8.3%). This is very low by industry standards - 10% was assumed at appraisal, 11% is achieved by EASI's competitor estate at Mumias. If a 10% rate were achieved "costlessly" the rate of return would be 10%. If an 11% rate were achieved, the rate of return would be 12%. Although these figures are overestimates - they assume costless improvements in efficiency and an agricultural potential that EASI may not possess - they do nevertheless indicate some of the lost potential of this project, and some of the potential of the sugar industry in Kenya. The lesson is clear, however: that if the economic rate of return is the key determinant of future investment in sugar in Kenya, then only the most efficient producers with low costs and high field and factory yields should invest, and a rigorous study of regional/company comparative advantage should precede any further investment.

9.04 Contrast with SONY. The SONY project is expected to yield a negative economic return, by contrast to the positive -albeit low - rate of return of the present Project. The major differences are two. First, SONY project costs were much higher as a new production unit was being set up, whereas the present project comprised only improvement and marginal expansion of an existing unit. Second, the operating efficiency of Muhoroni has been comparatively greater, as factory capacity utilisation is projected to be nearly 100%, against an anticipated 50% at SONY. SONY operates in a marginal production area where outgrower production has not been forthcoming to the extent anticipated, whereas Muhoroni operates in the heart of the sugar belt, under comparatively favorable conditions and under pressure from competing factories. These factors would suggest greater advantage in improvement and rehabilitation of existing estates with potential rather than any new expansion.

X. Summary and Conclusions

10.01 Five basic flaws in the Project are apparent. First, it seems that Government gave lower priority to rehabilitation than to the construction of new factories. The Bank had a different perception of relative priorities and favoured rehabilitation before new construction. There was thus a fundamental lack of agreement between Bank and Government on the priority to be given to the Project.

10.02 Second, there were a number of basic policy issues that were never resolved. Appraisal took two years and required four separate missions because of the large number of unresolved issues (para. 8.01). In the absence of political will on the part of Government to solve these issues, the Bank insisted upon numerous covenants in an attempt to tie Government down to specific solutions. These covenants caused delays in achieving effectiveness, because the sugar companies, KSA and Government could not appreciate and fully understand the legal and financial requirements of the Loan Agreement. Following loan effectiveness, Government began to back away from its commitments, reflecting the fundamental differences of perception between Bank and Government. The first such action was a volte face in Government policy regarding the provision of funds to private companies. Most of the Project proved unimplementable because of this problem, and a painful and costly process of cutting down the Project was begun. It took three years to recast the Project and negotiate a cancellation of US$ 58 million. The delays in decision making cost the Government US$ 2.4 million in commitment fees. At the same time lack of resolution of major sectoral policy issues - on cane and sugar pricing levels, sector development policy, mechanism for sector coordination - reduced the potential contribution of the remaining components.

10.03 Third, Government did not have the institutional mechanism to coordinate and implement what was in fact a multi-project rehabilitation program loan. The Sugar Companies themselves were probably capable of implementing their own sub-projects, but overall planning, formulation of development policy, reconciliation between policy issues and implementation was never achieved as no strong institution was responsible for sugar policy or for the project. KSA made an effort but had no authoritative power; it was in any case in a development stage itself and there was inadequate staff (both in numbers and experience) in MOALD.

10.04 Fourth, Project costs were underestimated and the Project was therefore underfunded. In the event, even the funding that was to be provided by the one company that implemented a sub-project never materialized as unfavorable movements in pricing policy and declining sugar factory efficiency resulted in operating losses, not profits. Finally, the implementation period coincided with the Government budgetary crisis of 1981-84 and even the greatly reduced level of resources allocated to the rump of the project could not all be fitted into the Estimates when required.

10.05 The fourth and fifth flaws - underestimates of costs and Government budgetary problems were common to other projects appraised in the Region at the time. Unanticipated levels of price inflation combined with less rigorous Bank practices in cost estimates at the appraisal stage caused cost estimates to be too low.

10.06 The Muhoroni Sugar Factory component has only been partially successful. Appraisal estimates for irrigation, drainage, road maintenance and the increase of the factory capacity were too low and Government could not provide funds to bridge the financing gap. As a result these components of the Muhoroni sub-project were not completed. Agricultural development was delayed and at the closing date only 88% of the appraisal estimates on the nucleus estate and 45% on outgrowers lands had been achieved. The part of the program which was implemented is however now showing results.

10.07 Major lessons from the project experience may be summarized as follows:

(a) The lack of agreed priorities and a clear strategy for sugar development in Kenya led to a shaky policy foundation for the Project. The pragmatic solution adopted by the Bank of trying to support two project (the Sugar Rehabilitation and SONY Projects) with quite different characteristics failed. Both projects have been poor performers. Agreement between Government and the Bank on investment priorities and strategy is a prerequisite for successful investment.

(b) Failure to resolve basic issues led to an unwieldy number of covenants, to many of which Government had no commitment. The use of covenants to paper over inconsistencies or disagreements on policy places undue strain on the legal documents and inevitably leads to breaches of covenants. Resolution of basic sub-sector issues should precede appraisal.

(c) The project was very complicated, with fifteen implementing agencies whose roles were not always clearly defined. Overly complex design placed too great a burden on weak executing agencies.

(d) Underestimated quantities and prices during technical preparation and appraisal resulted in "cost overruns". Physical implementation consequently fell short of appraisal targets. Greater precision of physical estimates is now provided by Bank rulings on the level of engineering necessary prior to Board presentation. Price level changes remain difficult to forecast accurately.

(e) The project required a great degree of administrative support and coordination. KSA could have handled this but its role was never properly defined and it lacked skilled manpower and authority to do the job. Greater attention to the role of sub-sector management and the need for a coordinating institution in a rehabilitation program loan is indicated.

(f) If subsector issues, particularly coordination and pricing are resolved, properly manageed sugar production in high potential areas could be a profitable and economically justified activity in Kenya. Investment in rehabilitation of existing estates and factories with potential would probably yield satisfactory returns, but expansion of area or the creation of new factories would not.

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

REVISED LOAN SCHEDULE AND DISBURSEMENTS

Category	Amount of the loan Allocated and Disbursed (Expressed in US$ million equivalent)		
	Original	Revised	Disbursed
Expenditure by (Category No.) Muhoroni for:	(2)	(1)	
(a) agricultural vehicles and equipment, office machines and furniture	4.6	4.1	3.498
(b) sugar factory machinery and equipment, and factory consultant's fees	2.0	0.72	0.663
(c) houses and social facilities, including architects' fees	3.6	1.05	1.111
(d) irrigation in Muhoroni zone, including survey, design, construction and supervision and consultant's fees	1.3	-	-
(e) access roads and tracks in smallholder areas including engineering, construction, supervision and consultants' fees, but excluding factory entrance roads	1.4	0.12	0.119
(f) land preparation, planting operations and incremental fertilizers	2.2	5.78	6.321
(g) staff training and incremental company salaries.	2.3	0.52	0.496
(h) Unallocated	1.8	-	-
Sub total	19.2	12.29	12.208

Category	Amount of the Loan Allocated and Disbursed (Expressed in US$ million equivalent)		
	Original	Revised	Disbursed
Expenditure by the (Category No.) Borrower and KSA for:	(4)	(2)	
(a) classified roads, any access roads and tracks in large-farm areas in all zones, smallholder area access roads and tracks in Chemelil Zone, and bridges and other major road-related structures, including engineering, construction and supervision, and consultant's fees	2.5	0.12	0.083
(b) irrigation Ahero Scheme and NSRI at Kibos, including survey, design, construction and supervision, and consultant's fees	2.0	-	-
(c) vehicles, equipment and furnishings, incremental salaries, staff training, and the construction of staff houses, a training center and laboratory for NSRI	0.8	0.08	-
(d) staff training and studies to be undertaken by KSA	0.5	0.51	0.388
(e) drainage works, including surveys, design, construction supervision and consultant's fees	6.4	0.01	0.124
(f) Unallocated (original)	2.2	-	-
(g) investment studies (revised)	-	1.00	-
Sub total	14.4	1.71	0.595
Grand total	33.6	14.00	12.803

KENYA: SUGAR REHABILITATION PROJECT (LN. 1636-KE)
PROJECT COMPLETION REPORT

Activities to be Carried out by Borrower and Compliance with Loan Conditions

Loan Agreement Section	Subject Matter	Status at Project Completion
3.01 (a)	Borrower was to carry out A(1) Irrigation at Miwani & Kibos A(3) Irrigation at Muhoroni A(4) Modification - Ahero Irrig. A(5) (b) Building of a dam at Ramisi B(1) Drainage at Miwani, Chemelil and Muhoroni	Consultants were appointed but no works were carried out under the project.
	F(1) Roads Construction	Program prepared by consultants: no roads constructed
	G(1) Strengthening of NSRI G(2) Establishment cane breeding at Mtwapa	Limited work done by experts. Done under SONY Project Loan 1389-KE.
	G(3) Establishment of training center at Kibos and provide overseas training.	Not done.
	H(1) Feasibility study of economiclly growing cane in Nandi Hills.	Partially done. Found uneconomical to transport cane to Miwani; feasiblity of a small factory not investigated.
	H(2) Completion of soils studies in all zones.	Not done.
	H(3) Investigation of groundwater availability in Ramisi zone.	Ramisi cancelled. Not done
	H(4) Topographical mapping of Kano plains to facilitate B(1) above and design of Regional Drainage scheme. Regional Drainage Plan acceptable to the Bank to be submitted by June 30, 1982.	Mapping was done: Regional drainage plan was not completed.
3.01 (b)	Borrower shall ensure companies perform and shall provide funds, facilities and services to enable companies to perform.	Did not work due to financial constraints and pricing policies.
3.01 (c)	Borrower shall make available loan proceeds withdrawn (1) KSh. 27.2 m to Muhoroni and (II) KSh. 14.4 m to Ramisi in exchange for shares.	Government decided to lend to Muhoroni and did not take up shares. Ramisi was cancelled.

Loan Agreement Section	Subject Matter	Status at Project Completion
3.01 (d)	Borrower shall make proceeds of Loan withdrawn for roads in F(1) as a grant to the companies.	No roads constructed.
3.01(f)	Borrower to ensure that each company is enabled to obtain adequate working capital during implementation period.	Procedure for advance funding proposed, agreed by KSA, but not implemented by Government.
4.05(a) and (b)	Borrower shall cause CBK and SBCU to review loans by SBCU to farmers exceeding one year in arrears, and to take appropriate action by March 31, 1979.	Not implemented: not possible to ascertain the exact position due to numerous staff changes.
4.05 (c)	Borrower to ensure that cooperative societies are provided staff training.	Only limited training was provided.
4.06(a)	Sugar Settlement organization to carry out ownership, tenancy and cane growing contract survey.	Survey was never completed and no results nor a plan for cane cultivation were submitted to the Bank.
4.06(b)	Results of such survey to be delivered to Bank by September 30, 1979, with plan for cane cultivation	
4.07(a)	Borrower to ensure the Companies maintain roads and drains, and to enter into agreements with Companies by December 31, 1979 for satisfactory execution of and reimbursement for maintenance, and to establish Maintenance Fund.	Survey completed for Sugarbelt; draft agreements never finalized and maintenance marginal. RDMF never established as it awaited Sugar Bill to strengthen KSA which has not been presented to parliament.
4.07(b)	Funding of Roads and Drainage Maintenance Fund (RDMF).	

Loan Agreement Section	Subject Matter	Status at Project Completion
4.07(c)	Payment of Companies out of RDMF.	No payments made: RDMF not established.
4.07(c)	Borrower to maintain "MOW maintenance" roads.	Only marginal maintenance being done.
4.08	Borrower to study labor supply for cane harvesting, prepare and review with the Bank a plan by December 31, 1979.	Plan was prepared by MOL in November 1980. There is no record of it being submitted and reviewed by the Bank.
4.09	Borrower to cause NIB to assess irrigation water charges.	No action; irrigation components not implemented.
4.10(a)	Borrower to set producer and consumer prices of sugar cane and sugar.	These covenants were discussed frequently by Bank and Government but were never fully observed. This delayed the revision of the project and caused numerous financial crises in the sugar industry.
4.10(b)	Borrower to review sugar and cane prices annually.	
4.11	Borrower to report on projected production and consumption of sugar by December 31, 1979, and annually thereafter, with anticipated investments and plans for marketing of sugar.	
5.01(g)(c)	Borrower to have right to withdraw proceeds of ADB Loan by October 31, 1979.	ADB Loan (for Ramisi) was cancelled.
5.01(h)	Any management contract entered into, renewed or amended between October 1, 1978 and effective date without Bank's consent.	Confirmed that no changes occurred during that period.
6.01	Letter of Agreement executed on of each Company.	Completed.
6.02	Legal opinions to be furnished to Bank that Letter Agreements duly authorized by and legally binding on Companies.	Legal opinions furnished satisfactorily.

Loan Agreement Section	Subject Matter	Status at Project Completion
Sch. 1.4(b)	Legal opinions to have been furnished that (i) Ramisi loans from Emco (Kenya) and reserves have been converted into equity capital; (ii) SFA duly executed and and legally binding.	Ramisi cancelled; covenant never implemented.
Sch. 1.4(c)	Legal opinions to have been furnished that (i) Miwani reserves of at least KSh 24 m have been converted into equity capital; (ii) SFA duly executed and legally binding.	(i) completed; (ii) Government never signed SFA and Miwani component was cancelled.
Sch. 1.4(d)	Legal opinions to have been furnished that (i) Muhoroni reserves of at least KSh. 23 m have been converted into equity capital; (ii) SFA duly executed and legally binding.	Company converted KSh. 4 m from reserves to equity. This was acceptable to Bank and SFA was executed March 1980.
Sch. 2A (i, (2), (3) (4) & (5)(b)	KSA to employ consultants for implementation of irrigation works.	Consultants for Muhoroni zone invited; complete irrigation component cancelled.
Sch. 2.B(1)	KSA to employ consultants for implementation of drainage works.	Consultants appointed but component cancelled.
Sch. 2F	MOW to construct roads or cause Companies to construct them.	Consultants appointed but roads not constructed.
Sch. 2F(4)	Companies to employ architects for housing and building facilities.	Architects appointed by Muhoroni; others did not proceed.

Loan Agreement Section	Subject Matter	Status at Project Completion
Sch.4,2(h)	No company to enter into renew or amend management agreement without first informing Bank and affording opportunity to comment thereon.	Muhoroni executed new agreement without prior consultation with Bank and is, therefore, in default.
Sch.4,3(d)	No Financed Company to incur consolidated long term debts greater than stated proportion of consolidated capital and positive surplus.	Muhoroni: none. Miwani, Ramisi were never bound by SFA's.
Sch.4,3(f)	No Financed Company to pay dividends except under stated conditions.	Muhoroni: none. Miwani, Ramisi were never bound by SFA's.
Sch.4,3(g)(i)	(A) Financed Companies to maintain stated current ratios. (B) Financed Companies to meet full annual expenses out of sales and interest revenue to earn a reasonable rate of return.	Miwani and Ramisi were never bound by SFA's. Muhoroni observed (A) but (B) was not achieved and losses were incurred from 1981 onwards.

KENYA: SUGAR REHABILITATION PROJECT (LOAN 16336)
PROJECT COMPLETION REPORT
MUHORONI FACTORY PERFORMANCE

	1979	1980	1981	1982	1983	1984	1985 1/
Cane Milled (tons)	527,835	531,750	391,283	330,500	392,089	490,037	470,000
Sugar Produced (tons)	47,000	51,900	35,481	29,170	34,421	42,231	39,010
Cane/Sugar Ratio	11.22	10.25	11.03	11.33	11.40	11.60	12.05
Polarity in Cane (%)	11.99	12.67	11.89	11.72	11.53	11.62	11.35
Sugar/Cane Ratio	8.91	9.75	9.05	8.83	8.77	8.62	8.30
Sugar Lost in Processing (%)	3.08	2.92	2.84	2.89	2.76	3.01	3.00
Fibre in Cane (%)	17.75	17.55	17.77	18.98	18.43	19.63	19.50
Primary Juice Quality:							
Polarity (%)	16.23	17.00	16.18	15.88	15.75	15.83	15.50
Brix (%)	18.95	19.76	19.17	19.01	18.68	18.36	18.70
Purity (%)	85.65	86.08	84.40	83.54	84.31	86.22	83.00
Milling Time Lost:							
Out of Cane (%)	3.4	5.0	18.3	25.0	14.2	3.3	3.00
Factory Reasons (%)	20.1	19.3	17.7	11.8	19.0	22.2	28.00
Miscellaneous (%)	2.2	0.7	1.6	5.6	1.3	-	3.00
TOTAL	25.7	25.0	37.6	42.4	34.5	25.5	34.00

1/ Estimated; Based on performance to October 1985.

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT
LAND PREPARATION PROGRESS
(Hectares)

	1979		1980		1981		1982		1983 3/		1984 3/	
NUCLEUS ESTATE (by Company)	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL
Improved and reclaimed land	–	439	226	214	226	404	226	181	226	341	226	187
Newly developed land	..	..	80	..	80	25	80	126	80	–	80	23
Sub-Total (annual)	..	439	306	214	306	429	306	307	306	341	306	210
Nucleus project area (cumulative)	..	439	306	653	612	1,082	918	1,389	1,224	1,730	1,530	1,940
Proposed irrigated area (cumulative) 1/					160		330		500		670	
Total Nucleus Project Area (cum.)	..	439	306	653	772	1,082	1,248	1,389	1,724	1,730	2,200	1,940
OUTGROWERS (by Company)												
Improved and reclaimed land		307	660	153	660	260	660	431	660	523	660	888
Newly Developed land		98	940	144	940	238	940	238	940	123	940	189
Sub-Total (annual)		405	1,600	297	1,600	498	1,600	606	1,600	646	1,600	1,077
ROWERS (by Contractors) 2/												
Improved and reclaimed land			660		660	206	660	890	660	189	660	270
Newly developed land												
Sub-Total (annual)			660		660	206	660	890	660	189	660	270
Total Outgrowers (annual)		405	2,260	297	2,260	704	2,260	1,496	2,260	835	2,260	1,347
Project Outgrowers (cumulative)		405	2,260	702	4,520	1,406	6,780	2,902	9,040	3,737	11,300	5,084
Total Project Cane Area (cum.)		844	2,566	1,355	5,292	2,488	8,028	4,291	10,764	5,467	13,500	7,024

/1 No irrigation carried out; the figures in "actual" column include land which might have been irrigated
/2 Proportion of work done by contractors estimated by Company: not envisaged at appraisal
/3 There was a significant increase in output after acquisition of new machinery in late 1983 and 1984.

(This table is comparable with Annex 6 Table 3, page 2 of SAR)

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

PROPOSED PLANTING, MAINTENANCE AND HARVESTING PROGRAMME (1985-92) - NUCLEUS ESTATE

EAST AFRICAN SUGAR INDUSTRIES PROPOSALS (DEC 1985)

(Figures in Hectares)

	1985	1986	1987	1988	1989	1990	1991	1992
A. NURSERY								
Planted		140	140	140	140	140	140	140
Harvested			(140)	(140)	(140)	(140)	(140)	(140)
Standing Crop		140	140	140	140	140	140	140
B. PLANT CROP								
Planted		260	260	260	260	260	260	260
Harvested		(175)	(152)	(260)	(260)	(260)	(260)	(260)
Standing Crop	240	325	433	433	433	433	433	433
C. RATOON 1								
Maintained		175	292	400	400	400	400	400
Harvested		(256)	(198)	(233)	(346)	(400)	(400)	(400)
Standing Crop	366	285	379	546	600	600	600	600
D. RATOON 2								
Maintained		256	198	233	346	400	400	400
Harvested		(358)	(400)	(227)	(216)	(289)	(373)	(400)
Standing Crop	630	528	326	332	462	573	600	600
E. RATOON 3								
Maintained		210	377	120	65			
Harvested		(165)	(281)	(293)	(249)	(92)	(33)	
Standing Crop	341	386	482	309	125	33		
F. RATOON 4								
Maintained								
Harvested		(40)	(66)					
Standing Crop	106	66						
TOTAL	1,683	1,730	1,760	1,760	1,760	1,779	1,773	1,773
FALLOW	167	120	90	90	90	71	77	77
TOTAL AREA UNDER CANE	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850
Milling Cane Harvested								
Area Harvested (Ha)		994	1,097	1,013	1,071	1,041	1,066	1,060
Yield (Tons/Ha)		74	74	74	74	75	75	75
Quantity (Tons)		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

PROPOSED PLANTING, MAINTENANCE AND HARVESTING PROGRAMME (1985-1993) - OUTGROWERS' AREAS

EAST AFRICAN SUGAR INDUSTRIES PROPOSALS (DEC 1985)

(Figures in Hectares)

	1985	1986	1987	1988	1989	1990	1991	1992	1993
A. NURSERY									
Planted		285	285	285	285	285	285	285	285
Harvested			(285)	(285)	(285)	(285)	(285)	(285)	(285)
Standing Crop		285	285	285	285	285	285	285	285
B. PLANT CROP									
Planted		1,950	2,150	2,150	2,150	2,150	2,150	2,150	2,150
Harvested		(2,747)	(2,276)	(2,017)	(2,150)	(2,150)	(2,150)	(2,150)	(2,150)
Standing Crop	4,373	3,576	3,450	3,583	3,583	3,583	3,583	3,583	3,583
C. RATOON 1									
Maintained		2,747	2,561	2,302	2,435	2,435	2,435	2,435	2,435
Harvested		(2,170)	(2,398)	(2,654)	(2,431)	(2,369)	(2,435)	(2,435)	(2,435)
Standing Crop	3,195	3,772	3,935	3,583	3,587	3,653	3,653	3,653	3,653
D. RATOON 2									
Maintained		2,170	2,398	2,654	2,431	2,369	2,435	2,435	2,435
Harvested		(1,180)	(1,663)	(2,284)	(2,526)	(2,543)	(2,400)	(2,401)	(2,435)
Standing Crop	1,758	2,748	3,483	3,853	3,758	3,584	3,619	3,653	3,653
E. RATOON 3 AND OTHERS									
Maintained		519							
Harvested		(934)	(260)	(259)					
Standing Crop	934	519	259						
TOTAL	10,260	10,900	11,412	11,304	11,213	11,105	11,140	11,174	11,174
Fallow	1,279	889	677	785	876	984	949	915	915
TOTAL AREA UNDER CANE	11,539	11,789	12,089	12,089	12,089	12,089	12,089	12,089	12,089
VIRGIN AREA	550	300							
TOTABLE CANEABLE AREA	12,089	12,089	12,089	12,089	12,089	12,089	12,089	12,089	12,089
Milling Cane Harvested									
Area Harvested (ha)		7,031	6,597	7,214	7,107	7,062	6,985	6,986	7,020
Yield (Tons/Ha)		83	83	83	83	84	84	84	84
Quantity (Tons)		583,573	547,551	598,762	589,881	593,200	586,740	586,824	589,680

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

PROJECTED CANE AVAILABILITY

EAST AFRICAN SUGAR INDUSTRIES PROPOSALS (DEC 1985)

(Figures in Tons)

	1986	1987	1988	1989	1990	1991	1992	1993
Nucleus Estate	73,556	81,178	74,962	79,254	78,675	79,950	79,500	79,500
Outgrowers	583,573	547,551	598,762	589,881	593,200	586,740	586,824	589,680
	657,129	628,729	673,724	669,135	671,275	666,690	666,324	669,180

KENYA

Sugar Rehabilitation Project: Completion Report

Forecast and Actual Financial Performance Compared

Annex 8.1

	1979		1980		1981		1982		1983		1984		1985		Total 1979-85	
	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL
ne crushed (t'000)	255	528	255	532	255	391	396	330	487	392	532	490	620	470	2791	3133
ne price (Sh/t)	133	133	133	133	133	150	133	170	133	227	133	250	133	270	133	190
gar sales (t)	25	47	25	50	25	38	39	29	49	34	52	42	62	39	277	279
gar price (Sh/t)	2800	2800	2800	2800	2800	3075	2800	3600	2800	4290	2800	4773	2800	4986	2800	3785
les revenue)	73	137	73	149	73	112	113	107	140	149	150	204	178	198	800	1056
material cost of sales)	34	70	34	71	34	59	53	56	65	89	70	122	82	127	372	594
er variable costs)(Sh million)	6	17	3	22	2	22	2	21	3	19	3	19	4	19	23	139
ed Costs)	23	35	26	44	27	46	32	46	34	49	35	56	37	60	214	336
erest)	3	6	6	9	9	6	11	8	12	8	11	8	10	13	62	58
profit/loss)	7	9	4	3	1	(21)	15	(24)	26	(16)	31	(1)	45	(21)	129	(71)
Sugar price/cane price ratio	21	21	21	21	21	201/2	21	21	21	19	21	19	21	18	21	20
Extr ion rate (%)	10	8.9	10	9.7	10	9.1	10	8.8	10	8.8	10	8.6	10	8.3	10	8.9
Raw rial cost as % of sales revenue	47	51	47	48	47	53	47	52	46	60	47	59	46	64	47	56
Overhead recovery rate (fixed costs as percentage of sales)	32	26	36	30	37	41	28	43	24	33	23	27	21	30	27	32

KENYA

SUGAR REHABILITATION PROJECT

East Africa Sugar Industries Limited - Muhoroni

Pro-forma Profit and Loss Statement for the Years

ended December 31

With Project

(KShs. Million)

Annex 8.2

	Year 1 (1979)	Year 2 (1980)	Year 3 (1981)	Year 4 (1982)	Year 5 (1983)	Year 6 (1984)	Year 7 (1985)	Year 8 (1986) 1/	Year 9 (1987) 2/	Year 10 (1988) 2/	Year 11 (1989) 2/
Sales	73 137	73 149	73 112	113 107	140 149	150 204	178 198	178 237	178 255	178 255	178 255
Variable Costs	40 87	37 93	36 81	55 77	68 108	73 141	86 146	86 148	86 168	86 168	86 168
Gross Income	33 50	36 56	37 31	58 30	72 41	77 63	92 52	92 52	92 69	92 87	92 87
Fixed Expenses	23 35	26 44	27 46	32 46	34 49	35 56	37 60	37 63	37 75	37 75	37 75
Operating Income	10 15	10 12	10 (15)	26 (16)	38 (8)	42 7	55 8	55 6	55 12	55 12	55 12
Interest	3 6	6 9	9 6	11 8	12 8	11 8	10 13	9 13	8 15	7 15	6 15
Income Before Taxes	7 9	4 3	1 (21)	15 (24)	26 (16)	31 (1)	45 (21)	46 (7)	47 (7)	48 (3)	49 (3)
Income Taxes	3 -	2 (2)	- (1)	7 -	12 -	15 -	20 -	21 -	22 ..	21 ..	23 ..
Net Income	4 9	2 5	1 (20)	8 (24)	14 (16)	16 (1)	25 (21)	25 (7)	25 (3)	27 (3)	26 (3)
Dividends	- -	- -	- -		- -	6 -	6 -	6 -	6 -	6 -	6 -
Addition to Retained Earnings	4 9	2 5	1 (20)	8 (24)	8 (16)	10 (1)	19 (21)	19 (7)	19 (3)	21 (3)	20 (3)
Retained Earnings	16 35	18 40	19 (9)	27 (33)	35 (49)	45 (49)	64 (70)	83 (77)	102 (80)	123 (83)	143 (86)

/ Estimated

/ EASI projections

EAST AFRICAN SUGAR INDUSTRIES LIMITED

(Balance Sheet) As at 31st December

(Kshs. Million:)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
ASSETS					(1)	(2)	(3)	(4)	(5)	(6)	(7)
Fixed Assets	72	89	105	141	153	299	304	314	319	340	
Less: Depreciation	26	30	35	43	54	64	81	97	111	125	
Work in Progress	23	9	9	1	3	2	4	4	6	10	
Sub Total	69	68	79	99	102	237	227	221	214	225	
Current Assets											
Nucleus Estate Plantation	-	-	-	7	7	8	9	8	10	15	
A/c Receivable O/Growers	-	-	-	6	11	12	19	37	48	59	
A/c Receive - Others/Prepay	2	3	12	4	7	28	11	7	15	26	
Other Inventories	9	17	21	27	31	43	41	39	36	53	
Cash & Bank Balance	-	-	-	-	-	-	-	-	-	-	
Cash Surplus Adjust	-	-	-	-	-	-	-	-	-	-	
Sub Total	11	20	33	44	56	91	80	91	103	153	
Less Current Liabilities											
Income Tax Payable	-	-	1	3	3	1	-	-	-	-	
Short Term Loans 1	5	5	11	22	29	32	34	32	25	21	
Accounts Payable 2	12	10	15	19	28	34	31	40	51	78	
Sub Total	17	15	27	44	60	67	65	72	76	99	
Net Working Capital (2-3)	(6)	5	6	-	(4)	24	15	19	33	54	
Net Assets (1 + 4)	63	73	85	99	98	261	242	240	247	279	
Liabilities											
Long Term Debt											
Rehabilitation Loan	-	-	-	-	-	26	36	59	82	116	
Others 3	34	37	45	46	36	32	23	22	22	20	
Total Long Term Debt	34	37	45	46	36	58	59	81	104	136	
NET Worth											
Company Equity - Capital	23	23	23	23	28	28	56	56	56	56	
- Share Premium A/c	2	2	2	2	-	-	-	-	-	-	
- Reserves	3	3	3	3	-	136	136	136	136	136	
Sub Total	28	28	28	28	28	164	192	192	192	192	
Retained Earnings	1	8	12	25	34	39	(9)	(33)	(49)	(49)	
Total Net Worth	29	36	40	54	62	203	183	159	143	143	
Total NET Worth plus Liabilities (5 + 8)	63	73	85	99	98	261	242	240	247	279	

Note: (1) Short Term Loans includes current maturity of Long Term Loans.
(2) Accounts Payable includes accrued interest on Long Term Loans.
(3) Excludes current maturity of Long Term Loans.

Revaluation in 1980

Annex 8.3

KENYA
Sugar Rehabilitation Project: Completion Report
Project Costs and Revenues [1]

(KSh. Million)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987 - 2003
Incremental cane (tons) [2]										
Nucleus				15.4	22.9	37.9	48.7	60.6	67.9	67.9
Outgrowers				14.9	25.8	51.6	106.5	137.1	186.6	191.1
Total				30.2	48.6	89.5	155.1	197.7	254.5	259.0
Sugar Price (Sh/ton)				3075	3600	4290	4773	4986	5386	5386
Incremental production as % of total				7.7	14.7	22.8	31.6	42.0	64.0	64.7
Factory Investment		-	1.8	1.4	0.4	0.8	1.0	2.8	2.0[5]	2.0
Recurrent [3]										
Labor				0.8	1.4	2.4	4.2	5.4	7.0	7.1
Other				2.4	4.2	6.8	10.6	13.5	17.4	17.5
Admin. Investment	3.5	2.1	1.1	0.6	1.9	0.1	0	1.9	0	0
Recurrent [3]				1.0	2.1	3.4	5.4	6.9	8.9	9.0
Field EASI Costs										
Investment [4]	13.2	0.2	0.4	1.2	2.0	4.4	17.1	8.5	5.0[1]	5.0
Recurrent[3] Nucleus Estate				3.3	5.8	9.4	10.6	13.5	17.4	17.5
Outgrower Services				1.2	5.5	5.7	11.2	14.3	18.4	18.5
Outgrower Labor[6]		0.5	0.8	1.7	3.5	4.5	6.1	6.1	6.1	6.1
Government/KSA Costs			3.0	2.7	0	2.9	2.7	-		
Total Costs	16.7	2.8	7.1	16.3	26.8	40.0	68.9	72.9	82.2	82.7
Revenues				8.6	15.7	34.0	64.4	83.2	118.1	120.2
1. Gross Flow	(16.7)	(2.8)	(7.1)	(7.7)	(11.1)	(6.0)	(4.5)	10.3	35.9	37.5
Add back Outgrower Cost		0.5	3.8	4.4	9.0	10.2	17.3	20.4	24.5	24.6
Deduct:										
Payments to Outgrowers				2.2	4.4	11.7	26.6	37.0	54.1	55.4
2. Net Flow to EASI										
(before debt service)	(16.7)	(2.3)	(3.3)	(5.5)	(6.5)	(7.5)	(13.8)	(6.3)	6.3	6.7
Government Duty/Levy				3.5	5.6	10.2	17.4	21.4	28.1	28.7
3. Net Flow + Government Share	(16.7)	(2.3)	(3.3)	(2.0)	(0.9)	2.7	3.6	15.1	34.4	35.4
1. Gross Flow in Constant Terms (FRR = 18%)	(35.5)	(5.3)	(11.8)	(10.7)	(13.2)	(6.5)	(4.5)	10.3	35.9	37.5
2. Net Flow to EASI in Constant Terms (FRR = 2%)	(35.5)	(4.3)	(10.5)	(9.7)	(7.7)	(8.1)	(13.8)	(6.3)	6.3	6.7
3. Net Flow + Government Share in Constant terms (FRR=21%)	(35.5)	(4.3)	(10.5)	(4.9)	(1.1)	2.9	3.6	15.1	34.4	35.4

KENYA
Sugar Rehabilitation Project - Completion Report
Economic Analysis
(KSh million)

	Agriculture 1/	Factory	Administration and Housing	Government/ XSA Costs	Production Foregone	Total Costs	Benefits	Net
1978	27	0	6	0	0	33	0	(33)
1979	1	0	3	0	0	4	0	(4)
1980	3	3	2	4	0	12	0	(12)
1981	10	6	2	3	1	24	12	(12)
1982	19	7	4	0	1	31	9	(22)
1983	27	11	4	3	2	47	26	(21)
1984	46	16	5	2	2	71	28	(43)
1985	38	20	8	0	3	69	21	(48)
1986	42	24	8	0	3	77	38	(39)
1987	42	24	8	0	3	77	46	(31)
1988	42	24	8	0	3	77	50	(27)
1989	42	24	8	0	3	77	70	(7)
1990	42	24	8	0	3	77	122	45
1991	42	24	8	0	3	77	116	39
1992	42	24	8	0	3	77	112	35
1993	42	24	8	0	3	77	108	31
1994-2003 (10 years)	42	24	8	0	3	77	104	27

IRR :: 3%

1/ including farm family labor

KENYA

Sugar Rehabilitation Project: Completion Report
Project cost and financing plan (Muhoroni Component) Appraisal and Actual Performance
(Source SAR Annex 15 Table 25)

	Detailed Table Ref.	Total cost, inc. contingencies	Financing World Bank	Government	KSA Levy	Muhoroni	Physical Objectives	Drawn from Loan
Irrigation								
- Capital cost	3	14.7 1/	13.5			1.2	670 ha brought under irrigation	Cancelled
- Recurrent	3	1.2				1.2	3 years' operating costs capitalized	
Drainage								
- Capital cost	4	6.5	4.0	2.5			1340 ha drained	
- Recurrent	4	3.2	1.9	1.2	0.1		4 years maintenance costs capitalized	Cancelled
Agriculture								
- Capital	7	49.1	44.2			4.9	equipment & vehicles to develop 5,100 ha, reclaim 1,500 ha and improve husbandry on 6,900 ha (total 13,500, existing was 9,100)	39.2
- Fixed Recurrent	11	39.5	16.9			22.6	5 years incremental salaries, administrative costs and training for EASI	8.7
- Variable Recurrent	17,18	68.5	21.7			46.8	4 years total cost of improved husbandry on 13,500 ha	86.3
Factory								
- Capital	22	22.3	20.1			2.2	increase factory capacity from 2000 tcd to 2400 tcd	7.7
- Recurrent	26	17.7				17.7	2 years incremental operating costs capitalized	
Management								
- Capital	28	0.5	0.5				Furniture and equipment for administration	
- Recurrent	28	15.4	5.2			10.2	4 years incremental administrative salaries and expenses	Cancelled
Roads								
- Capital	29	27.4	8.6	17.2		1.6	249 Km constructed/upgraded	
- Recurrent	30	1.7			1.3	0.4	incremental maintenance costs for 3 years on 516 Km	Cancelled
Housing	31	40.3	34.7			5.6	763 units, including 680 laborer's cottages	9.2
Total		308.0	171.3	20.9	1.4	114.4	In 1985, produce: 620,000 t.c. and 62,000t sugar	151.1
US$		38.50	21.41	2.61	0.18	14.30		12.21

Notes to "Project Costs and Revenues"

1/ Costs and revenues in current terms 1978-1984 and constant 1984 values thereafter. Costs to 1984 are actual, from 1985 estimated/projected on basis of 1978-84 experience. Flows are presented in constant 1984 for the FRR calculations.

2/ Estimated from Annex 4 hectarage on following increased yield assumptions: nucleus estate 21t/ha/annum; outgrowers 20t/ha/annum. Average harvesting time: nucleus estate 20 months; outgrowers 22 months.

3/ Based proportionately on EASI Profit and Loss Accounts. Recurrent costs exclude finance and exceptional charges.

4/ Agricultural Vehicles and Equipment only. Costs of Land Preparation etc. assumed taken up in recurrent costs.

5/ Assumes no factory expansion, excess cane processed at Chemelil with identical cost and revenue structure. Investment cost is for expenditures to maintain existing capacity and productivity.

6/ Outgrower Labor estimated (as in SAR) on basis of 60 man days/ha/annum. Price of labor 20/- per day x 60 = 1200/- p.ha.

	ha	cost
1979	405	0.5
1980	702	0.8
1981	1406	1.7
1982	2902	3.5
1983	3737	4.5
1984	5084	6.1

7/ Assumes replacement annually at average rate obtaining during the project period.

NOTES TO "ECONOMIC ANALYSIS"

As at appraisal, 100% of the cost of productive investment and housing has been considered.

As at appraisal, benefits have been valued at the import parity price, as Kenya remains a sugar deficit country.

As at appraisal, an imputed value for production foregone on the newly developed area has been calculated on the basis of the maize producer price (used as proxy for export parity price) and assumed 60% occupancy rate (1142 ha x 60% x 2.2 t). Prices: KSh 954 in 1980 to KSh 1730 in 1984 and KSh 1900 in 1985.

As at appraisal a shadow exchange rate of KSh 11.0 = $1.00 was used for foreign exchange elements 1977-82. Thereafter a rate of KSh 16.0 = $1.00 was used.

As at appraisal, labor was not shadow priced for the reasons evoked at the time of appraisal.

Values are in constant 1983 terms.

NOTE OF RECORD

PROJECT COMPLETION REPORT

KENYA - SUGAR REHABILITATION PROJECT
(LOAN 1636-KE)

Reasons for Pass-through Decision

The state of the sugar industry and the experience with Government sugar projects in Kenya are described in a recent audit (South Nyanza Sugar Project, PPAR No. 6235 dated June 6, 1986), and little would be gained from auditing this project as only a fraction of it was implemented.

Quality of PCR

The PCR presents a comprehensive account of the experience with this project.

Project Description

The project was designed to rehabilitate and expand the sugar companies at Miwani, Chemelil, Muhoroni and Ramisi, including the factories, nucleus estates, outgrower cane areas and housing and transportation infrastructure. It was expected that Kenya would reach self-sufficiency in sugar in the early 1980s as a result of the project.

Project Outcome

Only about ten percent of the project was implemented, and the investments made appear not to be economically and financially viable. The PCR identifies several underlying causes of the poor performance. A major problem was the low priority given to rehabilitation by Government compared with construction of new factories. There also were important policy issues that remained unresolved prior to project approval, leading the Bank to insist on numerous covenants in the Loan Agreement. Implementation suffered particularly because Government did not have the institutional mechanism to coordinate and implement what was in fact a multi-project rehabilitation program loan. Financing problems to some extent resulted from underestimation of project cost at appraisal and were aggravated by Government's budgetary crisis of the early 1980s. The companies' financial condition was adversely affected by lower-than-expected sugar prices.

Significant Aspects of Project Experience

The lack of agreed priorities and a clear strategy for sugar development in Kenya led to a shaky policy foundation for the project. The pragmatic solution adopted by the Bank of trying to support two projects (Rehabilitation and South Nyanza) with different characteristics failed. The use of covenants to paper over inconsistencies or disagreements on policy places undue strain on the legal documents and inevitably leads to breaches of covenants.

The project was very complicated, with fifteen implementing agencies whose roles were not always clearly defined. Overly complex design placed too great a burden on weak executing agencies.

The project required a great degree of administrative support and coordination. The Kenya Sugar Authority could have handled this but its role was never properly defined and it lacked skilled manpower and authority. Greater attention to the role of sub-sector management and the need for a coordinating institution in a rehabilitation program loan would be indicated.

If subsector issues, particularly coordination and pricing, are resolved, properly managed sugar production in high potential areas could be a profitable and economically justified activity in Kenya.

Prepared by: Gottfried Ablasser
Date: April 7, 1987
Approved by: Graham Donaldson, Chief, OEDD1

cc: Ms. Reyes, OED

YELLOW FILE COPY

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE: April 24, 1987

TO: Mr. Adrianus J. H. Otten, Chief, EAPCA

FROM: Graham Donaldson, Chief, OEDD1

EXTENSION: 32893

SUBJECT: Project Completion Report on Kenya - Sugar Rehabilitation Project (Loan 1636-KE)

1. The attached project completion report has been read in this Department and will not be audited.

2. The PCR is being sent to the Borrower and its agencies for comments by May 29, 1987. On receipt, any comments will be sent to you to be reflected in the project completion report and reproduced as an annex.

3. The Preface, Basic Data Sheet and Highlights in the PCR need to be amended; our suggestion for revision will be forwarded to you. The revised, final version should be returned to us after Borrower comments have been received and incorporated.

Attachment

GAblasser:clf

YELLOW FILE COPY

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

April 24, 1987

Mr. James W. Adams
Director, Regional Mission
in Eastern Africa
World Bank
P. O. Box 30577
Nairobi, Kenya

Dear Mr. Adams:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

The accompanying letters and copies of the Project Completion Report on Kenya Sugar Rehabilitation Project (Loan 1636-KE) are for distribution to the addressees on the attached list.

I would appreciate it if your office could distribute them as soon as possible. A copy of the report is also attached for your comments which are scheduled to reach us by May 29, 1987.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosures

GAblasser:clf

PROJECT COMPLETION REPORT

KENYA SUGAR REHABILITATION PROJECT (LOAN 1636-KE)

List of Recipients

Mr. S. B. Obura
Chief Executive
Kenya Sugar Authority
P. O. Box 51500
Nairobi, Kenya

Mr. J. B. Awford
General Manager
E. A. Sugar Industries
P. O. Box 48979
Nairobi, Kenya

Mr. J. Kamunge
Permanent Secretary
Ministry of Agriculture
P. O. Box 30028
Nairobi, Kenya

Mr. C. S. Mbindyo
Permanent Secretary
Ministry of Finance
P. O. Box 30007
Nairobi, Kenya

Mr. J. W. Githuku
Permanent Secretary
Ministy of Planning and National Development
P.O. Box 30005
Nairobi, Kenya

Mr. Arap Letting
Permanent Secretary
Office of the President
P. O. Box 30510
Nairobi, Kenya

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

April 24, 1987

Mr. S. B. Obura
Chief Executive
Kenya Sugar Authority
P. O. Box 51500
Nairobi, Kenya

Dear Mr. Obura:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

I am forwarding to you the draft Project Completion Report (PCR) on the Kenya Sugar Rehabilitation Project, prepared by the Eastern and Southern Africa Regional Office. We have chosen not to audit the project in the Operations Evaluation Department, so we are inviting any comments you or your colleagues may wish to make on the PCR by May 29, 1987. Such comments will be reflected in the final version of the PCR and will be incorporated verbatim as an attachment to the report before it is submitted to the Board of Executive Directors of the Bank.

Please advise us, preferably by telex, if you have no comments to make.

We shall send you a copy of the final version of the PCR after it has been distributed to the Board.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosures

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

April 24, 1987

Mr. J. B. Awford
General Manager
E. A. Sugar Industries
P. O. Box 48979
Nairobi, Kenya

Dear Mr. Awford:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

I am forwarding to you the draft Project Completion Report (PCR) on the Kenya Sugar Rehabilitation Project, prepared by the Eastern and Southern Africa Regional Office. We have chosen not to audit the project in the Operations Evaluation Department, so we are inviting any comments you or your colleagues may wish to make on the PCR by May 29, 1987. Such comments will be reflected in the final version of the PCR and will be incorporated verbatim as an attachment to the report before it is submitted to the Board of Executive Directors of the Bank.

Please advise us, preferably by telex, if you have no comments to make.

We shall send you a copy of the final version of the PCR after it has been distributed to the Board.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

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INTERNATIONAL DEVELOPMENT ASSOCIATION

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Cable Address: INTBAFRAD
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April 24, 1987

Mr. J. Kamunge
Permanent Secretary
Ministry of Agriculture
P. O. Box 30028
Nairobi, Kenya

Dear Mr. Kamunge:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

I am forwarding to you the draft Project Completion Report (PCR) on the Kenya Sugar Rehabilitation Project, prepared by the Eastern and Southern Africa Regional Office. We have chosen not to audit the project in the Operations Evaluation Department, so we are inviting any comments you or your colleagues may wish to make on the PCR by May 29, 1987. Such comments will be reflected in the final version of the PCR and will be incorporated verbatim as an attachment to the report before it is submitted to the Board of Executive Directors of the Bank.

Please advise us, preferably by telex, if you have no comments to make.

We shall send you a copy of the final version of the PCR after it has been distributed to the Board.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosures

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

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Washington, D.C. 20433
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Cable Address: INTBAFRAD
Cable Address: INDEVAS

April 24, 1987

Mr. C. S. Mbindyo
Permanent Secretary
Ministry of Finance
P. O. Box 30007
Nairobi, Kenya

Dear Mr. Mbindyo:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

I am forwarding to you the draft Project Completion Report (PCR) on the Kenya Sugar Rehabilitation Project, prepared by the Eastern and Southern Africa Regional Office. We have chosen not to audit the project in the Operations Evaluation Department, so we are inviting any comments you or your colleagues may wish to make on the PCR by May 29, 1987. Such comments will be reflected in the final version of the PCR and will be incorporated verbatim as an attachment to the report before it is submitted to the Board of Executive Directors of the Bank.

Please advise us, preferably by telex, if you have no comments to make.

We shall send you a copy of the final version of the PCR after it has been distributed to the Board.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosures

ITT 440098 · RCA 248423 · WUI 64145

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

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Cable Address: INTBAFRAD
Cable Address: INDEVAS

April 24, 1987

Mr. J. W. Githuku
Permanent Secretary
Ministry of Planning and
National Development
P. O. Box 30005
Nairobi, Kenya

Dear Mr. Githuku:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

I am forwarding to you the draft Project Completion Report (PCR) on the Kenya Sugar Rehabilitation Project, prepared by the Eastern and Southern Africa Regional Office. We have chosen not to audit the project in the Operations Evaluation Department, so we are inviting any comments you or your colleagues may wish to make on the PCR by May 29, 1987. Such comments will be reflected in the final version of the PCR and will be incorporated verbatim as an attachment to the report before it is submitted to the Board of Executive Directors of the Bank.

Please advise us, preferably by telex, if you have no comments to make.

We shall send you a copy of the final version of the PCR after it has been distributed to the Board.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosures

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

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Cable Address: INTBAFRAD
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April 24, 1987

Mr. Arap Letting
Permanent Secretary
Office of the President
P. O. Box 30510
Nairobi, Kenya

Dear Mr. Letting:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

I am forwarding to you the draft Project Completion Report (PCR) on the Kenya Sugar Rehabilitation Project, prepared by the Eastern and Southern Africa Regional Office. We have chosen not to audit the project in the Operations Evaluation Department, so we are inviting any comments you or your colleagues may wish to make on the PCR by May 29, 1987. Such comments will be reflected in the final version of the PCR and will be incorporated verbatim as an attachment to the report before it is submitted to the Board of Executive Directors of the Bank.

Please advise us, preferably by telex, if you have no comments to make.

We shall send you a copy of the final version of the PCR after it has been distributed to the Board.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosures

YELLOW FILE COPY

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

April 24, 1987

Mr. M. Bouzid
Director, Programs I
African Development Bank
01 B.P. No. 1387
Abidjan
01 Côte d'Ivoire

Dear Mr. Bouzid:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

Since your institution provided cofinancing for the above mentioned project, I enclose a copy of the draft Project Completion Report for favor of any comments that you may wish to make on the draft by May 29, 1987. In addition to reflecting them in the conclusions of the Project Completion Report, they will also be reproduced fully in the final report before distributing it to the Bank's Executive Directors. We shall send you a copy of the final report.

The comments of the borrower have been separately requested.

Yours sincerely,

Graham Donaldson, Chief
Agriculture and Human Resources Division
Operations Evaluation Department

Enclosure

GAblasser:clf GA.

FORM NO. 27 - OCR
(7/86)

WORLD BANK OUTGOING MESSAGE FORM Cable, Telex

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PAGE	OF	OFFICIAL DEPT/DIV ABBREVIATION	MESSAGE NUMBER	TEST NUMBER (FOR CASHIER'S USE ONLY)
1	1	OEDD1		

START HERE

INTBAFRAD, NAIROBI, KENYA. FOR ANSON RE PCR ON KENYA SUGAR REHABILITATION PROJECT (LOAN 1636) THANKS YRTLX OF MAY 29. UNABLE TO DELAY PROCESSING OF THIS PCR. APPRECIATE YOU ARRANGE WITH MR. MUKURU FOR COMMENTS TO REACH OED BY JUNE 12. ANY COMMENTS RECEIVED AFTER THAT DATE WILL NOT BE REFLECTED IN THE FINAL VERSION OF THE PCR BUT WILL BE CIRCULATED TO CONCERNED STAFF IN THE BANK. REGARDS, DONALDSON, OEDD1.

END OF TEXT

PINK AREA TO BE LEFT BLANK AT ALL TIMES

INFORMATION BELOW NOT TO BE TRANSMITTED

CLASS OF SERVICE: TELEX TELEX NO.: 22022 DATE: 06/03/87

SUBJECT: PCR - Kenya Sugar (Ln 1636)

DRAFTED BY: GAblasser:clf

EXTENSION: 32886

CLEARANCES AND COPY DISTRIBUTION:

cc: Mr. Otten

AUTHORIZED BY (Name and Signature): G. Donaldson

DEPARTMENT: Operations Evaluation

SECTION BELOW FOR USE OF CABLE SECTION

CHECKED FOR DISPATCH

DISTRIBUTION: WHITE—File Copy CANARY—Bill Copy BLUE—Originator to Keep

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NAI3052
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INTBAFRAD NAIROBI MAY 29, 1987
FOR G DONALDSON, CHIEF, OEDDI

RE:KENYA SUGAR REHABILITATION PPAR

WHILE DISCUSSING ANOTHER MATTER, YESTERDAY MR PETER MUKURU (DEPUTY SECRETARY IN THE MINISTRY OF AGRICULTURE) REQUESTED THAT I INFORM YOU THAT IT IS NOT POSSIBLE FOR THE MINISTRY TO SUBMIT THEIR COMMENTS ON THE DRAFT PPAR BY MAY 29. HE REQUESTED AN EXTENDED DEADLINE OF JUNE 15. I ASSUME THAT, IF YOU DO NOT TLX WITHIN A FEW DAYS, THIS REQUEST IS ACCEPTABLE.

REGARDS
R ANSON,
CENTRAL AGRICULTURE, RMEA

=06021242

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(Connie has a copy)

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INTBAFRAD NAIROBI MAY 29, 1987
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R ANSON,
CENTRAL AGRICULTURE, RMEA

=06021242

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(Connie has a copy)

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INTBAFRAD NAIROBI MAY 29, 1987
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=06021242

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NAI3052
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INTBAFRAD NAIROBI MAY 29, 1987
FOR G DONALDSON, CHIEF, OEDDI

RE:KENYA SUGAR REHABILITATION PPAR

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REGARDS
R ANSON,
CENTRAL AGRICULTURE, RMEA

=06021242

NNNN

YELLOW FILE COPY

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE: June 17, 1987

TO: Mr. Yves Rovani, DGO

FROM: Graham Donaldson, Acting Director, OED

EXTENSION: 32893

SUBJECT: Selective Auditing Procedure:
Project Completion Report on Kenya Sugar
Rehabilitation Project (Loan 1636-KE)

The above project has not been audited by OED staff. The PCR was prepared by the Eastern and Southern Africa Regional Office and sent by OED to the Borrower for comments. However, no comments have been received. The attached report is now being released to the Executive Directors and the President.

Attachment

cc: Messrs. Jaycox, AFRVP
Mwine, LEG
Otten, AFR
Amoako, AFR

GAblasser:clf

PROJECT COMPLETION REPORT

KENYA

SUGAR REHABILITATION PROJECT

(LOAN 1636-KE)

June 17, 1987

Africa Region
Central Agriculture Division

PROJECT COMPLETION REPORT

KENYA - SUGAR REHABILITATION PROJECT
(LOAN 1636-KE)

TABLE OF CONTENTS

PAGE No.

TEXT TABLES

ANNEXES

KENYA
SUGAR REHABILITATION PROJECT
LOAN 1636-KE

PROJECT COMPLETION REPORT

PREFACE

This is the Project Completion Report (PCR) of the Sugar Rehabilitation Project in Kenya, for which Loan 1636-KE in the amount of US$72 million was approved on December 5, 1978. The Loan was closed as scheduled on March 31, 1985; US$58 million was cancelled at the request of the Government in September 1983 and a further US$1.2 million was cancelled at the time of loan closing. The date of final disbursement was October 7, 1985.

The PCR was prepared by the Eastern and Southern Africa Regional Office following a mission to Kenya in November 1985, and is based in part on a draft completion report prepared by a consultant, a review of the Staff Appraisal Report No 1887-KE dated November 17, 1978, the President's Report No. P-2412-KE dated November 17, 1978, the Loan Agreement of December 20, 1978, correspondence with the Borrower, material drawn from reports and papers produced by East African Sugar Industries Ltd (EASI) and the Kenya Sugar Authority (KSA), internal Bank memoranda on project issues as contained in relevant Bank files, as well as interviews with officials both in the Bank and in Kenya who have been associated with the project.

A copy of the draft report was sent to the Borrower on April 24, 1987 for comments. No comments have been received.

This project has not been subjected to an audit by OED.

PROJECT COMPLETION REPORT

KENYA - SUGAR REHABILITATION PROJECT
(LOAN 1636-KE)

BASIC DATA SHEET

KEY PROJECT DATA

	Appraisal Estimate	Actual or Estimated Actual	Actual as % of Appraisal Estimate
Total Project Cost (US$ million	138.0	14.7	11
Loan Amount (US$ million)	72.0	72.0	
Disbursed (US$ million)	72.0	12.8	18
Cancelled (US$ million)	-	59.2	-
Date Board Approval		12/05/78	
Loan Agreement Date		12/20/78	
Date Effectiveness	03/20/79	09/20/79	300 /a
Date Physical Components Completed	12/31/84	12/31/84 /b	100 /a
Proportion Then Completed (%)	100	*** /c	***
Closing Date	03/31/85	03/31/85	100
Economic Rate of Return (%)	33-35	3	9
Financial Rate of Return (%)	14	2	14
Institutional Performance		Poor	

STAFF INPUT /d

	FY76	FY77	FY78	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	TOTAL
Identif./Prep	4.9	27.4	0.1	-	-	-	-	-	-	-	-	32.4
Appraisal	-	79.3	80.7	4.6	-	-	-	-	-	-	-	164.6
Negotiations	-	-	-	9.4	-	-	-	-	-	-	-	9.4
Supervision	0.1	-	1.6	11.7	38.1	22.1	18.0	17.8	14.6	6.0	10.6	140.6
TOTAL	5.0	106.7	82.4	25.7	38.1	22.1	18.0	17.8	14.6	6.0	10.6	347.0

CUMULATIVE DISBURSEMENTS

	FY79	FY80	FY81	FY82	FY83	FY84	FY85
Appraisal Estimate US$ million)	5.7	20.7	38.1	54.7	63.7	70.7	72.0 (03/31/85)
Actual (US$ million)	NIL	2.3	4.2	6.2	7.8	10.6	12.8 (10/07/85)
Actual as % of Estimate	-	11.1	11.0	11.3	12.2	15.0	17.8
Date of Final Disbursement	October 7, 1985						

MISSION DATA

Mission	Date (mo./yr.)	No. of Persons	Specializations Represented /e	Performance Rating /f	Trend	Types of Problems /h
1. HQ/RMESA	May/June 1979	3	a,b	2	2	M
2. RMESA	Sept/Oct. 1979	3	a,b,c	2	2	M
3. RMESA	June/July 1980	2)				
4. RMESA	February 1981	3)	a,b,c,d,e	3	2	P,T,F,M
5. RMESA	December 1981	3				
6. RMESA	February 1984	3	c,b,d	3	1	
7. RMESA	February 1985	1	c	3	2	P,M,T

/a Calculated in terms of months from date of Board approval
/b The project's scope was greatly reduced, hence, the physical completion date is of little relevance.
/c No component to be undertaken by KSA/Government was commenced; completion of residual company components (Muhoroni) varies: irrigation NIL; drainage NIL; nucleus estate development 88%; outgrowers field development 45%; increase factory capacity NIL; infrastructure 42%.
/d Input as staff weeks. Source: World Bank Planning and Budgeting Department.
/e a = Engineer; b = Financial Analyst; c = Agronomist; d = Economist; e = Young Professional; f = Agriculturalist.
/f 1 = Problem-free or minor problems; 2 = Moderate problems; 3 = Major problems.
/g 1 = Improving; 2 = Stationary; 3 = Deteriorating.
/h F = Financial; M = Managerial; T = Technical; P = Political; O = Other

OTHER PROJECT DATA

Borrower:	Government of Kenya
Executing Agency:	Sugar Companies; Government of Kenya and the Kenya Sugar Authority (KSA)
Fiscal Year of the Borrower:	July 1 to June 30
Name of Currency (Abbreviation)	Kenya Shilling (KSh)
Currency Exchange Rate:	
Appraisal Year Average (1978)	US$1.0 = KSh 8.00
Intervening Years Average	US$1.00 = KSh10.00
Completion Year Average (03/85)	US$1.00 = KSh16.50

Follow-on Project: None.

PROJECT COMPLETION REPORT

KENYA - SUGAR REHABILITATION PROJECT (LOAN 1636-KE)

EVALUATION SUMMARY

Introduction

(i) Sugar production in Kenya has its origins in the 1920s. By the early 1970s, there were five sugar factories in the country. Because of the poor performance of the sugar industry, a need was felt to take ameliorative action, and the Bank was approached for financial assistance.

Objectives

(ii) The project was designed to rehabilitate and expand the sugar companies at Miwani, Chemelil, Muhoroni and Ramisi, including the factories, nucleus estates, outgrower cane areas and housing and transportation infrastructure. It was expected that Kenya would reach self-sufficiency in sugar in the early 1980s as a result of the project.

Implementation Experience and Results

(iii) From a study of the genesis of this Project, it is apparent that its success was always in doubt. Five basic flaws in the Project are apparent. First, it seems that Government gave lower priority to rehabilitation than to the construction of new factories. The Bank had a different perception of relative priorities and favoured rehabilitation before new construction. There was thus a fundamental lack of agreement between Bank and Government on the priority to be given to the Project. In fact, Government can be said to have shown little commitment to Project objectives.

(iv) Second, there were a number of basic policy issues that were never resolved. Appraisal took two years and required four separate missions, because of the large number of unresolved issues (para. 8.01). In the absence of political will on the part of Government to solve these issues, the technical solution adopted was the drawing up of numerous covenants in an attempt to tie Government down to specific solutions. These covenants caused delays in achieving effectiveness, because the sugar companies, Kenya Sugar Authority (KSA), and Government could not appreciate and fully understand the legal and financial requirements of the Loan Agreement. Following loan effectiveness, Government began to back away from its commitments, reflecting the fundamental differences of perception between Bank and Government. The first such action was a volte face in Government policy regarding the provision of funds to private sugar companies. Most of the Project proved unimplementable because of this problem, and a painful and costly process of cutting down the Project was begun. It took three years to recast the Project and negotiate a cancellation of US$ 58 million. The delays in decision making cost the Government US$ 2.4 million in commitment fees. At the same time lack of resolution of major sectoral policy issues: on cane and sugar pricing levels, sugar sector development policy, mechanism for sugar sector coordination, reduced the potential contribution of the remaining components.

(v) Third, Government did not have the institutional mechanism to coordinate and implement what was in fact a sugar rehabilitation program loan. The several Sugar Companies themselves were probably capable of implementing their own sub-projects, but overall planning, formulation of development policy, reconciliation between policy issues and implementation was never achieved as no strong institution was responsible for sugar policy or for the project. KSA made an effort but had no authoritative power; it was in any case in a development stage itself, and there was inadequate staff (both in numbers and experience) in the Ministry of Agriculture (MOA). The Permanent Secretaries of Finance and Agriculture, at separate times, criticized the complexity of the Project and felt that a coordinating unit should have been built into the Project in the first place.

(vi) Fourth, Project costs were underestimated and the Project was therefore underfunded. In the event, even the funding that was to be provided by the one company that implemented a sub-project never materialized as unfavorable movements in pricing policy and declining sugar factory efficiency resulted in operating losses, not profits. Finally, the implementation period coincided with the Government budgetary crisis of 1981-84 and even the greatly reduced level of resources allocated to the rump of the project could not all be fitted into the Government budget when required.

(vii) The fourth and fifth flaws included underestimates of costs and Government budgetary problems. These problems were common to other projects appraised in the Region at this time. Unanticipated levels of inflation and less rigorous Bank practices in making cost estimates at the appraisal stage combined to make the cost estimates too low. Higher investment costs and lower international sugar prices caught the Kenya Governments unprepared, and there were losses fiscal losses which Government could not manage properly.

(viii) The Muhoroni sugar factory component (the only one implemented) has only been partially successful. Appraisal cost estimates for irrigation, drainage, road maintenance and the increase of the factory capacity were too low and Government could not provide funds to bridge the financing gap. As a result these components of the Muhoroni sub project were not completed. When the Project design was revised in 1983 the housing component for Muhoroni was also cut back. Agricultural development was delayed and at the closing date only 88% of the appraisal estimates for the nucleus sugar estate and 45% of outgrowers lands had been achieved. The Muhoroni program is however now showing results and the financial rate of return to the combination of Government, farmers, and Muhoroni Factory of the more limited investment actually undertaken is about 20%. Farmers and Government are the main beneficiaries (Government from the high excise taxes collected on Muhoroni sugar sales). However, the economic rate of return is 3% due to the low international price of sugar.

Sustainability

(ix) Although project investments realized fell far short of appraisal targets, enduring physical investments in improved and expanded cane production area have been made and are now contributing to increased output. Provided that financial incentives for growers and factory are maintained at adequate levels, this production increase should represent a permanent gain for the economy. However, project cane production may outstrip processing capacity and complementary investments in Muhoroni factory will be necessary if project output is to be sustained.

Findings and Lessons

(x) Major lessons from the Project experience may be summarized as follows:

(a) The lack of agreed priorities and a clear strategy for sugar development in Kenya led to a shaky policy foundation for the Project. The pragmatic solution adopted by the Bank of trying to support two projects (the Sugar Rehabilitation and SONY Projects) with quite different characteristics failed. Both projects have been poor performers. Full agreement between Government and the Bank on investment priorities and strategy is a prerequisite for successful investment. Agreement cannot be easily worked out during the implementation (para 1.04).

(b) Failure to resolve basic issues led to an unwieldy number of covenants, to many of which Government had no commitment. The use of covenants to paper over inconsistencies or disagreements on policy, places undue strain on the legal documents and inevitably leads to breaches of covenants. Resolution of basic sub-sector issues should precede appraisal (para 2.10).

(c) The Project was very complicated, with fifteen implementing agencies whose roles were not always clearly defined. Overly complex design placed too great a burden on weak executing agencies (para 3.07).

(d) Underestimated quantities and prices during technical preparation and appraisal resulted in "cost overruns". Physical implementation consequently fell short of appraisal targets. Greater precision of physical estimates is now provided by Bank rulings on the level of engineering necessary prior to Board presentation. Price level changes remain difficult to forecast accurately.

(e) The project required a great degree of administrative support and coordination. KSA could have handled this but its role was never properly defined and it lacked skilled manpower and authority to do the job. Greater attention to the role of sub-sector management and the need for a coodinating institution in a rehabilitation program loan is indicated.

(f) If subsector issues, particularly coordination and pricing are resolved, properly managed sugar production in high potential areas could be a profitable and economically justified activity in Kenya. Investment in rehabilitation of existing estates and factories with potential would probably yield satisfactory returns, but expansion of area or the creation of new factories would not.

KENYA
SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

I. Introduction

1.01 Although sugar production in Kenya had its origins as far back as the 1920's when two private factories (Miwani and Ramisi) were set up, further development did not take place until 1966-73 when three more factories were established (Muhoroni, Chemelil and Mumias). The Government was the majority shareholder in these new factories. By 1976 the annual output of the five factories was 167,000 tons sugar derived from about 51,000 ha sugar cane.

1.02 In 1976, the performance of the sugar industry was poor. In particular, management of smallholder services was deficient, resulting in an uneven cane supply to factories, which operated about 40% below capacity. This inefficiency made sugar an unprofitable investment and factories deteriorated as both private and jointly owned factory companies were reluctant to reinvest in expensive plant and equipment. It was clear that the industry would decline further unless corrective action was taken.

1.03 Local demand for sugar in Kenya had exceeded local production for several decades. Imports averaged 52,000 tons sugar per year from 1968 to 1976. In the mid 1970's it was estimated that, without new projects, the annual deficit would reach about 205,000 tons sugar by 1985, rising to 355,000 tons by 1990. In view of the rising cost of imports Government set out a policy to increase local production in order to reach self sufficiency during the 1980's. Government commissioned a survey (financed by UNDP) to work out an appropriate strategy. The survey, carried out in 1975, outlined a sector strategy, defined investment priorities and identified four projects. Highest priority was awarded to a sugar rehabilitation project, comprising the rehabilitation of Miwani Sugar Mills Ltd. (Miwani), Chemelil Sugar Company Ltd. (Chemelil) and East African Sugar Industries Ltd (Muhoroni) in the Nyanza Province sugar belt, together with Associated Sugar Company Ltd. (Ramisi) in Coast Province. The three other projects identified were the construction of new factories at Nzoia in Western Province and in South Nyanza, and the doubling of the capacity of Mumias factory in Western Province.

1.04 The Government accepted the conclusions of the survey but changed the order of priority of investments to implement the creation of new factories before rehabilitation. Projects to construct the Nzoia factory (with French bilateral aid) and to double the capacity of Mumias (with UK bilateral were agreed). The Bank was approached by Government in late 1975 to co-finance the South Nyanza project (SONY). The Bank's position was that the reorganization of the existing sugar industry was a prerequisite to project investment and that better returns would accrue from the rehabilitation of the existing industry than from new projects, which could come later. The Bank therefore agreed to pre-appraise the SONY project only reluctantly and on condition that Government would at the same time commit itself to rehabilitation by requesting funding for a rehabilitation project. The SONY project was appraised between May and November, 1976 and an IBRD Loan of US$ 25 million was granted in April 1977. The Bank then proceeded with the appraisal of the Sugar Rehabilitation Project.

II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

Identification and Preparation

2.01 The Project was identified in the 1975 sugar survey (para. 1.03). The same consultants then prepared a feasibility report, with the cooperation of the four sugar companies involved. The report was made available in May, 1976.

Appraisal

2.02 The appraisal of the Project was a lengthy process lasting two years and requiring no less than four separate missions. This was due to the complexity of the project (which was more akin to a sub-sector rehabilitation program than a project) and to the number and difficulty of the technical and economic issues involved. Project design evolved considerably during this period; the final project description at the end of the appraisal period is shown below, paragraphs 2.08 - 2.09.

2.03 A pre-appraisal team visited Kenya in November 1976, discussed the various proposals with Government and the sugar companies and outlined the supplementary information which was required. A full appraisal mission then visited Kenya in April, 1977 and the first Issues/Decision process was completed by June, 1977. Issues were numerous and could not be easily resolved. They hinged on: (i) technical matters (drainage, irrigation, mechanized harvesting); (ii) organization and management (zoning, cane production to be a factory responsibility, organization of outgrowers, the roles of the Sugar Belt Cooperative Union (SBCU) the Sugar Settlement Organization (SSO) and the Kenya Sugar Authority (KSA), improved labor conditions, training); (iii) finance (outstanding SBCU and SSO loans, control over factory investment, capital increases, levy for maintenance of roads and drainage, financing gap, sugar pricing, six year disbursement period) and (iv) the economic justification of certain project components. Appraisal mission recommendations on these issues were generally accepted, except on economic justification. It was decided that several critical components in the project be subjected to separate economic analyses before a decision could be made on their inclusion. The final composition and project costs could not be determined until these analyses were completed. The decision was therefore taken to send a post-appraisal mission.

2.04 The third, post-appraisal, mission visited Kenya in October 1977 and held discussions with senior staff of the ministries involved (Finance, Agriculture, Cooperatives, Lands and Settlement), Kenya Sugar Authority (KSA), the National Irrigation Board (NIB) and the four factory companies. The draft "White Cover" Staff Appraisal Report was presented at a round up meeting held on October 24, 1977. The minutes of the round-up meeting in Nairobi indicate agreement on the following decisions from the Bank Decision Meeting:

(i) Technical Government accepted the Bank's proposal to study the drainage problems and prepare a regional plan for the Kano plains. Government agreed to set up a Roads and Drainage Maintenance Fund (RDMF) with monies available from the existing Price Equalization Fund. The new RDMF would be made available to and be administered by KSA. The Bank's irrigation proposals for Miwani and Kibos were noted and Government confirmed the agreement to convert the Ahero Scheme from rice to sugar cane. The Ministry of Water Development would determine ground water levels at Ramisi through a special study. Mechanization of cane harvesting would not be adopted and KSA, Ministry of Labor and labor unions would devise means of increasing harvesting labor.

(ii) Organization and Management The recent re-zoning was considered adequate. On cane production and outgrower organization, the Companies would inform the Unions and the Societies of their cane development plans. The SBCU agricultural and cane transport activities would be phased out and all outstanding debts due to SBCU would be audited and arrangements made for their recovery or write off. The SSO would relinquish all agricultural functions and concentrate exclusively on settlement aspects. KSA would adopt the role of advisor and arbitrator and assume its statutory regulatory functions. A Sugar Belt Coordinating Committee (SBCC) would be established. On labor conditions, the SBCU, the Muhoroni Cooperative Union (MCU) and unaffiliated societies would represent their members collectively in dealing with KSA and the Factory Companies. Cooperative staff would receive training.

(iii) Finance SBCU loans would be audited and uncollectable loans written off; a recovery effort would be made for these and for SSO loans. On the financing gap, the Project financing plan would be worked out between the Bank and the Treasury. Government requested retroactive financing effective from July 1977 in order to cover expenditures on the program by companies during the extended appraisal period. The Bank considered September 1977 or from the date of signing the Loan Agreement more appropriate (in fact the date became from November 1, 1977).

2.05 A further meeting was held to discuss sugar pricing. This was a major issue because prices did not provide adequate incentives for either growers or the factories. Government did not give a firm commitment. Government was, however, already committed to real price increases under the SONY project and it was confirmed at the meeting that a letter would be sent to Washington on the pricing issue before Christmas 1977.

2.06 In the event, Government told the Bank that it considered there was no case for the 6% increase in real cane prices in 1978 which was stipulated in the SONY project. The Bank thus had a major issue on its hands. In mid March 1978 the Regional Vice President chaired a meeting to review the issue. It was decided that the consequences of the Government pricing decision required detailed review. The implications for the financial rate of return and the viability or otherwise of the various project components had to be determined. It was stressed that Bank analyses had to be incontrovertible as evidence of potential world over supply was becoming available. In fact, the Board discussion of the SONY project had linked the issue of pricing to that of the balance of supply and demand; if Kenya were to become a net exporter, then prices would have to come down or subsidies be paid. It was therefore agreed that a desk study would be carried out in Washington followed by a further field mission to discuss the basis of Government's decision and its implications for the Project. Provided a satisfactory financial basis for the project could be established, a revised appraisal report would be prepared for submission to the Loan Committee.

2.07 A fourth mission, therefore, visited Kenya from April 10-25, 1978 and held extensive discussions with government on the main issues, (a) cane and the ex-factory sugar prices, and (b) the balance between production and demand. An aide memoire was submitted to Government (April 28, 1978), and a second Decision Meeting was held in Washington on May 12, 1978. The Bank agreed with the Government decision not to increase sugar prices at that time and that the then current price of KSh 133/- per ton of cane was adequate. Agreements and mechanisms would be developed during negotiations for joint reviews between the Bank and Government regarding prices. The Appraisal Report would be updated on this basis. Government would be formally advised of the decision and also that the South Nyanza pricing clause in the Loan Agreement was not in default. On the question of production and demand, it was agreed that the likely exportable surplus as a result of the Project would be quite small and would be caught up by consumption in time. However, a joint mechanism would likewise be developed at negotiations, to review investment and production plans. The Bank was concerned that Kenya should not generate large surpluses for export, as price prospects for export were poor. The necessary covenants would be included in the Legal Documents.

Project Description

2.08 The Project as described in Appraisal report No. 1887-KE November 17, 1978 was designed, over the six years 1979-84, to rehabilitate and expand the sugar companies at Miwani, Chemelil, Muhoroni and Ramisi, including the factories (with the exception of Chemelil), the nucleus estates, outgrower cane areas and housing and transportation infrastructure. The Project would increase the annual domestic production of mill-white sugar, thus helping Kenya to reach self-sufficiency in sugar in the early 1980's. Specifically, the Project would comprise:

(a) the establishment of run-of-the-river irrigation on 2,000 ha in Miwani, Chemelil and Muhoroni zones; the conversion of 770 ha of irrigated rice area to irrigated sugarcane at Ahero; and the rehabilitation of the existing irrigation system for 370 ha and establishment of sprinkler irrigation from a new dam for an additional 400 ha at Ramisi;

(b) Drainage for 15,000 ha of nucleus estate and outgrowers land in the Sugar Belt;

(c) Agricultural development, including the rehabilitation of existing cane lands (12,000 ha) and establishment of new cane areas (2,690 ha), improvements in cane harvesting and transportation, and strengthening of the sugar companies' agricultural research and training;

(d) Rehabilitation and expansion by a total of 1,150 TCD of the Miwani, Muhoroni and Ramisi sugar factories, and training of factory staff;

(e) Improvement of the companies' general management and administration, mainly through the provision of equipment and extra staff;

(f) Infrastructure, including construction and maintenance of roads and tracks, (a total of 678 km were involved) and of staff housing and other facilities;

(g) The strengthening of the National Sugar Research Institute with equipment and personnel;

(h) Studies and additional agricultural staff training to be undertaken by the KSA.

2.09 During the investment period (Years 1-5) all incremental staff salaries and agricultural and factory inputs and materials would be capitalised and treated as project expenditures for funding purposes. The Project would be executed by the respective sugar companies (agriculture, factories, training, company research, minor roads and tracks), the Ministry of Works (major roads), the Ministry of Agriculture (national research), the National Irrigation Board (Ahero conversion) and the Kenya Sugar Authority (drainage, irrigation, training, studies).

Agreements Reached

2.10 In view of the project's complex nature and the long appraisal cycle the number of agreements to be discussed during loan negotiations in Nairobi in October, 1978 was considerable. The following important agreements were reached (reference to Loan Agreement is shown in parenthesis):-

(a) the on-lending of funds for factory rehabilitation and expansion would be conditional upon review and approval by KSA of the companies' factory rehabilitation plans; (Sch 2, D)

(b) the KSA would appoint consultants under terms and conditions satisfactory to the Bank to (i) undertake studies and (ii) review and approve the sugar companies' factory rehabilitation plans; (Sch 2, H and D[4])

(c) Government would prepare a regional drainage development plan for the Kano plains, acceptable to the Bank, before December 31, 1981; (Sch 2, H[4]).

(d) the Government would establish a Roads and Drainage Maintenance Fund (RDMF) which KSA would administer; (4.07).

(e) the Ministry of Labor would review the market for cane harvest labor in collaboration with KSA and the labor unions and prepare a plan, acceptable to the Bank, for improvement in labor supply and in employment conditions by December 31, 1979; (4.08).

(f) until December 31, 1988 Government would consult with the Bank before making or promoting investments in additional sugar milling capacity in Kenya; (4.11).

(g) sugarcane, ex-mill and sugar retail prices would be reviewed periodically in consultation with the Bank; (4.10).

Detailed obligations of the companies were set out in the Loan Agreement, and the Companies undertook to perform these obligations in separate Letters of Agreement with the Bank.

2.11 Conditions of disbursements of Loan funds were:

(a) the disbursement of any funds to an individual sugar company would be conditional on effectiveness of an agreement between Government and that company covering investment and on-lending terms; and (Sch 1.4)

(b) the disbursement of funds to Ramisi, Miwani and Muhoroni companies would be conditional on the conversion into equity of the existing parent company loan at Ramisi and reserves at Ramisi, Miwani and Muhoroni (Sch 1.4).

2.12 In addition to the above important covenants, there were a number of less important, project specific covenants, plus the regular covenants on consultants, accounts, procurement etc. All covenants are listed in detail in Annex 2. The plethora of legal undertakings led to adverse comment at Board presentation and to difficulties in implementation and supervision (para 7.05).

Costs and Financing

2.13 Total Project cost was estimated at KSh 1,104 million (US$138 million), of which about US$71.8 million or about 52% represented foreign exchange requirements. Total project cost is detailed below.

TABLE I: Summary of Project Cost Estimates (reproduced from the Appraisal Report)

	Local	Foreign (KSh. Million)	Total	Local	Foreign (US$ Million)	Total	Foreign Exchange %
Irrigation	21.9	23.2	45.1	2.7	2.9	5.6	51
Drainage	26.4	31.5	57.9	3.4	3.9	7.3	55
Agriculture	155.8	183.7	339.5	19.4	23.4	42.4	54
Sugar Factories	60.7	97.5	158.2	7.6	12.2	19.8	62
General Company Management & Administration	16.9	13.8	30.7	2.1	1.7	3.8	45
Roads	31.4	28.9	60.3	3.9	3.6	7.5	48
Housing and Other Facilities	54.8	22.7	77.5	6.9	2.8	9.7	29
National Sugar Research Institute	3.4	3.8	7.2	0.4	0.5	0.9	53
Kenya Sugar Authority	1.5	2.9	4.4	0.2	0.4	0.6	65
Sub total	372.8	408.0	780.8	46.6	51.0	97.6	52
Contingency Allowances:							
Physical	48.8	54.4	103.2	6.1	6.8	12.9	53
Price	107.6	112.3	219.9	13.5	14.0	27.5	51
	529.2	574.7	1,103.9	66.2	71.8	138.0	52

2.14 Base costs were estimated at prices expected to prevail in September 1978. Physical contingencies of 10% were included on all Project components except on irrigation and drainage investments, to which a physical contingency of 35% was applied because final engineering designs had not been prepared. Price contingencies were based on IBRD/IDA guidelines and mission estimates. Local taxes estimated at KSh 76.5 million (US$ 9.6 million) were included in the above Project cost estimates.

2.15 Project costs were to be financed as follows:

TABLE 2: Financing Schedule

Sources of Financing	(US$ Million)	%
World Bank	72.0	56
African Development Bank	6.0	5
GOK	3.5	3
Miwani	8.5	6
Chemelil	14.9	12
Muhoroni	14.3	11
Ramisi	9.2	7
Cost Net of Taxes/Duties	128.4	100
Taxes and Duties	9.6	
Total Project Cost	138.0	

2.16 The IBRD Loan of US$72 million to GOK, to be repaid over 20 years, was to carry an annual interest rate of 7.35% and there was a commitment charge of 0.75% per annum on the unwithdrawn balance. There was a grace period of $5^1/_2$ years, the first payment falling due on July 15, 1984 and the final payment on January 15, 1999. The loan would be drawn down by the closing date of March 31, 1985.

2.17 GOK was to make the proceeds of the loan available to the sugar companies at an interest rate of $10^1/_2$% per annum with a term of 20 years including 5 years grace for Miwani and Muhoroni and 8 years grace in the case of Ramisi. The GOK was also to make available KSh. 27.2 million (US$3.4 million) to Muhoroni in exchange for shares and KSh. 14.4 million (US$1.8 million) to Ramisi in exchange for shares.

III. Project Implementation and Operating Performance

Effectiveness and Start-up

3.01 The original loan effectiveness date (March 20, 1979) was extended twice, and the loan was not declared effective until September 20, 1979. Effectiveness was held up by the need to have effective agreements with each of the companies; the legal opinions initially provided by the companies' lawyers were not acceptable to the Bank's Legal Department. The problem was resolved with the assistance of a local law firm retained by the Bank's Nairobi office. The delay did not, however, hold up the start of the Project, as equipment procurement for Muhoroni proceeded and was eligible for retroactive financing (para 2.04). Selection of consultants for factory rehabilitation, road works, drainage and irrigation also progressed. In any case Government made no provision for the Project in the Estimates until the year beginning July, 1979, so that neither Government nor World Bank contributions could begin to disburse until then.

3.02 Satisfying the conditions for disbursements from the loan as mentioned in paragraph 2.11 above took much longer and ultimately only those in respect of Muhoroni were finalised:

Muhoroni: The company having converted KSh. 4 million of its reserves into share capital in October 1979, Government and the Bank agreed that this created a satisfactory debt: equity ratio and that it was unnecessary to convert the full amount of KSh. 23 million stated in the Loan Agreement (Schedule I paragraph 4[d]). The Subsidiary Financing Agreement (SFA) was signed in March 1980, with which the Muhoroni component disbursement conditions were fulfilled (15 months after the signing of the Loan Agreement).

Miwani: All formalities including a debenture were completed by June 1980 and Miwani signed the SFA. Government, however, had begun to have doubts about on-lending to private companies and never signed the SFA.

Ramisi: Government's attitude towards on-lending to Ramisi was even more negative. Not only was Ramisi a private company, but Government had problems with loan recoveries from the group to which Ramisi belongs and was, through auditors and consultants, endeavoring to assess Ramisi's assets and liabilities position. The SFA was never signed.

Project Revision

3.03 In July 1980 a supervision mission identified Government's hesitancy in entering into SFAs with Miwani and Ramisi but was unable to obtain formal confirmation. Lack of the two SFAs blocked implementation of the largest components of the project, and the Bank requested a formal statement of the Government's position at a Country Implementation Review

(CIR) in January 1981. No clear response was received. Bank staff then met with Ministry of Agriculture and Livestock Development (MOALD) officials in March 1981 to express concern about this issue and to raise other important issues on Government policy which were then becoming apparent; the issues included policy on outgrowers; unprogrammed and apparently uneconomic expansion of land under cane; prices for cane and sugar; and lack of Project coordination.

3.04 Clearly Government's refusal to sign agreements with the private sugar companies made most of the project unimplementable. In addition the passage of time had brought to light important sugar sub-sector issues that made prospects for the project very dim. In mid - 1981, therefore, the Regional Vice President agreed with the Minister of Agriculture the need to "re-formulate the project in an appropriate sector policy context". Details of how the re-formulation was to be achieved were agreed by January 1982: funds would not be passed to the private companies; a sector strategy would be drawn up; and the project would be reformulated and reappraised. As a first step, at the Spring 1982 CIR, it was agreed that the Ramisi component should be scrapped and that the funds from the Bank loan allocated (US$ 30 million) should be cancelled.1/

3.05 During 1982, efforts were made by the Bank and KSA to draw up the sector strategy and to reformulate the Project. Consultants (financed under the SONY Project, Loan 1389-KE) studied sector issues and a special committee set up by Government reviewed the sugar industry's financial crisis. However, the Bank's offer to finance technical assistance for project revision was not taken up at this stage, the Government failed to come up with a comprehensive strategy for the sugar sector and by mid - 1983 proposals for project re-formulation were still inadequate as a basis for reappraisal. It was thus agreed, in August 1983, to shelve attempts to agree a strategy and to reformulate the project; instead Government would request cancellation of US$ 58 million (inclusive of the US$ 30 million allocated to Ramisi). This would reduce the loan to US$ 14 million to finance a rump comprising a (reduced) Muhoroni component and funds for technical assistance and for preparation of an investment proposal for revised sugar projects. Of the US$ 14 million, US$ 7 million had by that time either been spent or committed, leaving a balance of US$ 7 million.

3.06 Government made its formal request on August 31, 1983 and the remaining Loan balance, allocated as follows, was to be drawn down by March 31, 1985:

1/ Even this proved problematic as Ramisi's' owners, with whom the Bank had a Letter of Agreement, withheld their counter-signature. The Legal Department subsequently advised that cancellation by the Bank for cause (non-performance of obligations) would not require a counter-signature by Ramisi.

Table 3: Allocation of Remaining Loan Balance

				US$ million
1.	Commitments to August 31, 1983			
	Muhoroni:	Agricultural equipment, sugar factory, housing, land and agriculture, staff training and incremental salaries	1.50	
	GOK/KSA	Roads, equipment, salaries, technical Assistance	0.40	1.90
2.	Future Commitments: September 1983-March 1985			
	Muhoroni:	Field equipment	1.90	
		Agricultural development	1.95	3.85
	KSA:	Technical assistance	0.25	0.25
3.	Preparation by MOALD and KSA of an investment proposal for a revised sugar project		1.00	1.00
				7.00

The revised disbursement schedule is shown in Annex 1.

Implementation Performance: Project Coordination

3.07 Overall, the Project performed far below expectations. Early supervision missions reported adequate project co-ordination by KSA and MOALD but this was short lived due to staff changes in both KSA and MOALD. It became clear in the course of implementation that MOALD and KSA did not have the capacity in terms of manpower to co-ordinate a project of this size involving about fifteen agencies. At a CIR held in March 1982, the Permanent Secretary to the Ministry of Finance indicated that projects of this type were difficult to implement, partly because they required difficult policy decisions, and partly because they were complex. He suggested that in formulating and selecting projects ease of implementation should be as important a criterion as economic and financial rates of return and the skill composition of the implementing Ministry should be carefully assessed. Details of the activities which MOALD/KSA were expected to either monitor or implement during the project are listed in Annex 2 which also shows the status of each at the close of the Project. It can be seen that none of the Government's tasks were achieved.

3.08 Financially, the Project suffered from budgetary constraints, as no provision was made in the Estimates until 1979/80, and the provision thereafter was consistently too low. This slowed down the rate of implementation and resulted in cost increases.

Muhoroni: Development and Performance

3.09 Project Concept: With the reduction of the Project scope as described above the only active component was Muhoroni. Muhoroni started production in 1966 with an installed capacity of 1,250 tons of cane per day (TCD) which through various stages was increased to 1,800 TCD by 1978. (Appraisal assumed or estimated 2,000 TCD but the company has disputed this figure ever since). Initially the Company was only involved in milling cane and carried out no agricultural operations. The cane was supplied by individual large scale farmers (40%) and the Sugar Settlement Organization (SSO) (60%). Chemelil factory, established in 1968, absorbed some of the large scale farmer cane which was intended to be replaced by cane from SSO. Subsequently, societies under the Sugar Belt Cooperative Union (SBCU) were organized in 1973 to promote smallholder production. Unfortunately neither the SSO nor the SBCU societies achieved their targets due to organizational problems. Under the Project, therefore, it was agreed that the Company would take a more active role in cane production: cane production would be the responsibility of an Agricultural Department, which was to be set up within the Company. The Department would be responsible for rehabilitating and developing a nucleus estate and outgrower lands. The production objective was 630,000 tons cane per annum and to mill this the factory would be expanded to 2,400 TCD. It was forecast at appraisal that, apart from the Bank Loan and the Government contribution, the Company would generate adequate funds from its own resources and have access to short term loans (arranged by Government) to finance the project. It was also assumed that cane and sugar prices would be reviewed regularly in consultation with the Bank and adjusted as necessary to ensure profits for both the farmers and the factory.

3.10 Project Description: The Muhoroni component comprised: irrigation on about 670 ha of the nucleus estate; improved drainage on 1,340 ha; provision of vehicles and equipment for maintenance of roads not maintained by Government; rehabilitation and supply of inputs on 2,200 ha of the nucleus estate (1,200 ha improved husbandry, 600 ha reclaimed fallow land and 400 ha new land) and on 11,300 ha outgrowers land (5,700 ha improved husbandry, 900 ha reclaimed fallow land and 4,700 ha new land); establishment of an Agricultural Department within the Company with trained staff, vehicles and equipment; research on cane husbandry; new and modified existing equipment for harvesting, loading, transporting and unloading cane; increasing factory capacity to 2,400 tons cane per day; office machinery, equipment, furniture and additional staff; and housing for 760 staff, and other common facilities such as a dispensary, workers club, offices, storage and a garage.

3.11 Project Start-up: First step in the Project program was to be the creation of the Company's Agricultural Department to take over from SSO and SBCU, and beginning of the agricultural development. However start-up was delayed by shortage of funds. Although retroactive financing had been agreed, the Company could not draw Loan funds until March 1980 when the SFA became effective (para. 302). However, producer price incentives were good in 1977-9, following a 27% price hike in May 1977, and this induced farmers to plant cane using their own resources.

This period of good cane availability coincided with favorable factory margins for Muhoroni and the Company crushed record levels of cane. Factory throughput rose from 241,293 tons in 1977 to 444,415 tons (1978), 527,835 tons (1979) and 531,200 tons (1980). However, this phenomenon of spontaneous planting was short-lived. Subsequently incentives to replant and to tend ratoons dropped - in a boom and bust cycle resulting from Government pricing policy, cane prices remained unaltered until April 1981. However, by this time the Company was beginning its own program. It borrowed KSh. 10 million from Government and invested KSh. 50 million from its own resources. Start-up was nonetheless slow - the Company could only develop 1,000 ha annually, compared with a rate foreseen at appraisal of 1,600 ha annually.

3.12 Agricultural Development and Performance: Appraisal design provided for improving existing and reclaiming fallow cane areas (8,400 ha) and developing new areas (5,100 ha). Of the total of 13,500 ha an area of 670 ha on the nucleus estate was to be irrigated and 1,340 ha was to have a new drainage system installed. The irrigation and the drainage components were cancelled. Implementation of the remaining program encountered a number of constraints:

(i) Land development was delayed: Delays in securing Credit effectiveness and satisfying disbursement conditions (para 3.11) were followed by lengthy procurement procedures (para 4.05) and the constraint of limited allocations in the Estimates (para 4.02). All this led to a long delay in procurement of land preparation machinery, fertilizer and pesticides, which were only procured in 1984. Because of the delay, costs escalated, thereby limiting the area that could be developed.

(ii) Farmer motivation was poor: In part, this was because of the widespread problem of absentee farmers. The project had provided for a survey by the SSO and a plan to tackle this problem, but neither survey nor plan were ever completed. More important were financial incentives for cane production. Real producer prices fluctuated over the Project period, quite good in 1977 but declining thereafter (para 3.11) until a sharp price hike in 1983. In general, cane was a profitable crop for farmer from 1983 but farmers have apparently differentiated between cane planted with their own resources and project cane. They maintain the former reasonably well but neglect the latter because of the repayment deductions made at the time of harvesting.

(iii) There was a labor shortage at peak periods: Labor availability for weeding, cane cutting and other manual tasks is a constraint. This problem was identified at appraisal and a plan for improvement in labor supply and in employment conditions was to be prepared (LA Section 4.08). The plan was prepared by MOL by November 1978 but was not submitted to the Bank for review. Labor is still a problem in the Muhoroni zone.

TABLE 4: Summary of Cane Land Development (Muhoroni)
(Hectares)

	Improved 1/		Reclaimed 1/		New Land 1/			Total		
	SAR	Actual	SAR	Actual	SAR	Actual	%	SAR	Actual	%
Nucleus Estate	1,200	1,766	600		400	174	44	2,200	1,940	88
Large Farms	1,500)				500)			2,000)		
Coop Farms	900)	4,116			3,700)	968	21	4,600)	5,084	45
SSO Farms	3,300)		900		500)			4,700)		2/
	6,900	5,882	1,500	NIL	5,100	1,142	22	13,500	7,024	52

1/ Due to poor recording the "reclaimed" and "improved husbandry" lands were not separated; total is
shown under "improved"; the achievement for both activities was 98% on the nucleus estate, and 62%
on outgrowers and overall was 70%.

2/ For the same reasons the groups "large farms", "co-op farms" and "settlement farms" were not recorded separately and all were reported as "outgrowers".

3/ New land development did not fare so well with 44% achievement on the estate and only 21% on outgrower's lands.

(iv) Rezoning deprived Muhoroni of prime cane land: The rezoning of about 2,400 ha of high potential land deprived Muhoroni of a prime source of cane in which it had already invested and obliged it to develop less suitable lands as a substitute.

(v) Muhoroni lost money on land development: Company costs for cane development were higher than the rates fixed by the KSA which could be charged to the farmer. The Company had to subsidise the difference, which (a) diminished its motivation to develop land; and (b) contributed to the Company's losses.

3.13 Within the above constraints, the Company managed to develop or improve 7,024 ha against 13,500 ha foreseen at appraisal.[1/] The overall position of cane land improvement is shown in Table 4 and the annual development with comparable appraisal figures is shown in Annex 4. After a drop in cane production from the 1980 peak of 531,200t (para.3.11) to 391,283t (1981) and 330,500t (1982), the agriculture development program between 1983 and 1985 is now showing results with factory throughputs of 392,089 tons in 1983, 490,037 tons in 1984, 460,000 tons in 1985 and 550,000 tons estimated for 1986. However, the scaling down of the factory component may have an unfortunate effect as cane production is likely to be in excess of real factory capacity. Muhoroni has drawn up a plan for continued improvement of agricultural practices and cane development. The plan which is still under review aims at having 1,850 ha on the nucleus estate and 12,089 ha on outgrowers lands under cane to produce about 660,000 tons of cane and 62,700 tons sugar (at 9.5% recovery) annually. Planting, maintenance and harvesting programs for the nucleus estate and outgrowers' under this plan, and projected cane availability from 1986 to 1992, are shown in Annexes 5, 6 and 7.

3.14 Factory Rehabilitation and Expansion The planning of the factory component started in October 1979 with an invitation to consultants to bid. Due to delays in bid evaluation and selection, consultants (nine specialists) arrived only in January 1981 and completed their survey by March 1981. The preliminary estimate for rehabilitation and expansion to 2,400 tons of cane per day was US$ 14.3 million compared with the amount in the Loan of US$ 2.0 million (100% foreign, 90% local). As the cost far exceeded estimates and as the need for factory expansion was not pressing (cane production was lagging), it was agreed by KSA/Bank to carry out rehabilitation within the limited funds and to review the case for expansion at a later date (probably 1984) when cane production was expected to have picked up. Limited rehabilitation was carried out to improve effectiveness.

1/ Muhoroni is continuing to implement the agricultural program with own funds. By the Project Closing Date (March 31, 1985) a further 133 ha on the nucleus estate had been improved and 10 ha new land developed, bringing the total to 2,083 ha. On outgrowers land, 746 ha had been improved and 16 ha of new land developed, bringing the total to 5,846 ha.

3.15 The actual costs of the components undertaken compared with appraisal estimates (Annex 11 Table 22) are shown below (Table 5). It will be seen that there were substantial cost overruns in most factory components. Consultancy fees in particular far exceeded the provision.1/

TABLE 5: Factory Rehabilitation (Muhoroni)
KSh '000

	Appraisal	Cost	Claimed
Reinforce and extend gantry and instal two 10T travelling cranes	1,400	1,826 2/	1,643
Rehabilitate equipment	200	302	272
Install additional river water treatment facilities	700	413	371
Install additional lagoon for treatment of factory effluent	400	1,654	1,488
Consultancy services	300	3,984	3,958
	3,000	8,179	7,732
Physical contingencies 3/	360		
Price contingencies 3/	700		
	4,060	8,179	7,732

1/ Although the bulk of the consultant work was for a factory expansion which was not implemented during the Project, it has subsequently formed the basis for a proposal for factory rehabilitation and expansion now under consideration by the Muhoroni Board (para 3.17).

2/ Only one crane installed.

3/ Estimated from appraisal figures.

3.16 During the Project period it was expected that the sugar to cane ratio would rise to 10% due to improved factory and field operations. The companys' cash generation and its contribution to project costs were also based on this assumption. In fact the ratio has dropped (Table 6). Sugar to cane ratio and poor capacity utilization are the two prime causes of unprofitable sugar factory operations. Capacity utilization was very high in 1984 and 1985, but the sugar to cane ratio dropped to the unsatisfactory level of 8.3% (rule of thumb for profitable operation is 10%). The cause of the drop was a combination of climatic conditions, use of low sucrose cultivars and sub-optimal factory processing due to restricted maintenance (long milling season, lack of finance and spares). The adverse financial implications of the deteriorating ratio were exacerbated during the Project period by an adverse movement in factory "terms of trade" during 1979/85. The cane price rose by 103% while the ex-factory sugar price rose by only 78%. In addition, in 1984/5, cane quality declined further with harvesting of over-aged cane and cane deliveries being bunched due to uncontrolled burning by farmers. Annex 3 lists in abbreviated form the Muhoroni factory performance from 1979/1985 (the final year is estimated).

3.17 There are two problems with the factory at present. Low efficiency has made operations unprofitable. Increasing production of cane is outstripping factory capacity; if the Company goes ahead with further agricultural development, factory expansion will be essential. The Company has therefore prepared a factory rehabilitation and expansion proposal designed to improve factory efficiency and to expand capacity to cope up with increased cane production. The proposal is to carry out all repairs and replacements and balance the various stations in the factory to improve the technical performance. The crushing capacity would be increased to 100 tons cane per hour. Field operations would be improved to balance cane availability and delivery with factory capacity. Cane varietal studies would be carried out and low yielding varieties would be phased out. The objective would be to increase the polarity percentage in cane by 1.75% and the sugar to cane ratio will increase to 9.5% by 1990. In effect, the Company proposal is to complete the Muhoroni sub-project as originally proposed. It is understood that the cost of carrying out essential repairs and increasing the factory capacity to 2400 TCD is about KSh 151 million (US$ 9.26 million) in December 1985 prices. However, it appears that rezoning of Muhoroni cane to nearby Chemelil, which has excess capacity, is a feasible alternative to expansion at Muhoroni. But even with rezoning, rehabilitation to improve efficiency is essential if Muhoroni is to break even.

3.18 Housing A firm of architects to complete designs for the housing component was appointed in August 1980 in accordance with Bank procedures. The estimated costs exceeded the funding availability ($ 4.0 million, of which 90% from the Bank loan). No provision was made in the 1981-3 Estimates for the component and when funds were re-allocated in 1983 the housing component was scaled down and the Bank allocation reduced to US$ 1.05 million from the original US$ 3.6 million. The reduced component was successfully implemented within the revised funding envelope. The items completed and their costs compared with appraisal estimates (Annex 10 Tables 7 and 8) are shown in Table 7.

TABLE 6: Cane/Sugar Production; Extraction Rates; Earnings and Prices
(Tons '000 and KSh million)

	1979	1980	1981	1982	1983	1984	1985	1986	Total
Cane: Appraisal	255	255	255	396	487	523	620	619	3410
Sugar: Appraisal	25.5	25.5	25.5	39.6	48.7	52.3	62.0	61.9	341
Sugar/Cane %	10	10	10	10	10	10	10	10	10
Cane : Actual	528	532	391	330	392	490	460	550 2/	3693
Sugar: Actual	47.0	51.9	35.5	29.2	34.4	42.3	38.0	46.7	326.8
Sugar/Cane Actual %	8.91	9.75	9.05	8.83	8.77	8.63	8.3	8.5	8.85
Assumed cane price KSh/Ton	133	133	133	133	133	133	133	133	
Assumed ex-factory sugar price KSh/Ton	2800	2800	2800	2800	2800	2800	2800	2800	
Actual Cane Price KSh/Ton	133	133	150	170	227	250	270	290	
Actual Sugar Price KSh/Ton	2800	2800	3075	3600	4290	4773	4986	5386	
Cane Price Increase %	-	-	13	13	34	10	8	7 2/	
Sugar Price Increase %	-	-	10	17	19	11	4.5	5 2/	
Estimated addition to retained earnings	4	2	1	8	8	10	19	19	
Estimated retained earnings	16	18	19	27	35	45	64	83	
Actual addition to retained earnings	8.7	5.4	(20.4)	(24.2)	(15.9)	(1.0)	(19.5)	(7.3)	
Actual retained earnings	34.3	39.7	19.3	(4.9)	(20.8)	(21.8)	(41.3)	(48.6)	

1/ Estimated.
2/ Projected in Company's factory expansion plan.

TABLE 7: Housing and Social Amenities Costs
(KSh. '000)

		Appraisal		Revised		Actual Costs			
Houses	Nos	Unit Cost	Total Cost	Nos	Total Cost	Nos.	Total Cost	Costs Claimed	
Type A	-	210	-	4	840	4	261	1,044	- 1/
" B	4	143	572	-	-	-	-	-	-
" C	9	88	792	6	528	6	295	1,771	1,595
" D	25	65	1,625	4	260	4	128	514	463
" E	45	32	1,440	160	5,120	160	21	3,345	3,011
" F	680	20	13,600	-	-	-	-	-	-
Sub total	763		18,029	174	6,748	174	6,674	5,069	
Other Facilities									
Dispensary	1	364	364	-	-	-	-	- 1/	
Workers Club	1	220	220	-	-	-	-	- 1/	
Dormitory/Training Inst./Nursery		221	221		297 2/		297	267	
Other Buildings		2,500	2,500		1,687 2/			1,687	1,519
Sub Total			3,305		1,984		1,984	1,786	
Sub Total Houses/ Facilities			21,334		8,732		8,658	6,855	
Architects Fees 10%			2,133		873		2,554	2,298	
Infrastructure 25%			5,333		2,183 3/			-	-
			28,800		11,788		11,212	9,153	

1/ These units were built pre-project from EASI own funds. Cost of Dispensary
and workers club could not be easily identified.

2/ Actually built: Outgrowers offices; field offices; primary school; agricultural workshop building and agronomy/research building.

3/ Estimated on same proportion as SAR. Actual costs intermixed with building costs and could
not be easily identified.

3.19 Other Components The irrigation, drainage and road maintenance components were not implemented. The consultants, hired in 1980 to prepare detailed irrigation plans, estimated the costs at about US$ 4.5 million. The cost was agreed to be too high to justify the investment economically and financially, in any case, Bank funding of US$ 1.3 million, supposed to cover 90% of the cost, was inadequate and neither Muhoroni nor Government wished to increase their contribution. It was therefore agreed to drop the component and transfer the funds to agricultural development, where the economic and financial returns justified it. The drainage component which was to be undertaken by Government, was held in suspense pending a decision on the Miwani Sub-project (para. 3.03). Consultant studies showed costs well in excess of appraisal estimates (US$ 16.9 million, whereas the amount in the Loan was US$ 6.4 million, 90% of costs). The component was deleted. Muhoroni, however, carried out some minor drainage works on the nucleus estate. Consultants prepared rehabilition and maintenance proposals for roads, which again were much more costly than appraisal estimates. The consultants estimated the cost of establishing and operating one Road Construction Unit for the sugar belt roads alone at US$ 6.3 million whereas the allocation in the loan for all roadworks was US$ 2.5 million (50% financing). Government never made a provision in Estimates for this program, the Roads and Drainage Maintenance Fund (RDMF) was not established and no road works were implemented.

3.20 Overall Implementation From the above it will be apparent (i) that engineering works were underestimated at appraisal; and (ii) that reduction in the scope of the Muhoroni sub-project was effected during implementation within available financing. Actual investments were less than foreseen in the revised loan agreement as follows (see Annex 10 for full details):-

	Revised L.A.	Actual
Agriculture		
New development	5,100 ha	1,142 ha
Rehabilitation	8,400 ha	5,882 ha
Factory		
Increase capacity	400 TCD (20%)	Rehabilitation of existing capacity only.
Housing	174 units	174 units
Total Cost	US$ 13.8	US$ 13.8

IV. Project Costs, Disbursements, Procurement

Costs

4.01 The Project at closure was very different from that which was appraised during 1977/78. As discussed in Chapter Three (para. 3.03 ff), an amount of US$ 58 million was cancelled in August 1983 and a further US$ 1.2 million at closure in October 1985. There were considerable cost escalations in other components which led to reductions of physical implementation within existing financing (para. 3.20). Overall the appraisal base cost estimates were over-optimistic, price contingencies were lower than actual price inflation and implementation delays led to further disparity between appraisal and actual cost. A summary of project costs is given in Table 8; total cost was KSh. 182.7 million (US$ 14.7 million).

Disbursements

4.02 Delays in achieving effectiveness and satisfying the conditions for disbursement resulted in the initial transfer of funds being much slower than anticipated at appraisal. This was compounded by Government's unwillingness, throughout the Project period, to make adequate provision in the Estimates. Within these constraints, this was true even when the Project was scaled down to a fraction of its former size in 1983, at which time the World Bank funds accounted for 90% of funding and the Company provided the balance (i.e. there was no net cost to Government). The Company prepared withdrawal applications and KSA processed them without delay. However, there was often a long delay in MOALD and Treasury before the applications reached the Bank. There were also delays in Treasury repaying Muhoroni after the Bank had paid applications. A proposed system of quarterly advance payments never worked. All these problems created cash flow problems for the Company and delayed project implementation. Claims were properly documented.

4.03 Despite these hitches, the revised allocation to the Muhoroni components was almost completely disbursed. An undisbursed balance of only US$ 82,000 was cancelled. The "residual" component to be implemented by the Government - the investment proposals - never got off the ground and the US$ 1 million left in the Loan in August 1983 for this specific purpose, together with US$ 115,000 for other items, were cancelled. The total amount cancelled from the reduced balance, therefore, was just under US$ 1.2 million bringing the total amount cancelled from the original Loan of US$ 72 million to US$ 59.2 million (82.2%).

4.04 Government paid over US$ 2.4 million to the Bank in commitment fees, much of which was run up during the period 1980-3 when Government and Bank were trying to reach agreement on cancellation of the bulk of the loan (para. 3.04 ff). Table 9 shows the interest and service payments made by Government on the loan up to the closing date, October 7, 1985, when the final disbursement was made.

TABLE 8: Summary of Project Costs
(KShs million)

	1978	1979	1980	1981	1982	1983	1984	1985	Total	Drawn Against Loan	%
Muhoroni											
Agricultural Vehicles & Equipment	13.2	0.2	0.4	1.2	2.0	4.4	17.1	8.5	47.0	39.2	83
Factory	–	–	1.8	1.4	0.4	0.8	1.0	2.8	8.2	7.7	94
Housing	3.5	2.1	1.1	0.6	1.9	0.1	–	1.9	11.2	9.1	81
Roads and Drainage			–		–	–	–	–	NIL	NIL 1/	–
Land Preparation, Planting) Nucleus		5.2	4.1	5.5	5.2	5.1	5.1	1.5	31.7	28.6	90
and Fertilizer) Outgrowers	–		–	6.0	17.8	13.7	19.9	6.2	63.6	57.7	90
Staff Training and Incremental salaries	–	1.3	1.5	2.1	2.8	2.0	–	–	9.7	8.7	90
Sub-Total	16.7	8.8	8.9	16.8	30.1	26.1	43.1	20.9	171.4	151.0	88
Government/KSA											
Roads				0.9					0.9	0.9	100
Training and Studies 2/						2.9	2.7		5.6	5.6	100
Topographical Survey, Kano Plains 3/			3.0						3.0	–	–
Drainage				1.8					1.8	1.8	100
Sub-Total			3.0	2.7		2.9	2.7		11.3	8.3	80
Grand Total	16.7	8.8	11.9	19.5	30.1	29.0	45.8	20.9	182.7	159.3	87

1/ Claim 105 was debited in error against roads (Annex 1 Category [e] US$ 0.119 m). In this table it has been included in housing (Category 1[c]) where it belongs.
2/ Although debited to training, costs were for consultants attached to KSA originally under SONY Project as Loan 1389-KE closed March 1983
3/ Carried out by Consultants to Ministry of Water Development but no claims submitted.

TABLE 9: Loan Service Payments
(US$ 000s)

Financial Year	Interest	Commitment Fees
1980	-	490.5
1981	90.0	530.7
1982	260.5	512.5
1983	390.5	498.9
1984	477.9	326.5
1985	572.0	36.5
1986	371.9	8.7
Total	2162.8	2404.7

Procurement

4.05 The Company was poorly briefed on Bank procurement requirements, and KSA and Bank staff had to spend much time ensuring that guidelines were followed, with inevitable delays. In some instances rebidding was required, resulting in cost escalation. A reimbursement problem regarding fertilizer which had been purchased from a Government agency and which had been originally supplied under an aid program took a long time to resolve. The issue was whether double financing was involved or not. The Bank finally reimbursed but the Company's cash flow position was tight in the meantime. This prevented the purchase of further fertilizer supplies which were necessary.

V. Financial Performance

5.01 Project Investments. At appraisal it was expected that expansion of the factory at Muhoroni from about 2000 tcd to 2400 tcd, additional agricultural development on 13,500 ha and related investments in management, roads and housing would cost KSh 308 million ($38.5 million), of which KSh 171 million ($21.4 million) was to be financed by the World Bank, KSh 21 million ($2.6 million) by Government and KSh 114 million ($14.3 million) by EASI from retained earnings.[1/] The actual project implemented was very much reduced and comprised only a limited rehabilitation of the factory, additional agricultural development on 7,024 ha and a small housing development. The irrigation, drainage, management and roads components were not implemented. The cost of the actual project was KSh 171 million ($13.9 million), financed by the World Bank KSh 151 million ($12.2 million) and EASI KSh 20 million ($1.6 million). The physical and cost estimates and actual realisations are shown in detail in Annex 10.

5.02 Project Production. It is estimated that Project investments have resulted in an increase of production at Muhoroni compared with appraisal estimates as follows:

(tons '000s)

	SAR		Actual/Forecast			
	Cane	Sugar	Cane	% of Appraisal	Sugar	% of Appraisal
1. Extra production Total PY1-7 (1979-85)	1,006	100	521	(52)	45	(45)
2. Average annual production PY9-25 (1987-2003)	365	36	259	(71)	22	(61)

Project production has thus achieved 45% of appraisal estimates and is expected to sustain about 61% of appraisal estimates in the future. The shortfall is due to the smaller than anticipated agricultural development and declining factory outturn.

5.03 Financial Rate of Return. The financial flows relating to this reduced level of investment and reduced level of production have been calculated on broadly the same assumptions as at appraisal (see detailed table and notes in Annex 8.4 "Project Costs and Revenues").

1/ These figures are drawn from Annex 10, based on SAR Annex 15, table 25. They include estimated apportionment of certain project costs (e.g. drainage) and differ slightly from the information in other parts of the project documents (e.g. Schedule 1 of the LA which shows total Bank financing for Muhoroni of $ 19.2 million).

The financial rate of return <u>to the Company</u> on project investments is estimated at 2% if production forecasts hold good, if the present (1984/85) price and cost relationships are maintained, and if present factory outturn levels are maintained. This return compares with 24% estimated at appraisal, unfavorably because of lower overhead recovery, higher operating costs, less favorable cane/sugar price ratios and lower factory outturn than estimated at appraisal.

5.04 <u>Returns to Outgrowers</u>. The above return takes payments to outgrowers as a proxy for cane production costs, following appraisal methodology. An analysis of project financial flows taking Company outgrower service costs and the imputed value of outgrower labor as a proxy for cane production costs gives a rate of return of 18%.[1/] Although this overstates the FRR as it excludes the cost of land rent and any direct non-labor farmer costs, it gives a rough measure of the financial profitability of the project investments <u>for the farmer</u>. An investment that from the Company's viewpoint is unable to generate adequate cash flow to service project-related debt becomes from the viewpoint of the farmer attractive (so long as the present cost/revenue relationship holds).

5.05 <u>Returns to Government</u>. Government has collected 1981-5 about KSh 58 million in duty and levy on project production and is projected to collect a further KSh 516 million over the life of the project. If this taxation is counted as part of project financial revenues, the return to the project becomes 21%. As for the farmer, so <u>for the Government</u> the project is likely to prove more profitable than for the Company.

5.06 <u>EASI Financial Position</u>.[2/] At appraisal it was estimated that Company Project and non-Project activities would generate sufficient cash to allow the company itself to finance KSh 114 million ($14.3 million) of project investments and to service KSh 126 million ($15.8 million) of debt contracted to implement the project. It was forecast that, in 1989, the debt to equity ratio would be an acceptable 24:76, and that the Company would have a net worth of KSh 195 million ($24.4 million). In fact, the Company has lost money every year since 1981 (KSh 61 million 1981-4) and is projected to continue to turn in small losses unless one or other of the basic parameters of operations changes. As a result the Company is likely to have a net worth of only KSh 106 million ($6.6 million) in 1989. The debt to equity ratio was a barely satisfactory 41:59 at last balance sheet date (1984) and is projected to deteriorate to an unsatisfactory 56:44 in 1989. In practice, therefore, the Company could not have financed 37% of project investments as had been foreseen at appraisal. In the event, the Company financed only 12% of a much reduced project.

1/ This is a rough and ready approach to give an order of magnitude only. Farm budgets to allow more precise analysis were not available.

2/ See Annexes 8.2 and 8.3.

5.07 The Company's Cost/Revenue Structure and Operating Performance. The reasons for the bad financial performance of the Company during the Project period can be summarized under three headings (See Annex 8.1):

(i) unfavorable movement in the input: output price structure. The Company slice of the cake got smaller as the farmers' and Government's got bigger. It was assumed at appraisal that the sugar price would remain at 21 times the cane price. In fact by 1985 it had dropped to a multiple of 18.

(ii) drop in factory outturn. It was assumed at appraisal that the sugar/cane ratio would stay at 10%. In fact by 1985, it had dropped to 8.3%. As a result of this, and of factor (i), cane cost accounted for 64% of sales revenue against 46% estimated at appraisal.

(iii) low overhead recovery. At appraisal it was assumed that by 1985 sugar sales would reach 62,000 tons of sugar annually and that fixed costs would represent only 21% of sales revenue. In fact fixed costs were 30% of sales revenue in 1985. This is partly owing to the lower turnover (39,000 tons of sugar sold), partly owing to higher overheads. The main factor in the latter was the rise in the level of "unabsorbed outgrower expenses". Unabsorbed expenses are the differences between the rates set by KSA at which the Company can recover from outgrowers the cost of services and the actual cost of providing those services (see para. 3.12 (v)). Unabsorbed expenses in 1984 totalled KSh 11.5 million or 21% of fixed cost.

5.08 Conclusion. The Project is capable of generating adequate financial flows to service and repay project debt and provide an adequate profit for growers and the Company. However the terms of trade set by Government control of input and output prices have become unfavorable to the Company; as a result the Company's Project investments are not profitable and overall the Company is likely to continue to lose money. Contributory factors in these losses are inefficiency in field and factory operations and the resulting high cost of providing outgrower services and low factory outturn. To some extent the scaling down of the Project is the cause of the factory inefficiencies as the investments needed to maintain factory efficiency were only partly made. A short term solution to the Company's financial problems would be to restore a more favorable input/output price relationship and to raise outgrower change rates. In the medium term action to reduce costs and increase yields is essential and will require further investment.

VI. Project Impact

6.01 Sugar Production Forecasts: In 1976, when the project was identified, the annual output of the existing five factories was 167,000 tons of sugar. Annual imports to satisfy consumption had been running at 205,000 tons. In the absence of investment, it was projected that the deficit would rise to 233,000 tons by 1985 and 355,000 tons by 1990. The on-going investment program (new projects at Nzoia and SONY and the extension of Mumias) would still leave a shortfall of 25,000 tons in 1985 and 97,000 tons by 1990. The present Project was to provide an annual incremental production of 103,000 tons by 1985 (therefore a surplus of 78,000 tons) and 109,000 tons by 1990 (a surplus of 12,000 tons). As uncertainties surrounded sugar production in Kenya, and there would be a shortfall without the Project, it was assumed that the Project's output would largely replace imports. In the event that exportable surpluses were consistently produced, no particular problem was foreseen as Kenya's cost of production of sugar was close to the Bank's projection of the export parity price for 1985 and no problem was anticipated in disposing of the surpluses to neighboring countries and other markets. A note of caution was sounded, however, regarding any additional new factories which would generate structural surpluses which would turn Kenya into a regular and sizable exporter - a clause was incorporated in the Loan Agreement whereby Government would report to the Bank on projected demand and production by December 31, 1979, and annually thereafter, with anticipated investments and plans for the marketing of sugar. (This clause, 4.11, was violated throughout the project). In practice, however, the forecasts of production have varied widely from expectations. Aggregate production far exceeded projections in 1979-81, resulting in considerable exports in 1980 and 1981. Thereafter, production levelled off well below forecast levels and Kenya resumed sugar imports in 1984. Details of sugar production, consumption, imports and exports 1974/85 are shown in Table 10.

6.02 Project Objectives: The primary direct objectives of the Project were to increase production of sugar and to reduce sugar imports. Better use of existing facilities would increase economic returns on existing investments. The Project's beneficiaries would be primarily the Government, the owners of Miwani and Ramisi, a number of large cane producers and some 10,800 smallholder producers. About 1,080 persons would gain employment and a large proportion of existing employees would enjoy better living conditions. Taking into account the value of foreign exchange savings through import substitution of the sugar produced under the Project, the Government's foreign exchange balance was expected to improve by KShs 617.9 million (US$ 77.2 million) during the six year development period. Annual net foreign exchange savings after debt service payments were expected to be KShs 250 million (US$ 31.3 million) in year 8 (expressed in constant 1978 prices) and to increase thereafter. The 10,800 smallholders would achieve average net returns of KShs 2,400/ha per year and those at Muhoroni were expected to achieve KShs 2,770/ha per year.

TABLE 10: Sugar Production, Consumption, Exports and Imports 1974/1984
(Tons '000)

YEAR	RAMISI		MUHORONI		CHEMELIL		MIWANI		MUMIAS		NZOIA		SONY		TOTAL		CONSUMPTION		IMPORTS	EXPORTS
	Act	App	Act	App	Act	App	Act	App	Act	App	Act	App	Act	App	Act	App	Act	App	Actual	Actual
1974	11	11	28	28	39	39	30	30	56	56					164	164	224	–	82	
1975	7	8	26	26	40	40	27	27	59	59					159	160	195	..	11	
1976	6	6	26	26	46	46	25	25	64	64					167	167	199	199	32	
1977	11	11	23	23	43	44	22	22	81	81					180	181	215	215	34	
1978	11	9	42	26	46	43	36	27	92	90	7	–			204	195	251	237	44	
1979	15	9	47	26	46	43	32	27	110	100	46	...	..	..	296	205	253	263	11	2
1980	13	9	52	26	63	43	32	28	163	115	43	–	35	–	401	221	300	292	1	95
1981	8	13	35	26	51	43	31	29	169	125	44	28	30	25	368	289	324	327	–	69
1982	11	18	29	40	35	49	18	40	139	135	48	36	27	35	307	353	328	345	–	18
1983	12	22	34	49	50	53	24	47	152	145	24	48	28	45	324	409	333	364	–	4
1984	7	25	42	52	57	55	18	50	175	155	32	52	38	56	369	445	349	381	4	4
1985	11	30	38	62	52	59	20	56	178	165	30	52	16	54	345	478	363	400	62	–
1986		30		62		59		56		175		52		75 1/	367 2/	509	372 2/	422	39 3/	–

Source: Kenya Sugar Authority
Staff Appraisal Report: Annex 14 Tables 4 and 6

1/ Includes SONY extension which is now postponed
2/ Estimated by KSA: individual factory estimates are being re-checked
3/ Provision has been made to import 39,000 tons to maintain strategic reserve.

6.03 Impact on Sugar Production: The Project was cut down considerably (paragraphs 3.03-3.06), leaving only the Muhoroni and some small Government components. As a result the production objectives will never be attained - production is forecast to increase by only 22,000 tons a year against 109,000 tons forecast at appraisal. Some improvement in outgrower incomes will be achieved at Muhoroni, but the Company has lost, and will continue to lose money on the Project. Overall, the four companies (and the sugar industry) remain essentially in the same state (or worse) as when the project was mooted in 1976. It can be seen from Table 10 that Miwani production in 1985 was lower than it was in 1974 and 55% of what was achieved in 1978. Ramisi production in 1985 was the same as the production achieved in 1974 and 1978. Even Muhoroni, the only production component to be implemented, produced less in 1985 than it had in the three boom years before implementation began. Production from the Muhoroni component is expected to be sustained at about 61% of appraisal estimates. In addition a certain amount of housing and infrastructure has been improved and the factory was partly rehabilitated (but throughput was not increased). These are lasting beneficial effects of the project but very small in relation to the ambitious targets set at the outset. In addition, almost US$ 1 million has been spent on fruitless studies. KShs 11.3 million (US$ 0.9 million) was spent on consultancy work for roads, KSA, topographical surveys and drainage, the results of which have not been utilized.

VII. Institutional Performance and Development

7.01 KSA: The bulk of the Government components were to be carried out by KSA but performance has been poor (para. 3.07). Although it was agreed that the consultants to KSA (originally financed under Loan 1389-KE, SONY) would be financed under this project until 1984 and KShs 5.6 million (US$ 0.45 million) were spent, KSA has not been effectively strengthened. A bill to give more authority to KSA, originally drafted in 1981, has not been presented to parliament and it seems unlikely that this will ever be done 1/. It appears in fact that KSA's budget is being reduced and that the institution plays no central role in planning or decision-taking for the subsector. Proposals submitted by KSA are not taken up and as a result staff morale is low. Yet the sugar industry sorely needs a body to plan and coordinate policy, and part of the failure of this Project must be attributed to the weakness of the KSA. The reader is referred to Chapter 3 of the South Nyanza Sugar Project Completion Report (Ln. 1389-KE) (paragraphs 3.24-26) for full discussion of this issue.

7.02 Farmers Organization: The Cooperative Societies and Unions were to be an integral part of the outgrowers organization. They were to be reviewed, their debt position rationalized and MOCD was to provide assistance and training to enable them to meet their obligations under the Project. Nothing could be traced as having taken place in this regard and the field mission found that the societies/unions were of little assistance to the farmers or the Company. The labor survey was carried out but was never submitted to and reviewed by the Bank (para. 3.12 (iii)). Labor is still a problem in the Muhoroni zone.

7.03 Muhoroni: Sugar company institutional development was catered for under the Project by components providing for study tours under factory company and KSA auspices and by the establishment of an industry training center. In practice only Muhoroni implemented a training program. The Company on its own resources, established a training center and during 1978-85 conducted a variety of training courses for their staff and for outgrower farmers, and sent officers on overseas courses. The Company was reinforced by extra staff and equipment paid out of the Loan Account. In general, the Company has been well managed and has been strengthened by its own efforts and by Project support.

7.04 Research: The proposed reinforcement of the National Sugar Research Institute at Kibos and the establishment of an industry training centre was never implemented. Sugar research and training nationally still remains at an unsatisfactory low level.

1/ An announcement quoted in the local press on February 13, 1986 by the Minister of Agriculture and Livestock Development states that the Bill will not be presented.

7.05 Compliance with Legal Covenants: Although MOALD and KSA were constantly reminded by supervision missions (and during Country Implementation Reviews) of obligations under the legal agreements, a large number of covenants were violated. These are listed in Annex 2. The number of covenants were considered by one of the Bank's Executive Directors to be excessive (para. 2.12) both in relation to Government's implementation capacity and to the Bank's supervision capability. In the event some covenants were not observed because they were redundant, while others were not observed because they tried to legislate for resolution of basic subsector issues on which Government and Bank had never agreed. The number of violations therefore comes as no surprise.

VIII. Bank Performance

8.01 Unresolved Issues: Project appraisal took two years because of the numerous complex and contentious issues. The agreements reached during negotiations were correspondingly numerous, resulting in an extensively detailed Loan Agreement. These numerous covenants were expected to resolve major issues, including general policy issues (e.g Government's willingness to lend Bank funds to private companies), sector issues (e.g. sugar price levels, lack of a sector development policy, lack of an institutional mechanicism for sector coordination), and project issues (e.g. poor management capability, numerous weak institutions like cooperatives with ill-defined roles in the project, underestimates of costs, labor availability). The question must be asked whether, in fact, the agreements reached at negotiations reflected genuine resolution of issues or whether they were largely nominal agreements which would allow the Project to go ahead. In view of the fact that the Project foundered on these same issues and that most covenants were either breached or lapsed, it is difficult to avoid the conclusion that the covenants "papered over" substantial unresolved issues and differences of opinions. Yet all these issues were adequately identified and debated; only the obvious conclusion was not drawn - that the Project and the sugar subsector were not ready for this investment.

8.02 Cancellation Delays: After supervision missions identified real implementation problems as early as July 1980 (18 months after signing and only 9 months after effectiveness) an inordinate delay took place before the Project was revised (end August 1983). Although the Bank made efforts to sustain a dialogue during this three year period, it had a difficult task in bringing this dialogue to the logical conclusion - that the Project was unimplementable in view of the unresolved issues and should be cancelled. The time taken to reach agreement on this conclusion (three years) was long, and costly for Government in commitment fees. The Bank has to be faulted for not sustaining this dialogue more forcefully or focussing it better, so as to achieve a more rapid cancellation. Even the August 1983 revision contained some wishful thinking: Government made no headway on the investment proposals for a revised project and a further US$ 1.2 million had to be cancelled.

8.03 Supervision: Supervision missions were regular at the commencement of the Project. During 1982/83, while revision or cancellation was under discussion, no field supervision was carried out but much time was spent on preparing and pursuing the dialogue with Government. Total supervision input is estimated at 587 man days but the results were disproportionately small as most of the time was spent in preparing the obsequies of the project.

8.04 Disbursements. Disbursements were handled promptly by the Bank when claims were received. There were, however, delays in claims being processed by MOALD and the Treasury and by the latter in reimbursing Muhoroni. This created cash flow problems for the Company and delayed implementation (paragraph 4.02 ft).

IX. Economic Rate of Return

9.01 Economic Rate of Return. The economic rate of return to the project is expected to be 3%, compared with a rate of 35% foreseen at appraisal. The methodology of the calculation was that used at appraisal and is detailed in annex 9.

9.02 Contrast with the Financial Analysis. The mediocre economic rate of return contrasts with the more buoyant picture given by the financial analysis where financial returns to the project as a whole (benefiting Company, farmers and Government) are in excess of 20%. The major difference between the financial and economic analysis lies in the valuation of benefits. In the case of the financial analysis these were valued at prevailing and anticipated domestic sugar prices. In the economic analysis they were valued at the historical and forecast import parity price, consistent with standard practice for economic analysis. The arguments for alternative approaches are well made in the recent Project Completion Report for the Kenya South Nyanza Sugar Project - SONY (Loan 1389 KE), paragraph 9.03, and need not be repeated here.

9.03 The Economic Lesson. A simple sensitivity analysis shows what might have been. The sugar to cane ratio used in the projections of revenue is 8.5% (latest actual was slightly lower, 8.3%). This is very low by industry standards - 10% was assumed at appraisal, 11% is achieved by EASI's competitor estate at Mumias. If a 10% rate were achieved "costlessly " the rate of return would be 10% . If an 11% rate were achieved, the rate of return would be 12%. Although these figures are overestimates - they assume costless improvements in efficiency and an agricultural potential that EASI may not possess - they do nevertheless indicate some of the lost potential of this project, and some of the potential of the sugar industry in Kenya. The lesson is clear, however: that if the economic rate of return is the key determinant of future investment in sugar in Kenya, then only the most efficient producers with low costs and high field and factory yields should invest, and a rigorous study of regional/company comparative advantage should precede any further investment.

9.04 Contrast with SONY. The SONY project is expected to yield a negative economic return, by contrast to the positive -albeit low - rate of return of the present Project. The major differences are two. First, SONY project costs were much higher as a new production unit was being set up, whereas the present project comprised only improvement and marginal expansion of an existing unit. Second, the operating efficiency of Muhoroni has been comparatively greater, as factory capacity utilisation is projected to be nearly 100%, against an anticipated 50% at SONY. SONY operates in a marginal production area where outgrower production has not been forthcoming to the extent anticipated, whereas Muhoroni operates in the heart of the sugar belt, under comparatively favorable conditions and under pressure from competing factories. These factors would suggest greater advantage in improvement and rehabilitation of existing estates with potential rather than any new expansion.

X. Summary and Conclusions

10.01 Five basic flaws in the Project are apparent. First, it seems that Government gave lower priority to rehabilitation than to the construction of new factories. The Bank had a different perception of relative priorities and favoured rehabilitation before new construction. There was thus a fundamental lack of agreement between Bank and Government on the priority to be given to the Project.

10.02 Second, there were a number of basic policy issues that were never resolved. Appraisal took two years and required four separate missions because of the large number of unresolved issues (para. 8.01). In the absence of political will on the part of Government to solve these issues, the Bank insisted upon numerous covenants in an attempt to tie Government down to specific solutions. These covenants caused delays in achieving effectiveness, because the sugar companies, KSA and Government could not appreciate and fully understand the legal and financial requirements of the Loan Agreement. Following loan effectiveness, Government began to back away from its commitments, reflecting the fundamental differences of perception between Bank and Government. The first such action was a volte face in Government policy regarding the provision of funds to private companies. Most of the Project proved unimplementable because of this problem, and a painful and costly process of cutting down the Project was begun. It took three years to recast the Project and negotiate a cancellation of US$ 58 million. The delays in decision making cost the Government US$ 2.4 million in commitment fees. At the same time lack of resolution of major sectoral policy issues - on cane and sugar pricing levels, sector development policy, mechanism for sector coordination - reduced the potential contribution of the remaining components.

10.03 Third, Government did not have the institutional mechanism to coordinate and implement what was in fact a multi-project rehabilitation program loan. The Sugar Companies themselves were probably capable of implementing their own sub-projects, but overall planning, formulation of development policy, reconciliation between policy issues and implementation was never achieved as no strong institution was responsible for sugar policy or for the project. KSA made an effort but had no authoritative power; it was in any case in a development stage itself and there was inadequate staff (both in numbers and experience) in MOALD.

10.04 Fourth, Project costs were underestimated and the Project was therefore underfunded. In the event, even the funding that was to be provided by the one company that implemented a sub-project never materialized as unfavorable movements in pricing policy and declining sugar factory efficiency resulted in operating losses, not profits. Finally, the implementation period coincided with the Government budgetary crisis of 1981-84 and even the greatly reduced level of resources allocated to the rump of the project could not all be fitted into the Estimates when required.

10.05 The fourth and fifth flaws - underestimates of costs and Government budgetary problems were common to other projects appraised in the Region at the time. Unanticipated levels of price inflation combined with less rigorous Bank practices in cost estimates at the appraisal stage caused cost estimates to be too low.

10.06 The Muhoroni Sugar Factory component has only been partially successful. Appraisal estimates for irrigation, drainage, road maintenance and the increase of the factory capacity were too low and Government could not provide funds to bridge the financing gap. As a result these components of the Muhoroni sub-project were not completed. Agricultural development was delayed and at the closing date only 88% of the appraisal estimates on the nucleus estate and 45% on outgrowers lands had been achieved. The part of the program which was implemented is however now showing results.

10.07 Major lessons from the project experience may be summarized as follows:

(a) The lack of agreed priorities and a clear strategy for sugar development in Kenya led to a shaky policy foundation for the Project. The pragmatic solution adopted by the Bank of trying to support two project (the Sugar Rehabilitation and SONY Projects) with quite different characteristics failed. Both projects have been poor performers. Agreement between Government and the Bank on investment priorities and strategy is a prerequisite for successful investment.

(b) Failure to resolve basic issues led to an unwieldy number of covenants, to many of which Government had no commitment. The use of covenants to paper over inconsistencies or disagreements on policy places undue strain on the legal documents and inevitably leads to breaches of covenants. Resolution of basic sub-sector issues should precede appraisal.

(c) The project was very complicated, with fifteen implementing agencies whose roles were not always clearly defined. Overly complex design placed too great a burden on weak executing agencies.

(d) Underestimated quantities and prices during technical preparation and appraisal resulted in "cost overruns". Physical implementation consequently fell short of appraisal targets. Greater precision of physical estimates is now provided by Bank rulings on the level of engineering necessary prior to Board presentation. Price level changes remain difficult to forecast accurately.

(e) The project required a great degree of administrative support and coordination. KSA could have handled this but its role was never properly defined and it lacked skilled manpower and authority to do the job. Greater attention to the role of sub-sector management and the need for a coordinating institution in a rehabilitation program loan is indicated.

(f) If subsector issues, particularly coordination and pricing are resolved, properly manageed sugar production in high potential areas could be a profitable and economically justified activity in Kenya. Investment in rehabilitation of existing estates and factories with potential would probably yield satisfactory returns, but expansion of area or the creation of new factories would not.

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

REVISED LOAN SCHEDULE AND DISBURSEMENTS

Category	Amount of the loan Allocated and Disbursed (Expressed in US$ million equivalent)		
	Original	Revised	Disbursed
Expenditure by (Category No.) Muhoroni for:	(2)	(1)	
(a) agricultural vehicles and equipment, office machines and furniture	4.6	4.1	3.498
(b) sugar factory machinery and equipment, and factory consultant's fees	2.0	0.72	0.663
(c) houses and social facilities, including architects' fees	3.6	1.05	1.111
(d) irrigation in Muhoroni zone, including survey, design, construction and supervision and consultant's fees	1.3	-	-
(e) access roads and tracks in smallholder areas including engineering, construction, supervision and consultants' fees, but excluding factory entrance roads	1.4	0.12	0.119
(f) land preparation, planting operations and incremental fertilizers	2.2	5.78	6.321
(g) staff training and incremental company salaries.	2.3	0.52	0.496
(h) Unallocated	1.8	-	-
Sub total	19.2	12.29	12.208

Category		Amount of the Loan Allocated and Disbursed (Expressed in US$ million equivalent) Original	Revised	Disbursed
Expenditure by the (Category No.) Borrower and KSA for:		(4)	(2)	
(a)	classified roads, any access roads and tracks in large-farm areas in all zones, smallholder area access roads and tracks in Chemelil Zone, and bridges and other major road-related structures, including engineering, construction and supervision, and consultant's fees	2.5	0.12	0.083
(b)	irrigation Ahero Scheme and NSRI at Kibos, including survey, design, construction and supervision, and consultant's fees	2.0	-	-
(c)	vehicles, equipment and furnishings, incremental salaries, staff training, and the construction of staff houses, a training center and laboratory for NSRI	0.8	0.08	-
(d)	staff training and studies to be undertaken by KSA	0.5	0.51	0.388
(e)	drainage works, including surveys, design, construction supervision and consultant's fees	6.4	0.01	0.124
(f)	Unallocated (original)	2.2	-	-
(g)	investment studies (revised)	-	1.00	-
	Sub total	14.4	1.71	0.595
	Grand total	33.6	14.00	12.803

KENYA: SUGAR REHABILITATION PROJECT (LN. 1636-KE)
PROJECT COMPLETION REPORT

Activities to be Carried out by Borrower and Compliance with Loan Conditions

Loan Agreement Section	Subject Matter	Status at Project Completion
3.01 (a)	Borrower was to carry out	
	A(1) Irrigation at Miwani & Kibos A(3) Irrigation at Muhoroni A(4) Modification - Ahero Irrig. A(5) (b) Building of a dam at Ramisi B(1) Drainage at Miwani, Chemelil and Muhoroni	Consultants were appointed but no works were carried out under the project.
	F(1) Roads Construction	Program prepared by consultants: no roads constructed
	G(1) Strengthening of NSRI G(2) Establishment cane breeding at Mtwapa	Limited work done by experts. Done under SONY Project Loan 1389-KE.
	G(3) Establishment of training center at Kibos and provide overseas training.	Not done.
	H(1) Feasibility study of economiclly growing cane in Nandi Hills.	Partially done. Found uneconomical to transport cane to Miwani; feasiblity of a small factory not investigated.
	H(2) Completion of soils studies in all zones.	Not done.
	H(3) Investigation of groundwater availability in Ramisi zone.	Ramisi cancelled. Not done
	H(4) Topographical mapping of Kano plains to facilitate B(1) above and design of Regional Drainage scheme. Regional Drainage Plan acceptable to the Bank to be submitted by June 30, 1982.	Mapping was done: Regional drainage plan was not completed.
3.01 (b)	Borrower shall ensure companies perform and shall provide funds, facilities and services to enable companies to perform.	Did not work due to financial constraints and pricing policies.
3.01 (c)	Borrower shall make available loan proceeds withdrawn (1) KSh. 27.2 m to Muhoroni and (II) KSh. 14.4 m to Ramisi in exchange for shares.	Government decided to lend to Muhoroni and did not take up shares. Ramisi was cancelled.

Loan Agreement Section	Subject Matter	Status at Project Completion
3.01 (d)	Borrower shall make proceeds of Loan withdrawn for roads in F(1) as a grant to the companies.	No roads constructed.
3.01(f)	Borrower to ensure that each company is enabled to obtain adequate working capital during implementation period.	Procedure for advance funding proposed, agreed by KSA, but not implemented by Government.
4.05(a) and (b)	Borrower shall cause CBK and SBCU to review loans by SBCU to farmers exceeding one year in arrears, and to take appropriate action by March 31, 1979.	Not implemented: not possible to ascertain the exact position due to numerous staff changes.
4.05 (c)	Borrower to ensure that cooperative societies are provided staff training.	Only limited training was provided.
4.06(a)	Sugar Settlement organization to carry out ownership, tenancy and cane growing contract survey.	Survey was never completed and no results nor a plan for cane cultivation were submitted to the Bank.
4.06(b)	Results of such survey to be delivered to Bank by September 30, 1979, with plan for cane cultivation	
4.07(a)	Borrower to ensure the Companies maintain roads and drains, and to enter into agreements with Companies by December 31, 1979 for satisfactory execution of and reimbursement for maintenance, and to establish Maintenance Fund.	Survey completed for Sugarbelt; draft agreements never finalized and maintenance marginal. RDMF never established as it awaited Sugar Bill to strengthen KSA which has not been presented to parliament.
4.07(b)	Funding of Roads and Drainage Maintenance Fund (RDMF).	

Loan Agreement Section	Subject Matter	Status at Project Completion
4.07(c)	Payment of Companies out of RDMF.	No payments made: RDMF not established.
4.07(c)	Borrower to maintain "MOW maintenance" roads.	Only marginal maintenance being done.
4.08	Borrower to study labor supply for cane harvesting, prepare and review with the Bank a plan by December 31, 1979.	Plan was prepared by MOL in November 1980. There is no record of it being submitted and reviewed by the Bank.
4.09	Borrower to cause NIB to assess irrigation water charges.	No action; irrigation components not implemented.
4.10(a)	Borrower to set producer and consumer prices of sugar cane and sugar.	
4.10(b)	Borrower to review sugar and cane prices annually.	These covenants were discussed frequently by Bank and Government but were never fully observed. This delayed the revision of the project and caused numerous financial crises in the sugar industry.
4.11	Borrower to report on projected production and consumption of sugar by December 31, 1979, and annually thereafter, with anticipated investments and plans for marketing of sugar.	
5.01(g)(c)	Borrower to have right to withdraw proceeds of ADB Loan by October 31, 1979.	ADB Loan (for Ramisi) was cancelled.
5.01(h)	Any management contract entered into, renewed or amended between October 1, 1978 and effective date without Bank's consent.	Confirmed that no changes occurred during that period.
6.01	Letter of Agreement executed on of each Company.	Completed.
6.02	Legal opinions to be furnished to Bank that Letter Agreements duly authorized by and legally binding on Companies.	Legal opinions furnished satisfactorily.

Loan Agreement Section	Subject Matter	Status at Project Completion
Sch. 1.4(b)	Legal opinions to have been furnished that (i) Ramisi loans from Emco (Kenya) and reserves have been converted into equity capital; (ii) SFA duly executed and and legally binding.	Ramisi cancelled; covenant never implemented.
Sch. 1.4(c)	Legal opinions to have been furnished that (i) Miwani reserves of at least KSh 24 m have been converted into equity capital; (ii) SFA duly executed and legally binding.	(i) completed; (ii) Government never signed SFA and Miwani component was cancelled.
Sch. 1.4(d)	Legal opinions to have been furnished that (i) Muhoroni reserves of at least KSh. 23 m have been converted into equity capital; (ii) SFA duly executed and legally binding.	Company converted KSh. 4 m from reserves to equity. This was acceptable to Bank and SFA was executed March 1980.
Sch. 2A (i, (2), (3) (4) & (5)(b)	KSA to employ consultants for implementation of irrigation works.	Consultants for Muhoroni zone invited; complete irrigation component cancelled.
Sch. 2.B(1)	KSA to employ consultants for implementation of drainage works.	Consultants appointed but component cancelled.
Sch. 2F	MOW to construct roads or cause Companies to construct them.	Consultants appointed but roads not constructed.
Sch. 2F(4)	Companies to employ architects for housing and building facilities.	Architects appointed by Muhoroni; others did not proceed.

Loan Agreement Section	Subject Matter	Status at Project Completion
Sch.4,2(h)	No company to enter into renew or amend management agreement without first informing Bank and affording opportunity to comment thereon.	Muhoroni executed new agreement without prior consultation with Bank and is, therefore, in default.
Sch.4,3(d)	No Financed Company to incur consolidated long term debts greater than stated proportion of consolidated capital and positive surplus.	Muhoroni: none. Miwani, Ramisi were never bound by SFA's.
Sch.4,3(f)	No Financed Company to pay dividends except under stated conditions.	Muhoroni: none. Miwani, Ramisi were never bound by SFA's.
Sch.4,3(g)(i)	(A) Financed Companies to maintain stated current ratios. (B) Financed Companies to meet full annual expenses out of sales and interest revenue to earn a reasonable rate of return.	Miwani and Ramisi were never bound by SFA's. Muhoroni observed (A) but (B) was not achieved and losses were incurred from 1981 onwards.

Annex 3

KENYA: SUGAR REHABILITATION PROJECT (LOAN 16336)
PROJECT COMPLETION REPORT
MUHORONI FACTORY PERFORMANCE

	1979	1980	1981	1982	1983	1984	1985 1/
Cane Milled (tons)	527,835	531,750	391,283	330,500	392,089	490,037	470,000
Sugar Produced (tons)	47,000	51,900	35,481	29,170	34,421	42,231	39,010
Cane/Sugar Ratio	11.22	10.25	11.03	11.33	11.40	11.60	12.05
Polarity in Cane (%)	11.99	12.67	11.89	11.72	11.53	11.62	11.35
Sugar/Cane Ratio	8.91	9.75	9.05	8.83	8.77	8.62	8.30
Sugar Lost in Processing (%)	3.08	2.92	2.84	2.89	2.76	3.01	3.00
Fibre in Cane (%)	17.75	17.55	17.77	18.98	18.43	19.63	19.50
Primary Juice Quality:							
Polarity (%)	16.23	17.00	16.18	15.88	15.75	15.83	15.50
Brix (%)	18.95	19.76	19.17	19.01	18.68	18.36	18.70
Purity (%)	85.65	86.08	84.40	83.54	84.31	86.22	83.00
Milling Time Lost:							
Out of Cane (%)	3.4	5.0	18.3	25.0	14.2	3.3	3.00
Factory Reasons (%)	20.1	19.3	17.7	11.8	19.0	22.2	28.00
Miscellaneous (%)	2.2	0.7	1.6	5.6	1.3	-	3.00
TOTAL	25.7	25.0	37.6	42.4	34.5	25.5	34.00

1/ Estimated; Based on performance to October 1985.

Annex 4

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT
LAND PREPARATION PROGRESS
(Hectares)

	1979		1980		1981		1982		1983 3/		1984 3/	
NUCLEUS ESTATE (by Company)	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL
Improved and reclaimed land	-	439	226	214	226	404	226	181	226	341	226	187
Newly developed land	..	..	80	..	80	25	80	126	80	-	80	23
Sub-Total (annual)	..	439	306	214	306	429	306	307	306	341	306	210
Nucleus project area (cumulative)	..	439	306	653	612	1,082	918	1,389	1,224	1,730	1,530	1,940
Proposed irrigated area (cumulative) 1/					160		330		500		670	
Total Nucleus Project Area (cum.)	..	439	306	653	772	1,082	1,248	1,389	1,724	1,730	2,200	1,940
OUTGROWERS (by Company)												
Improved and reclaimed land		307	660	153	660	260	660	431	660	523	660	888
Newly Developed land		98	940	144	940	238	940	238	940	123	940	189
Sub-Total (annual)		405	1,600	297	1,600	498	1,600	606	1,600	646	1,600	1,077
OUTGROWERS (by Contractors) 2/												
Improved and reclaimed land			660		660	206	660	890	660	189	660	270
Newly developed land												
Sub-Total (annual)			660		660	206	660	890	660	189	660	270
Total Outgrowers (annual)		405	2,260	297	2,260	704	2,260	1,496	2,260	835	2,260	1,347
Project Outgrowers (cumulative)		405	2,260	702	4,520	1,406	6,780	2,902	9,040	3,737	11,300	5,084
Total Project Cane Area (cum.)		844	2,566	1,355	5,292	2,488	8,028	4,291	10,764	5,467	13,500	7,024

/1 No irrigation carried out; the figures in "actual" column include land which might have been irrigated
/2 Proportion of work done by contractors estimated by Company: not envisaged at appraisal
/3 There was a significant increase in output after acquisition of new machinery in late 1983 and 1984.

(This table is comparable with Annex 6 Table 3, page 2 of SAR)

Annex 5

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

PROPOSED PLANTING, MAINTENANCE AND HARVESTING PROGRAMME (1985-92) - NUCLEUS ESTATE

EAST AFRICAN SUGAR INDUSTRIES PROPOSALS (DEC 1985)

(Figures in Hectares)

	1985	1986	1987	1988	1989	1990	1991	1992
A. NURSERY								
Planted		140	140	140	140	140	140	140
Harvested			(140)	(140)	(140)	(140)	(140)	(140)
Standing Crop		140	140	140	140	140	140	140
B. PLANT CROP								
Planted		260	260	260	260	260	260	260
Harvested		(175)	(152)	(260)	(260)	(260)	(260)	(260)
Standing Crop	240	325	433	433	433	433	433	433
C. RATOON 1								
Maintained		175	292	400	400	400	400	400
Harvested		(256)	(198)	(233)	(346)	(400)	(400)	(400)
Standing Crop	366	285	379	546	600	600	600	600
D. RATOON 2								
Maintained		256	198	233	346	400	400	400
Harvested		(358)	(400)	(227)	(216)	(289)	(373)	(400)
Standing Crop	630	528	326	332	462	573	600	600
E. RATOON 3								
Maintained		210	377	120	65			
Harvested		(165)	(281)	(293)	(249)	(92)	(33)	
Standing Crop	341	386	482	309	125	33		
F. RATOON 4								
Maintained								
Harvested		(40)	(66)					
Standing Crop	106	66						
TOTAL	1,683	1,730	1,760	1,760	1,760	1,779	1,773	1,773
FALLOW	167	120	90	90	90	71	77	77
TOTAL AREA UNDER CANE	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850
Milling Cane Harvested								
Area Harvested (Ha)		994	1,097	1,013	1,071	1,041	1,066	1,060
Yield (Tons/Ha)		74	74	74	74	75	75	75
Quantity (Tons)		73,556	81,178	74,952	79,254	78,075	79,950	79,500

Annex 6

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

PROPOSED PLANTING, MAINTENANCE AND HARVESTING PROGRAMME (1985-1993) - OUTGROWERS' AREAS

EAST AFRICAN SUGAR INDUSTRIES PROPOSALS (DEC 1985)

(Figures in Hectares)

	1985	1986	1987	1988	1989	1990	1991	1992	1993
A. NURSERY									
Planted		285	285	285	285	285	285	285	285
Harvested			(285)	(285)	(285)	(285)	(285)	(285)	(285)
Standing Crop		285	285	285	285	285	285	285	285
B. PLANT CROP									
Planted		1,950	2,150	2,150	2,150	2,150	2,150	2,150	2,150
Harvested		(2,747)	(2,276)	(2,017)	(2,150)	(2,150)	(2,150)	(2,150)	(2,150)
Standing Crop	4,373	3,576	3,450	3,583	3,583	3,583	3,583	3,583	3,583
C. RATOON 1									
Maintained		2,747	2,561	2,302	2,435	2,435	2,435	2,435	2,435
Harvested		(2,170)	(2,398)	(2,654)	(2,431)	(2,369)	(2,435)	(2,435)	(2,435)
Standing Crop	3,195	3,772	3,935	3,583	3,587	3,653	3,653	3,653	3,653
D. RATOON 2									
Maintained		2,170	2,398	2,654	2,431	2,369	2,435	2,435	2,435
Harvested		(1,180)	(1,663)	(2,284)	(2,526)	(2,543)	(2,400)	(2,401)	(2,435)
Standing Crop	1,758	2,748	3,483	3,853	3,758	3,584	3,619	3,653	3,653
E. RATOON 3 AND OTHERS									
Maintained		519							
Harvested		(934)	(260)	(259)					
Standing Crop	934	519	259						
TOTAL	10,260	10,900	11,412	11,304	11,213	11,105	11,140	11,174	11,174
Fallow	1,279	889	677	785	876	984	949	915	915
TOTAL AREA UNDER CANE	11,539	11,789	12,089	12,089	12,089	12,089	12,089	12,089	12,089
VIRGIN AREA	550	300							
TOTABLE CANEABLE AREA	12,089	12,089	12,089	12,089	12,089	12,089	12,089	12,089	12,089
Milling Cane Harvested									
Area Harvested (ha)		7,031	6,597	7,214	7,107	7,062	6,985	6,986	7,020
Yield (Tons/Ha)		83	83	83	83	84	84	84	84
Quantity (Tons)		583,573	547,551	598,762	589,881	593,200	586,740	586,824	589,680

Annex 7

KENYA: SUGAR REHABILITATION PROJECT (LOAN 1636-KE)
PROJECT COMPLETION REPORT

PROJECTED CANE AVAILABILITY

EAST AFRICAN SUGAR INDUSTRIES PROPOSALS (DEC 1985)

(Figures in Tons)

	1986	1987	1988	1989	1990	1991	1992	1993
Nucleus Estate	73,556	81,178	74,962	79,254	78,075	79,950	79,500	79,500
Outgrowers	583,573	547,551	598,762	589,881	593,200	586,740	586,824	589,680
	657,129	628,729	673,724	669,135	671,275	666,690	666,324	669,180

Annex 8.1

KENYA

Sugar Rehabilitation Project: Completion Report

Forecast and Actual Financial Performance Compared

		1979		1980		1981		1982		1983		1984		1985		Total 1979-85	
		SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL	SAR	ACTUAL
Cane crushed (t'000)		255	528	255	532	255	391	396	330	487	392	532	490	620	470	2791	3133
Cane price (Sh/t)		133	133	133	133	133	150	133	170	133	227	133	250	133	270	133	190
Sugar sales (t)		25	47	25	50	25	38	39	29	49	34	52	42	62	39	277	279
Sugar price (Sh/t)		2800	2800	2800	2800	2800	3075	2800	3600	2800	4290	2800	4773	2800	4986	2800	3785
Sales revenue	)	73	137	73	149	73	112	113	107	140	149	150	204	178	198	800	1056
Raw material cost of sales	)	34	70	34	71	34	59	53	56	65	89	70	122	82	127	372	594
Other variable costs	)(Sh million)	6	17	3	22	2	22	2	21	3	19	3	19	4	19	23	139
Fixed Costs	)	23	35	26	44	27	46	32	46	34	49	35	56	37	60	214	336
Interest	)	3	6	6	9	9	6	11	8	12	8	11	8	10	13	62	58
Net profit/loss	)	7	9	4	3	1	(21)	15	(24)	26	(16)	31	(1)	45	(21)	129	(71)
1. Sugar price/cane price ratio		21	21	21	21	21	201/2	21	21	21	19	21	19	21	18	21	20
2. Extraction rate (%)		10	8.9	10	9.7	10	9.1	10	8.8	10	8.8	10	8.6	10	8.3	10	8.9
3 [illegible] material cost as % of sales revenue		47	51	47	48	47	53	47	52	46	60	47	59	46	64	47	56
4. Overhead recovery rate (fixed costs as percentage of sales)		32	26	36	30	37	41	28	43	24	33	23	27	21	30	27	32

Annex 8.2

KENYA

SUGAR REHABILITATION PROJECT

East Africa Sugar Industries Limited - Muhoroni

Pro-forma Profit and Loss Statement for the Years ended December 31

With Project

(KShs. Million)

	Year 1 (1979)	Year 2 (1980)	Year 3 (1981)	Year 4 (1982)	Year 5 (1983)	Year 6 (1984)	Year 7 (1985)	Year 8 (1986) 1/	Year 9 (1987) 2/	Year 10 (1988) 2/	Year 11 (1989) 2/
Sales	73 137	73 149	73 112	113 107	140 149	150 204	178 198	178 237	178 255	178 255	178 255
Variable Costs	40 87	37 93	36 81	55 77	68 108	73 141	86 146	86 148	86 168	86 168	86 168
Gross Income	33 50	36 56	37 31	58 30	72 41	77 63	92 52	92 52	92 69	92 87	92 87
Fixed Expenses	23 35	26 44	27 46	32 46	34 49	35 56	37 60	37 63	37 75	37 75	37 75
Operating Income	10 15	10 12	10 (15)	26 (16)	38 (8)	42 7	55 8	55 6	55 12	55 12	55 12
Interest	3 6	6 9	9 6	11 8	12 8	11 8	10 13	9 13	8 15	7 15	6 15
Income Before Taxes	7 9	4 3	1 (21)	15 (24)	26 (16)	31 (1)	45 (21)	46 (7)	47 (7)	48 (3)	49 (3)
Income Taxes	3 -	2 (2)	- (1)	7 -	12 -	15 -	20 -	21 -	22 ..	21 ..	23 ..
Net Income	4 9	2 5	1 (20)	8 (24)	14 (16)	16 (1)	25 (21)	25 (7)	25 (3)	27 (3)	26 (3)
Dividends	- -	- -	- -	- -	- -	6 -	6 -	6 -	6 -	6 -	6 -
Addition to Retained Earnings	4 9	2 5	1 (20)	8 (24)	8 (16)	10 (1)	19 (21)	19 (7)	19 (3)	21 (3)	20 (3)
Retained Earnings	16 35	18 40	19 (9)	27 (33)	35 (49)	45 (49)	64 (70)	83 (77)	102 (80)	123 (83)	143 (86)

1/ Estimated

2/ EASI projections

EAST AFRICAN SUGAR INDUSTRIES LIMITED

(Balance Sheet) As at 31st December

(Kshs. Million:)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
ASSETS					(1)	(2)	(3)	(4)	(5)	(6)	(7)
Fixed Assets	72	89	105	141	153	299	304	314	319	340	
Less: Depreciation	26	30	35	43	54	64	81	97	111	125	
Work in Progress	23	9	9	1	3	2	4	4	6	10	
Sub Total	69	68	79	99	102	237	227	221	214	225	
Current Assets											
Nucleus Estate Plantation	-	-	-	7	7	8	9	8	10	15	
A/c Receivable O/Growers	-	-	-	6	11	12	19	37	48	59	
A/c Receive - Others/Prepay	2	3	12	4	7	28	11	7	15	26	
Other Inventories	9	17	21	27	31	43	41	39	36	53	
Cash & Bank Balance	-	-	-	-	-	-	-	-	-	-	
Cash Surplus Adjust	-	-	-	-	-	-	-	-	-	-	
Sub Total	11	20	33	44	56	91	80	91	103	153	
Less Current Liabilities											
Income Tax Payable	-	-	1	3	3	1	-	-	-	-	
Short Term Loans 1	5	5	11	22	29	32	34	32	25	21	
Accounts Payable 2	12	10	15	19	28	34	31	40	51	78	
Sub Total	17	15	27	44	60	67	65	72	76	99	
Net Working Capital (2-3)	(6)	5	6	-	(4)	24	15	19	33	54	
Net Assets (1 + 4)	63	73	85	99	98	261	242	240	247	279	
Liabilities											
Long Term Debt											
Rehabilitation Loan	-	-	-	-	-	26	36	59	82	116	
Others 3	34	37	45	46	36	32	23	22	22	20	
Total Long Term Debt	34	37	45	46	36	58	59	81	104	136	
NET Worth											
Company Equity - Capital	23	23	23	23	28	28	56	56	56	56	
- Share Premium A/c	2	2	2	2	-	-	-	-	-	-	
- Reserves	3	3	3	3	-	136	136	136	136	136	
Sub Total	28	28	28	28	28	164	192	192	192	192	
Retained Earnings	1	8	12	25	34	39	(9)	(33)	(49)	(49)	
Total Net Worth	29	36	40	54	62	203	183	159	143	143	
Total NET Worth plus Liabilities (5 + 8)	63	73	85	99	98	261	242	240	247	279	

Note: (1) Short Term Loans includes current maturity of Long Term Loans.
(2) Accounts Payable includes accrued interest on Long Term Loans.
(3) Excludes current maturity of Long Term Loans.

Revaluation in 1980

Annex 8.3

KENYA

Sugar Rehabilitation Project: Completion Report

Project Costs and Revenues [1/]

(KSh. Million)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987 - 2003
Incremental cane (tons) [2/]										
Nucleus				15.4	22.9	37.9	48.7	60.6	67.9	67.9
Outgrowers				14.9	25.8	51.6	106.5	137.1	186.6	191.1
Total				30.2	48.6	89.5	155.1	197.7	254.5	259.0
Sugar Price (Sh/ton)				3075	3600	4290	4773	4986	5386	5386
Incremental production as % of total				7.7	14.7	22.8	31.6	42.0	64.0	64.7
Factory Investment			1.8	1.4	0.4	0.8	1.0	2.8	2.0[5/]	2.0
Recurrent [3/]										
Labor				0.8	1.4	2.4	4.2	5.4	7.0	7.1
Other				2.4	4.2	6.8	10.6	13.5	17.4	17.5
Admin. Investment	3.5	2.1	1.1	0.6	1.9	0.1	0	1.9	0	0
Recurrent [3/]				1.0	2.1	3.4	5.4	6.9	8.9	9.0
Field EASI Costs										
Investment [4/]	13.2	0.2	0.4	1.2	2.0	4.4	17.1	8.5	5.0[1/]	5.0
Recurrent[3/] Nucleus Estate				3.3	5.8	9.4	10.6	13.5	17.4	17.5
Outgrower Services				1.2	5.5	5.7	11.2	14.3	18.4	18.5
Outgrower Labor[6/]		0.5	0.8	1.7	3.5	4.5	6.1	6.1	6.1	6.1
Government/KSA Costs			3.0	2.7	0	2.9	2.7	-		
Total Costs	16.7	2.8	7.1	16.3	26.8	40.0	68.9	72.9	82.2	82.7
Revenues				8.6	15.7	34.0	64.4	83.2	118.1	120.2
1. Gross Flow	(16.7)	(2.8)	(7.1)	(7.7)	(11.1)	(6.0)	(4.5)	10.3	35.9	37.5
Add back Outgrower Cost		0.5	3.8	4.4	9.0	10.2	17.3	20.4	24.5	24.6
Deduct:										
Payments to Outgrowers				2.2	4.4	11.7	26.6	37.0	54.1	55.4
2. Net Flow to EASI (before debt service)	(16.7)	(2.3)	(3.3)	(5.5)	(6.5)	(7.5)	(13.8)	(6.3)	6.3	6.7
Government Duty/Levy				3.5	5.6	10.2	17.4	21.4	28.1	28.7
3. Net Flow + Government Share	(16.7)	(2.3)	(3.3)	(2.0)	(0.9)	2.7	3.6	15.1	34.4	35.4
1. Gross Flow in Constant Terms (FRR = 18%)	(35.5)	(5.3)	(11.8)	(10.7)	(13.2)	(6.5)	(4.5)	10.3	35.9	37.5
2. Net Flow to EASI in Constant Terms (FRR = 2%)	(35.5)	(4.3)	(10.5)	(9.7)	(7.7)	(8.1)	(13.8)	(6.3)	6.3	6.7
3. Net Flow + Government Share in Constant terms (FRR=21%)	(35.5)	(4.3)	(10.5)	(4.9)	(1.1)	2.9	3.6	15.1	34.4	35.4

Annex 9

KENYA
Sugar Rehabilitation Project - Completion Report
Economic Analysis
(KSh million)

	Agriculture 1/	Factory	Administration and Housing	Government/ XSA Costs	Production Foregone	Total Costs	Benefits	Net
1978	27	0	6	0	0	33	0	(33)
1979	1	0	3	0	0	4	0	(4)
1980	3	3	2	4	0	12	0	(12)
1981	10	6	2	3	1	24	12	(12)
1982	19	7	4	0	1	31	9	(22)
1983	27	11	4	3	2	47	26	(21)
1984	46	16	5	2	2	71	28	(43)
1985	38	20	8	0	3	69	21	(48)
1986	42	24	8	0	3	77	38	(39)
1987	42	24	8	0	3	77	46	(31)
1988	42	24	8	0	3	77	50	(27)
1989	42	24	8	0	3	77	70	(7)
1990	42	24	8	0	3	77	122	45
1991	42	24	8	0	3	77	116	39
1992	42	24	8	0	3	77	112	35
1993	42	24	8	0	3	77	108	31
1994-2003 (10 years)	42	24	8	0	3	77	104	27

IRR = 3%

1/ including farm family labor

KENYA

Sugar Rehabilitation Project: Completion Report
Project cost and financing plan (Muhoroni Component) Appraisal and Actual Performance
(Source SAR Annex 15 Table 25)

	Detailed Table Ref.	Total cost, inc. contingencies	Financing World Bank	Government	KSA Levy	Muhoroni	Physical Objectives	Drawn from Loan
Irrigation								
- Capital cost	3	14.7 1/	13.5			1.2	670 ha brought under irrigation	Cancelled
- Recurrent	3	1.2				1.2	3 years' operating costs capitalized	
Drainage								
- Capital cost	4	6.5	4.0	2.5			1340 ha drained	
- Recurrent	4	3.2	1.9	1.2	0.1		4 years maintenance costs capitalized	Cancelled
Agriculture								
- Capital	7	49.1	44.2			4.9	equipment & vehicles to develop 5,100 ha, reclaim 1,500 ha and improve husbandry on 6,900 ha (total 13,500, existing was 9,100)	39.2
- Fixed Recurrent	11	39.5	16.9			22.6	5 years incremental salaries, administrative costs and training for EASI	8.7
- Variable Recurrent	17,18	68.5	21.7			46.8	4 years total cost of improved husbandry on 13,500 ha	86.3
Factory								
- Capital	22	22.3	20.1			2.2	increase factory capacity from 2000 tcd to 2400 tcd	7.7
- Recurrent	26	17.7				17.7	2 years incremental operating costs capitalized	
Management								
- Capital	28	0.5	0.5				Furniture and equipment for administration	
- Recurrent	28	15.4	5.2			10.2	4 years incremental administrative salaries and expenses	Cancelled
Roads								
- Capital	29	27.4	8.6	17.2		1.6	249 Km constructed/upgraded	
- Recurrent	30	1.7			1.3	0.4	incremental maintenance costs for 3 years on 516 Km	Cancelled
Housing	31	40.3	34.7			5.6	763 units, including 680 laborer's cottages	9.2
Total		308.0	171.3	20.9	1.4	114.4	In 1985, produce: 620,000 t.c. and 62,000t sugar	151.1
US$		38.50	21.41	2.61	0.18	14.30		12.21

Notes to "Project Costs and Revenues"

1/ Costs and revenues in current terms 1978-1984 and constant 1984 values thereafter. Costs to 1984 are actual, from 1985 estimated/projected on basis of 1978-84 experience. Flows are presented in constant 1984 for the FRR calculations.

2/ Estimated from Annex 4 hectarage on following increased yield assumptions: nucleus estate 21t/ha/annum; outgrowers 20t/ha/annum. Average harvesting time: nucleus estate 20 months; outgrowers 22 months.

3/ Based proportionately on EASI Profit and Loss Accounts. Recurrent costs exclude finance and exceptional charges.

4/ Agricultural Vehicles and Equipment only. Costs of Land Preparation etc. assumed taken up in recurrent costs.

5/ Assumes no factory expansion, excess cane processed at Chemelil with identical cost and revenue structure. Investment cost is for expenditures to maintain existing capacity and productivity.

6/ Outgrower Labor estimated (as in SAR) on basis of 60 man days/ha/annum. Price of labor 20/- per day x 60 = 1200/- p.ha.

	ha	cost
1979	405	0.5
1980	702	0.8
1981	1406	1.7
1982	2902	3.5
1983	3737	4.5
1984	5084	6.1

7/ Assumes replacement annually at average rate obtaining during the project period.

NOTES TO "ECONOMIC ANALYSIS"

As at appraisal, 100% of the cost of productive investment and housing has been considered.

As at appraisal, benefits have been valued at the import parity price, as Kenya remains a sugar deficit country.

As at appraisal, an imputed value for production foregone on the newly developed area has been calculated on the basis of the maize producer price (used as proxy for export parity price) and assumed 60% occupancy rate (1142 ha x 60% x 2.2 t). Prices: KSh 954 in 1980 to KSh 1730 in 1984 and KSh 1900 in 1985.

As at appraisal a shadow exchange rate of KSh 11.0 = $1.00 was used for foreign exchange elements 1977-82. Thereafter a rate of KSh 16.0 = $1.00 was used.

As at appraisal, labor was not shadow priced for the reasons evoked at the time of appraisal.

Values are in constant 1983 terms.

YELLOW FILE COPY

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

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Washington, D.C. 20433
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(202) 477-1234
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Cable Address: INDEVAS

July 14, 1987

Mr. S. B. Obura
Chief Executive
Kenya Sugar Authority
P. O. Box 51500
Nairobi,
Kenya

Dear Mr. Obura:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

On April 24, 1987, we forwarded to you a copy of the draft Project Completion Report on Kenya Sugar Rehabilitation Project (Loan 1636-KE). Comments from the Borrower have been reproduced as Annex 11.

The final version of the report has now been distributed to the Bank's Board of Directors and I am enclosing a copy for your information.

Yours sincerely,

Graham Donaldson, Chief
Agriculture, Infrastructure and
Human Resources Division
Operations Evaluation Department

Enclosure

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The World Bank
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Cable Address: INDEVAS

July 14, 1987

Mr. J. B. Awford
General Manager
E. A. Sugar Industries
P. O. Box 48979
Nairobi,
Kenya

Dear Mr. Awford:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

On April 24, 1987, we forwarded to you a copy of the draft Project Completion Report on Kenya Sugar Rehabilitation Project (Loan 1636-KE). Comments from the Borrower have been reproduced as Annex 11.

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Graham Donaldson, Chief
Agriculture, Infrastructure and
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Operations Evaluation Department

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July 14, 1987

Mr. J. Kamunge
Permanent Secretary
Ministry of Agriculture
P. O. Box 30028
Nairobi,
Kenya

Dear Mr. Kamunge:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

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July 14, 1987

Mr. C. S. Mbindyo
Permanent Secretary
Ministry of Finance
P. O. Box 30007
Nairobi,
Kenya

Dear Mr. Mbindyo:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

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Agriculture, Infrastructure and
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July 14, 1987

Mr. J. W. Githuku
Permanent Secretary
Ministry of Planning and
National Development
P. O. Box 30005
Nairobi,
Kenya

Dear Mr. Githuku:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

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July 14, 1987

Mr. Arap Letting
Permanent Secretary
Office of the President
P. O. Box 30510
Nairobi,
Kenya

Dear Mr. Letting:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

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July 14, 1987

Mr. M. Bouzid
Director, Programs I
African Development Bank
01 B.P. No. 1387
Abidjan
01 Côte d'Ivoire

Dear Mr. Bouzid:

Re: Project Completion Report
Kenya Sugar Rehabilitation
Project (Loan 1636-KE)

On April 24, 1987, we forwarded to you a copy of the draft Project Completion Report on Kenya Sugar Rehabilitation Project (Loan 1636-KE). Comments from the Borrower have been reproduced as Annex 11.

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